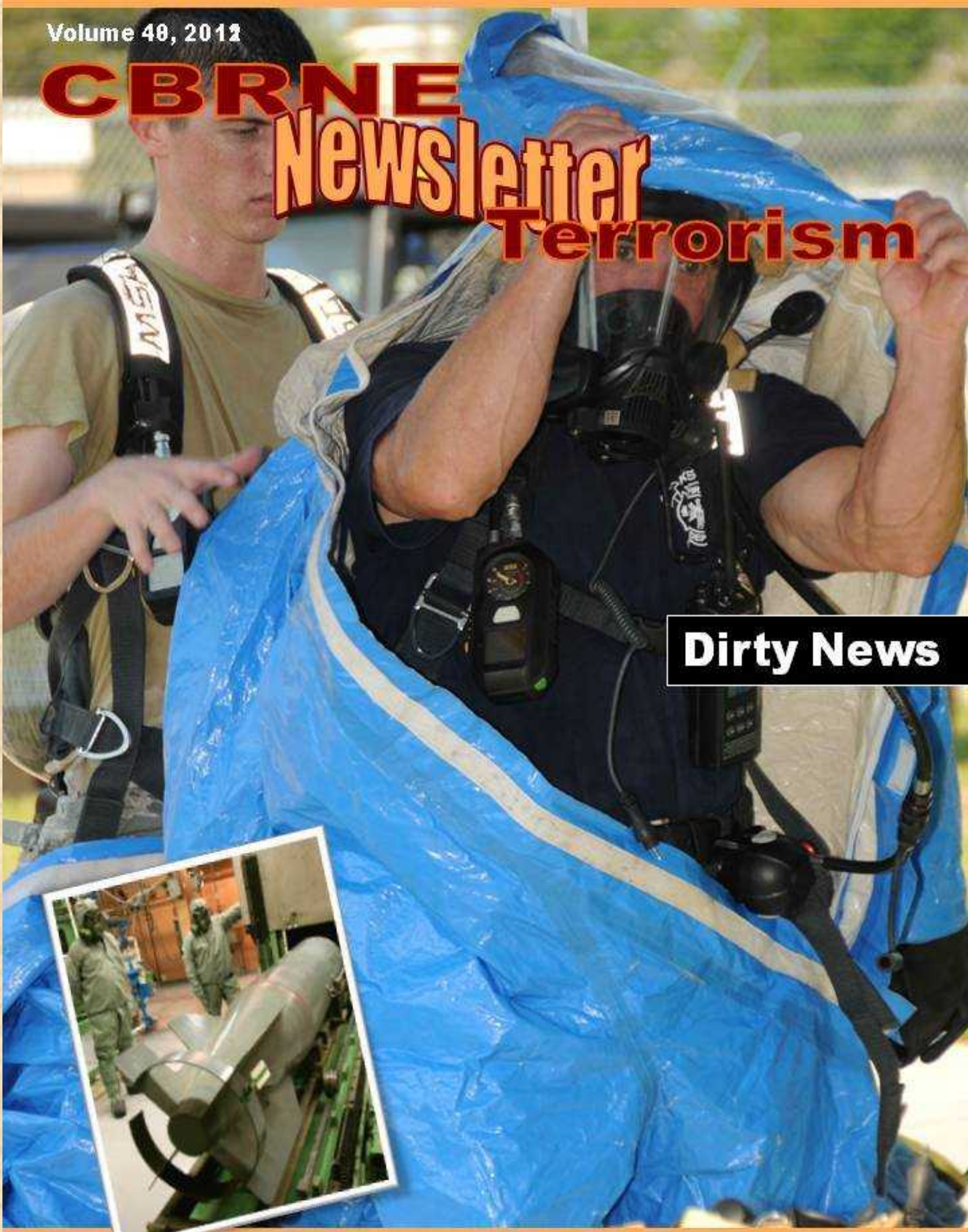
Syria's WMDs – Are they under control?

Volume 40, 2012

CBRNE Newsletter Terrorism



Dirty News

www.cbrne-terrorism-newsletter.com

Pakistan boasted of nuclear strike on India within eight seconds

Source: http://www.guardian.co.uk/world/2012/jun/15/pakistan-boasted-nuclear-strike-pakistan

Pakistan could launch a nuclear strike on India within eight seconds, claimed an army general in Islamabad whose warning is described in the latest volume of Alastair Campbell's diaries.

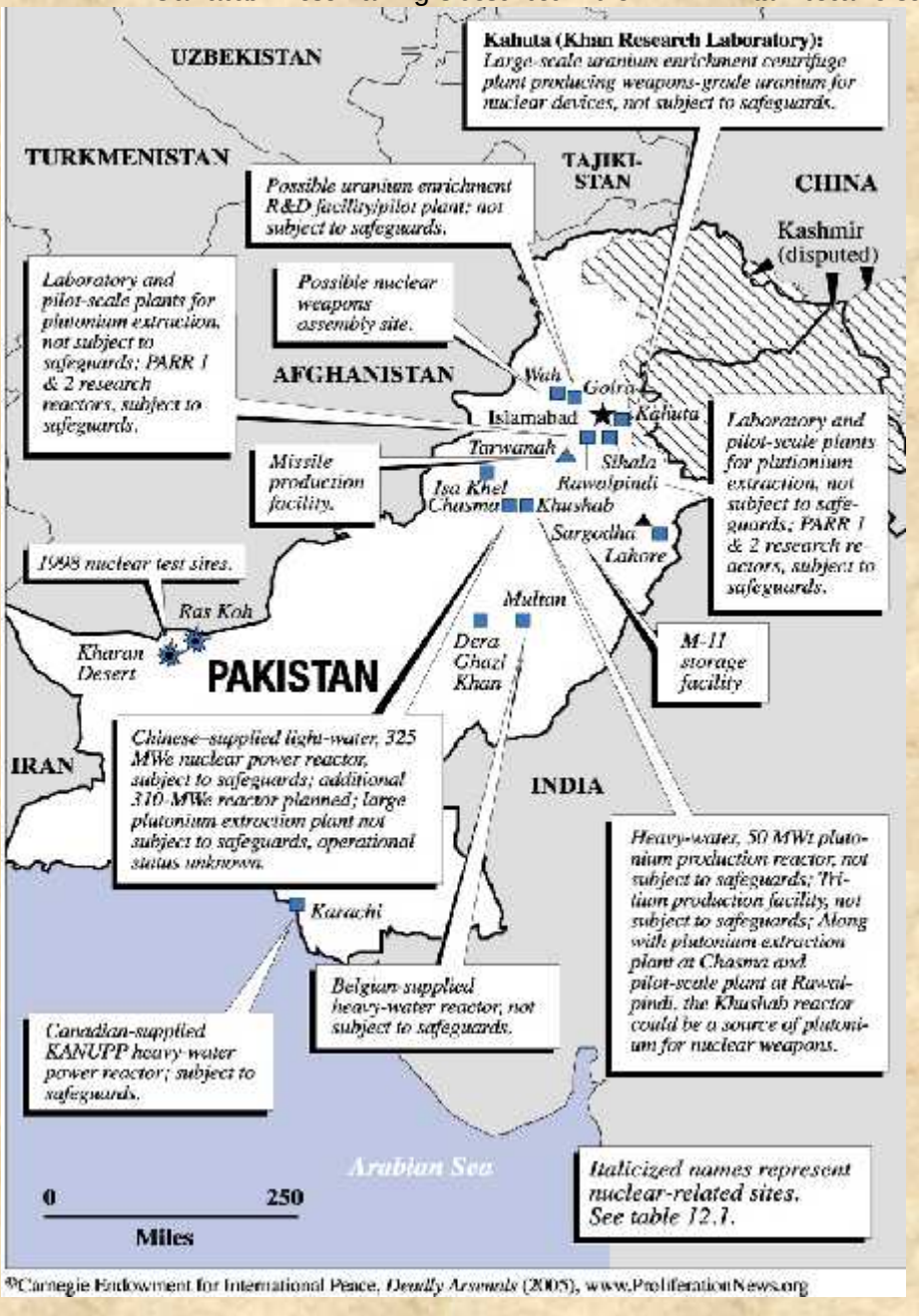
The general asked Tony Blair's former communications director to remind India of Pakistan's nuclear capability amid fears in Islamabad that Delhi was "determined to take them out".

Britain became so concerned about Pakistan's threat that Blair's senior foreign policy adviser, Sir David Manning, later warned in a paper that Pakistan was prepared to "go nuclear".

The warnings are relayed by Campbell in a section in his latest diaries, The Burden of Power, which are being serialised in the Guardian on Saturday and Monday. The diaries start on the day of the 9/11 attacks and end with Campbell's decision to stand down in August 2003 after the Iraq war.

The nuclear warnings came during a visit by Blair to the Indian subcontinent after the 9/11 attacks in 2001. Campbell was told about the eight-second threat over a dinner in Islamabad on 5 October 2001 hosted by Pervez Musharraf, then Pakistan's president.

Campbell writes: "At dinner I was between two five-star generals who spent most of the time listing atrocities for which they held the Indians responsible, killing their own people and trying to blame 'freedom fighters'. They were pretty convinced that one day there would be a nuclear war because India, despite its vast population and despite being seven times bigger, was unstable and determined to take them out.



*Carnegie Endowment for International Peace, *Deadly Arsenals* (2005), www.ProliferationNews.org

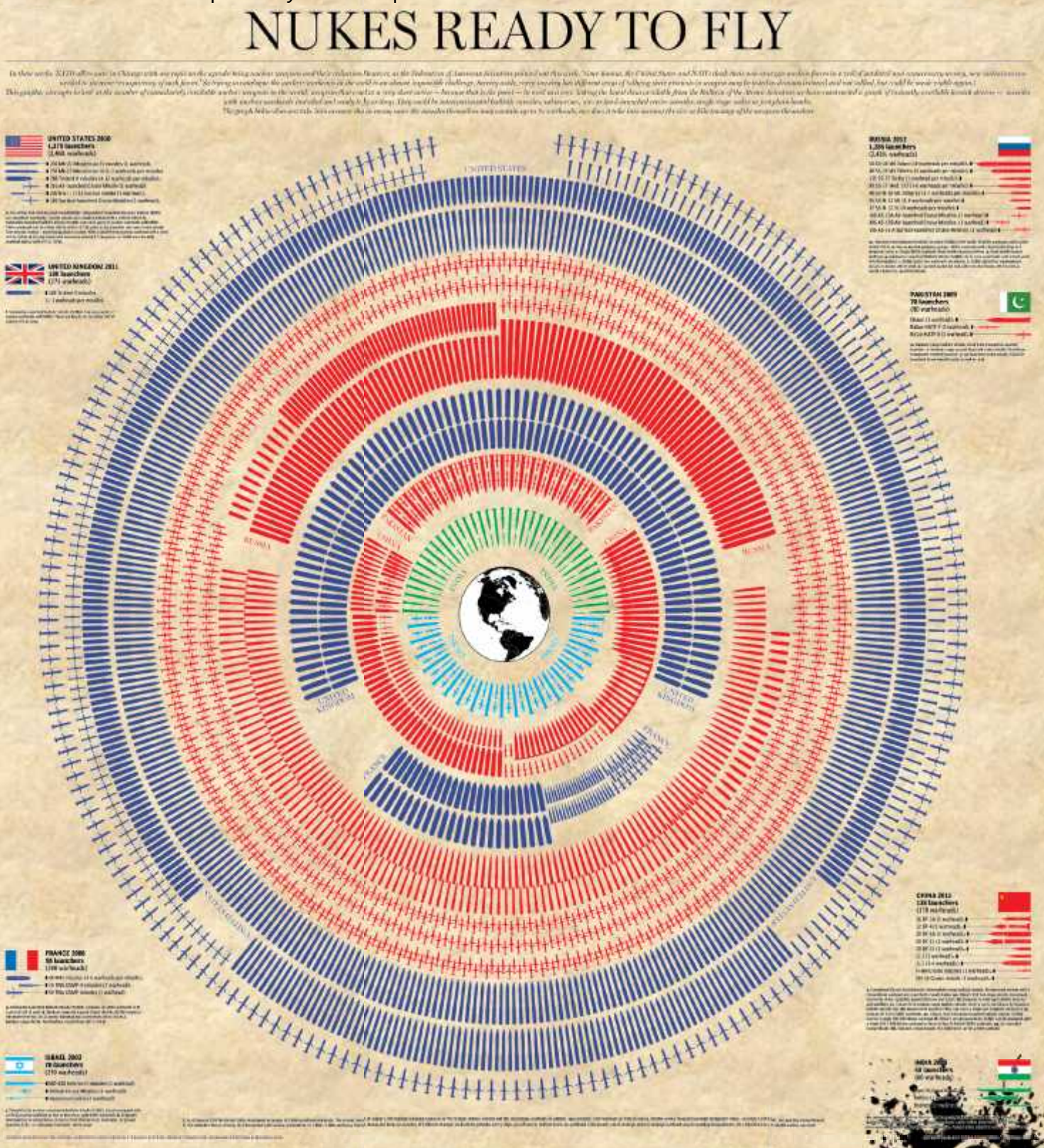
"When the time came to leave, the livelier of the two generals asked me to remind the Indians: 'It takes us eight seconds to get the missiles over,' then flashed a huge toothy grin."
Blair visited Pakistan less than a month after the 9/11 attacks as Britain and the US attempted to shore up support in Islamabad before the bombing of Afghanistan, which started on 7 October 2001. Campbell writes that the Pakistani leadership seemed to be keen for Britain and the US to capture Osama bin Laden, though he added it was difficult to be sure.

