Towards a Chemical War in Syria ?

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UK accused of dumping WMDs in Scotland

Source: http://www.presstv.ir/detail/2012/10/30/269555/wmds/

The Scottish National Party (SNP) has accused the British government of "dumping" weapons of mass destruction (WMD) in Scotland, ahead of the debate as to where the UK will replace its nuclear base.

Plans were discussed on Monday 29 October about the UK possibly replacing its nuclear deterrent 'Trident', which is currently based in Clyde, Scotland.

Scotland's deputy First Minister Nicola Sturgeon said the "Trident weapons of mass destruction dumped in Scotland exemplify the independence dividend" for Scots if they voted to leave the UK in 2014.

"The obscene amount ploughed into upgrading and maintaining Trident illustrates the independence dividend and how, with the powers of an independent Parliament, we could spend Scotland's share of Trident spending on key public services", she added.

In the recent weeks, the nuclear dispute between Britain and Scotland has been leading the SNP to stand ground on its commitment to the removal of nuclear weapons from Scottish territory.

During a visit to the Faslane base on the Clyde, UK Defence Secretary Philip Hammond said there were no plans to move the submarine-based system, despite the hype of a growing Scottish independence referendum and support in the Scottish Parliament for getting rid of Trident.

Ex-Turkish president Ozal was poisoned to death (?)

Source: http://pakobserver.net/detailnews.asp?id=180575

A Turkish daily has claimed that former Turkish president had been killed by a very venomous poison. Citing an unpublished autopsy report

prepared by the Forensic Medicine Institute (ATK), Bugün daily said in its report that Turgut Özal, Turkey's revolutionary president, was poisoned by "strychnine creatine," a powerful deadly poison.

An investigation into the suspicious death of the former president began earlier this year after a number of witnesses spoke of unusual circumstances on the day of the death of the then-president, who was reported to have suffered a heart attack. The Ankara Chief Public Prosecutor's Office recently issued a warrant to exhume the remains of the president for toxicology testing.

Özal, the eighth president of the Turkish Republic, died of heart failure in April of 1993 at an Ankara hospital at the age of 65 while serving in office.

Prosecutors decided in September that Özal's remains should be exhumed and an autopsy performed after a state supervisory board, acting on the order of President Abdullah Gül, produced a report in June that voiced suspicions about the death. The report was ordered in response to the suspicions of Özal's family and friends about his death and the subsequent investigation.

After the reburial of Özal, the ATK said it will release its report in two months. In the leaked autopsy report, Bugün claims that the autopsy doctors investigated Özal's bone marrows, parts of his internal organs and examples of other parts of his body. It added that the examination revealed **high-level of strychnine creatine** in his body.

The report said this chemical substance was not used in embalming the body of Özal. It noted that the poison was widely used against rats and it is currently banned in Turkey. It is speculated that the poison could be mixed up with Özal's food or drinks. The chemical substance is a powerful poison that leads to respiratory failure in 15-20 minutes and could also cause a heart attack.—Turkish News

Indian scientists devise unique radiation-decontamination wipes

Source: http://www.newstrackindia.com/newsdetails/2012/11/04/157--Indian-scientists-devise-unique-radiation-decontamination-wipes-.html

They look like the facial wipes available in the market, but what makes them different is that they are meant to clean off radioactive material from the body during a nuclear disaster. Developed by India's Defence Research and Development Organisation (DRDO), the unique decontamination wipe is catching the attention of vendors who cater to NATO forces.

Scientists working on it claim the wipe, developed at the DRDO Institute of Nuclear Medicine and Allied Sciences (INMAS) here, can remove over 95 percent of the contamination.

At Rs.10 (20 cents), the 5cm x 5cm wipe - the size of a face wipe - is easy to use and dispose of.

According to the scientists, these decontamination wipes will be useful for people working in nuclear plants and those living around them, as also during any nuclear disaster like what happened at Fukushima in Japan.

"This is one-of-a-kind product not known to have been developed by anyone else," R.K. Sharma of INMAS's CBRN (Chemical, Biological, Radiological and Nuclear) division, told IANS in an interview.

"The decontamination procedure with the use of soap and water removes most of the external contaminants. But the accidental release of a number of radio-isotopes in the environment could contaminate water also, thereby limiting its availability or sometimes it may be scarce," he said.

"In view of this, the self-usable skin decontamination wipe has been developed for immediate application after the release of the contaminant," Sharma added.

Named radio-decontamination wipes, the project costs Rs. 495,000 ($9,200) and INMAS has already initiated the process for patenting the technology.

"Once we get it patented, we would propose keeping this wipes not just with disaster management forces like NDRF (National Disaster Response Force) but also at Metro stations and with local authorities like the state police," Sharma said.

Following a major earthquake, a 15-metre tsunami disabled the power supply and cooling chambers of three of Fukushima's Daiichi reactors Mar 11, 2011. There were no deaths but over 100,000 people had to be evacuated from their homes to prevent exposure to radiation.

The decontamination wipe causes no skin toxicity and has been found to be safe, effective and non-irritant.

INMAS has already received a request from British-based Branco Diagnostics and an Indian company, Novel, for transfer of technology for mass production of the decontamination wipes.

An email from the Branco Diagnotics in October said: "We understand that you are developing radiation decontamination wipes and have completed efficacy studies and skin safety studies under the Drug and Cosmetics Act 1940."

"We are interested to take this technology from your organisation for commercializing the same. Branco produces reactive skin decontamination lotion (which removes chemical warfare agents), which is used by the US Department of Defense and military forces in NATO countries," the letter said.

INMAS has sent both the requests to the DRDO's marketing wing - the Directorate of Industry Interface and Technology Management (DIITM).

The wipes come in a small packing along with a sealed disposal zipper bag so that the contamination doesn't spread further after wipe is used.

The institute has also published the results of its study in the International Journal of Pharmaceutics in September, the official said.

Terror Attacks Planned For Pittsburgh, Pennsylvania; Most Likely Bio-Terror Or Chemical

By David Chase Taylor

Source:http://truthernews.wordpress.com/2012/11/18/terror-attacks-planned-for-pittsburgh-pennsylvania-most-likely-bio-terror-or-chemical/

Pittsburgh, Pennsylvania, commonly known as the “City of Bridges” or the “Steel City”, appears to be slated for Mumbai style terror attacks on November 18, 2012, when multiple locations throughout the city could be attacked simultaneously. Pennsylvania has also been home to recent Mumbai style terror drills and based on the collective terror related data, a combination of 9/11 style aerial attacks, active shooters, bio-terror, chemical, and suicide terror attacks could occur throughout the city on Sunday night.

Terrorists, such as the Israeli Mossad, could theoretically gain taccess to Pittsburgh targets via the Allegheny, Monongahela and the Ohio River rivers by way of Canada. To date, there have been at least 5 high-profile Canadian terror plots and a few terror scares potentially

indicating that a terrorist attack from Canada on the United States is imminent. A U.S. Department of Homeland Security report published on November 13, 2012, (allegedly written April of 2011), states that "The capabilities of al-Qaida and its sympathizers to conduct small boat water-borne improvised explosive device attacks against the U.S.-Canada MTS (marine transport system) probably remain limited," A day prior on November 12, 2012, it was reported that Toronto Police are calling the vandalism of a war memorial "a hate crime" after someone had taken a black marker and written "Canada will burn; Praise Allah".

This Truther.org terror warning is rather complex and interconnected and therefore can only be

understood once all the following evidence is reviewed and confirmed.

The state of Pennsylvania was featured prominently in the 9/11 Attacks and was recently the staging grounds for a chemical laden plane in the foiled 9/11 style 2012 DNC Terror Plot. Even more shocking is the fact that the University of Pittsburgh has suffered over 130 bomb threats in 2012 alone. The state of Pennsylvania recently gained unprecedented international attention for the Penn State child sex abuse scandal, in which young boys were sexually exploited by football coaches, high-level school officials and donors. Based on everything that has transpired in Pennsylvania over the last year, it appears that "The Keystone State" is now ready for a "prime-time" made-for-TV terror event.

Pennsylvania Terror Blinking Red

False-flag related terror in Pennsylvania is blinking red on every level. Aside from the fact that Pennsylvania was intimately tied to "Jihad Jane" and was allegedly targeted by a Scottish terrorist group, and a Uzbek terrorist organization, Pennsylvania has been the subject of recent terror propaganda and home to numerous terror attacks, terror drills, terror scares, terror threats, terror plots, as well as multiple Pennsylvanian suspects who were arrested for terror related crimes. Also, on November 14, 2012, it was reported that a federal lawsuit had been filed stating that Pittsburgh failed to train its undercover police officers on how to properly identify themselves, potentially foreshadowing the means by which "terrorists" will gain future access to restricted areas within the city of Pittsburgh.

Potential Pittsburgh, Pennsylvania, False-Flag Terror Targets:

1: Pittsburgh's Center for Biosecurity (UPMC: University of Pittsburgh Medical Center)
2. Pittsburgh's Heinz Field (Pittsburgh Steelers versus Baltimore Ravens)
3: Pittsburgh's 446 bridges, 2 inclined railways
4: Pittsburgh's 151 high-rise buildings
5: Pittsburgh's 17 universities

Pennsylvania Bio-Terror

Since 9/11, Pennsylvania has been front and center in respect to state-sponsored bio-terrorism. Heading up this program is dual U.S.-Israeli citizen Ezekiel Emanuel, also known as

the "Doctor of Death". Emanuel, the brother of Chicago Mayor Rahm Emanuel, is the son of a known Israeli terrorist and a bioethicist at the University of Pennsylvania School of Medicine. Should a terror attack occur in Pennsylvania, it will likely be executed from behind the scenes by Ezekiel Emanuel. On May 9, 2005, it was reported that a bio-terror drill at PNC Park, home of the Pittsburgh Pirates, simulated an explosions in the seating area which represented a suicide bombing attack and another bomb explosion simulated a poisonous sarin gas bomb. Seven years later on January 1, 2012, it was reported that Pittsburgh and its surrounding areas are unprepared to handle a terrorist attack using biological weapons. Wes Hill, the Beaver County Emergency Services director and the chairman of the Region 13 Counter-Terrorism Task Force that encompasses Pittsburgh and the 13 surrounding counties in southwestern Pennsylvania, said the report is "very misleading to the public."

NFL Terror in Pittsburgh

Aside from the fact that Pittsburgh has suffered multiple terror related events, Heinz Field in Pittsburgh was featured as the Gotham football stadium which was attacked by terrorists in the Batman movie "The Dark Knight Rises" (see photo). As depicted in the photo, despite the movie taking place in New York (Gotham), the UPMC (University of Pittsburgh Medical Center) logo was featured prominently in the background immediately after the terror attack in the movie. Six years ago on November 6, 2006, it was reported that two Carnegie Mellon University students were charged with criminal conspiracy and criminal trespass after they were caught in the middle of the night trying to sneak into Heinz Field, home of the Pittsburg Steelers. Although explosive-sniffing dogs found nothing of interest around the football stadium, an affidavit stated that the dogs registered two separate "positive hits for explosives" in the Lexus sport utility vehicle the men were driving. Five years later, the Pittsburg Steelers along with the Green Bay Packers were featured as the two teams in the Super Bowl XLV nuclear terror plot which was ultimately foiled.

Chemical Attack?

Unprecedented chemical releases and terror threats suggest that a chemical terror attack may be planned by Zionist terrorists within the U.S government. On October 29, 2012, a train "crash" caused a chemical release in Kentucky which resulted in a hazmat declaration and the evacuation of a one-mile radius. Two days later on November 1, 2012, it was reported that a hazardous materials release had sickened some 200 people in Santa Teresa, New Mexico, near the U.S.-Mexican border. A day later on November 2, 2012, it was reported that police had closed streets and sidewalks around the CNN Center in downtown Atlanta, Georgia due to the investigation of a chemical bomb threat. A few weeks later on November 17, 2012, it was reported that chemicals commonly used for making bombs and explosive devices have been found at the home of an unemployed northern New Jersey doctor. These chemical events, most likely staged, have no doubt readied the American public for chemical terror.