Relations between Islamabad and Delhi plummeted after the Blair visit when terrorists attacked the Indian parliament on 13 December 2001, killing seven people. Five of the attackers died.
India blamed Pakistan-based militants for the attack by Lashkar-e-Taiba and Jaish-e-Mohammed terror groups fighting Indian rule in Kashmir. The tensions became so great that Richard Armitage, the US deputy secretary of state, was sent to the region in May 2002.
Blair returned to the Indian subcontinent in January 2002, shortly after the fall of the Taliban in Afghanistan, amid one of the tensest nuclear standoffs between Indian and Pakistan since independence in 1947.
In the preparations for the visit, Manning prepared a paper for Blair that warned of the real threat of a nuclear conflict. In an extract from his diaries for 4 January 2002, Campbell wrote: "DM had a paper, making clear our belief that the Pakistanis would 'go nuclear' and if they did, that they wouldn't be averse to unleashing them on a big scale. TB was genuinely alarmed by it and said to David 'They wouldn't really be prepared to go for nuclear weapons over Kashmir would they?' DM said the problem was there wasn't a clear understanding of strategy and so situations tended to develop and escalate quickly, and you couldn't really rule anything out."
A few days after the visit, the India-Pakistan standoff was discussed by the British war cabinet. In an extract for his diaries on 10 January 2002, Campbell wrote: "CDS [chief of the defence staff Admiral Sir Michael Boyce] said if India and Pakistan go to war, we will be up the creek without a paddle. Geoff [Hoon] said there may have to be limited compulsory call-up of Territorial Army reserves. TB gave a pretty gloomy assessment re India/Pakistan, said [the Indian prime minister Atal Bihari] Vajpayee was really upset at the way [Pakistan's president] Musharraf treated him. Military dispositions remained the same, with more than a million troops there [in Kashmir]. He assessed that the Indians believed that they could absorb 500,000 deaths. Pakistani capability was far greater than the Indians believed."
Relations between Delhi and Islamabad have eased in recent years, though they still remain tense because Delhi believes that elements in the Pakistan state encourage Kashmiri terror groups. During his first visit to India in 2010 David Cameron famously accused Pakistan of exporting terrorism.
Campbell also relays another nuclear threat a year later when George Bush told Blair he feared that Ariel Sharon, the former Israeli prime minister, was planning to launch a nuclear attack against Iraq. In an account of a conversation with Bush at a Nato summit in Prague in November 2002, as diplomatic pressure intensified on Saddam Hussein, Campbell writes: "[George Bush] felt that if we got rid of Saddam, we could make progress on the Middle East. He reported on some of his

discussions with [Ariel] Sharon, and said he had been pretty tough with him. Sharon had said that if Iraq hit Israel, their response would 'escalate' which he took to mean go nuclear. Bush said he said to him 'You will not, you will not do that, it would be crazy.' He said he would keep them under control, adding 'A nuke on Baghdad that could be pretty tricky."

Nukes ready to fly

Source: http://visual.ly/nuclear-weapons



Swedish police baffled by explosives near nukes

Source:http://hosted.ap.org/dynamic/stories/E/EU_SWEDEN_NUCLEAR?SITE=ININS&SECTION=HOME&TEMPLATE=DEFAULT

Two days after nuclear officials found a small amount of explosives on a forklift on the

grounds of Sweden's largest nuclear power plant, police said they still had no clues about possible perpetrators or how the material got there.

Officers completed a search of the plant's premises in the morning, but found no other explosives, police spokesman Tommy Nyman said Friday.

"There's no suspect and we're trying to find out the motive now ... how it could get in there, and why," he said.

Nuclear officials said they had received no threats.

Nyman said investigators were analyzing witness statements and security camera footage of the vehicle's movements. He declined to give more details.

Power utility Vattenfall said the clay-like, fist-sized explosive was found on a fire extinguisher in the forklift during a routine check as it entered the high-security enclosure, where the four reactors are situated, from the plant's adjoining industrial area.

"To me, it looked like the size of a fist," Ringhals spokesman Gosta Larsen said, noting that the small gray mass would have been difficult to spot if the sniffer-dogs had not found it.

There was no danger of explosion because the material did not have a detonator or triggering device, police and nuclear officials said. They insisted that even if it had exploded, the damage would have been minimal and would not have affected the plant.

Police combed the outer enclosure of the Ringhals plant - an area the size of 150 football fields - but found no indication that the explosive had been brought in through or over the surrounding fencing, Gith Thedvall, a local police spokeswoman, said.

"So it must have been brought in by someone who came through the control gates," she said, referring to the gates at the plant's outer enclosure.

Wednesday's incident prompted Sweden to increase its security alert at the country's three nuclear plants, including Forsmark and Oskarshamn.

Police temporarily cordoned off the area immediately surrounding the forklift, but the find did not cause any other exceptional measures at the plant, officials said.

"It's serious that someone tries to bring in explosives to a nuclear plant," Larsen said. "But it was a really stupid thing to do because there's a 100 percent certainty that it would have been discovered. It would never have made its way through."

Critics slammed the plant and Sweden's nuclear industry after the incident, saying it shows how vulnerable atomic power stations are.

David Persson, a spokesman at the Swedish Radiation Safety Authority, said the agency considers the incident serious but doesn't want to draw any conclusions or plan to tighten its guidelines or rules until police have established what actually happened.

"We're following this closely. There definitely shouldn't be any explosive materials near a nuclear plant, but it's positive that they found it," Persson said.

The United Nations nuclear watchdog, the International Atomic Energy Agency, said it was aware of the incident and was in touch with Swedish authorities but declined to comment further.

The Swedish government has not commented on the incident, saying that it would wait for the outcome of the police investigation.

Ringhals, with more than 3,500 workers, is Sweden's largest power plant, producing 28 Terawatt-Hours a year, or supplying around 20 percent of the country's electricity.

It is located near Varberg in Halland, some 70 kilometers (45 miles) south of Sweden's second-largest city, Goteborg.

Pinnacle Arrow: Pakistan's Conspiracy to Sell Nukes to Iran

By Larry Werline

Source:http://blackwaterusa.com/2012/06/pinnacle-arrow-pakistans-conspiracy-to-sell-nukes-to-iran/?utm_source=June+23+BTW&utm_campaign=BTW+June+23&utm_medium=email

In 2004, we were all wondering what Pakistan's plan was for its nuclear warheads. We knew it had 76 enriched uranium warheads with 5 – 25 kilotons of explosive yield each. We also knew

it was working on plutonium fissile materials and had well over 100 tons of raw uranium buried in the hills of Balochistan. It was a God-awful mess of reckless development.

We knew Pakistan wasn't afraid to hand off its warheads to some of our worst enemies, and the country had already sold nuclear secrets for oil, gas, and economic trade agreements to North Korea, Iran, Syria, Libya to name a few.

The Pakistani Inter-Services Intelligence agency, which uncharacteristically and unexplainably oversaw the country's nuclear program, was also growing increasingly cooperative with China. We felt there was much reason for concern over Pakistan's nuclear weapons program.

In November 2004, I was given a series of briefs over a three-day period by former Senior Pakistani Military Officers. These men were educated, well traveled, and religious in their beliefs, family oriented and professionally respectful toward everyone in our group. Some unpolished, but very knowledgeable British and American scientists also attended the briefings. The former Pakistani officers conducted a brilliant briefing about Pakistan's Nuclear Program since it's inception in the 1970s and made very pointed

statements about the ISI's exclusive control of the country's nuclear arsenal and its dangerous habit of recklessly moving nuclear warheads.
The briefing also included details of a Pakistani nuclear scientist's visit to Afghanistan to consult with Osama bin Laden, the Al-Qaida terrorist network and the Taliban-controlled government of Afghanistan of the late 1990s that was orchestrated, planned and executed by Pakistan's ISI. The General also mentioned China's now-growing cooperation with the ISI in the advanced production of lighter plutonium warheads for miniaturization and fitment on Chinese missiles made from stolen US and British technology. Plutonium weapons are lighter and have a higher explosive yield than weapons based on enriched uranium, which have been the mainstay of Pakistan's nuclear weapons program. Those weapons are now showing signs of decay due to purity contamination in the early stages of the uranium enrichment processes. By the time we heard this, everyone in the room was silent. The briefing had hit a deep nerve.
I intervened and asked, is it not the Pakistan Atomic Energy Commission's right and duty to oversee the nuclear power development in Pakistan? Also, why would an intelligence services organization like the ISI be in the business of massing a nuclear arsenal? Is it not the central government's job to ensure that any nuclear energy program is managed and operated by its country's qualified personnel?
The room went silent again and everyone started shaking their heads in approval, except the Pakistani military officers giving the briefing. They were looking at me and nodding their heads in disapproval. But I understood people from this region of the world usually shook their heads from side to side whether they agreed or disagreed. I was understanding of the culture and bodily gestures they commonly express. The highest ranking officer, Brigadier General Naseer, looked out at our group and was about to say something when one of the American scientists stopped him and stated that he would take it from there.
The American scientist was a nuclear weapons expert and was employed by the Department of Energy. He looked a bit scraggly—long hair, a beard, slacks and a short sleeve shirt. He said:
" I understand that all of you here have been selected by our government to attend this briefing. You all have impeccable credentials and are unusually skilled in specific areas of your profession. We're all grown men, and I'm going to fast forward a bit here and get to the heart of a very sensitive matter.

"Last week, an elite team of Navy SEALs attached devices to the hull of a luxury yacht off the coast of U.A.E. and deployed powerful miniature surface water devices that enhanced eavesdropping. On board were three high-ranking Pakistani ISI general officers with Iranian officials to discuss the sale and transfer of nuclear arms to the Islamic Republic of Iran.
Furthermore, it has been leaked through a Saudi Arabian official, many years before—whose identity is anonymous—that Saudi Arabia has already made a purchase from the Central Government of Pakistan for 13 enriched uranium nuclear warheads in a long-term oil-for-arms deal. The three ISI officials, who have been identified, are in charge and in control, by succession of Rank and Authority, of various sites that store these warheads and are rouge profiteers conspiring to make the sale and transfer without Pakistani government knowledge."
"What has been discovered thus far is that the movement of the enriched uranium warheads may occur within the next three to six months, or when there is an event within the country or region that would warrant authorized movement of the warheads from the highest level of Pakistani leadership and power. It is most likely at that time, the ISI General Officers would move three warheads into the possession of Iranian handlers".
An American General Officer and two company personnel came into the room, and the Pakistani generals along with the American and British scientists were escorted out.
The lights were turned on, and my group all filed into another room. We went to lunch, and no one talked. But there was no doubt we could feel the

energy of mind vibes at lunch. What was next, we were all thinking. We didn't have to wait long.

It's 2004, the US and its allies were at war in

Afghanistan and Iraq. The Pakistani government is virtually in a perpetual state of economic default due to expenditures in nuclear development, increased military budgets, cuts in social and food programs for its people and a deep rooted hatred of its neighbor, India. A secret intelligence agency virtually ran everything in and out of Pakistan and killed its own leaders who were determined to either harness or diminish its power and authority, much like the Nazi Gestapo of World War II. The agency was out of control, and the ISI's own leadership was now in the radical Muslim, "Islamic Jihadi" nuclear black market business.

Planning went into effect to locate Pakistan's nuclear warheads that were to be sold to Iran.

A large team was assembled and assigned various known routes to transport the weapons—rail, air, road, tunnels, ports. Highly sophisticated electronics with powerful penetrating x-ray, sensors, cameras, Geiger counters, radiation-exposure detectors, cellular GPRS eavesdropping devices, even remote satellite command was employed. This was going to be a huge undertaking of diligent efforts on everyone's part to make this work like a Swiss clock.

My primary responsibility was Aviation Operations Surveillance, and I had all the resources at my disposal I could imagine. I was assigned six crack aviators with impeccable flying skills beyond reproach. These guys were the best we had to offer. There was a team of excellent technicians; all were combat-hardened, proven leaders with solid backgrounds in ethical and moral professionalism. If one of them screwed up, he admitted it, took full responsibility, and held himself to a high standard of maturity while ensuring whatever it was didn't happen again.

Our home base of operations was in the desolate desert of Afghanistan with operational teams in Pakistan at key sites where the nukes were stored and maintained. I operated out of an airbase in Pakistan with a small fleet of Helicopters and Cessna Caravan Turboprops that were owned by the US and under the operational control of the Pakistani Ministry of Interior. However, The exact number of planes and helicopters in Pakistan, to include their color, markings, registration numbers, interior and even the scratches or marks on the fuselage were staged just over the border in Afghanistan. In other words, for all the aircraft we had in Pakistan, we had exact lookalikes in Afghanistan that could easily intrude Pakistani Airspace at anytime.

Whenever the Pakistani Ministry of Interior, the Pakistani military, gave the US a mission in Pakistan, the teams in Afghanistan were alerted, given the Pakistani transponder and IFF codes so they could fly covertly over the border into Pakistan to scout any new evidence of moving nukes. In the meantime, the fleet that had always been in Pakistan flew the usual, day-to-day missions. Without the Pakistani Transponder and IFF Codes, our aircraft were sure to be shot down in these highly sensitive areas. We lucked out every time, and these guys never knew what was going on.

Our Cessnas were loaded with highly sophisticated ground-penetrating radar panels inside the cargo holds that emitted a lot of energy on a newly discovered frequency and band that isn't recorded in any technical literature. We were searching for the enriched uranium signatures below ground, in buildings, on trains, in tunnels, you name it.

No Pakistani-deployed sensors ever picked up the slightest signature of electronic interrogation from our sweeps and it if it was there, we had no problems finding it. The floors and crew compartments of all our aircraft were flamed sprayed with a layer of lead to prevent exposure to the crews and sensitive equipment. The aircraft exterior control surfaces were enhanced with static wicks that dissipated electricity generated

through the airframe and improved grounding discharge through landing gear contact with the earth upon landings. We went undetected.

SHAKY GROUND

On 8 October, 2005, a 7.6-magnitude earthquake in the North West Frontier Province struck with a destructive force never before seen in Pakistan. Some estimates put the number killed at 84,000 including 1,400 killed in China. All planes and helos we had in Afghanistan at home base immediately went into action as the US was very concerned that now was the time these rogue ISI generals would move the nukes. In addition, the Department of Energy was very concerned that a possible nuclear processing facility was leaking radiation as detected through satellite sensor readings. The Pakistani government knew about the leak, kept the information secret, and had issues getting qualified personnel to the location due to washed-out and debris-covered roads. It was a complete mess, and the Pakistanis had their pride and honor at stake for their inability to handle an emergency of this magnitude.

The Pakistani government is always claiming the need for and arguing for more and more aid and assets from the US. However, this time DOE was very concerned about Pakistan's aging uranium enrichment processing plants, and it was a well known fact that the Pakistanis needed to bypass roads and get experts to the damaged facilities via air ASAP. The decision was made by DOE to approve funding for the purchase of six more Bell 412s through the Pacific Northwest Nuclear Laboratory. Knowing a great deal about the Pakistani Military Aviation Maintenance Programs and the caliber of technicians and pilots they possessed, this was just a Band-Aid compared to the gushing wound the services lacked.

The program manager for the company I was working for as my cover requested I immediately move air assets from the airbase where I was stationed. I communicated this request to the teams in Afghanistan, and a fully loaded Cessna Caravan landed at the airfield where I was with no issues whatsoever. The Pakistani Military understood the immediate need to get all air assets to the affected region as soon as possible. As we were en route to Qasim Air Base, all equipment was powered on and the surveillance ops were all now in full swing. I had to make a pit stop for fuel and passengers in Multan, and was soon back up and heading into the devil's lair. Our mission this day was to actually land at Chaklala Air base and electronically interrogate a large

hanger and adjacent facilities, as there were reports of a possible movement of warheads from this location.

FINAL APPROACH, MAY DAY, MAY DAY

As we entered Islamabad Airspace I made the usual calls to the tower at Qasim Airbase, gave tail number, heading, altitude, passenger and crew numbers. We were given clearance to enter airspace and as we reached the threshold between Qasim and Chaklala, I initiated an emergency call: "May day, May day! Experiencing power loss and smoke in the cockpit!"

I had tripped a simulated smoke generator, and from the tower at Chaklala Airbase, they could see we

were in trouble. But Chaklala Airbase was not authorizing a US aircraft to land at Chaklala. I made another emergency "May day" call over the emergency net frequency and reported total engine failure as I oriented our flight path to the active runway on final. From our position, we could see Pakistani military vehicles scrambling on the runway to prevent our landing. I nosed it over, increased speed, turned on landing lights and proceeded with approach. The aircraft was at max gross weight, we had Pakistani military passengers and a ½ load of fuel. Off to our right, we could see the target hanger and a roadway along its side. The Pakistani troops guarding that hanger facility had mounted up in vehicles and were blocking the freaking runway.

My APR-39 was indicating a surface to air missile laser lock on the aircraft. We knew from intel surveillance that it was the French-design Crotale 2000 SAM System. By now, my pucker factor was a 10 and my co-pilot's anal retention dropped to zero. If there was a launch, we would be vaporized.

I continued with the emergency calls: "May Day, May Day." By now, the Pakistani Military passengers were yelling, screaming, saying their prayers to Allah. As soon as I was five feet off the runway, I applied max power on the engine, full feathered the prop and landed with the smoke generators blowing some serious smoke. I immediately steered the aircraft to the roadway next to the target hanger and reported a stuck throttle with braking difficulty. The Pakistani vehicles were all over the roadway waving us down, trying to get us back on the active, but I stayed the course and requested emergency fire vehicles. By now, we were scanning for warheads. "BINGO!" We got three major hits on the scope and the computers were recording everything in real time at the home base in Afghanistan. By the time I got to the other end of the hanger, we had the evidence we were looking for.

I brought the aircraft to a stop, killed the smoke generator, engines and stowed the landing gear light. I made communications with the tower that I was going through emergency shutdown procedures. Before I could thank all my passengers for flying with American Eagle flight 1 from Multan to Islamabad, they were already piling out, looking blue, pale and a little loose in bladder control. Now we were surrounded by Pakistani troops all pointing AK-47s at us. I felt one wrong move, and we'd cut to Swiss cheese. So I put my hands up in the air, and my crew did the same. They opened the door and had us deplane and lie flat on the ground. We were searched and a young captain walked up and asked in English, "Who's in charge?"

I rolled my head to where he was standing and said I was. He then asked me to get up, and when I did I recognized the man as Captain Javed, a young arrogant officer who was an Aviator in Training. He immediately recognized me: "Mr. Larry! My God, man! What happened?" He ordered his troops to stand down into the low ready, and I explained we had taken on fuel in Multan and experienced engine failure before landing with a loss of oil pressure and high temperature readings from the power gearbox.

The Captain was concerned for us and stated we were in a highly restricted area that was off limits to even the Pakistani Military. He was shitting bricks when another vehicle pulled up and it was Colonel Imtaz, the ISI officer in charge of Chaklala Air base. He was more calm and relaxed and looking like the spitting image of Barney Fife of Mayberry RFD with his big bug eyes. The captain vouched for me, my credentials and crew and stated that I was an Aviation Advisor for the Department of State working as an instructor through the Ministry of Interior. Examining all my ID cards, Colonel Imtaz immediately ordered a search of the plane. (Like the Pakistani's had any clue what they were looking at!)

Captain Javed told the Colonel all was OK, and that there were only relief supplies on board, which were our travel bags, toolbox and some

boxes of aircraft oil. The passengers also were telling the Colonel that if it wasn't for me and my Co-Pilot, they all would have died. By now my Co-pilot was telling everyone not to forget their box lunches and peanuts! Captain Javed had wanted to qualify in my aircraft, and he was a major kiss ass since I was posted as an instructor. He was always wanting to impress upon me his skills and knowledge as an aviator, but he was a marginal pilot at best.

Finally Col. Imtaz was satisfied with the search of the plane and our engine-failure story. About this time, my co-pilot, "Knuckles," a big, corn-fed Alabama boy, says to Col. Imtaz, "Where's the titty bar! Any liquor in this place?" Looking at Col. Imtaz, Knuckles puts this huge dip of snuff in his mouth and lets out a fart! He then reaches for his US Marine Corps K-Bar, pulls it out, and starts picking at a sore on his palm. I wanted to laugh so hard it made pee. Colonel Imtaz was fixated on Knuckles and didn't know what to say. He looked confused, like he was thinking of a response for Knuckles. Still being surrounded by Pakistani troops, I told the Colonel, "Excuse me for a minute sir," and took about six steps away and started to piss like a Texas jack ass.

The Pakistani soldiers were all looking at the Colonel and me. The roadway was slanted, and the soldiers started to move out of the way as the river of piss headed for them. Col. Imtaz, also looking at me, was speechless and called Captain Javed over. They walked toward the Colonel's vehicle and were talking. Col. Imaz got into his vehicle and left the area.

Captain Javed came over and said I had to stop pissing, that I was embarrassing him in front of the soldiers, who were all still in shock and staring at me. I told Captain Javed: "Dude, sorry! But I was on a freaking four-hour flight, had engine failure, made an emergency landing, and almost had my head blown off! Ya' think I would have just pissed in my flight suit?"

Not hearing any response from Captain Javed, I looked over at him and he was staring like the rest of those morons. I finally said, "Hello, hello!" Captain Javed then ordered the troops to push the Cessna to a mooring spot right next to the hanger. Knuckles and I tied it down and got our bags. While Knuckles was talking to Captain Javed, I cycled a remote satellite transmitter that signaled we were OK and on Chaklala Airbase. I ensured the ground-penetrating radar system was completely grounded and the battery disconnected. We got a ride to the Officer's Club and called U.S. Marine Corps Post 1, US Embassy, Islamabad for a ride ASAP. The young Marine on the other end patched me through to transportation, and our ride was on its way to take us to the safe house.

LEAVE NOW…ER, NEVER MIND

Captain Javed came over to the table where we sat and ordered coffee and tea. He conveyed to us that the aircraft had to be flown out of here by tomorrow or the Pakistani military was going to tow it. I immediately made a call to Qasim Airbase and requested a technician be transported to Chaklala to repair the Cessna by 7 PM that same day. I explained to Captain Javed that the technician had to eat dinner and would come afterward. Our tech knew exactly what to do upon arrival and made a big deal to the Pakistani's that the work was complicated. I also mentioned to Captain Javed that I wanted to give him the rating on the Cessna and that if he wouldn't mind accompanying me on flights to the Federally Administered Tribal Areas for the relief efforts, he would surely have enough time behind the wheel to receive the rating with no problems. His eyes lit up like alfalfa and buckwheat staring at a bar of soap. I did this to diffuse the tensions over having the Aircraft moored next to a hanger that was surrounded by troops and seemed suspicious. Col. Imtaz was also on his case to move the aircraft ASAP.

Captain Javed agreed and stated that he would get authorization from his superiors immediately. I mentioned to Knuckles that I would stay behind while he went with the driver to the safe house to shower. By this time it was approaching 7PM and the technician was escorted up to the aircraft by a group of Pakistani soldiers. I told the tech to open the engine doors and that I would get inside the cockpit to do some checks.

By this time, we had an audience, and even the security cameras all around the place were on us recording our every move. We had to make our efforts look good. The tech removed the igniters and cleaned them, replaced a gearbox pressure sensor and went through throttle checks. After about four hours, Knuckles came back, and we went through the preflight checklist, cranked the engine, prop feathering

and brake checks. All comms were good, and we asked for permission to taxi to the active.

The tower denied permission, and we stayed there for about 10 mins at engine idle listening to U2 and keeping our cool. We needed to get the hell out of there now.

Again I made the tower call and permission was denied. I was then instructed to power off and proceed to the Operations Center. We all just looked at each other and expected the worse. We didn't know if we'd just been had. But I gave the hand signal for no one to talk as I felt we may have a listening device on board or worse. I did exactly as the tower instructed and looking out at the tower, we could see a lot of military vehicles there and more pulling up all the time. Were we going to be arrested? A jeep drove up to the plane and ground troops in the vicinity rushed the plane and surrounded it.

I was then told by a Pakistani military officer that I was needed in the Operations Center and the crew was asked to go to the ready room of the Pilot's office. We were being separated.

The driver took me over to Operations, and a room full of Pakistani officers was looking at me when I came through the door. I looked around and wanted to know what the problem was. A Brigadier approached and asked why I decided to land at Chaklala instead of Qasim Airbase—since Qasim was the base I should have landed at. I quickly told him, "Sir, I had to turn the troubled aircraft into the wind. I was loosing altitude and power, carrying six passengers. I was dropping like the stock market trying to keep the ship stable. Thinking quickly, I also knew you had a longer runway and emergency fire vehicles here. Which I reported and received no assistance from your fire brigade when I landed! The aircraft was full of smoke from a faulty engine oil pressure sensor that was leaking oil onto the engine, which your crews installed back at the airbase!"

The Brigadier then asked why I had pulled off the runway. "Why didn't I stop on the active?" I asked. "I had to pull off onto the access road because your military vehicles were blocking the active, and I had to avoid a collision that surely would have resulted in a major incident, loss of life and aircraft. Furthermore, sir, the United States military and all its resources available are lending assistance to your country in a major disaster relief effort to save over a million people that have been trapped in the NWFP (North West Frontier Province)! My crew and myself have been working around the clock to repair the aircraft, move it to Qasim AB at this time and get some rest before daylight. Do I need to inform my Ambassador?"

By now all the officers were shaking their heads, "No." Looking around, the Brigadier apologized and ordered the tower to give clearance immediately.

When I walked out of there, I was trembling with fear, and I knew I had just saved everyone's ass. In the background was one of the ISI Generals who had made the deal to sell the nukes to Iran. He sat there listening to every word I had to say. The Brigadier actually had looked at him when I was done talking, and it was the ISI General that gave a hand signal to release us.

I got my guys on the aircraft, we mounted our PVS6 Night Vision Goggles and flew just 10 minutes to Qasim Airbase. We landed, got out of the ship and a new American crew from Afghanistan got in and flew the heavily equipped nuke hunter out of there toward the south. We quickly got into the waiting Suburban and went straight to the safe house without anyone saying a word. When we arrived, we went to our rooms, showered and went to sleep. It was a hell of a long day, but we made a major play in the discovery of the loose nukes.

THREE CARD MONTE

The next day was a day like any other day. The team assembled downstairs, and we all drove back down to Qasim Airbase to assist in the earthquake relief efforts. When we arrived at the

tower, I noticed the Cessna Caravan that I usually fly that had always been based out of another airbase was there on station. We managed to pull off this three card monte because when I flew from Chaklala to Qasim, the original Cessna that we always use in country was just 30 minutes away at another airbase. When I took off from Chaklala, the other aircraft took off from the base it was pre-staged at, when I landed at Qasim, we all got off and changed crews. The new crew explained to Qasim Control Tower that they were taking the aircraft for a test flight. As they did, they flew in the direction of the replacement plane and as they passed each other, Transponder and IFF frequencies were swapped. This left the replacement aircraft returning to Qasim and the Nuke Hunter transmitting on another code and frequency that was Pakistani, back to Afghani airspace.

Captain Javed was there at the tower waiting for us and wanting to learn all he could about flying and I was happy to oblige. The relief efforts went on for over two months, and he was qualified afterward.