Bio-Terror Attack?

Based on the cumulative data of bio-terror research, a made-for-TV bio-terror "event" will likely occur in America involving the use of agents known as Anthrax and Smallpox. This future event is most likely being masterminded at the Center for Biosecurity located at the University of Pittsburgh Medical Center, who are responsible for numerous bio-terror related war games. Despite the television theatrics, the true source of the pandemic which is planned for 2012 will be poisonous vaccines issued to the public by the government and medical establishment in the immediate aftermath of a major bio-terror attack. Aside from having the means, the motive and the opportunity to conduct a major bio-terror attack, the government is the only entity with the resources to organize, plan, drill and execute a major bio-terror false-flag operation.

Batman Movie Foreshadows Pittsburgh Football Terror

The concepts and ideas put forth in the 2012 Batman movie entitled "The Dark Knight Rises" appears to be programming for what will transpire in America at the end of 2012. The movie title "The Dark Knight Rises" has implications that America will literally go dark, possibly from an EMP attack, and the movie itself is filled with numerous acts of terror and symbolism which ultimately programs viewers for what will likely later transpire in reality. Aside from a bloody attack on the New York Stock Exchange, a cyber-terror heist where criminals make off with millions, a terror

attack on the Brooklyn Bridge while children are stranded on a school bus, a prison break where criminals terrorize the streets, there is terrorist attack on the Gotham football stadium which curiously

has the UPMC (University of Pittsburgh Medical Center) logo in the background (see photo). The team jerseys of the Gotham team are black and gold, just like the Pittsburgh Steelers and just as the game is kicks off, massive explosions rip through the field and the city of Gotham. As anti-terror officials evaluate the situation, it is discovered that a nuclear scientist from Uzbekistan has been kidnapped and forced to construct a nuclear bomb. Interestingly, on March 16, 2012, it was reported that Bakhtiyor Jumaev, a Philadelphia resident believed to be from Uzbekistan, was charged with conspiring to provide material support or resources to a terrorist organization. What implications this movie will have on reality is not known, but exactly 9 days prior to the Batman Massacre, an alleged candidate for the U.S. Senate named David Vanderbeek appeared on a radio show and stated that the "soon to be released motion picture The Dark Night contains foreshadowing of a false flag attack".

U.S. Weak on Terror

Just as the Obama administration attempts to pick up the pieces of a public intelligence failure in the alleged Al Qaeda attacks on U.S. embassies in Benghazi, Libya, Egypt, Yemen and Tunisia, and the highly publicized sex scandal regarding the resignation of U.S. General David Petraeus, the illegal state of Israel is busy attacking the Gaza Strip in a coordinated effort to enrage Muslims against the West just prior to a terrorists attack on the U.S. homeland. These events are being orchestrated to precipitate a "revenge" type of scenario whereby the U.S. is attacked for its support of Israeli airstrikes on Gaza and because of Obama's perceived weakness on foreign policy as the U.S. Commander in Chief.

Middle East Scapegoats Primed

Only days before the scheduled terror attack, both Al Qaeda and the Taliban are front and center in the minds of millions, all thanks to the corporate media and the government of the U.K. In the highly rated Israeli inspired "Homeland" television series, terrorist leader "Abu" Nazir is being sought by the CIA in an effort to stop suicide bombers and other unknown terror attacks on America. In an obvious collusion between the CIA and Hollywood, it was reported on November 13, 2012, that a radical Islamist cleric "Abu" Qatada, described by prosecutors as a key Al Qaeda operative in Europe, was mysteriously freed from prison. According to reports, the preacher was seen smiling as he was driven away from Long Lartin maximum security jail in Worcestershire, central England. "Abu" Qatada is accused by Britain of links with Zacarias Moussaoui, the only person charged in the United States in the 9/11 terrorist attacks. Three days later on November 16, 2012, it was reported that a Taliban spokesperson sent out a routine email last week in which he publicly CC'd the names of everyone on his mailing list. According to the report, the names were disclosed in an email by

Qari Yousuf Ahmedi, an official Taliban spokesperson was made up of more than 400 recipients includes an address appearing to belong to a provincial governor, an Afghan legislator, several academics and activists.

American Music Awards

On Sunday, November 18, 2012, the 40th annual American Music Awards will kick off at the Nokia Theatre in Los Angeles, California. The 2012 American Music Awards could be used to spin and further amplify the Pittsburgh terror attacks to the rest of the world or may even be targeted for terror based on recent Hollywood bomb threats, riots at an MTV event in Europe and the rich history of violence at award shows. Sunday's ceremony features performances from high-profile stars such as Kelly Clarkson, Pink, No Doubt, Nicki Minaj, Justin Bieber, Christina Aguilera, Usher, Taylor Swift, Carrie Underwood and Chris Brown.

1. PITTSBURGH STEELERS & NFL TERROR

1.1: NFL Terror Drills (2001-Present)

The NFL has allowed the U.S. government to conduct numerous terror related drills in their football stadiums throughout America. These terror drills have trained local, state and federal officials for almost every conceivable act of NFL terror including but not limited to active-shooter scenarios, bio-chemical attacks, dirty bomb explosion and suicide terror attacks. In 2001, FEMA officials simulated a terror attack on the Superdome in New Orleans Louisiana, just prior to it hosting the Super Bowl. The Super Bowl terror drill simulated explosions as well as the outbreak of a mysterious bio-terror plague. Coincidentally, the Superdome will also host the 2013 Super Bowl on February 3, 2013.

1.2: NFL Dirty Bomb Terror Plot (October, 2006)

On October 20, 2006, it was reported that Jake J. Brahm, an alleged 20-year-old grocery store clerk, had posted threats on the internet of a terrorist attacks on NFL stadiums in which radioactive "dirty bombs" would be detonated at seven NFL football stadiums. According to reports, Brahm's posting on October 18, 2006, targeted stadiums in Miami, Atlanta, Seattle, Houston, Oakland, Cleveland and New York City. Brahm also added that the stadium explosions would be praised by Osama bin Laden as "America's Hiroshima" and spark global conflicts. The message said that bombs would be delivered by trucks and that "the death toll will approach 100,000 from the initial blasts and countless other fatalities will later occur as result from radioactive fallout." Although Brahm was arrested on federal charges that could have resulted in five years behind bars, he only received a 6 month prison sentence.

1.3: Pittsburgh NFL Bomb Scare (November, 2006)

On November 6, 2006, it was reported that two Carnegie Mellon University students, Sudeep Paul, 21, and Anand Shankar Durvasula, 20, were charged with criminal conspiracy and criminal trespass after they were caught in the middle of the night trying to sneak into Heinz Field, home of the Pittsburg Steelers. Although explosive-sniffing dogs found nothing of interest around the football stadium, an affidavit stated that the dogs registered two separate "positive hits for explosives" in the Lexus sport utility vehicle the men were driving. According to reports, Heinz Field security officers spotted the men on a security camera trying to enter the stadium. The security officers then approached the men who tried to escape, only to be apprehended by Pittsburgh police officers in waiting. The suspects initially told police that they were trying to check out the stadium because they had tickets to the Steelers game against the Denver Broncos, but later changed their story and told investigators they were trying to complete a music video. A video camera and tripod were allegedly found inside the vehicle which police found parked nearby. Even though the suspects were questioned by agents from the Joint Terrorism Task Force, Pittsburgh Police Chief Nate Harper stated that "We don't know exactly what their intentions were".

1.4: NFL Exempt from Terror Lawsuits (2008)

Congressional legislation passed in December of 2008, conveniently dismisses any potential lawsuits against the NFL stemming from a future terror attack on any of the NFL's football stadiums. The new law, entitled the SAFETY Act (Support Anti-terrorism by Fostering Effective Technologies), which was curiously not reported until September of 2009, essentially

guarantees that the NFL will not have to pay any claims that terror victims may file in the aftermath of an attack. According to the report, the "protection extends only to companies' services or equipment that the Homeland Security Department has approved as being effective in anti-terrorism." The NFL got the protection after the government approved the league's nine-page stadium-security guidelines. "An attack from a terrorist organization could put us out of business", stated NFL security chief Milt Ahlerich.

1.5: NFL & DHS Partnership (2011)

The NFL was intimately connected to the foiled Super Bowl XLV nuclear terror plot (see below), so it should come as no surprise that the NFL and DHS have partnered together in the "If You See Something, Say Something" terror program. The NFL and DHS terror partnership was forged just two days prior to Super Bowl XLV, when U.S. Department of Homeland Security Secretary Janet Napolitano stated that: "We are partnering this year with the NFL on our 'If You See Something, Say Something' campaign and launching that NFL partnership right here at the Super Bowl…The idea is simple…We are simply asking the American people to be vigilant, recognizing that our security is a shared responsibility that all of us must participate in. If a fan at the Super Bowl or any other American at any other place sees something that is potentially dangerous, then say something about it to local law enforcement or someone in authority".

1.6: Super Bowl Nuclear Terror Plot (February, 2011)

The Pittsburg Steelers along with the Green Bay Packers were featured as the two teams which planed in Super Bowl XLV on February 6, 2011. Unbeknown to many, a state-sponsored false-flag terrorist plot to detonate a nuclear bomb at Super Bowl XLV in Dallas, Texas, was foiled. Five days before on February 1, 2011, Julian Assange of Wikileaks revealed to the world via leaked classified diplomatic documents that Al-Qaida was on the brink of using a nuclear bomb and that the West was on the verge of a "Nuclear 9/11". What the diplomatic documents failed to mention was actual target, date and location of the upcoming nuclear terror attack. Published 4 days prior on January 28, 2011, a free ebook, entitled The Nuclear Bible that went viral on the internet, specifically named Super Bowl XLV as the target, date and location of the impending nuclear terror attack. Pakistan, the alleged greatest purveyor of terrorism and nuclear proliferation, was scheduled to be scapegoated for the nuclear attack that would kick off a nuclear World War III.

1.7: New NFL Security Protocols (2011-2012)

Shortly after the failed Super Bowl terror plot, the NFL drastically changed their security protocols, a clear move to give the NFL plausible deniability in the aftermath of a terror attack. The first phase came in September of 2011, when it was reported that under the new "enhanced" pat-down procedures, the NFL had ordered all 32 clubs to search fans from the ankles to the knees as well as the waist up. Previously, security guards only patted down fans from the waist up while looking for booze, weapons or other banned items. The second phase came in August of 2012 when it was reported that even newer security protocols were being implemented at all NFL stadiums. According to the NFL, the new procedures involved "using handheld metal detectors" to "ensure a safe game day environment for all fans". Football fans are now asked to hold their keys, cell phones and other metal items in their hands during the new security process, a new measure implemented to eliminate the need for "pat-downs" before games. It appears that the NFL is fully anticipating a terror attack and has gone through the necessary procedure to ensure that they are not held accountable in the aftermath.