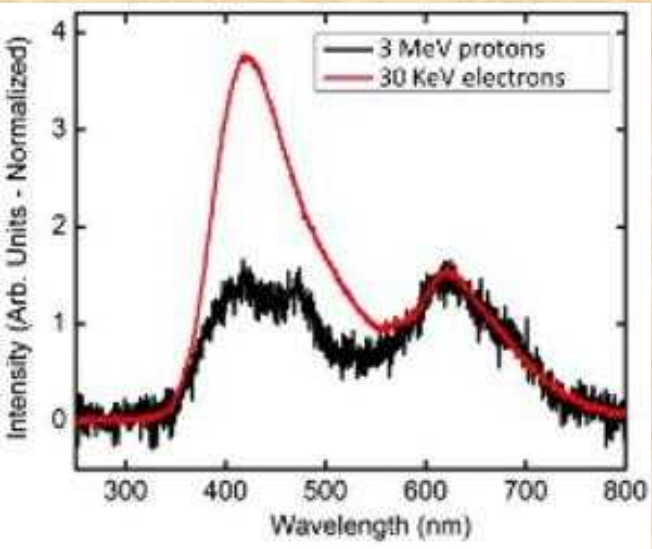
The mission was a complete success and all teams recalled back to Afghanistan. What we had discovered was a Boeing 737 Saudi Arabian airliner inside the hanger that was fitted for cargo use and having three enriched uranium, 25 kiloton bombs on board. The Saudis claimed to have absolutely no knowledge that the plane was theirs. But little did they know, the corrupt ISI generals were selling to the Iranians what the Saudi's had already purchased from the Pakistanis in exchange for oil. The US immediately came forward with this information to the Pakistani and Saudi Arabian governments, including the recordings from the luxury yacht as well.

Strangely enough, the Pakistani ISI generals suddenly disappeared without a trace and were replaced within a few days of this disclosure.

More effective radiation detection of cargo, baggage

Source: http://www.homelandsecuritynewswire.com/dr20120629-more-effective-radiation-detection-of-cargo-baggage

Spectral shape discrimination data for an iridium-MOF scintillator // Source: sandia.gov



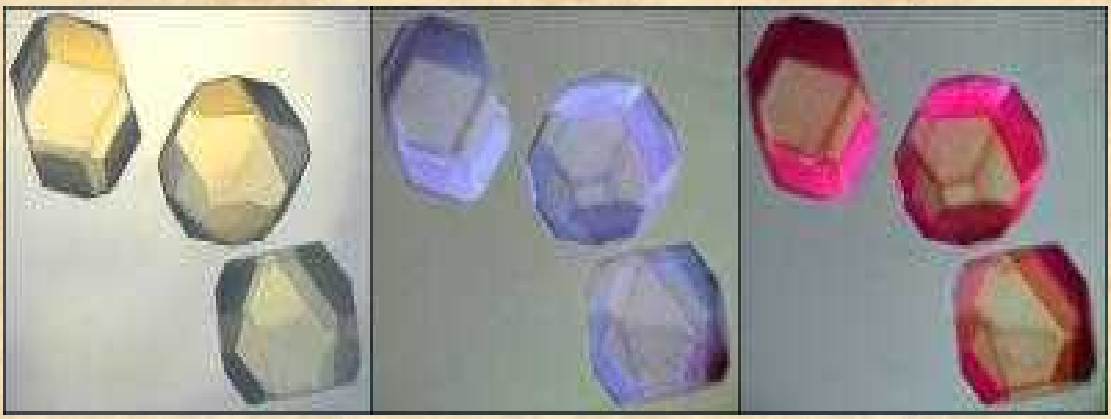
A team of nanomaterials researchers at Sandia National Laboratories has developed a new technique for radiation detection that could make radiation detection in cargo and baggage more effective and less costly for homeland security inspectors.

Known as spectral shape discrimination (SSD), the method takes advantage of a new class of nanoporous materials known as metal-organic frameworks (MOFs). A Sandia Lab release reports that researchers discovered that adding a doping agent to an MOF leads to the emission of red and blue light when the MOF interacts with high-energy particles emanated from radiological or nuclear material, enabling more effective detection of neutrons. Neutron detection is currently a costly and technically challenging endeavor due to the difficulty in distinguishing neutrons from ubiquitous background gamma rays.

Initial work on the use of MOFs for radiation detection was internally funded by Sandia's Laboratory Directed Research and Development (LDRD) program, but subsequent funding for the project has come from the National Nuclear Security Administration's (NNSA) Defense Nuclear Nonproliferation research office.

"Improving our radiation detection capabilities is crucial to advancing NNSA's nonproliferation mission," said Anne Harrington, NNSA's deputy

administrator for Defense Nuclear Nonproliferation. "Preventing the illicit movement of radiological and nuclear materials around the globe supports the president's nuclear security objectives and helps to mitigate the threat of a nuclear terror attack."



Crystals of a metal organic framework (left) emit light in the blue (middle) when exposed to ionizing radiation. Infiltrating them with an organometallic compound causes the crystals to emit red light as well (right), creating a new way to differentiate fission neutrons from background gamma particles.

The new technology works with plastic scintillators, materials that fluoresce when struck by charged particles or high-energy photons, making it suitable for commercialization by companies who produce plastic and other organic scintillators used in radiation detection devices. Though work remains before it can move into the marketplace, Sandia is currently seeking commercial partners to license the technology.

Current radiation detection methods are limited in terms of speed and sensitivity, crucial elements for dynamic scenarios, such as border crossings, cargo screenings and nuclear treaty verification. This new technology monitors the color of light emissions, which have the potential to make the screening process easier and more reliable.

"We are approaching the problem from a materials-chemistry perspective," said Sandia materials scientist Mark Allendorf. "Fundamentally, it is easier to monitor the color of light emissions rather than the rate at which that light is emitted. That's the crux of this new approach." Current radiation detection methods use time to discriminate between neutrons and gamma rays, requiring complex and costly electronics.

MOFs and dopants lead to more light

Allendorf and his team have been working with MOFs for more than five years. Early on, they discovered a fluorescent, porous MOF with superb scintillation properties, an important breakthrough and the first new class of scintillators found in decades. The MOF's porosity is a key feature because it allows researchers to add other materials to fine-tune the scintillation.

The MOF's nanoporosity triggered a new idea when team member Patrick Doty read about the use of dopants to increase the efficiency of organic light-emitting diodes (OLEDs). These dopants, usually compounds containing heavy metals such as iridium, dramatically increase OLED brightness by "scavenging" the excited-state energy in the device that was not converted to light. This energy represents as much as 75 percent of the possible light output.

The release notes that combining MOFs with OLED dopants led to a second breakthrough. By filling MOF pores with dopants, the team created a material that not only produces more light, but light of another color. Doty, a materials scientist working in Sandia's radiation/nuclear detection materials and analysis department, hypothesized that the discovery could be applied to radiation detection.

The trick, Doty said, is to add just the right amount of dopant so that both the scavenged light and fluorescence from the excited MOF itself are emitted. Then the ratio of the intensities at the two wavelengths is a function of the type of high-energy particle interacting with the material.

"That's the critical thing," Doty said. "SSD allows one particle type to be distinguished from another on the basis of the color of the emitted light."

Because the ratio of neutrons to gamma rays is so low — on the order of one neutron to 105 gamma rays — the threshold at which current detectors can see neutrons is fairly high. Sandia calculations suggest that the threshold for detecting neutrons produced by fissionable material could be lowered substantially using SSD, perhaps improving the "figure of merit" by a factor of 10 compared to the current standards. "In principle, we could quadruple the sensitivity of the gold standard," said Allendorf.

SSD also addresses another radiation detection problem — active interrogation. Using an active source to create a signal from special nuclear material is an effective means for detection, say Sandia researchers. But current detectors are often overwhelmed by the onslaught of gamma rays. The new materials developed at Sandia can be tuned for improved timing performance at high rates, and the new technology also could be used in radiation detectors for treaty verification.

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Radiation-resistant circuits from mechanical parts

Source:http://www.homelandsecuritynewswire.com/dr20120702-radiationresistant-circuits-from-mechanical-parts

University of Utah engineers designed microscopic mechanical devices that withstand intense radiation and heat, so they can be used in circuits for robots and computers exposed to radiation in space, damaged nuclear power plants, or nuclear attack.

A University of Utah release reports that the researchers showed the devices kept working

despite intense ionizing radiation and heat by dipping them for two hours into the core of the University of Utah's research reactor. They also built simple circuits with the devices.

Ionizing radiation can quickly fry electronic circuits, so heavy shielding must be used on robots such as those sent to help contain the meltdowns at the Fukushima Daiichi nuclear power plant after Japan's catastrophic 2011 earthquake and tsunami.

"Robots were sent to control the troubled reactors, and they ceased to operate after a few hours because their electronics failed," says Massood Tabib-Azar, a professor of electrical and computer engineering at the University of Utah and the Utah Science Technology and Research initiative.

"We have developed a unique technology that keeps on working in the presence of ionizing radiation to provide computation power for critical defense infrastructures," he says. "Our devices also can be used in deep space applications in the presence of cosmic ionizing radiation, and can help robotics to control troubled nuclear reactors without degradation."

The new devices are "logic gates" that perform logical operations such as "and" or "not" and are a type of device known as MEMS or micro-electro-mechanical systems. Each gate takes the place of six to 14 switches made of conventional silicon electronics.

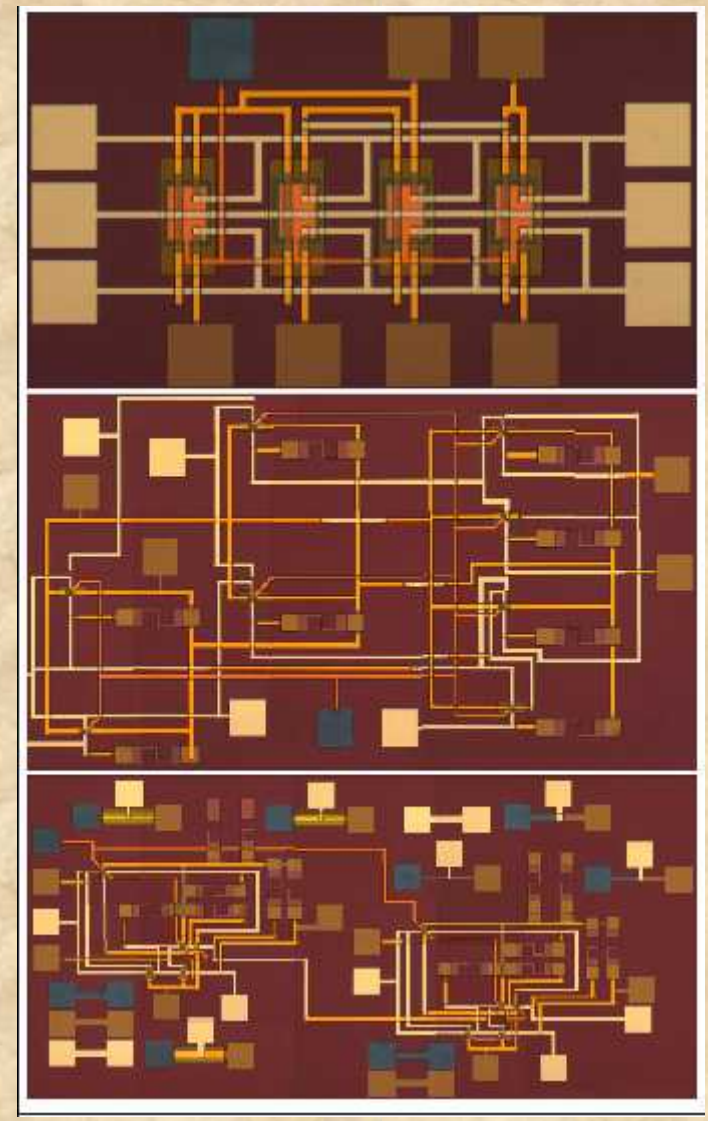
Development of the new logic gates and their use to build circuits such as adders and multiplexers is reported in a study set for online publication this month in the journal Sensors and Actuators.

The research was conducted by Tabib-Azar, University of Utah electrical engineering doctoral student Faisal Chowdhury and computer engineer Daniel Saab at Case Western Reserve University in Cleveland.

Tabib-Azar says that if he can obtain more research funding, "then the next stage would be to build a little

computer" using the logic gates and circuits.

The study was funded by the Defense Advanced Research Projects Agency (DARPA).



Shown here are three kinds of micro-electro-mechanical systems (MEMS) circuits built from microscopic mechanical devices, known as "logic gates," designed to resist ionizing radiation. The circuits are a 2-bit multiplexer (top), a 1-bit full adder (center) and a 2-bit full adder (bottom). Photo Credit: Massood Tabib-Azar, University of Utah

"Its premier goal is to keep us ready," says Tabib-Azar. "If there is a nuclear event, we need to be able to have control systems, say for radars, to be working to protect the nation. There are lots of defense applications both in peacetime and wartime that require computers that can operate in the presence of ionizing radiation."

In April DARPA issued a call for the development of robots to deal with stricken nuclear reactors to reduce human exposure to deadly radiation. In May NASA said it was seeking proposals for new shields or materials able to resist radiation in space.

Circuits built with the new devices also could resist intense heat in engines to monitor performance, Tabib-Azar says.

MEMS: Ability to withstand radiation overcomes drawbacks

Current radiation-resistant technologies fall into two categories: conventional complementary silicon-oxide semiconductor electronics shielded with lead or other metals, and the use of different materials that inherently resist radiation.

"Electronic materials and devices by their nature require a semiconducting channel to carry current, and the channel is controlled by charges," Tabib-Azar says. Radiation creates current inside the semiconductor channel, and "that disrupts the ability of the normal circuitry to control the current, so the signal gets lost."

He says the MEMS logic gates are not degraded by ionizing radiation because they lack semiconducting channels. Instead, electrical charges make electrodes move to touch each other, thus acting like a switch.

MEMS have their drawbacks, which Tabib-Azar believes is why no one until now has thought to use them for radiation-resistant circuits. Silicon electronics are 1,000 times faster, much smaller, and more reliable because they have no moving parts.

By having one MEMS device, however, act as a logic gate, instead of using separate MEMS switches, the number of devices needed for a computer is reduced by a factor of 10 and the reliability and speed increases, Tabib-Azar says.

Also, "mechanical switches usually require large voltages for them to turn on," Tabib-Azar says.

"What we have done is come up with a technique to form very narrow gaps between the bridges in the logic gates, and that allows us to activate these devices with very small

voltages, namely 1.5 volts" versus 10 or 20 volts. Unlike conventional electronics, which get hot during use, the logic gates leak much less current and run cooler, so they would last longer if battery-operated.

Design and reactor testing of the logic gates

Each logic gate measures about 25-by-25 microns, or millionths of a meter, "so you could put four of these on the cross section of a human hair," says Tabib-Azar. Each gate is only a half-micron thick.

The logic gates each have two "bridges," which look somewhat like two tiny microscope slides crossing each other to form a tic-tac-toe pattern, with tungsten electrodes in the center square.

Each bridge is made of a glass-like silicon nitride insulator with polysilicon under it to give rigidity. The insulator is etched and covered by metallic strips of tungsten that serve as electrodes. "When you charge them, they attract each other and they move and contact each other. Then current flows," says Tabib-Azar.

He and his colleagues put the logic gates and conventional silicon switches to the test, showing the logic gates kept working as they were repeatedly turned on and off under extreme heat and radiation, while the silicon switches "shorted out in minutes."

The devices were placed on a hot plate in a vacuum chamber and heated to 277 degrees Fahrenheit for an hour. Three times, the researchers lowered the devices for two hours into the core of the university's 90-kilowatt TRIGA research reactor, with wires extending to the control room so the researchers could monitor their operation. The logic gates did not fail.

The researchers also tested the logic gates outside the reactor and oven, running them for some two months and more than a billion cycles without failure. But to be useful, Tabib-Azar wants to improve that reliability a millionfold.

Two kinds of logic gates

For the study, Tabib-Azar and colleagues built two kinds of logic gate, each with two inputs (0 or 1) and thus four possible combinations of inputs (0-0, 0-1, 1-0, 1-1). The input and output are electrical voltages:

– An AND gate, which means "and." If both inputs – A and B – are true (or worth 1 each), then the output is true (or equal to 1). If input A or B or both are false (worth 0), then the output is false (or equal to 0).

– An XOR gate, which means "exclusive or." If input A doesn't equal B (so A is 0 and B is 1 or A is 1 and B is 0), the output is true (equal 1). If both A and B are either true (1) or false (0), the output is false (0).

"In a sense, you can say these are switches with multiple outcomes," rather than just off-on (0-1), says Tabib-Azar. "But instead of using six [silicon] switches separately, you have one structure that gives you the same logic functionality."

"Let's say you want to decide whether to go to dinner tonight, and that depends on if the weather is nice, if you feel like it," he says. "In order to make that decision, you have a bunch of 'or' statements and a bunch of 'and' statements: 'I'll go to dinner if the weather is nice and I feel like it.' 'I like to eat Italian or French.' You put these statements together and then you can make a decision."

"To analyze this using silicon computers," Tabib-Azar says, "you need a bunch of on-off switches that have to turn on or off in a particular sequence to give you the output, whether you go to dinner or not. But just a single one of these [MEMS logic gate] devices can be designed to perform this computation for you."

Even a limited India-Pakistan nuclear war would substantially reduce global crop yields

Source: http://www.homelandsecuritynewswire.com/dr20120703-even-a-limited-indiapakistan-nuclear-war-would-substantially-reduce-global-crop-yields

Worries about nuclear winter have faded since the end of the cold war, but existing stockpiles of nuclear weapons still hold the potential for devastating global impacts.

Researchers at the University of Wisconsin-Madison and Rutgers University have found that the climate effects of a hypothetical nuclear war between India and Pakistan would greatly reduce yields of staple crops, even in distant countries.

A University of Wisconsin-Madison release reports that the work, by Mutlu Ozdogan and Chris Kucharik of the

Center for Sustainability and the Global Environment in the Nelson Institute for Environmental Studies at UW–Madison and Alan Robock of Rutgers' Center for Environmental Prediction, will appear in an upcoming issue of the journal *Climatic Change*.

Robock used global climate models to calculate the climate impacts of a conflict between India and Pakistan, each using fifty nuclear weapons. "This is essentially a climate change experiment, but instead of running a climate change model under a global CO2 scenario, you run it under a soot scenario, where the soot comes from fires from cities and industrial areas burning as a result of the war," explains Ozdogan, a UW–Madison professor of forest and wildlife ecology.

The soot and smoke can travel around the world in the atmosphere and block some of the sunlight that would normally reach the Earth. That leads to cooler temperatures, altered weather and precipitation patterns, and shorter growing seasons.

"We were surprised that there was such a large climate change — climate change unprecedented in recorded human history — even from a war with fifty small nuclear weapons per side, much, much less than one percent of the current nuclear arsenal," says Robock. He adds that the changes also lasted a full decade, much longer than he expected. "The question is, what impact does that have on things that matter to humans, and the most important is our food supply."

The researchers used the climate changes predicted for the Midwest to calculate potential effects on corn and soy production in Iowa, Illinois, Indiana and Missouri. Using climate-based agricultural output models, they compared yields under modern weather patterns and under the war scenario.

The release reports that they found that the climate effects of nuclear war led to decreases in corn yields of 10 to 40 percent and soy yields of 2 to 20 percent, with the reductions gradually declining over the course of the decade following the war.

"Those changes — in any year — are much larger than the natural variation we might see" due to weather fluctuations alone, Ozdogan says. Unlike gradual environmental changes associated with greenhouse gas accumulation, the rapid onset of a war would not permit farmers or the global economy any time to adapt.

A companion study by Robock and Lili Xia of Rutgers University, also published in *Climatic Change*, calculated that the same scenario would dramatically reduce rice production in China: an average decrease of 21 percent during each of the first four years after the war and 10 percent less for the next six years.

Such losses add up to a huge impact on regional food supplies that could escalate into wider food shortages and trade breakdowns with dire economic and political consequences, Robock says.

The take-home message, Ozdogan says, is that localized events can have disproportionately large global impacts.

"Hopefully this will never happen," he says, "but if it happens, if the prospect is there, these are some of the results that people could expect."

Was Arafat killed with polonium?

Source: http://www.aljazeera.com/programmes/whatkilledarafat/2012/07/201273181058734888.html

It was a scene that riveted the world for weeks: The ailing Yasser Arafat, first besieged by Israeli tanks in his Ramallah compound, then

shuttled to Paris, where he spent his final days undergoing a barrage of medical tests in a French military hospital.

Eight years after his death, it remains a mystery exactly what killed the longtime Palestinian leader. Tests conducted in Paris found no obvious traces of poison in Arafat's system. Rumors abound about what might have killed him – cancer, cirrhosis of the liver, even allegations that he was infected with HIV.

A nine-month investigation by Al Jazeera has revealed that none of those rumors were true: Arafat was in good health until he suddenly fell ill on October 12, 2004.

More importantly, tests reveal that Arafat's final personal belongings – his clothes, his toothbrush, even his iconic kaffiyeh – contained abnormal levels of polonium, a rare, highly radioactive element. Those personal effects, which were analyzed at the Institut de

Radiophysique in Lausanne, Switzerland, were variously stained with Arafat's blood, sweat, saliva and urine. The tests carried out on those samples suggested that there was a high level of polonium inside his body when he died.

"I can confirm to you that we measured an unexplained, elevated amount of unsupported polonium-210 in the belongings of Mr. Arafat that contained stains of biological fluids," said Dr. Francois Bochud, the director of the institute.

The findings have led Suha Arafat, his widow, to ask the Palestinian Authority to exhume her late husband's body from its grave in Ramallah. If tests show that Arafat's bones contain high levels of polonium, it would be more conclusive proof that he was poisoned, doctors say.

"I know the Palestinian Authority has been trying to discover what Yasser died from," Suha

Arafat said in an interview. "And now we are helping them. We have very substantial, very important results."

Unsupported polonium

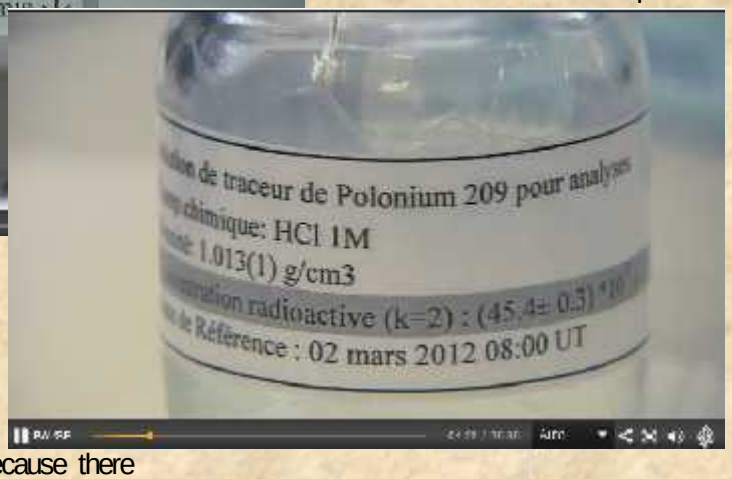
The institute studied Arafat's personal effects, which his widow provided to Al Jazeera, the first time they had been examined by a laboratory. Doctors did not find any traces of common heavy metals or conventional poisons, so they turned their attention to more obscure elements, including polonium.

It is a highly radioactive element used, among other things, to power spacecraft. Marie Curie discovered it in 1898, and her daughter Irene was among the first people it killed: She died of leukemia

several years after an accidental polonium exposure in her laboratory.

At least two people connected with Israel's nuclear program also reportedly died after exposure to the element, according to the limited literature on the subject.

But polonium's most famous victim was Alexander Litvinenko, the Russian spy-turned-dissident who died in London in 2006 after a lingering illness. A British inquiry found that he was poisoned with polonium slipped into his tea at a sushi restaurant.



There is little scientific consensus about the symptoms of polonium poisoning, mostly because there are so few recorded cases. Litvinenko suffered severe diarrhea, weight loss, and vomiting, all of which were symptoms Arafat exhibited in the days and weeks after he initially fell ill.

Animal studies have found similar symptoms, which lingered for weeks - depending on the dosage – until the subject died. "The primary radiation target… is the gastrointestinal tract," said an American study conducted in 1991, "activating the 'vomiting centre' in the brainstem."

Scientists in Lausanne found elevated levels of the element on Arafat's belongings - in some cases, they were ten times higher than those on control subjects, random samples which were tested for comparison.

The lab's results were reported in millibecquerels (mBq), a scientific unit used to measure radioactivity.

Polonium is present in the atmosphere, but the natural levels that accumulate on surfaces barely register, and the element disappears quickly. Polonium-210, the isotope found on Arafat's belongings, has a half-life of 138 days, meaning that half of the substance decays roughly every four-and-a-half months. "Even in case of a poisoning similar to the Litvinenko case, only traces of the order of a few [millibecquerels] were expected to be found in [the] year 2012," the institute noted in its report to Al Jazeera.

But Arafat's personal effects, particularly those with bodily fluids on them, registered much higher levels of the element. His toothbrushes had polonium levels of 54mBq; the urine stain on his underwear, 180mBq. (Another man's pair of underwear, used as a control, measured just 6.7mBq.)

Further tests, conducted over a three-month period from March until June, concluded that most of that polonium – between 60 and 80 per cent, depending on the sample – was "unsupported," meaning that it did not come from natural sources.

'It was a crime'

Doctors in Lausanne, and elsewhere, also ruled out a range of other possible causes for Arafat's death, based on his original medical file, which Ms. Arafat also provided to Al Jazeera. Their examination ruled out many of the other causes of death that have been rumored over the last eight years.

"There was not liver cirrhosis, apparently no traces of cancer, no leukemia," said Dr. Patrice Mangin, the head of the Institute of Legal Medicine of Lausanne University. "Concerning HIV, AIDS – there was no sign, and the symptomology was not suggesting these things."

Dr. Tawfik Shaaban, a Tunisian specialist in HIV and one of the doctors who examined Arafat in his Ramallah compound, confirmed that there were no signs of the disease.

Their conclusions, of course, were based on documentation rather than firsthand examination. Doctors in Lausanne had hoped to study the blood and urine samples taken from Arafat while he was at Percy Military

Hospital in France. But when she requested access, the hospital told his widow that those samples had been destroyed.

"I was not satisfied with that answer," Ms. Arafat said. "Usually a very important person, like Yasser, they would keep traces – maybe they don't want to be involved in it?"

Several of the doctors who treated Arafat said that they were not allowed to discuss his case – even with Ms. Arafat's permission – because it was considered a "military secret." And most of his onetime doctors in Cairo and Tunis refused requests for interviews as well.

With those avenues of inquiry closed, Arafat's body itself would be the last remaining source of conclusive evidence. Exhuming it would require approval from the Palestinian Authority; shipping bone samples outside of the West Bank would require permission from the Israeli government.

Whatever the outcome, Ms. Arafat said she hopes further tests would "remove a lot of doubt" about her husband's still-mysterious death.

"We got into this very, very painful conclusion, but at least this removes this great burden on me, on my chest," she said. "At least I've done something to explain to the Palestinian people, to the Arab and Muslim generation all over the world, that it was not a natural death, it was a crime."

A conclusive finding that Arafat was poisoned with polonium would not, of course, explain who killed him. It is a difficult element to produce, though – it requires a nuclear reactor – and the signature of the polonium in Arafat's bones could provide some insight about its origin.

Experts: If Arafat was poisoned, it was not by polonium-210

Source: http://www.homelandsecuritynewswire.com/dr20120708-experts-if-arafat-was-poisoned-it-was-not-by-polonium210

The Middle East is a region rife with conspiracy theories, which usually conform to a predictable pattern: Arab politicians or opinion makers accuse Israeli agencies (typically, the Mossad) of the most fantastic – and bizarre — feats. Thus, a year and half ago, after several European tourists vacationing in Sharm al-Shiek were attacked by sharks, an Egyptian government minister accused the Mossad of having a secret program to train sharks to attack European tourists in order to damage the Egyptian economy. Immediately after the 9/11 attacks, there were voices in the Arab press

arguing that there were no Jews among the 3,000 killed in the Twin Towers because the Mossad, which orchestrated the attack, called all the Jews who worked in offices in the towers the night before the attack to tell them not to show up for work.