1.8: NFL Attacks & Scares (2011-2012)

Sports stadium terror propaganda is all-time high and there have been at least 10 stadium deaths, shootings, stabbings, scares and threats in 2012 alone. Ever since the foiled Super Bowl XLV terror plot, there have been numerous incidents which foreshadow that NFL terror is on the horizon. On August 21, 2011, it was reported that two men were shot and a third man was beaten unconscious inside the stadium in the parking lot of Candlestick Park after a preseason game between the San Francisco 49ers and the Oakland Raiders. Roughly three weeks later on September 13, 2011, a man was arrested after allegedly using an illegal Taser in a fight with other fans during the Dallas Cowboys and New York Jets game. About a month later on November 10, 2011, a man was stabbed during a fight in the Qualcomm Stadium parking lot during a San Diego Chargers

and Oakland Raiders game. A month later on December 20, 2011, the start of Monday Night Football at Candlestick Park in San Francisco was delayed when a transformer exploded just outside the stadium. The unprecedented explosion delayed the start of the game for about 30 minutes. After being allegedly fixed, the power and lights went out for a second time around 6:45 p.m. causing a second delay of game that lasted 16 minutes in the second quarter. Roughly eight months later, on August 18, 2012, it was reported that a man was police responded to a call from a man who said he had "accidentally shot" another man in a parking lot near the University of Phoenix stadium during the Oakland Raiders and Arizona Cardinals game. Roughly a month later on September 15, 2012, a man shot and wounded a female parking lot employee before killing himself between the stadiums that are home to the Kansas City Chiefs and Royals. A month later on October 15, 2012, a man suffered non-fatal injuries when he was stabbed outside Candlestick Park, shortly after the start of Sunday's game between the San Francisco 49ers and the New York Giants. Based on the sheer amount of events involving NFL teams from Oakland and San Francisco, a terror event may transpire in the Bay Area sometime in the near future. On November 16, 2012, it was reported that officials had found the dead body of a 26-year-old man who was reported missing after attending Thursday night's NFL game between the Buffalo Bills and the Miami Dolphins.

1.9: NFL Bomb Threat (January, 2012)

On June 2, 2012, it was reported that a Detroit Lions fan, Shawn Payton, 34, had called in two bomb threats during Detroit's playoff loss to the New Orleans Saints at the Superdome in January of 2012. According to reports, Payton called in the hoax threats from his home in Jackson, Michigan, in an attempt to halt the January 7, 2012, game, which the Saints went on to win. According to the indictment, he told the receptionist, "I will blow up your building." In the second message, which was recorded by police after the first threat was reported, he ordered, "I want you to relay a message to the sideline: If your stupid Southern team keeps winning, there will be … severe consequences, OK?" FBI agents allegedly traced phone records to nab Payton, who eventually pleaded guilty to a felony charge of using interstate communications to transmit a threat. Although Payton faced a maximum of five years' imprisonment and a $250,000 fine, it was reported on September 7, 2012, that he was only sentenced to three years probation and two months of home confinement.

1.10: NFL Bio-Terror Foreshadowing? (August, 2012)

On August 23, 2012, it was reported that potentially rabid bats had swooped down fans during a game between the Baltimore Ravens and the Detroit Lions and that the Maryland's Department of Health and Mental Hygiene (DHMH) has warned people sitting in section 500 that they could be at risk for rabies. Curiously, the Pittsburgh Steelers play the Baltimore Ravens in Pittsburgh on November 18, 2012. Will chemical laden jets, missiles or bombs be waiting for NFL fans come Sunday night?

1.11: NFL Theft in Pittsburgh (October, 2012)

During an October 28, 2012, NFL game in Pittsburgh, Pennsylvania between the Steelers and the Washington Redskins, visiting Redskins coach Mike Shanahan allegedly had money and his passport stolen from the locker room. According to the report, Redskins director of security Ed Burke released a statement stating that officers in Pittsburgh insisted on filing a police report and that the investigation is ongoing. This NFL theft, the first of its kind in the National Football League, clearly indicates that security surrounding Heinz Field and the Pittsburgh Steelers has been compromised and potentially vulnerable to a terror attack from within the stadium.

1.12: NFL's 'Salute to Service' (November, 2012)

The NFL is dedicating the entire month of November to the U.S. military in what is being called 'Salute to Service', a pro-war propaganda campaign started in 2011. According to reports, "The National Football League will continue its long history of honoring veterans and active duty members of the military with its annual 'Salute to Service' campaign" which is "designed to unify and elevate the extensive military appreciation work of the NFL and its clubs". All 32 NFL teams have designated one home game to honor the U.S. military in which teams will be forced to display a number of 'Salute To Service'-branded elements in their stadiums including goal post wraps, pylons with camouflage ribbon decals, wall banners with the words 'Salute To in the back of

the end zone, camouflage ribbon lapel pins, camouflage Gatorade towels, camouflage Nike and Under Armour gloves for players, camouflage captain's patches and camouflage ribbon footballs used on every play.

2. PENNSYLVANIA BIO-TERROR

2.1: Bio-Terror Mastermind: Ezekiel Emanuel

When a major bio-terror attack and subsequent pandemic hits the United States of America, it will most likely be executed from behind the scenes by dual U.S.-Israeli citizen Ezekiel Emanuel, also known as the "Doctor of Death". Emanuel, the brother of Chicago Mayor Rahm Emanuel, is the son of a known Israeli terrorist and a bioethicist at the University of Pennsylvania School of Medicine. Emanuel's native country of Israel is the only modern nation that has not signed the 1972 Biological Weapons Convention (refusal to engage in offensive biological warfare, stockpiling, and use of biological weapons). Israel is also the only modern nation that has signed but not ratified the 1993 Chemical Weapons Convention (refusal to produce, stockpile and use chemical weapons). Should a future biological terror attack hit America or any other nation, the state of Israel and its citizens will be prime suspects.

2.2: Pennsylvania & Bio-Terror

Shortly after 9/11, the city of Pittsburgh became the focal point of bio-terror in the now infamous "war on terror". On February 5, 2002, it was reported that then U.S. President Bush had allocated funds to the University of Pittsburgh for a beeper system that notices if there is a surge in respiratory distress and skin rashes in dozens of hospitals in western Pennsylvania and checks the air for potentially dangerous substances. Three years later on May 9, 2005, it was reported that a bio-terror drill at PNC Park, home of the Pittsburgh Pirates, simulated an explosion in the seating area which represented a suicide bombing attack. A short time later, another bomb explosion simulated a poisonous sarin gas bomb. Roughly four years later on September 7, 2009, it was reported that Pennsylvania-based BSL-3 BioLab had again failed a safety inspection. The lab was cited for faulty alarms signaling a power failure and poor seals around doors and other areas that could allow contaminated, potentially deadly air to leak out. That same year, it was reported on December 21, 2009, that Jameson and Ellwood City hospitals in Pennsylvania received a $1.6 million grant award from the U.S. Defense Department to aid them in their fight against bioterrorism and pandemics. Three years later on January 1, 2012, it was reported that Pittsburgh and its surrounding areas are unprepared to handle a terrorist attack using biological weapons. Wes Hill, the Beaver County Emergency Services director and the chairman of the Region 13 Counter-Terrorism Task Force that encompasses Pittsburgh and the 13 surrounding counties in southwestern Pennsylvania, said the report is "very misleading to the public." Lastly, on November 15, 2012, it was reported that Pittsburgh- based BIOSAFE, Inc. a supplier of microbes, including mold, mildew, bacteria, algae and viruses, signed a strategic partnership agreement with Gelest, Inc. of Morrisville, Pennsylvania. What this merger means in the long run is unknown, but due to the fact it deals with bio-terror related bacteria and viruses raises red-flags nonetheless.

2.3: Pennsylvania Bio-Terror Beta-Tests?

It appears that a college and high school in Pennsylvania may have been the victims of bio-terror beta-tests, likely funded and executed at the behest of individuals affiliated with the Center for Biosecurity at the UPMC. While the aforementioned claims have not been substantiated, the proximity and timing of the threat and outbreak justify their documentation. On September 26, 2012, it was reported that a Pennsylvania community college recently shut down after an anonymous caller threatened the campus with a chemical attack using a nerve agent. According to the report, Westmoreland County Community College, located in Youngwood, Pennsylvania, closed its main campus and eight satellite locations after a caller threatened to attack the school if his demands for money were not met. The second incident occurred four days later on September 30, 2012, when it was reported that a high school football game was canceled due to an alleged MRSA outbreak. According to reports, nearly a third of the Council Rock South football team had a skin condition known as MRSA, a staph infection affecting the skin.

3. PENNSYLVANIA TERROR

3.1: Pennsylvania Terror Attacks (2001-Present)

Pennsylvania is well-known for its role in the 9/11 event in which United Airlines Flight 93 was hijacked by four al-Qaeda terrorists on and crashed into a field near Shanksville, Pennsylvania, killing all 44 people aboard including the 4 alleged hijackers. More recently, Pennsylvania suffered a terror attack on March 8, 2012, when a gunman opened fire at the Pittsburgh area Western Psychiatric Institute and Clinic, killing 2 and injuring 7. The alleged gunman died while exchanging fire with police, although it was unknown whether he shot himself. Three months later on July 26, 2012, it was reported that 5 people were arrested for allegedly terrorizing a Jewish camp in Pennsylvania when they drove a white Ford pickup truck "recklessly" through the camp, "narrowly missing several campers and staff" and damaging fields, yards, buildings and fences

3.2: Pennsylvania Terror Drills (2005-Present)

Recent and suspicious terror drills executed within the state of Pennsylvania in 2012 indicate that Mumbai style terror attacks (multiple locations attacked simultaneously) may be imminent. On May 9, 2005, it was reported that a bio-terror drill at PNC Park, home of the Pittsburgh Pirates, simulated an explosion in the seating area which represented a suicide bombing attack. A short time later, another bomb explosion simulated a poisonous sarin gas bomb. Roughly four years later on July 19, 2009, it was reported that a Mumbai style terror drill had been executed at Westmoreland County Community College Public Safety Training Center by 14 Western Pennsylvania police departments in which 3 terror suspects open fire at a local Wal-Mart, while a bomb goes off at the Westmoreland County Prison and another detonates at a five-star hotel. Roughly three years later, it was reported on June 26, 2012, that a terror drill entitled "Operation Edge" was executed in which a "bomb" went off on a subway train in Philadelphia, trapping it in a tunnel. As emergency crews responded, an out-of town ambulance with a 900-pound bomb meant to kill the first responders went unnoticed. Two months later on August 2, 2012, it was reported that a terror drill at Pittsburgh International Airport simulated a commercial plane disaster in which the engine failed during takeoff, the plane crashed, a wing fell off, and a fire engulfed the plane. Six days later on August 8, 2012, it was reported that a terror drill paid for by a federal grant through the Department of Homeland Security simulated three masked gunmen attacking Parkland High School in Allentown, Pennsylvania.

3.3: Pennsylvania Terror Plots & Patsies (2010-Present)

The state of Pennsylvania has had at least 10 different terror related cases in which individuals were arrested based for terrorist acts committed or for suspected links to terrorist organizations. On March 10, 2010, it was reported that according to the U.S. Justice Department, a Pennsylvania woman named Colleen LaRose, also known as "Jihad Jane" and "Fatima LaRose," was indicted for conspiracy to provide material support to terrorists and to kill a person in a foreign country. A few months later on September 21, 2010, it was reported that that Tea Party activists had made the Pennsylvania terror threat list generated by an Israeli company. Roughly a year later on July 19, 2011, it was reported that Emerson Winfield Begolly, of New Bethlehem, Pennsylvania, was charged with soliciting crimes of violence, including acts of terrorism, and with posting bomb-making materials online. On March 16, 2012, it was reported that a Philadelphia man named Bakhtiyor Jumaev was arrested and charged in an alleged plot to provide support to an Uzbek terrorist organization. Jumaey was officially charged with conspiring to provide material support or resources to a terrorist organization. The next month on April 12, 2012, it was reported that the Pittsburgh University police department and Allegheny County Police arrested Mark Lee Krangle as he arrived at the Pittsburgh airport on a flight from New York on charges of harassment and terroristic threats. A month later on May 4, 2012, it was reported that Mohammad Hassan Khalid pleaded guilty to U.S. terror charges for offering assistance to an American woman who dubbed herself "Jihad Jane". Khalid was convicted of a single count of conspiracy to provide material support to terrorists for his offer to raise money and recruit terrorists for jihad. Two months later on July 26, 2012, it was reported that 5 people were arrested for allegedly terrorizing a Jewish camp in Pennsylvania when they drove a white Ford pickup truck "recklessly" through the camp, "narrowly missing several campers and staff" and damaging fields, yards, buildings and fences. The next month on August 15, 2012, it was reported that man with ties to a Scottish terrorist group was accused of sending email bomb threats more than 50 times to the

University of Pittsburgh. According to the report, Scottish National Liberation Army member Adam Stuart Busby is accused of sending the email threats to the university, along with multiple bomb threats to western Pennsylvania courthouses, and specific threats of violence. A couple months later on October 19, 2012, it was reported that Alexander Waterland pleaded guilty to conspiracy related to threats against the University of Pittsburgh. Lastly, on November 16, 2012, it was reported that Pittsburgh police and the FBI are searching for Rashee Beasley and Jamal Knox, both of whom face charges of making terroristic threats, intimidation of witnesses, retaliation against witnesses and conspiracy.

3.4: Pennsylvania Terror Threats (2010-Present)

Starting in 2010, Pennsylvania, specifically the city of Pittsburgh, has been allegedly been subjectedhundreds of terror related threats, mostly coming in the form of bomb threats.On May 2, 2010, it was reported that a suspicious bomb like device near the finish line of the Pittsburgh Marathon prompted police to briefly stop the race after it had begun and change the actual course of the race. A year or so later on October 22, 2011, it was reported that authorities in Pennsylvania are searching for a university student who allegedly made a threat on Twitter to kill classmates in a reference to the 2007 Virginia Tech massacre which killed 32 and wounded 15. A month later on November 12, 2011, it was reported that university Police investigated a bomb threat before the Penn State-Nebraska game in State College, Pennsylvania. According to the report, police used bomb-sniffing dogs to investigate an anonymous tip of a bomb at Beaver Stadium. A year or so later on April 6, 2012, it was reported that there have been at least 31 building bomb threats on the University of Pittsburgh campus since February of 2012. Six days later, it was reported that the bomb threat total had surpassed 50. According to the latest report dated September 12, 2012, the University of Pittsburgh bomb threat total is now past 60. A few weeks later, it was reported on September 26, 2012, that a Pennsylvania community college recently shut down after an anonymous caller threatened the campus with a chemical attack using a nerve agent.

3.5: Pittsburgh Fails to Properly Train Undercover Police Officers (2012)

In a legal maneuver which gives plausible deniability to the city of Pittsburgh post terror attack, it has been revealed that undercover Pittsburgh police officers have repeatedly acted in an illegal manner. On November 14, 2012, it was reported that a federal lawsuit had been filed stating that Pittsburgh has failed to train its undercover police officers in how to properly identify themselves during confrontations with the public. According to the report, the plaintiff, Evelyn Marie C. Reese claims the lack of training is responsible for Pittsburgh police officers Jeffrey John Abraham and Joseph P. Fabus shooting and killing her son, Lawrence Jones, during a traffic stop. According to the lawsuit, officers Abraham and Fabus weren't supposed to be conducting traffic stops while they were in civilian clothes or operating an unmarked car. Aside from the negative implications this stunning revelation has on the city of Pittsburgh, the undercover police scandal potentially foreshadows the means by which "terrorists" will gain future access to restricted areas within the city of Pittsburgh.

4. CANADIAN TERROR ANGLE

Canadian Terror Plots & Patsies (2006-2012)

To date, Canada has had at least 5 high-profile terror plots. On June 6, 2006, it was reported that a frightening plot to bomb high profile targets in Toronto and the arrest of 17 alleged terror suspects fell apart as evidence surfaced that "The Royal Canadian Mounted Police itself delivered three tons of potential bomb-making material," to the alleged terrorists. Four years later on August 28, 2010, it was reported that the Canadian Parliament was reportedly on the hit-list of the Al-Qaeda-linked terror plot in which police charged three men with terrorist activities in a sweep that uncovered videos, schematics and manuals on bombing-building in their homes. In one home, police found some 50 remote-control detonators for improvised explosive devices, or IEDs. A year later on March 15, 2011, it was reported that counterterrorism officials on both sides of the border announced charges against a 30-year-old Canadian fugitive reaffirming their long-held suspicions that he trained al-Qaeda operatives who tried to kill U.S. citizens. That same day, the RCMP charged two Canadians with terrorism-related offences in connection to a 2009 plot to blow up packed subway cars in New York City. On October 19, 2012, it was reported that a judge ruled there is enough evidence to

extradite a Canadian man to the U.S. to face charges that he helped coordinate Tunisian jihadists believed responsible for separate suicide attacks in Iraq in 2009 that killed five American soldiers outside a U.S. base and seven people at an Iraqi police complex. On October 22, 2012, it was reported that Khalid Awan, a Canadian citizen, is a "material witness" in the grand jury investigating Osama bin Laden's involvement in the attacks and has been held since 2001. Two days later on October 24, 2012, it was reported that Algerian terrorist Ahmed Ressam, who in December of 1999, drove off a ferry from Canada into Washington state with a trunk full of explosives, was sentenced to 37 years in prison for plotting to bomb LAX airport.

Canadian Terror Threat to U.S. (2010-Present)

On October 19, 2010, it was reported that Ottawa can't seem to persuade Americans that it's a myth that terrorists lurk in Canada posing a grave threat to America because of a porous border. "The fact of the matter is that Canada allows people into its country that we do not allow into ours," DHS Chief Napolitano stated. Two years later on September 30, 2012, it was reported that terrorists see Canada as a safe haven when an Israeli anti-terror corporation stated that terrorists have spared Canada from a major attack because they see the country as a place to raise money and as a safe haven for their families. "Terror groups don't want to cause a problem here," Yoav Lorbert, the security manager of El Al Israel Airlines. "These groups attack for a reason and Canada is not an attractive target." Two months later on November 13, 2012, it was reported that the U.S. government calculates there's a low risk of terrorism against North American shipping, ports and along shared waterways, in contrast to a Canadian assessment of maritime security vulnerabilities. "The capabilities of al-Qaida and its sympathizers to conduct small boat water-borne improvised explosive device attacks against the U.S.-Canada MTS (marine transport system) probably remain limited," says a newly surfaced Department of Homeland Security report. The report also concludes that "Ships traveling between the U.S. and Canada and the ports that serve them can present attractive targets to terrorists, but the vessels and facilities present a difficult environment to execute an attack".

Canadian Politician Attack (2012)

On September 5, 2012, it was reported that Richard Henry Bain was been detained by police officials after opening fire and killing one person while Pauline Marois of the separatist Parti Quebecois was giving her victory speech The new separatist premier was abruptly rushed party from the stage by security after police said a masked gunman wearing a bathrobe opened fire just outside the building. According to reports, the gunman was heard shouting "The English are waking up!" in French as police dragged him away. RDI television showed pictures of police arresting a man with a rifle outside the venue where Marois had been speaking with a large fire at the back of the building. Bain, 61, of La Conception, Quebec, was arraigned on 16 charges, including murder, attempted murder and possession of explosives.

CONCLUSION

An unprecedented "2012 Doomsday" type bio-terror event in Pittsburgh post-election would give Obama the national and global tragedy that his administration has yet been unable to pull off. To date, there have been at least three Obama terror plots which have been foiled: The Super Bowl XLV nuclear terror plot, the 2012 New Year's Eve dirty bomb plot, and the 2012 Democratic National Convention terror plot. After being caught red-handed on multiple occasions, the Obama Administration and its Zionist controllers are more desperate than ever to conduct major false-flag operations with the United States.

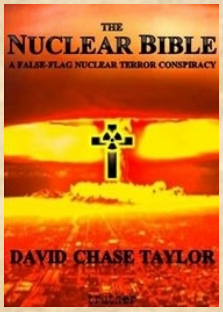
Obama & Pennsylvania Gun Owners

While campaigning for the 2008 U.S. Presidential Election in April of 2008, then candidate Barack Obama stated the following in respect to the people of Pennsylvania: "You go into these small towns in Pennsylvania and, like a lot of small towns in the Midwest, the jobs have been gone now for 25 years and nothing's replaced them. And they fell through the Clinton administration, and the Bush administration, and each successive administration has said that somehow these communities are gonna regenerate and they have not. And it's not surprising then they get bitter, they cling to guns or religion or antipathy toward people who aren't like them or anti-immigrant sentiment or anti-trade sentiment as a way to explain their frustrations." Should an Obama terror attack

occur in Pennsylvania, it may be ultimately used to as justification to provocateur violence against the U.S. government in the aftermath of the attack.

Obama Desperate

The U.S. economy is at an all-time low and dissent for Obama and the U.S. government is at an all-time high. According to a Financial Times article, Obama's has a "growing credibility crisis" and there are fears that the Democrats could lose the White House and the Senate to the Republicans. White House adviser Robert Shapiro made it crystal clear that Obama is relying on a terror attack to rescue his presidency: "The bottom line here is that Americans don't believe in President Obama's leadership," said Shapiro, "He has to find some way between now and November of demonstrating that he is a leader who can command confidence and, short of a 9/11 event or an Oklahoma City bombing, I can't think of how he could do that. The November election Shapiro spoke of came and went, so it's crystal clear that an Obama false-flag attack is imminent.



David Chase Taylor *is an American journalist living in Zürich, Switzerland, where he has applied for political asylum after the release of The Nuclear Bible, a book credited with stopping a false-flag nuclear terror attack upon America. Taylor has also released the Bio-Terror Bible, a book and website exposing the coming global bio-terror pandemic. Taylor, the editor-in-chief of Truther.org, has also exposed the 2012 Democratic National Convention Terror Plot, NATO's implementation of the SKYNET Terminator Program, as well as the Alex Jones links to STRATFOR.*

TRUTHER.ORG LEGAL DISCLAIMER: Terror related assertions, forecasts and predictions by Truther.org DO NOT conclusively indicate that that said terror events will transpire in reality, but rather that there is a distinct possibility that said terror events could happen based on the cumulative terror related data. As documented by Truther.org, plans are always subject to change and once a terror related plot is exposed, it is immediately canceled. Terror attacks always have a "paper trail" in order to set-up patsies and scapegoats, create public plausible deniability, and to distract from the true perpetrators of terror. Whether or not planned terror events transpire is inconsequential, for Truther.org's sole goal is preventing another 9/11 type terror event by drawing unwanted attention to various terror related "paper trails".

► **Note:** Due to large numbers of links incorporated to this text it is suggested to read it in its web form.

Environics CBRN Event Module Provides CBRN Continuous Fixed Monitoring in a Compact Portable Package

Source: http://www.environicsusa.com/

The Environics CBRN Event Module provides continuous monitoring and alarms for CBRN threats in a compact package suited for easy deployment for high profile events in venues that would not normally warrant installation of a 24/7 CBRN detection system. Within the transportable wheeled Pelican™ case are detectors for Chemical Warfare Agent (CWA) and Toxic Industrial Chemical (TIC) gases/vapors using the reliable ChemPro detection engine. A Geiger-Muller gamma radiation detector provides continuous detection of radiation threats. Continuous scanning for biological threats is done using the proven technique of particle sizing and fluorescence in a compact, transport hardened device. If a biological threat is detected, the CBRN Event Module will trigger a sampler to put a sample on appropriate filter media

for further analysis. The innocuous case has hardened sample inlets designed to prevent ingress of rain and dirt. One or several CBRN Event Modules can be networked via Ethernet cabling or wireless modems so that their readings can be seen in a remote incident command site. It has easy to swap batteries for up to 18 hours of off the grid use or it can be powered continuously from 110/220VAC. When the event is over the CBRN Event Module is easily and quickly packed up and moved to its next mission.

Improved technology to detect hazardous chemicals

Source:http://www.homelandsecuritynewswire.com/dr20121125-improved-technology-to-detect-hazardous-chemicals

Scientists at Imperial College London have developed a system quickly to detect trace amounts of chemicals like pollutants, explosives, or illegal drugs.