We may see the birth of another conspiracy theory, this one involving the charge that Yasser Arafat was poisoned by the radioactive substance polonium-210. Last week, Al-Jazzeera aired a program based on an investigation into the death of Yasser Arafat in November 2004. Suha Arafat, Yasser's widow, gave the program researchers a few items of clothing Arafat wore in his last days, and also personal items such a toothbrush and a hair brush. The items were examined by a reputable radiation lab in Switzerland, and the Swiss scientists reported that they found unusually high concentration of polonium-210 in those items.

The widow, who in 2004 refused to give a permission to have an autopsy performed on her husband's body, now calls for the exhumation of his body so it could be tested. Palestinian leaders have joined her call (a few years ago the Palestinian Authority established a commission to investigate Arafat's death, but it is yet to issue its findings).

Now, suspecting that Israel had something to do with Arafat's death is not as far-fetched as saying that the Mossad trains shark to attack tourists in Egypt. For more than three decades now, Israel has been engaged in a systematic, covert campaign to take out Palestinian leaders. In most cases, those killed were at the operational level of various Palestinian organizations, but Israel also showed its readiness to kill political leaders: it killed Hamas's spiritual leader Sheikh Ahmed Yassin in March 2004, and Hamas's political leader, Abdel Aziz al-Rantissi, a month later, after Hamas crossed what Israel considered to be a "red line": earlier that year, Hamas sent two suicide bombers to try and blow up an oil tank farm near the port of Ashdod, even though Israel had earlier let Hamas know that attacks on Israel's critical infrastructure would cost Hamas heavily. The two suicide bombers were detected and killed before they reached their target, but Israel decided that the message to Hamas needed to be reinforced, and its two leaders were taken out.

Arik Sharon, who was Israel's prime minister at the time of Arafat's death, was also heard, on more than one occasion, to suggest that the Middle East would be a better place without Arafat in the picture. So when Arafat was taken ill in October 2004, and when Palestinian and French doctors – he was flown to Paris in late October for treatment – could not identify the source on the underlying infection which led to his death in mid-November, the Palestinians, and many in the Arab street, charged that the Mossad poisoned him.

These charges could not be conclusively investigated because Arafat's widow refused to allow an autopsy to be performed.

What is new in the current round of charges, then, is not the accusation that Israeli agents poisoned Arafat – but the fact that the poison was identified as polonium-210 (earlier charges of poisoning claimed the poison used was thallium or ricin).

Experts doubt that Arafat was poisoned with polonium 210, if he was poisoned at all. An Israeli terrorism expert who specializes in CBRN (chemical, biological, radiological, nuclear) terrorism, for example, dismisses the charges becasue they violate the laws of physics.

The *Jerusalem Post* quotes Dr. Ely Karmon of the Interdisciplinary Center, Herzliya's International Institute for Counterterrorism, to say that the characteristics of polonium-210 preclude it from having killed Arafat. The half life of polonium would make it impossible for the substance to have been discovered in such high levels in Arafat's belongings eight years after Arafat's death.

Polonium-210 has a half-life of 138 days, meaning that half of the substance decays roughly every four-and-a-half months. Since only miniscule amounts of the substance would suffice to kill someone, it is not possible that eight years after Arafat's death, Swiss scientists would find polonium levels of 54 millibecquerels (mBq) and 180 millibecquerels on his belonging. If Arafat was killed by polonium poisoning, and the killers used the same amount of polonium-210 to kill him that the Russian secret service used in 2006 in a London restaurant to kill Alexander Litvinenko, a former KGB agent who became a critic of Putin, then there would be no traces, or hardly any traces, of the substance left after eight years.

Put another way: for polonium-210 to be discovered today in Arafat's clothing in the amounts reported by

the Swiss radiation specialist, would mean that such large quantities of the material had to be used – unnecessarily — eight years ago that not only Arafat, but his entourage and many of the doctors, nurses, and patients at the Hôpital d'instruction des armées Percy in Clamart, the suburb west of Paris where the hospital is located, would be dead as well of radiation poisoning.

Karmon said that the only explanation for the presence of such high-levels of polonium-210 now is that the material has been recently planted in Arafat's belonging.

"If it had been used to for poisoning, minimal levels should be seen now. Yet much higher levels were found. Someone planted the polonium much later," said Karmon.

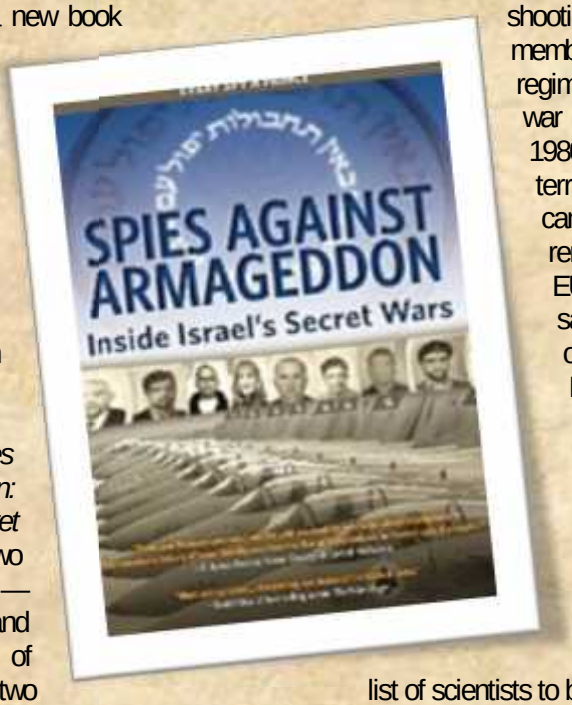
Karmon also noted that if it were true that Arafat's belonging had traces of polonium, then the places where those items were kept would also retain traces of the radioactive substance. "Did Al-Jazeera check the home of Suha Arafat in Paris and Malta where she kept the items for traces of polonium?" Al Jazeera's report did not include a radiation analysis of the closets where the items were kept.

Karmon raises another point: "If Suha Arafat safeguarded these contaminated materials, why, after seven years, was she not poisoned too? She touched these things and Arafat in hospital," he added.

New book confirms Israel behind killing of Iran nuclear scientists

Source:http://www.homelandsecuritynewswire.com/dr20120709-new-book-confirms-israel-behind-killing-of-iran-nuclear-scientists

This may not qualify as breaking news, so we may say the story belongs in the category of confirmatory news: a new book confirms, and offers details about, Israel's campaign to take out Iranian nuclear scientists, a campaign which is part of the Israel's broader effort to prevent Iran from acquiring nuclear weapons.



The book, *Spies Against Armageddon: Inside Israel's Secret Wars*, is written by two respected journalists — Dan Raviv of CBS and Yossi Melman of *Haaretz* (the two collaborated on an earlier book on Israel's intelligence services — *Every Spy a Prince: The Complete History of Israel's Intelligence Community*).

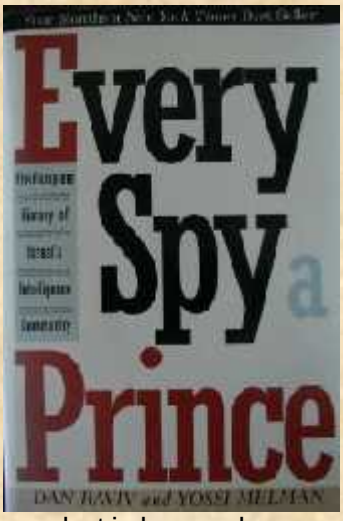
The Mossad agents "excel at accurate shooting at any speed and staying steady to shoot and to place exquisitely shaped sticky bombs" and consider it their hallmark, Raviv said Friday during a Fox News interview with both authors.

After the fourth Iranian scientist was killed last year, news stories claimed that the actual shooting was being done by members of the MEK, an anti-regime group which has been at war with the Ayatollahs since 1980s (the MEK is on the U.S. terror watch list, and there is a campaign underfoot to have it removed from the list, as the EU did in 2009). The reports said that Israel and the CIA operate training camps in the Kurdish area of Iraq, in which anti-regime groups are being trained for intelligence gathering and sabotage activities inside Iran. The reports suggested that Israel provided the MEK with the right equipment, a list of scientists to be removed, and intelligence about their daily routines — then sent them into Iran for the mission,

Raviv disagrees. "They [the Israelis] don't farm out a mission that is that sensitive," so sensitive that Israel's prime minister has to sign off on it personally, Raviv said. "They might use dissidents for assistance or logistics but not the hit itself. The methodology and training and use of

motorcycles is all out of the Mossad playbook. They wouldn't trust anybody else to do it."

In Friday's Fox News interview, co-author Melman said Israel believes the campaign successfully disrupted Iran's nuclear program not only by taking out key scientists but also dissuading other up-and-coming scholars from joining the program.



For Israel to engage in a covert killing of scientists trying to develop nuclear weapons is not new: it pursued similar campaigns in Egypt in 1961-63 (the targets then were European scientists, mostly German – or, rather, West German – who tried to help President Gamal Abed al-Nasser to build nuclear bombs and a missile fleet), and in Iraq in the 1980s.

The campaign against Iran's nuclear weapons program does have a new feature: Israel has tried to derail the Iranian program not only by killing the program's leading scientists, but also by using cyber warfare on an unprecedented scale. Melman said the cyber campaign was an Israeli innovation, not an American one as recently reported. It was the brainchild of Israel's military intelligence agency (AMAN) and Unit 8-200 — Israel's equivalent of the eavesdropping, code-breaking National Security Agency (NSA) — and endorsed by the White House at Israel's suggestion, he added.

Israel's cyber warriors then worked with NSA to build malware. Melman told Fox News that the program Flame was built first — a Trojan horse code designed to penetrate the Iranian nuclear sites and "suck information about the (uranium-enriching) centrifuges and how they operate," Melman said. Once the Israeli and U.S. cyber experts got that information, they were able to build Stuxnet.

Training the nuclear forensics experts of the future

Source: http://www.homelandsecuritynewswire.com/dr20120711-training-the-nuclear-forensics-experts-of-the-future

Ten percent of the U.S. experts in nuclear and radiochemistry are at or nearing retirement age, according to a recent report from the National Academies of Science. Meanwhile, not enough students are being trained to take their places.

Two University of Missouri scientists are doing their part this summer to get young people interested in a career in nuclear science. They are being aided by two grants worth about $1.7 million from the U.S. Department of Energy to oversee summer school programs that encourage undergraduates to consider entering nuclear science fields.

A university of Missouri release reports that Justin Walensky, MU assistant professor of chemistry, is leading the Nuclear Forensic Summer School, which opens today (11 June) and ends 20 July. David Robertson, director of research at the MU Research Reactor and a professor of chemistry, is leading the Nuclear Chemistry Summer School at Brookhaven National Laboratory in Upton, New York, which begins 20 June and ends 22 July.

Robertson said the nuclear science field has led to developments in technology to diagnose heart disease and certain cancers that use a radioisotope called technetium-99m.

"The nation needs more of these individuals to develop ways to make these isotopes safely and efficiently and develop new drugs for finding and treating diseases," he said.

Students at MU's nuclear summer school will receive hands-on training in topics involving nuclear forensics, including radiation detection and environmental radiochemistry — in other words, an overview of what to do after a nuclear accident.

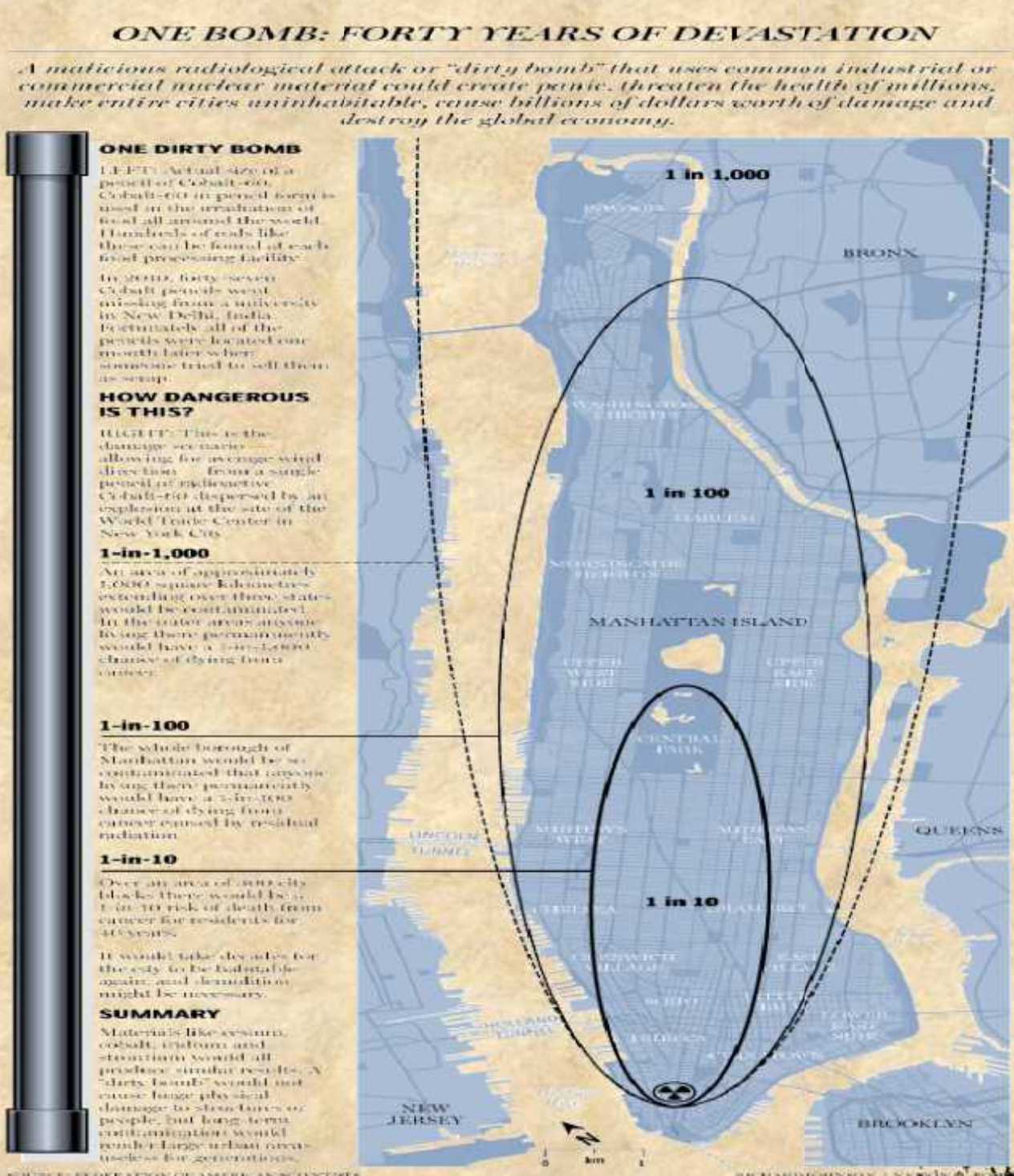
"Our main goal in nuclear forensics is to track and contain the material," Walensky said. "Students in the summer school will be learning laboratory techniques that allow us to measure and identify radioactive material."