The new system can pick out a single target molecule from 10,000 trillion water molecules within milliseconds, by trapping it on a self-assembling single layer of gold nanoparticles.

The team of scientists, all from the Department of Chemistry at Imperial, say this technology opens the way to develop devices that are compact, reusable and easy to assemble, and could have a range of uses including detecting illegal drugs, explosives, pollutants in rivers, or nerve gases released into the air. Results of the research are published this week in *Nature Materials*.

An Imperial College London release reports that in one potential use, such a device could detect tiny traces of explosives or other illegal substances left behind by criminals on the surfaces they touch. The advances made by this team would help law enforcers to identify and deal with such activities involving illegal substances.

Research co-author Michael Cecchini said: "Our system could solve a key problem of reliable and portable chemical testing for use in the outside world. It is very sensitive and could well be used to look for very small amounts of a specific molecule even in busy, public areas."

The target molecules are identified by an effect called Surface Enhanced Raman Scattering (SERS) of light. This technique, which has been around since the late 1970s, works because each molecule scatters light in a unique way. Previous research has shown that the signal can be amplified by catching molecules in a particular way on a layer of metal nanoparticles. These sheets, however, are complex to manufacture.

The scientists overcame this problem by dealing with interfaces of two liquids that do not mix, such as water and oil, or water and air interface. By manipulating the electrical charge of the gold nanoparticles and the composition of the solution, they were able to create a situation where the particles line themselves up at the interface between the two non-mixable liquids, or between a liquid and the air.

"The trick to achieving this system's sensitivity to the target molecules was in finding the conditions at which nanoparticles would settle at the interface at close distances to each other without fusing together," commented another co-author Jack Paget.

If the nanoparticles are disturbed, they spontaneously arrange themselves back in the correct way make the device more robust than those made rigidly arranged particles. Research co-author Vladimir Turek said: "The system shows real promise for detectors for use in rough outdoor environmental and defence applications, since the liquids and nanoparticles can be easily replaced to regenerate the device."

This research is supported by funds from the UK's Defense Science and Technology Laboratory (DSTL) and the European Research Council (ERC) starting investigator grant.

— Read more in M. P. Cecchini et al., "Self-assembled nanoparticle arrays for multiphase trace analyte detection," Nature Materials (18 November 2012)

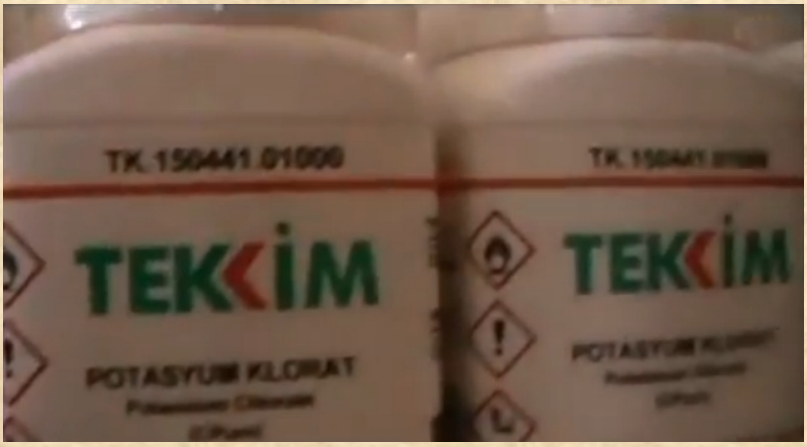
Abstract

Nanoplasmonic structures designed for trace analyte detection using surface-enhanced Raman spectroscopy typically require sophisticated nanofabrication techniques. An alternative to fabricating such substrates is to rely on self-assembly of nanoparticles into close-packed arrays at liquid/liquid or liquid/air interfaces. The density of the arrays can be controlled by modifying the nanoparticle functionality, pH of the solution and salt concentration. Importantly, these arrays are robust, self-healing, reproducible and extremely easy to handle. Here, we report on the use of such platforms formed by Au nanoparticles for the detection of multi-analytes from the aqueous, organic or air phases. The interfacial area of the Au array in our system is ≈25 mm^2 and can be made smaller, making this platform ideal for small-volume samples, low concentrations and trace analytes. Importantly, the ease of assembly and rapid detection make this platform ideal for in-the-field sample testing of toxins, explosives, narcotics or other hazardous chemicals.

A troubling video appears on YouTube showing rebel fighters testing chemical weapons in Syria

Source: http://www.syria-tribune.com/e/index.php/by-syria-tribune/58-chem-weapons-in-syria

While President Obama is busy talking about Syria's chemical weapons, a troubling video appears on YouTube yesterday showing what appears to be a rebel group testing chemical weapons on lab rabbits, and threatening to use them against Syrian civilians on a sectarian basis.



The video (see here) starts with several scenes showing chemical containers with Tekkim labels (Tekkim is a Turkish chemicals company) and some lab equipment, while playing Jihadists chants in the background. A glass box then appears with two rabbits inside, with a poster on the wall behind it reading *The Almighty Wind Brigade* (*Kateebat A Reeh Al Sarsar*). A person wearing a lab mask then mixes chemicals in a beaker in the glass box, and we see some gas emitting from the beaker. About a minute later, the rabbits start to have random convulsions and then die. The person says: *You saw what happened? This will be your fate, you infidel Alawites, I swear by ALLAH to make you die like these rabbits, one minute only after you inhale the gas.*

Judging from the rabbits' reaction, the gas must be a nerve agent. The number of containers, if not a bluff, indicates ability to produce a considerable amount of this gas. Deployment could be by means of a smoke generator placed in the target area, an explosion, possibly a suicide one, of a "chemmed" car, or simply by using a humidifier.

This alarming video poses many serious questions: Who is this brigade? What will NATO's reaction be if this was proven to be a rebel group? Is this going to be used a false alarm in a

pretext to justify war against Syria? How did these chemicals reach this brigade? Is Tekkim or the Turkish Government going to comment on this? How is this related to the defeat of rebel fighters in the airport battle? Questions left unanswered at the moment, until we see more of what is likely to be a horrific chapter of the Syrian conflict.

EDITOR'S COMMENT: In addition to above questions – if TEKKIM possesses these chemicals (precursors) and perhaps many others, does this imply that its government has the ability/potential to manufacture CWAs?

Syrian Bombs Are Now Filled With Chemicals — And Could Be Up for Grabs

Source:http://www.wired.com/dangerroom/2012/12/syria-chemical-terror/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+WiredDangerRoom+%28Wired%3A+Blog+-+Danger+Room%29

The Bashir Assad regime in Syria is loading of some of its weapons with deadly nerve agents, and mixing together the chemical precursors needed to carry out a sarin-laced attack. But that may not be the biggest chemical threat Syria faces. There's also an increasing chance that a terror group might get its hands on some of the planet's most gruesome chemical arms.

Assad's chemical corps have spent years buying up and experimenting with the chemicals needed to make the nerve agent sarin; not even an increasingly bloody civil war has kept the labs from running. Today, Syria-watchers in the U.S. government believe, these chemical engineers may be skilled enough in handling sarin that the nerve agent might remain deadly for up to a year. ("This is not a 'move it or lose it' situation," one American official tells Danger Room.) And during that time, the sarin could be acquired by one of the Islamic extremists working in the loosely led rebel movement to topple the Assad regime. In other words: There's the prospect of chemically armed terrorists emerging from the Syrian civil war.

"Uncertainties regarding this crisis are pervasive, yet at least one outcome is highly probable: terrorist acquisition of chemical weapons if the regime falls," writes Federation of American Scientists analyst Charles Blair.

The nerve agent sarin is inherently unstable, breaking down over time and potentially corroding its containers — especially if the sarin is anything less than pure. So when Assad's engineers began combining some of its stores of phosphorous compounds and isopropanol to make the deadly agent, it sparked fears that the Syrian military would either have to have employ the chemical weapons, or see a portion of its stockpile vanish.

But there's a converse, and potentially more troubling, scenario. If Assad's sarin is stable enough to last for months, as U.S. observers believe, it could be a tempting target for some of the more radical elements in the Syrian opposition. With more than 500 metric tons of nerve agent precursors scattered across more than two dozen sites, there have long been opportunities for a militant band getting its hands of some portion of these chemicals. Now that some of those precursors have been combined and loaded into munitions in central Syria, it makes the prospect of such acquisitions even more dark. Yes, mixed sarin is much more dangerous to maintain and transport than its precursor chemicals separately; "it makes handling this stuff ten times harder," says one U.S. official. But is easier to employ as a weapon.

BM-21 "Grad" rockets

These safety and security concerns led the U.S. and other chemical-armed states during the Cold War to build artillery rounds that keep the two "binary" precursors separate. Only when the round is fired — and spinning thousands of times per minute — does the membrane separating the two

chemicals break, and the deadly combination form.

But this decades-old approach has been difficult for other states to master. The Saddam Hussein regime in Iraq, for example, "tested a limited number of binary artillery systems, including 155-mm and 152-mm shells for sarin, but did not enter serial production of such systems," according to one United Nations report. During Hussein's war with Iran in the 1980s, Baghdad's military didn't use the binary shells during its chemical attacks. "The Iraqis used to make it [the sarin] up and shoot it off right away," RAND corporation unconventional weapons specialist James Quinivan tells Danger Room.

Many of Syria's chemical-capable munition arms aren't artillery rounds at all. They're BM-21 "Grad" rockets and rudimentary Soviet-era gravity bombs, designed to be dropped from airplanes. Neither of them spins fast enough to break a membrane in-flight. Depending on the weapon, the precursor chemicals are loaded in separately, and then mixed within the munition while it is still on the ground. "Or they'll mix it before putting it on the weapons," one U.S. weapons intelligence expert tells Danger Room. "This is Russian stuff, older. So there's just a single chamber" on the munition.

The blending is a tricky process; the precursors have to agitated just so, and sometimes cooled as they are mixed. But if it's done right, the result is a nerve agent so awful and so taboo, no one in the world has dared to used it for decades. That is a point the Syrian military has now reached; "they've gotten to the point where the can load it up on a plane and drop it," an American official told Danger Rom earlier this week. Hopefully, the prohibition against used these weapons will still hold.

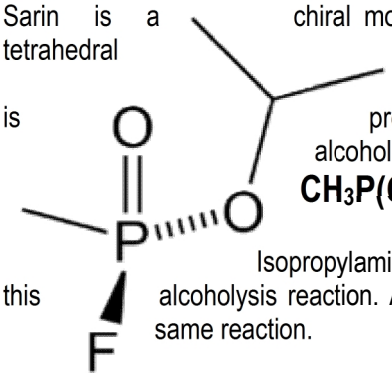
In the meantime, according to one report, Western governments are training some of the more responsible Syrian rebel groups in chemical weapons security. The training is reportedly taking place in Jordan and in Turkey, where the U.S. has been schooling the rebels for months in using the latest communications gear. "U.S. contractors have also been on the ground in Syria to monitor the status of regime stockpiles," according to the new *Syria Deeply* site.

At least one opposition leader is trying to work behind the scenes with Assad officials to keep the weapons and their chemical precursors safe. And everyone from President Obama to the U.N. Secretary-General to the head of NATO are warning Damascus not to go any further with its nerve agent preparations.

"Our concerns are that an increasingly desperate Assad regime might turn to chemical weapons or might lose control of them to one of the many groups that are now operating within Syria," Secretary of State Hillary Clinton said on Thursday, in advance of a meeting with her Russian counterpart. "And so, as part of the absolute unity that we all have on this issue, we have sent an unmistakable message that this would cross a red line and those responsible would be held to account."

Sarin – Production and structure

Sarin is a chiral molecule (typically racemic), with four substituents attached to the tetrahedral phosphorus center. The S_P form (shown) is the more active enantiomer due to its greater binding to acetylcholinesterase. It is prepared from methylphosphonyl difluoride and a mixture of isopropyl alcohol.



$$CH_3P(O)F_2 + (CH_3)_2CHOH \rightarrow [(CH_3)_2CHO]CH_3P(O)F + HF$$

Isopropylamine is added to neutralize the hydrogen fluoride generated during this alcoholysis reaction. As a binary chemical weapon, it can be generated in situ by this same reaction.

UMass Amherst Research Develops 'Second Skin' Military Fabric to Repel Chemical and Biological Agents

Source: http://www.umass.edu/newsoffice/umass-amherst-research-develops-%E2%80%98second-skin%E2%80%99-military-fabric-repel-chemical-and-biological-agents

Military uniforms of the future may offer a new layer of critical protection to wearers thanks to research by teams at the University of Massachusetts Amherst and several other institutions who are developing a nanotube-based fabric that repels chemical and biological agents.

UMass Amherst polymer scientists Kenneth Carter and James Watkins, collaborating with team leader Francesco Fornasiero of Lawrence Livermore National Laboratory (LLNL), recently received a five-year $1.8 million grant to design ways to manufacture the new material as part of a $13 million project funded by the U.S. Defense Threat Reduction Agency. It's estimated that the new uniforms could be deployed in the field in less than 10 years.

The researchers say the fabric will be able to switch reversibly from a highly breathable state to a protective one in response to the presence of the environmental threat without the need for an external control system. In the protective state, the uniform material will block the chemical threat while maintaining a good breathability level. "The uniform will be like a smart second skin that responds to the environment," says Fornasiero.

UMass Amherst polymer scientists bring expertise in additive-driven assembly processes that bring polymers and nanoparticles together to produce hybrid functional materials to the project. Membrane and layer fabrication will take place in part through the university's Roll-to-Roll Nanofabrication Laboratory.

The new fabric's reversibility is due to highly breathable membranes with pores made of a few-nanometer-wide, vertically-aligned carbon nanotubes modified with a functional surface layer designed to respond to the presence of a chemical warfare agent, says Watkins at UMass Amherst. The threat response would be triggered by direct chemical warfare agent attack. The fabric would switch to a protective state by closing the pore entrance or by shedding the contaminated surface layer.

For wearer comfort and safety, high breathability is a critical requirement for protective clothing to prevent heat stress when military personnel are engaged in missions in contaminated environments. To provide high breathability, the new composite material will take advantage of the unique transport properties of carbon nanotube pores, which offer gas transport rates two orders of magnitude faster than any other pore of similar size.

The polymer scientists point out that biological agents such as bacteria and viruses are close to 10 nanometers in size. Because the membrane pores on the uniform are only a few nanometers wide, these membranes will block such agents.

However, chemical agents such as mustard gas and nerve gas can be much smaller and require the membrane pores to be able to react to block that threat. To create a multifunctional membrane, the research team plans to modify the surface of the original prototype carbon nanotube membranes with chemical threat responsive functional groups. These functional groups sense and block the threat like gatekeepers on entrance.

The scientists also plan to develop a second, "shedding" response scheme in which the fabric exfoliates upon recation with a chemical agent. In this way, the fabric will be able to block chemical agents such as sulfur mustard (blister agent), GD and VX nerve agents, toxins such as staphylococcal enterotoxin and biological spores such as anthrax.

Carter at UMass Amherst says, "Mimicking the way real skin responds to threats by exfoliation and shedding of contaminated areas will allow for a dynamic responsive garment, all achieved through controlled chemical reactions in this new advanced fabric."

Tracee Harris, science and technology manager for the Dynamic Multifunctional Material for a Second Skin Program, says, "Development of chemical threat responsive carbon nanotube membranes is a great example of a novel material's potential to provide innovative solutions for the Department of Defense CB needs. This futuristic uniform would allow our military forces to operate safely for extended time periods and successfully complete their missions in environments contaminated with chemical and biological warfare agents."

In addition to Carter, Watkins, Jeffrey Morse and YuYing Tang at UMass Amherst, with Fornasiero, Sangil Kim and Kuang Jen Wu at LLNL, the team includes Heidi Schreuder-Gibson at U.S. Army Natick Soldier Research Development and Engineering Center, Timothy Swager at Massachusetts Institute of Technology, Jerry Shan at Rutgers University, and Robert Praino at Chasm Technologies, Inc. of Canton, Mass.

Why Assad Won't Use His Chemical Weapons

And why you should still be worried…

Source:http://www.foreignpolicy.com/articles/2012/12/06/why_assad_wont_use_his_chemical_weapons?page=0,0

Since the Syrian uprising began in March 2011, concerns over the country's chemical arsenal have largely reflected the fear that terrorists might steal them in the chaotic aftermath of Bashar al Assad's overthrow. Military use against the Free Syrian Army seemed less likely, largely because the use of unconventional weapons would violate international law and norms. If it broke that taboo, the regime would risk losing Russian and Chinese support, legitimizing foreign military intervention, and, ultimately, hastening its own end. As one Syrian official said, "We would not commit suicide."

But this week chemical anxieties shifted. President Barack Obama warned Syria that "[t]he use of chemical weapons is and would be totally unacceptable" -- a comment echoed by Secretary of State Hillary Clinton and Secretary of Defense Leon Panetta, both of whom said that use of the arsenal would cross a "red line" for the United States. Despite these admonitions -- and a barrage of reports that Syria is preparing to deploy its chemical arsenal -- it remains doubtful that Damascus is at the point where the use of chemical weapons against rebels makes tactical or strategic sense.

Chemical weapons have rarely been militarily decisive. In World War I -- which marked the historical debut of choking, blister, and blood agents --

they caused only 4 percent of the war's casualties and only 3 percent of those casualties died. Used episodically in the years since, blistering agents rarely achieved notable results. Italy had little success incorporating them into its attempted conquest of Abyssinia (Ethiopia), and Libya's use of blistering agents against Chadian forces in the 1980s had little impact on battle outcomes. Used in isolation, World War I-era chemical agents were relatively ineffective.

Other chemical agents, however -- most notably nerve agents, which kill by shutting down respiration and other vital functions -- have enabled some tactical successes, while killing tens of thousands civilians. The most notable is example is Iraq's use during its war with Iran, which reportedly suffered 60,000 casualties from chemical weapons. Although difficult to manufacture, nerve agents are immensely lethal and, in some cases, easier to weaponize and deliver. First developed by the Germans, these agents include tabun, soman, and sarin.

So, while blistering agents remain a likely element of the Syrian chemical arsenal, it is the regime's likely possession of nerve agent that provokes far greater concern. Experts note that Syria likely has hundreds of tons of sarin -- a lethal dose is approximately half a milligram. Deliverable by planes and artillery, 100-200 Syrian Scud missiles also reportedly serve as a quickly readied additional delivery platform. There is also suspicion that Syria possesses VX, a far deadlier nerve agent that is 100-400 times more toxic than sarin.

But even these weapons have become obsolete for states. They are rarely strategically decisive, they have been obviated by advanced conventional arms (and, of course, nuclear weapons), and they are stigmatized. That is why all but six states belong to the Chemical Weapons Convention, which bans the production and use of chemical weapons. Syria's weapons, produced beginning in the early 1970s with Egyptian assistance, have been intended to deter Israel's nuclear capability and to offset Syrian conventional inferiority. It's unlikely they could have served either purpose, but designed for use in large-scale, state-to-state warfare, Syria's chemical weapons are particularly unsuited for the urban fights that have characterized the civil war. Close-quarters combat renders chemical weapons not only ineffective but counterproductive; with sarin or VX, a simple wind shift could turn the deadly agent against the Syrian military. Syria's likely blister agent -- so called "mustard gas" -- is highly corrosive, remaining a hazard for forces attempting to occupy the affected area.

That doesn't mean Assad won't use chemical weapons -- in particular, there is the possibility of irrational action if the regime is on the verge of collapse. The more isolated the top leadership becomes, the more likely it is to make unsound decisions based on an altered sense of reality. But the greater threat remains terrorist acquisition of chemical weapons if the military loses control over relevant sites and facilities. The Pentagon estimated earlier this year that it would take more than 75,000 troops to secure Syria's chemical weapons against theft -- and that assumes that U.S. intelligence knows precisely where they all are. After the fall of Baghdad, looters gained access to Iraq's Al-Qaqaa military installation, and close to 200 tons of military grade explosives vanished, even though there were 200,000 coalition forces available and the International Atomic Energy Agency had specifically warned of the explosives' vulnerability.

Some commentators have warned that, as with Iraq, intelligence could be faulty: perhaps Syria has no (or few) WMD. Alas, that is unlikely given Syria's early chemical cooperation with Egypt and its perceived need to deter nuclear-armed Israel. Indeed, following the 2007 destruction of its al-Kibar nuclear facility, Syria may well have doubled down on its reliance on chemical, and possibly, biological weapons to afford the country a perceived deterrent against existential threats. Given all the variables in play, it seems all but certain that in the end an inventory of Syria's chemical stockpile will reveal significant gaps in the current assessments.

Uncertainties regarding this crisis are pervasive, yet at least one outcome is highly probable: terrorist acquisition of chemical weapons if the regime falls. Although militarily ineffective for states, chemical agents still evoke disproportionate fear and anxiety with civilians. Used effectively, they are excellent tools for spreading terror beyond their immediate victims to a far wider audience.

The good news is that few terrorist groups would actually be able to use any materials they acquired. Nerve agents require

precision and perennial care. Absent the scientific expertise to maintain and replenish various precursors, many of the agents' purity rates will degrade. Depending on how the particular precursor or agent is stored, its shelf-life could diminish rapidly. The United States, for example, applied certain techniques to its sarin-filled munitions that reportedly retained their purity rate at 90 percent for over three decades. In contrast, Iraqi agents, intended for use in a short period of time, degraded to less than 10 percent, and in some cases 1 percent, in less than two years. Actually delivering the weapons is another hurdle.

Unfortunately, some of the terrorist groups operating in or near Syria do in fact possess the operational capabilities to competently control various quantities of deadly chemical agents. Given Syria's porous border, there are legitimate fears that these agents could find their way to Western Europe, Russia, the United States, or elsewhere. Some could also remain in-country, complicating the transition to a post-Assad government. The ethnic and religious divisions that have plagued Iraq are likely to be replicated with the fall of the Syrian regime. Were chemical agents to fall into the hands of armed factions battling for control of the nation, the implications would be stark and ominous. So, the United States is right to worry about Syria's chemical weapons -- it may just be worried about them for the wrong reason.

Avon Protection Systems Announces the New PC50 Air Purifying Respirator (APR)

Source:http://www.domesticpreparedness.com/Industry/Industry_Updates/Avon_Protection_Systems_Announces_the_New_PC50_Air_Purifying_Respirator_%28APR%29/

Avon Protection Systems, today announced the introduction of the PC50 APR, a field proven, military pedigree, NIOSH approved, non-CBRN respiratory device for use with the CTF12 Canister providing protection against CS/CN agents. The PC50 was specifically developed and designed for Correctional Officers, Riot Control, Border Patrol, Plant Security and other non-CBRN requirements.