The release notes that the summer schools are competitive. The Nuclear Forensics School accepted only 10 students from 60 applications while

the Nuclear Chemistry School accepted only 24 students from more than 120 applications. Robertson said the growth of nuclear electrical power plants in the United States requires young scientists knowledgeable in the nuclear field. "We need to make sure we have the people in the career pipeline," Robertson said. "These schools are one answer to that challenge."

One dirty bomb — forty years of devastation

Source:http://news.nationalpost.com/2012/03/23/graphic-one-dirty-bomb-forty-years-of-devastation/?goback=.gde_160062_member_133591393



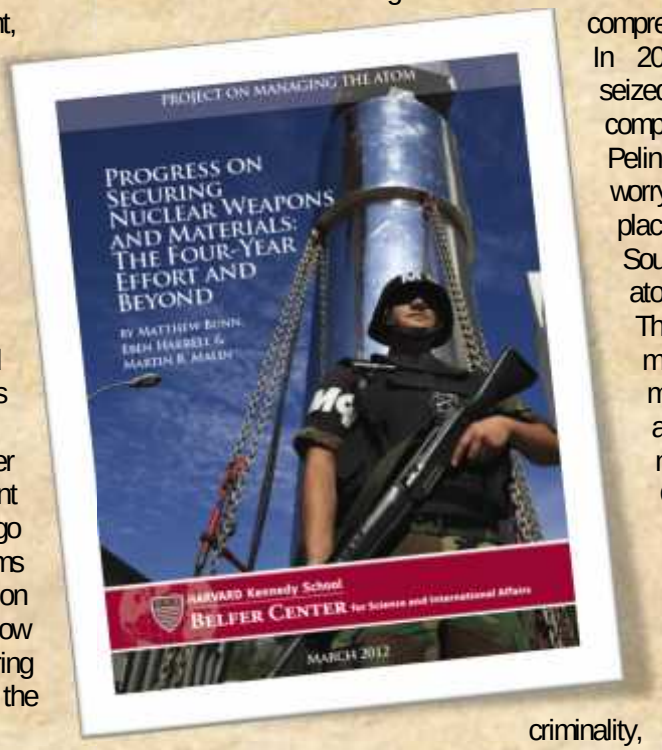
In Saturday's National Post, Peter Goodspeed writes about how much destruction one dirty bomb could inflict on a city. Below, how a small bomb could devastate New York City

Another Infiltration Reported at South African Atomic Site

Source:http://www.nti.rsvp1.com/gsn/article/new-infiltration-reported-south-african-atomic-plant/?mgh=http%3A%2F%2Fwww.nti.org&mgf=1

South Africa's Pelindaba nuclear facility in April sustained an unspecified violation of its protective measures, marking the third such case at the site in seven years, the Johannesburg *Times* reported on Thursday (see *GSN*, Nov. 24, 2008).

Plant operator South African Nuclear Energy on May 7 informed the "relevant" official agency of the incident, which *Business Day* this week said happened on April 28. South Africa's National Nuclear Regulator, which received notice of the case on June 1, has reportedly played down the event's significance.



South Africa's former apartheid government decades ago conducted nuclear arms research and production at Pelindaba, which now is employed in preparing medical isotopes, the newspaper reported.

South African Nuclear Energy and the National Nuclear Regulation both refused to provide details on the recent infiltration or describe protections at the facility. They also declined to specify if the site contains highly enriched uranium or outline findings from a 2007 incident in which trespassers shot one site employee (see *GSN*, Nov. 14, 2007).

Pelindaba is believed to hold hundreds of pounds of highly enriched uranium, according to the Washington-based Nuclear Threat Initiative.

The April infiltration ended in failure for the perpetrator, said Van Zyl de Villiers, strategy and performance group executive for South African Nuclear Energy.

"No security systems were disarmed, no shootings occurred and no arrests were made," De Villiers stated.

Addressing the time lag prior to the start of a probe of the incident, he said "The issue of deadlines is subject to mutual engagements between the regulator and the operator. The regulator is satisfied with a comprehensive response."

In 2005, an individual seized a portable computer from the Pelindaba site. Another worrying incident took place previously at South Africa's Koeberg atomic energy site.

The particular motivation behind the most recent incident at Pelindaba is not a matter of concern, Council on Foreign Relations conflict prevention specialist Micah Zenko said.

"Even if it is common criminality, there should be concern, especially as the facility has (weapons-grade uranium)," he said. "Though the level of sophistication of breaking into a facility by common criminals, and the breaking into a vault and removing (the uranium) by sophisticated criminals, is very different, it is incredibly problematic. The international community should be very concerned."

The analyst called for a probe into security breaks at the Pelindaba facility. "Even though the (weapons-grade uranium) at Pelindaba is 'locked down', the number of breaches suggests vigilance is needed," Zenko added.

South Africa's nuclear facilities enjoy a "high level of security," though a "few security incidents" have taken place at Koeberg and Pelindaba,

National Nuclear Regulator spokesman Gino Moonsamy said .
"These have not exceeded four and are not severe. Due to adequate physical protection, no nuclear or radioactive material was accessed, lost or stolen," the official stated (Graeme Hosken, Johannesburg *Times* I, July 12).
A recent independent assessment, though, says the government has so far failed to officially ensure compliance with rules intended to help protect South African atomic facilities, the newspaper reported.
The nation has not pledged to rid itself of hundreds of pounds of bomb-usable uranium, the document states. In addition, it has not adopted a 2005 amendment to the Convention on the Physical Protection of Nuclear Material.

NOTE: You can read the full Belfer Center report in the Newsletter's website – "CBRNE-CT Papers" section

Calculating the global health consequences of the Fukushima nuclear disaster

Source:http://www.homelandsecuritynewswire.com/dr20120718-calculating-the-global-health-consequences-of-the-fukushima-nuclear-disaster

Radiation from Japan's Fukushima Daiichi nuclear disaster may eventually cause approximately 130 deaths and 180 cases of cancer, mostly in Japan, Stanford researchers have calculated. The estimates have large uncertainty ranges, but contrast with previous claims that the radioactive release would likely cause no severe health effects. The numbers are in addition to the roughly 600 deaths caused by the evacuation of the area surrounding the nuclear plant directly after the March 2011 earthquake, tsunami, and meltdown.
A Stanford University release reports that recent Ph.D. graduate John Ten Hoeve and Stanford civil engineering Professor Mark Z. Jacobson, a senior fellow at the Precourt Institute for Energy and the Woods Institute for the Environment, publish their findings Tuesday (17 July) in the journal *Energy and Environmental Science*. The research constitutes the first detailed analysis of the event's global health effects.

No effects?

The Fukushima Daiichi meltdown was the most extensive nuclear disaster since Chernobyl. Radiation release critically contaminated a "dead zone" of several hundred square kilometers around the plant, and low levels of radioactive material were found as far as North America and Europe.
Most of the radioactivity was dumped in the Pacific — only 19 percent of the released material was deposited over land — keeping the exposed population relatively small.
"There are groups of people who have said there would be no effects," said Jacobson.
A month after the disaster, the head of the UN Science Committee on the Effects of Atomic Radiation, for example, predicted that there would be no serious public health consequences resulting from the radiation.

Global reach?

Evaluating the claim, Ten Hoeve and Jacobson used a 3-D global atmospheric model, developed over twenty years of research, to predict the transport of radioactive material. A standard health-effects model was used to

estimate human exposure to radioactivity.
The release notes that because of inherent uncertainties in the emissions and the health-effects model, the researchers found a range of possible death tolls, from 15 to 1,300, with a best estimate of 130. A wide span of cancer morbidities was also predicted, anywhere from 24 to 2,500, with a best estimate of 180.
Those affected according to the model were overwhelmingly in Japan, with extremely small effects noticeable in mainland Asia and North America. The United States was predicted to suffer between 0 and 12 deaths and 0 and 30 cancer morbidities, although the methods used were less precise for areas that saw only low radionuclide concentrations.
"These worldwide values are relatively low," said Ten Hoeve. He explained they should "serve to manage the fear in other countries that the disaster had an extensive global reach."

The response

The Japanese government's response was much more rapid and coordinated than that of the Soviets in Chernobyl, which may have mitigated some of the cancer risk.
Japanese government agencies, for example, evacuated a 20-kilometer radius around the plant, distributed iodine tablets to prevent radioiodine uptake, and prohibited cultivation of crops above a radiation threshold — steps that Ten Hoeve said "people have applauded."
The paper also notes, however, that nearly 600 deaths were reported as a result of the evacuation process itself, mostly due to fatigue and exposure among the elderly and chronically ill.
According to the model, the evacuation prevented at most 245 radiation-related deaths — meaning the evacuation process may have cost more lives than it saved.
Still, the researchers cautioned against drawing conclusions about evacuation policy. "You still have an obligation to evacuate people according to the worst-case scenario," said Jacobson.

If it happened here

To test the effects of varying weather patterns and geography on the reach of a nuclear incident, the two researchers also analyzed a hypothetical scenario: an identical meltdown at the Diablo Canyon Power Plant, near San Luis Obispo, California.
Despite California's population density being about one-fourth that of Japan's, the researchers found the magnitude of the projected health effects to be about 25 percent larger. The model showed that rather than being whisked toward the ocean, as with Fukushima, a larger percentage of the Diablo Canyon radioactivity deposited over land, including population centers such as San Diego and Los Angeles.
Jacobson stressed, however, that none of the calculations expressed the full scope of a nuclear disaster. "There's a lot more to the issue than what we examined, which were the cancer-related health effects," he said. "Fukushima was just such a large disaster in terms of soil and water contamination, displacement of lives, confidence in government oversight, cost and anguish."

— Read more in John E. Ten Hoeve and Mark Z. Jacobson, "Worldwide health effects of the Fukushima Daiichi nuclear accident," Energy and Environmental Science (17 July 2012)

EU Nations Face Iodine-131 CBRN Threat

By Valentino Vondenhoff and Andrew Proudlove
Approved by Ilja M. Bonsen (IB Consultancy)
Source: http://news.cbrnresourcenetwork.com/newsDetail.cfm?id=74

Early in November 2011, the International Atomic Energy Agency (IAEA) announced that very low levels of Iodine-131 (I-131) were detected in the atmosphere above at least six EU Member States. Later that same month, the IAEA notified that it had "most probably" identified the Institute of Isotopes in Hungary as the source of the radiation. In a reaction towards this allegation the director admitted a leak was found at the Budapest-based Institute. However, according to him it is "extremely unlikely" that the Institute of Isotopes was the source of relatively high levels of I-131 traced in

the EU countries.(1) The exact cause of the release is still under investigation by the IAEA.(2)

I-131 is a radioactive form of Iodine and is produced by the fission of uranium atoms during operation of nuclear reactors and by plutonium (or uranium) in the detonation of nuclear weapons.(3) It has a half-life of about eight days and is also used in medicine to diagnose and treat disorders of the thyroid gland, as this gland easily absorbs iodine. Exposure to large amounts of I-131 is dangerous to human health. External exposure to large amounts can cause burns. Internal exposure in significant quantities can cause cancer, particularly in the thyroid gland. Internal exposure can take place through the inhalation of I-131 contaminated air or when ingested through food or water. Pregnant women and young children are especially susceptible to the effects of I-131 ingestion.(4) Normally, no traces of I-131 should be detectable in rainwater or milk.(5) In the weeks after the Fukushima disaster in March 2011 I-131 was measured on the US West Coast.(6) In Europe, I-131 was detected after the Chernobyl disaster took place in 1986. It is important to mention that the levels traced in November 2011 are extremely low compared to rates observed after the Chernobyl tragedy.(7)

Radiological Hazards

By all accounts, the latest 'I-131 case' could hardly have any serious consequences for health and environment. However, it exemplifies the on-going threat that the EU faces from CBRN incidents, regardless of whether or not they are the consequences of natural or man-made disasters or accidents. Besides that, the case underlines the cross-border impact of CBRN incidents and the dependency of the various Member States on one another. Until now, radiological terrorist killing of more than one person has not been reported. All radiological substances can be potentially harmful if people are exposed.(8)

Most cases of people exposed to radiation have happened by accident.

Unlike chemical and biological substances, radiological materials cannot be "neutralised" and many radiological materials have half-lives measured in many years. (9) Radiological incidents are clearly a threat to human health and if densely populated, industrial or financial districts have to be evacuated following the detection there of radiological material it could have far-reaching economic consequences.