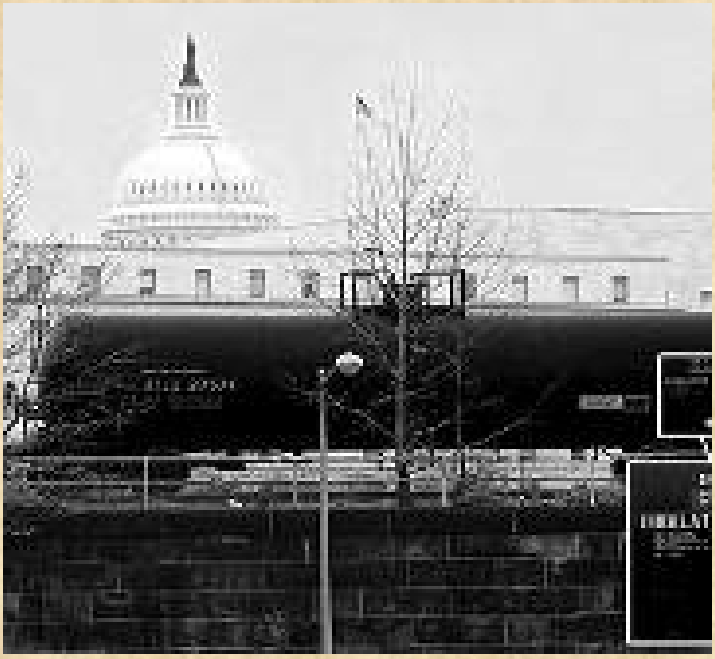
According to Tom Korb, Avon's Senior Global Product Manager "The targeted user groups continually face financial pressures to procure the most competitively priced respiratory protection mask available that still meets their demanding operational requirements. Our new PC50 exceeds these demands by providing a mask designed for low cost of ownership and delivers maximum reliability. The PC50 is also field proven and combines Avon's military pedigree with NIOSH approval."

Avon claims the PC50 is among the most comfortable mask available, provides superior protection, excellent fit and a class leading integration with protective helmets and clothing. Unlike other masks the PC50 was specifically designed with the intended user in mind. It incorporates a lower profile, a downward exhalation cover to prevent fogging of the helmet visor and a standard communication port to allow the ability to connect with existing radios.

The PC50 is available in three sizes with either left or right hand 40mm canister mounts and includes a six point head harness designed for comfort and rapid donning and doffing. Multiple, coloured outserts are also available to increase ballistic protection and additional scratch resistance. The mask can be easily fitted with a vision correction system.

Industrial Chemicals as Weapons: Chlorine

Source: http://www.nti.org/analysis/articles/industrial-chemicals-weapons-chlorine/



A tanker car with hazardous chlorine gas passes four blocks from the U.S. Capitol. Inset shows hazard warning enlarged. *Source: Photo by Jim Dougherty, Sierra Club*

This issue brief describes the properties, hazards, and the legitimate applications of chlorine, as well as its use for weapons purposes during World War I and currently in Iraq. The vulnerability of America's chemical infrastructure to deliberate attack (including the facilities that produce, consume, and transport chlorine), as well as efforts currently underway to achieve infrastructure security, are also examined. The brief concludes with an evaluation of alternative approaches to mitigating the potential threat posed by a deliberate chlorine release.

Introduction

Certain recent events in Iraq have elevated long-standing fears that terrorist groups may use poisonous chemicals, especially elemental chlorine, as toxic weapons against vulnerable populations. These concerns rest on a solid factual basis: many chemicals produced for industrial purposes are inherently dangerous due to their possession of one or more of the following properties: reactivity, flammability, explosiveness, toxicity, or carcinogenicity. In particular, the toxic industrial gases anhydrous ammonia, hydrogen fluoride, and elemental chlorine (often referred to as toxic inhalation hazards, or TIH) are of utmost concern from both safety and security standpoints. Any of these chemicals when released in the course of an accident or a deliberate attack can form a toxic gaseous plume that when carried by wind is capable of inflicting potentially catastrophic loss of life on the population in its path. The worst industrial accident in history is illustrative: 40 metric tons of methyl isocyanate was released from a Union Carbide pesticide plant in Bhopal, India, on December 3, 1984. The resulting plume killed at least 3,000 people downwind and injured more than 100,000. A sufficiently large release of elemental chlorine may be capable of exacting a comparable toll, particularly if it were to be discharged in a highly populated civilian area.

Properties of Chlorine

Chlorine (Cl[2]) is a highly reactive, pale green gas produced industrially by the electrolysis of readily available aqueous sodium chloride (table salt). Worldwide, the annual production of chlorine totals approximately 55 million metric tons.[1] In 2006, the American chemical industry produced 12.2 million metric tons of chlorine, making it one of the ten most produced chemicals in the United States by weight.[2] Chlorine and its derivative chemicals serve myriad functions in modern society. The most important use of chlorine itself is as a disinfectant; for example, chlorine is employed worldwide in drinking water treatment facilities. In addition, chlorine derivatives (materials containing chlorine atoms chemically bound to other elements) are used as bleaching agents, construction materials (especially polyvinyl chloride, or PVC), high purity silicon precursors (e.g. trichlorosilane) for use in computer chip manufacture, pharmaceutical compounds (including "blockbuster" drugs such as Singulair, Plavix, and Norvasc), and many other functional materials.[3]

The high toxicity of chlorine gas tempers the many beneficial uses of

the chemical.[4] Chlorine gas is heavier than air, and therefore will disperse slowly into the atmosphere after release. Because chlorine is water soluble, exposure to the gas irritates the mucous membranes and eyes at concentrations (in air) of under 3 parts per million (ppm).[5],[6] Moderate irritation of the upper respiratory tract occurs at 5-15 ppm, followed by chest pain, vomiting, and dyspnea at 30 ppm. Above 50 ppm, lung inflammation and pulmonary edema occurs. Chlorine is deadly at concentrations of several hundred ppm or higher. According to the National Institute for Occupational Safety and Health, a chlorine concentration of 10 ppm is considered to be immediately dangerous to life or health.[7]

Military and Terrorist Use of Chlorine

In what many consider to be the dawn of modern chemical warfare, chlorine was first employed as a "choking agent" in the early

days of World War I. On April 22, 1915, during the second battle of Ypres, the German military released approximately 168 metric tons of chlorine from 5,730 buried gas cylinders.[8] The heavy green plume was carried by prevailing winds to the Allied lines, where French and French Algerian soldiers, not suspecting a chemical attack, were taken by surprise and quickly overwhelmed by the chlorine. The attack claimed the lives of at least 800 soldiers, and injured thousands more. While this incident underscores the potential lethality of chlorine, both sides soon realized that chlorine is not a militarily effective chemical weapon against a prepared adversary. In particular, chlorine possesses both a visible color and a strong odor, which alerts people of its presence and enables avoidance. Moreover, the effects of chlorine exposure may be completely or somewhat mitigated using simple countermeasures, such as wearing a gas mask or even covering the nasal passages with a wet cloth. Therefore, chlorine was quickly abandoned in favor of more fearsome chemical agents (e.g. phosgene and mustard gas). Despite its nefarious usage, its widespread manufacture and distribution for industrial and sanitary purposes has continued.

In Iraq, militias or terrorists have detonated bombs rigged to cylinders containing chlorine that originally were intended for water treatment and other industrial uses, with the intention of dispersing the gas over their targets (primarily Iraqi police and civilians). The US military believes that terrorist groups affiliated with Al Qaeda are primarily responsible for these types of attacks.[9] According to the United Nations Monitoring, Inspection, and Verification Commission (UNMOVIC), at least 10 attacks involving chlorine have occurred in Iraq up to June 1, 2007, resulting in dozens of civilian deaths and an unknown number of injuries.[10] An attack on June 3, 2007 targeted a United States military forward operating base and resulted in making 65 US service members ill from chlorine exposure. The perpetrators have used relatively small, easily transportable quantities of chlorine in the attacks, no more than several tons. Deaths have been attributed primarily to the effects of the explosives themselves, not the chlorine.[11] It is reasonable to assume that the efficacy of these attacks will increase as terrorists modify their methods of chlorine dispersion based on past experience.

The attacks in Iraq utilizing chlorine have re-raised simmering questions in the United States: Is the country's chemical infrastructure, especially the sub-sector that makes and stores elemental chlorine, vulnerable to

attacks by terrorist elements that would result in the large-scale release of TIH chemicals over population centers? Would facilities where chlorine is stored be attractive to those who seek to harm civilians?

Chlorine presents both disadvantages and some advantages to domestic terrorists. On the one hand, chlorine is not nearly as potent a toxin as other chemical weapons used in terrorist attacks, such as the fluoroorganophosphate nerve agent sarin released on the Tokyo subway on March 20, 1995 by the religious cult Aum Shinrikyo, killing 12. However, nerve agents require substantial finances, advanced equipment, appropriate chemical precursors, and personnel with specialized training in synthetic organic chemistry to prepare. Even then, nerve agent synthesis and dispersion is non-trivial. For example, Aum Shinrikyo used impure sarin coupled with a crude and relatively ineffective delivery system for the subway attack, despite mustering all the resources mentioned above.[12] On the other hand, chlorine does not need to be chemically synthesized (given its abundance), and as a gas does not require active aerosolization for efficient dispersal. Most importantly, a large release of chlorine may inflict mass casualties on unprepared civilians. According to a 2004 report by the Homeland Security Council, a deliberate release of 60,000 gallons of liquefied chlorine from an industrial facility in a highly populated area may result in 17,500 civilian deaths, while the Department of Homeland Security (DHS) estimates that a "worst-case" chemical release would result in fewer than 10,000 deaths.[13][14]

Chemical Facility Security

According to the Environmental Protection Agency (EPA), in the United States there are approximately 15,000 facilities, including about 2,000 water systems, which store more than the threshold quantities of hazardous chemicals necessary to trigger EPA regulation. A "worst-case" chemical release from any one of 123 such facilities could expose more than 1,000,000 people to toxic gases.[15] In the aftermath of September 11th, the chemical industry has recognized its potential vulnerability and moved rapidly to enhance facility security. In 2002, the American Chemistry Council (ACC), a chemical industry association whose members control approximately 2,000 facilities, established the Responsible Care[®] Security Code, a mandatory private security initiative.[16] The Security Code requires member facilities to complete vulnerability assessments, perform physical security enhancements, invite an independent, third party audit of these enhancements, conduct employee training and drills, and perform periodic security self-audits. These requirements apply to members of the Chlorine Institute, a trade association and Responsible Care[®] partner whose membership includes 98% of chlorine producers and 100% of chlorine packagers in the United States.[17] According to the ACC, its companies have invested about $3 billion in security improvements since September 11th, and all member facilities have completed security upgrades and subsequent independent audits.[18]

Although private security initiatives have garnered justifiable praise, they are also widely viewed as inadequate. Investigative journalists have easily penetrated dozens of chemical facilities nationwide, including many housing chlorine, over the past several years. For example, in 2003, a reporter was able to approach storage tanks holding approximately 1,000 tons of chlorine gas at the Sony Technology Center in Westmoreland County, Pennsylvania.[19] In 2005, reporters from the New York Times were able to approach and loiter near chlorine storage tanks on an industrial site in densely populated Northern New Jersey, only miles from New York City.[20] In addition to the gaps in physical security, facility employees and emergency response personnel are often inadequately prepared to handle a deliberate chemical release.[21] Clearly, comprehensive chemical security requires, in addition to private initiatives, the participation of the public sector in order to safeguard the public most effectively.

At the federal level of government, DHS is responsible for chemical sector security. Until very recently, however, DHS had not received a Congressional mandate to implement and enforce industry-wide security measures.[22] The situation changed in October 2006, when President Bush signed the Homeland Security Appropriations Act, H.R. 5441, which gave DHS interim (3 year) authority to regulate security at chemical facilities. On April 2, 2007,

DHS issued the interim final rule regulating chemical facility security, known as the Chemical Facility Anti-Terrorism Standards.[23] The rule requires facilities possessing a threshold quantity of one or more of 342 chemicals of interest, including chlorine, to file a report known as a "top screen" with DHS. For chlorine, this threshold level currently is 1,875 lbs or more.[24] Using this data, DHS will perform a risk assessment and categorize "at risk" facilities according to a tiered system, with Tier 1 facilities considered the highest risk and Tier 4 facilities the lowest. A number of factors are considered in the assessment, including the type and amount of chemical(s) stored as well as the layout and location of the facility. DHS currently estimates that 5,000-8,000 facilities will be assigned a ranking in the tier system, with fewer than 1,000 assigned to Tiers 1 & 2.[25] The facilities assigned to a risk tier will be required to submit vulnerability assessments and site security plans, subject to DHS verification, with failure to comply resulting in daily fines and/or shutdown of the facility in violation. Chemical manufacturers have embraced the new rule's risk-based approach, although others, including environmental groups, have highlighted several apparent weaknesses.[26],[27] For example, the rule contains no timetable for compliance, no whistleblower protections, and may preempt more stringent state and local regulations. Furthermore, the rule is not applicable to water and waste treatment facilities that utilize chlorine for disinfection, and does not require these or other chemical facilities to consider replacing chlorine with safer alternatives (see below). Recent thefts of chlorine cylinders from a California water treatment facility have served to underscore the final point.[28]

Security of Chlorine Rail Shipments

Industrial chemicals, like all commodities, must be transported from production facilities to various consumers. For TIH chemicals such as chlorine, freight railroad offers the most viable transportation option for large-scale shipment. Of the approximately 12 million tons of chlorine produced annually in the United States, almost 3 million tons are shipped by rail, usually in 90 ton pressurized tank cars.6 Rail shipment of hazardous materials (hazmat) is very reliable; 99.997% of the ca. 1.8 million annual hazmat shipments in the United States arrive without incident.[29] Although rail accidents involving chlorine are exceedingly rare, when chlorine tank cars are breached, the consequences often are fatal. On June 28, 2004, near San Antonio, Texas, a head-on collision of two trains resulted in a chlorine tank car breach. Two people died of chlorine inhalation, and 50 more were hospitalized for exposure. On January 6, 2005, in Graniteville, South Carolina, another head-on collision resulted in the derailment of three cars containing chlorine. The resultant chlorine plume killed 8 people, injured 240 more, and led to the evacuation of 5400 people from the spill area.[30]

The railroad infrastructure (including trains, tracks, stations, etc.) is vast and relatively accessible, a necessity for rapid and inexpensive exchange of people and goods. The US rail system is comprised of approximately 171,000 miles of track and covers an area of 3,200 square miles.[31] The open nature of rail systems renders them particularly prone to attacks by terrorists and other groups, as no feasible security plan can possibly protect the entire infrastructure simultaneously and at all times. The RAND Corporation estimates that 181 terrorist attacks against railroads worldwide occurred in the period between 1998 and 2003.[32] Most attacks were directed against transit systems, as exemplified by the more recent bombings of the Madrid, London, and Mumbai commuter rail systems. The US freight rail system is as vulnerable as the European rail systems, and many lines pass through densely populated, high threat urban areas (HTUA's), most notably in the Northeastern corridor. Given the large quantities of chlorine shipped by rail, as well as the potentially catastrophic consequences of a large chlorine release, chlorine-containing tanker cars may represent an attractive target for terrorists.

Freight rail security, especially hazmat and TIH chemical transport, has attracted concern since September 11th and, even more so, after the Graniteville, S.C. chlorine accident in 2005. The freight rail industry, through programs initiated by the Association of American Railroads (AAR), has taken a more proactive stance on security issues since September 11th. The Terrorism Risk Analysis and Security Management Plan designed by AAR forms the basis for post-9/11 freight rail security. The plan includes over 50 security enhancements,

addressing a number of general issues such as physical security, risk assessment, communications, and enhanced employee security training.[33] The railroads also, through the Transportation Community Awareness and Emergency Response Program (TRANSCAER) and the ACC's Chemical Transportation Emergency Center (Chemtrec), train and inform emergency responders to help them deal with hazmat emergencies. With respect to chlorine and other TIH chemicals, the Union Pacific railroad recently signed a memorandum of understanding with Dow Chemical to upgrade the TIH railcar fleet and procedures for TIH transport. The memorandum calls for the installation of global positioning satellite units on all TIH tank cars, the design of a new, more robust tank car for TIH chemicals, as well as a reduction in the time that TIH tank cars lay idle in urban areas.[34]

There has existed considerable variation in the approaches of local and federal governments to the threat of chlorine rail shipments. Many local governments, particularly HTUA's, are examining the possibility of banning chlorine rail shipments in proximity to highly populated areas. Citing the threat of chlorine, the Washington, D.C. city council voted on February 1, 2005 to ban all hazmat shipments within 2.2 miles of the Capitol, thus forcing rail companies to reroute shipments of chlorine around the city center.[35] CSX Transportation challenged the law in court and received an injunction, which remains in effect as of this writing. The railroad industry argues that: (1) rerouting increases the risk of accidental of deliberate hazmat exposure, due to increased mileage, (2) rerouting simply shifts exposure risk to other populations, and (3) regulatory variations at each locality would impose significant cost and time burdens on the industry. The federal government, represented by the Department of Justice, supported the railroad industry position in this case, arguing that the regulation of interstate commerce is its Constitutional responsibility.[36] The federal agency responsible for freight rail security, the Transportation Security Administration (TSA), has not yet sought to force railroads to reroute chlorine and other TIH chemicals around HTUA's, as it currently is not currently required to do so by law. Rather, TSA and the Department of Transportation (DOT) have issued voluntary security action items to guide private railroad efforts to secure chlorine and other TIH railcars.[37] TSA is also engaged in formulating rules and pilot programs in cooperation with the railroad industry, aimed at reducing the potential for attack on chlorine tankers. In conjunction with other federal, state, and local government agencies, TSA is currently conducting comprehensive reviews of rail corridor security, with a focus on HTUA rail corridors.[38] However, many have perceived federal funding for surface transportation security, including rail security, to be inadequate. The American Public Transportation Association noted in early 2007 that the federal government has allocated $549 million for rail transit security (including both passenger and freight rail security) since September 11, 2001, in contrast to over $24 billion for aviation security.[39]

Although prior security efforts have no doubt made a positive impact on rail security, freight railroads, and the chlorine transported on them, remain poorly protected. Publicly disclosed reports and media investigations over the past five years have identified gaping vulnerabilities in freight rail security. For example, a 2006 report published by the Citizens for Rail Safety (a public interest group) concluded that rail facilities are not sufficiently secure: cars containing hazmat, including TIH such as chlorine, often sit idle and unprotected, rail workers are poorly trained with respect to security, and emergency responders and citizens are ill-prepared for a hazmat emergency.[40] In early 2007, a reporter from the Pittsburgh Tribune-Review published an article describing how he gained access to a number of hazmat-containing (including chlorine) railcars throughout the country.[41] The reporter was not stopped by employees or rail police, and found hazmat-containing railcars unprotected on rails controlled by 12 railroads. These reports followed the publication in 2005 of two Teamsters Rail Conference surveys of rail workers, which reported significant physical security lapses and a notable lack of security training for workers.[42],[43]

Partially in response to the problems cited above, the US Congress passed new homeland security legislation (H.R. 1: Improving America's Security Act of 2007) on July 27, 2007.[44] President Bush has indicated that he will sign the bill into law in August 2007. The

legislation will provide significant enhancements in TIH rail transportation security.[45] Provisions in the legislation call for significantly enhanced funding for freight rail safety and security, including hazmat transportation security, infrastructure improvement, and research and development aimed at secure rail car technologies. Specifically, language in the bill encourages the adoption of wireless communications to track the positions of TIH railcars and monitor their status in real-time. Furthermore, DHS and the DOT must require rail carriers shipping TIH chemicals to develop and submit risk mitigation plans to be enacted when the Homeland Security Advisory System threat levels are high or severe. These plans are to include rerouting of TIH chemical shipments away from high consequence targets, including densely populated areas, landmarks, and other important national resources, as designated by DHS. The legislation also calls for the establishment of a "rail worker security training program" and introduces federal whistleblower protections to protect rail employees who report rail security lapses and violations. This legislation promises to mitigate some of the problems currently facing rail security, but the ongoing evolution of public and private measures must continue.

Inherently Safer Technologies

An alternate approach to mitigating the risk posed by chlorine may be to reduce levels of chlorine consumption by replacing chlorine with inherently safer technologies (ISTs). As noted in a 2006 study by the National Academy of Sciences, "The most desirable solution to preventing chemical releases is to reduce or eliminate the hazard where possible, not to control it."[46] The adoption of ISTs to replace TIH chemicals is strongly supported by a number of interested parties, including environmental groups and the railroad industry. Depending on the industrial application, chlorine may in fact be readily replaced with cost-effective alternatives. According to a 2006 study by the Center for American Progress, 207 waste treatment plants and drinking water facilities have replaced chlorine gas with safer disinfectants such as sodium hypochlorite (chlorine bleach) and ultraviolet light since 1999.[47] Adoption of ISTs not only eliminates the TIH risk of chlorine at the chemical facility, but also reduces the risk of chlorine release in transit. For example, since 1999, 25 water facilities in the United States that previously received chlorine shipments by freight rail have switched to ISTs, and six others plan to do so.[48] Despite this progress, over 2,000 water treatment facilities continue to use chlorine gas, with 37 continuing to receive freight rail shipments. These facilities should be encouraged to adopt ISTs, especially in light of the current situation in Iraq and the thefts of chlorine in California in 2007 (see above).

However, chlorine cannot be easily replaced with IST in totality due to its chemical versatility. Notably, water treatment accounts for only about 5% of chlorine consumption. Chlorine remains a central ingredient in the manufacture of other chemicals and materials, most notably plastics, and a cost-effective replacement may not be apparent in many cases. In addition, a main byproduct of chlorine manufacture, sodium hydroxide (caustic soda), is itself an important industrial chemical (the chlorine production process is known as the Chlor-Alkali process for this reason). Eight million metric tons of sodium hydroxide was produced in the United States in 2006. Thus, an analysis of chlorine replacement by IST must explore the economic impact of lowered chlorine and sodium hydroxide production. The replacement of chlorine by IST is a worthy pursuit, but it will be a long-term endeavor.

Conclusion

It is indisputable that should a large chlorine release such as the Graniteville accident take place in the future, it would pose a substantial danger to the public. Moreover, recent studies demonstrate convincingly that chlorine-containing facilities, whether they are chemical plants or railroad infrastructure, may be infiltrated with ease and regularity by trespassers. It may be argued that there exist more readily accessible targets for terrorist attack, including even smaller quantities of chlorine transported by truck. However, given the toll that a large-scale chlorine release could inflict on a population, facilities and railcars containing multi-ton quantities of chlorine warrant increased attention. The DHS and TSA have both worked well with industry to create voluntary chemical security guidelines, yet to date neither agency has imposed stringent regulations governing chlorine security. The establishment of a coherent national policy (which

adequately addresses the concerns of individual localities) regarding the issue of TIH railcar rerouting around HTUA's is particularly vital. The recently approved federal legislation addresses rerouting of TIH shipments in times of elevated threat, but a permanent, satisfactory solution for a non-threat environment will also be required. Further, the new Chemical Facility Anti-Terrorism Standards issued by DHS do not require the chemical industry to examine adopting ISTs to replace chlorine and other TIH chemicals. While chlorine replacement with an IST should not necessarily be mandatory, incentives should be considered to persuade the chemical industry to adopt safer practices. The federal government should also consider an increase in funding for research aimed at the development of ISTs. If a viable, cost effective IST exists for a given chemical process, it is in the best interest of the chemical industry to adopt it of their own accord in order to safeguard employees, facilities, and the surrounding communities. Increased funding for fundamental research and development of ISTs will hasten this progression. Finally, perhaps the best countermeasure against a large attack using chlorine or other TIH chemicals is public awareness and education. Militarily, it has been known for 80 years that the deleterious effects of chlorine may be attenuated using simple methods. Both private industry and governments at all levels, especially those with chlorine facilities in their jurisdictions, should enhance education and outreach efforts to the public regarding appropriate courses of action (e.g. shelter in place protocols) in the case of a chlorine release incident.

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