Terrorist have shown interest in I-131 and in the 1970s it was used in terrorist attacks. In April 1974, in Austin, Texas, a domestic American group sprayed railway compartment cars with it and as a consequence, six people were affected. I-131 was also used in the mid-1970s by Palestinian terrorists to contaminate a train in Austria.(10) Even today, terrorists examine the possible consequences of I-131. In his 1500 page manifesto, *A European Declaration of Independence* terrorist and right-wing extremist Anders Breivik investigates possibilities for radioactive contamination. He classifies Iodine among high level contaminators.

"Dirty Bomb"

Breivik, moreover, pays special attention to Radiological Dispersal Devices (RDDs) also known as "dirty bombs". He values this weapon greatly for its usefulness as a weapon to disrupt societies.(11) Furthermore, al-Qaeda has openly expressed its desire to produce radiological weapons. According to the CIA, the group could easily construct a RDD.(12) For this reason it is crucial that terrorists like Breivik or members of al-Qaeda do not gain access to radiological facilities like the Institute of Isotopes. Terrorist groups armed with radiological weapons can be one of the serious risks our society faces. Unlike nuclear weapons, RDDs are not very hard to acquire, transport or build. A "dirty bomb" does not trigger a nuclear reaction or involve a nuclear explosion. It consists of a high explosive, (e.g. Semtex, dynamite or TNT), incendiary material (e.g. thermite), and radioactive material. The detonation of a RDD would contaminate personnel, equipment, facilities, and terrain. The fire caused by the incendiary material would carry the radioactivity up into the air, further spreading contamination.(13)

The consequences of a "dirty bomb" are twofold. Firstly, detonation of a RDD would result in immediate deaths and serious injuries, caused by conventional explosive. Effects on the health of those exposed to radioactivity depends upon how long they remain in the contaminated area, the size of the particles released by the explosion, and the type of radioactivity emitted. Secondly, while such weapons would bring about far less damage than a

nuclear explosion, which would result in hundreds of thousands of casualties, RDDs have enormous power to intimidate and also have the potential to cause serious social, psychological and economic disruption. Decontamination would be very costly and would last for weeks, if not months.(14)

Orphan Sources

RDDs are constructed with the intention to damage society. We can also identify unintentional radiological man-made incidents. Common accidents involving radioactive materials are the consequence of so-called orphan sources. According to the IAEA "An orphan source is a radioactive source that poses sufficient radiological hazard to warrant regulatory control, but which is not under regulatory control because it has never been so, or because it has been abandoned, lost, misplaced, stolen or otherwise transferred without proper authorisation".(15) Since in some regions the control of radioactive sources is non-existent and in other areas inadequate, these orphan sources are widely available throughout the world.(16) Despite stronger regulatory frameworks in most countries the amount of available radioactive materials throughout the world is increasing. Primarily as a consequence of the industrialisation of developing regions, the use of radiological sources has increased. Moreover, old sources are being regularly replaced by new.

It is estimated that in the EU area approximately 30,000 disused radiological sources can be found of which up to 70 sources per year are said to be orphaned. Moreover, on the external side of the EU border with the former Soviet Union it is estimated that there are thousands of orphan sources of high threat category.(17) Across the Atlantic, probably the most infamous incident with an orphan source took place in Goiânia, Brazil in 1987, when radioactive material coming from a hospital ended up at a scrap dealer. It took two weeks, after the scrap dealer and his family developed symptoms of radiation poisoning (nausea, vomiting, burns and ultimately death), before the illness was connected to the hospital material. By the time the radioactivity had been identified and the government informed, radioactive powder from the source had already been spread over a large area. Four people died as a result of radiation poisoning and 28 more received local radiation damage. 112,000 people sought medical attention. 600 sought attention for contamination but only 248 were actually contaminated.(18)

Trade in Nuclear Material

According to the research *Securing Air Traffic. Case CBRN Terrorism* conducted by the University of Helsinki, "nuclear material that is directly usable for weapons and explosive devices exists in about 40 states. In many of those states, nuclear material can become available to terrorists."(19) "Particularly vulnerable areas are understood to be in Pakistan (…) and in the DPRK (Democratic People's Republic of Korea, VV), where the security situation is deteriorating. The threat of disseminating material and knowledge to unknown purposes is possibly increasing. In Russia the security measures, including the physical protection of facilities and material have been improved during the past 15 years (…), but the work is not yet completed."(20)

Even within the borders of the EU, illegal trade in nuclear material takes place: in 2007, two people were arrested in Bratislava, Slovakia when the police caught them, supposedly, selling 2.2 pounds of highly enriched uranium (HEU) with a value of $1,000,000. HEU is the critical ingredient for making a nuclear warhead. There are many examples of trade in nuclear material at EU borders. For instance, in 2008, a load of uranium and caesium, worth $4,900,000, was captured in the Ukraine. The nuclear material was stolen from a nuclear facility in Kiev.(21) Furthermore, in 2010, two individuals pleaded guilty to smuggling HEU into Georgia. It was the third time in seven years that HEU had been intercepted in Georgia.(22) Obviously, it takes a lot more than obtaining materials such as HEU to build a nuclear device. Nevertheless, the above mentioned cases should be of concern to EU Member States: illicit trade and trafficking in nuclear materials is present within, at and near the borders of the EU.

CBRN Incidents

In recent years we have seen an increase in the frequency and scale of natural and man-made disasters in Europe.(23) The majority of CBRN incidents cannot be considered as accidents. From so-called 'lone wolves' to Islamic fundamentalist and from right- wing

extremists to regionalist separatists, one can see a growing risk posed by terrorist groups seeking to get access to and use CBRN materials.(24) As a consequence, governments need to prepare for the unthinkable: the aftermath of a terrorist attack using CBRN weapons.(25) Despite the fact that, in the years following 9/11, Europe has been hit by a number of atrocious terrorist attacks, it has thwarted many others. Terrorists used CBRN agents in only a limited number of attempts. Consequently, the quantity of terrorist attacks involving CBRN agents is small. However, the consequences of a CBRN attack can be far more devastating than the aftermath of a terrorist attack carried out with conventional means.

Terrorists often rely on criminal groups for access to chemicals. According to the Europol *EU Terrorism Situation and Trend Report 2011*, the connection between terrorist and organised crime groups' activities is an issue of growing concern.(26) This means that an increasing number of terrorist groups have contact with organised crime groups in order to procure weapons.

EU Action Against CBRN Threats

As illustrated previously, the EU faces a variety of CBRN threats. Therefore, at EU level it is crucial to design a policy for preventing CBRN incidents that is as coherent as possible. Next to that, the EU should be well prepared for the aftermath of a CBRN incident. The second part of this report will concentrate on two policy tools the European Commission currently has in the fight against CBRN threats: the EU CBRN Action Plan and the EU Internal Security Strategy, which entered into force respectively in 2009 and 2010.

EU CBRN Action Plan and the EU Internal Security Strategy

The EU CBRN Action Plan identifies three main arenas of work: prevention, detection and preparedness and response. In order to prevent CBRN incidents the Action Plan advocates the use of risk-assessments to prioritise high-risk CBRN materials, and then focuses on the security and control of these materials and their related facilities. Moreover, the EU wishes to set up detection systems within the Member States and at its own external borders. At EU level, minimum CBRN detection standards will be established, and exchanges of good practices will be enhanced.(27) The EU also aims to improve preparedness and response by raising awareness and increasing knowledge and information sharing on CBRN related subjects. Finally, it wants to amend response and emergency planning and means to increases the chances of finding and prosecuting terrorists and other criminals.(28)

The EU Internal Security Strategy proposes five strategic objectives for the Member States to work together to be more effective: in fighting and preventing organised crime; terrorism; and cybercrime; to strengthen the management of the external borders and to build resilience to natural and man-made disasters. Regarding CBRN threats, two objectives are of importance: firstly, in order to "cut off terrorists' access to funding and materials" the EU should set up a network of CBRN law enforcement units, ensuring that Member States take CBRN risks into consideration into their national planning. Moreover, the EU means to establish a law enforcement Early Warning System at Europol for incidents relating to CBRN materials. Secondly, the EU wants to increase resilience to CBRN disasters. Therefore, management practices in terms of efficiency and coherence at EU level need to be improved.(29)

Three Weaknesses

In both the Action Plan and the Internal Security Strategy the EU acknowledges a current lack of measures in the fight against CBRN incidents. Through the announcement of policy-adjustments the EU hopes to start improving prevention of and response to CBRN incidents. Nonetheless, one can distinguish three weaknesses the EU should deal with in its response to CBRN threats.

In the first place, since the responsibility to respond to CBRN threats lies mainly within the Member States, the EU does not have many competencies to coordinate action against them.(30) Second, the Union has not yet created an EU-wide regulatory regime to prevent the diversion of CBRN materials for terrorist's purposes. EU rules on the security of CBRN materials are only designed to prevent industrial mismanagement and accidental environmental damage.(31) Finally, EU Member States Home Affairs ministers differ in how they implement EU legislation. Some consider EU

security agreements as sets of minimum standards to which they can add additional measures. Others consider EU rules primarily as suggestions.(32)

Despite the fact that "many of today's security challenges are cross-border and cross-sectoral in nature and that (…) no single Member State is able to respond to these threats on its own"(33), most Member States are not willing to assign more responsibilities to the EU on the subject of internal security, particularly in the area of intelligence. One can possibly perceive a discrepancy in the Schengen Treaty, on the one hand and the way the various intelligence services operate on the other. EU citizens are able to cross national boundaries without limitations while, at the same time, the jurisdiction of the different national intelligence agencies stops at the border.

Moreover, in recent years there has been an increase in the frequency and scale of natural and man-made disasters in the EU. According to the EU Internal Security Strategy, "this has demonstrated the need for a stronger, more coherent and better integrated European crisis and disaster response capacity as well as for the implementation of existing disaster prevention policies and legislation".(34) For example, taking the I-131 case into account we cannot identify a single European nuclear watchdog, whilst every Member State has, at least, one nuclear agency. The I- 131 case indicates that in several EU countries, including Hungary, licensing and surveillance of nuclear facilities and laboratories using high amounts of radioisotopes are in the hands of different authorities. The administrative difficulties arising from this ambiguous arrangement probably account for the fact that the investigation into the definite source of the radiation of I-131 has been hampered until today.(35)

Furthermore, taking the I-131 case into consideration, the EU could be well advised to, apart from updating its own mechanisms, support global systems for prevention and detection. Regarding radiological threats, for instance, the preparatory commission for the comprehensive nuclear-test-ban treaty organisation (CTBTO) has already made good progress in creating a global system of surveillance of radionucleoids in the atmosphere.

Conclusion

The EU recognises the problems it faces in combatting CBRN incidents. Because the EU does not have many competencies pertaining to the internal security of its Member States, the responsibility for responding to CBRN terrorism and dealing with the aftermath of (cross-border) CBRN incidents lies in the hands of those Member States. However, most Member States seem reluctant to concede more independence in the field of security whilst at the same time being unable to handle a CBRN crisis without help from each other. Moreover, some politicians may be afraid to appear to be weak if they request other Member States for help. Consequently, a comparison with the current Euro-crisis can be drawn: short term national interests in the short term appear to be more important than the EU's interests which, are perhaps of more importance to all the Member States in the long term.

Politicians need to be reminded that the EU faces a real CBRN threat. In the prevention and preparation for the response to the aftermath of a natural or man-made CBRN incident the EU Member States should focus on one keyword: co-operation. Within the current framework, an increase in co-operation without the violation of fundamental rights, such as privacy, is possible. To achieve this, the various Member States should seriously consider transferring more competencies to the EU regarding the subject of security. The EU, on its side should explore the possibilities and modalities for creating central agencies to better manage cooperation in order to prevent CBRN incidents and to provide adequate support and responses to CBRN disasters.

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Storing spent nuclear fuel in dry casks significantly safer then wet pools storage

Source: http://www.homelandsecuritynewswire.com/dr20120730-science-group-storing-spent-nuclear-fuel-in-dry-casks-significantly-safer-then-wet-pools-storage

The Nuclear Regulatory Commission (NRC) on Friday issued a staff paper evaluating recommendations based on lessons learned from the Fukushima nuclear accident in Japan in March 2011.

The paper reiterated the NRC's position that storing spent nuclear fuel in wet pools at commercial nuclear power plants provides "adequate" protection for public health and safety and the environment. The NRC also stated that it will continue to study spent fuel storage issues for up to five more years.

Edwin Lyman, senior scientist with the Union of Concerned Scientists' (UCS) Global Security Program, disagrees. He says: '"Adequate' is not good enough, especially when there is a safer alternative.

"Nuclear plant owners are currently storing some 55,000 tons of spent fuel — which remains dangerously radioactive for hundreds of thousands of years — in overcrowded cooling pools that require active safety measures to prevent overheating. These pools contain, on average, much more spent fuel and are more densely packed than the spent fuel pools at the Fukushima reactors. An accident or terrorist attack resulting in a rapid loss of cooling water from a pool could lead to a self-sustaining fire and release of a massive quantity of highly radioactive Cesium-137 into the environment.

"However, 80 percent of that stored spent fuel has been in the pools for more than five years and can be moved to dry casks, which do not require power for cooling and are passively safe.

Given the potential consequences from a severe accident or terrorist attack on a spent fuel pool, it makes sense to transfer to casks as soon as it is safe to do so.
"While NRC studies find that spent fuel pool storage provides 'adequate protection,' the uncertainties in those studies are large enough that it is prudent to move the fuel to dry casks, which are safer. For example, just today the NRC and the Nuclear Energy Institute discussed the need for further work to evaluate the seismic vulnerability of spent fuel pools. While the NRC encourages new reactor designs to have passive safety features, it appears unwilling to take steps to increase passive safety measures, like dry casks, for existing reactors."

An Electromagnetic Pulse Catastrophe

By Jamie Glazov
Source: http://frontpagemag.com/2012/jamie-glazov/an-electromagnetic-pulse-catastrophe/

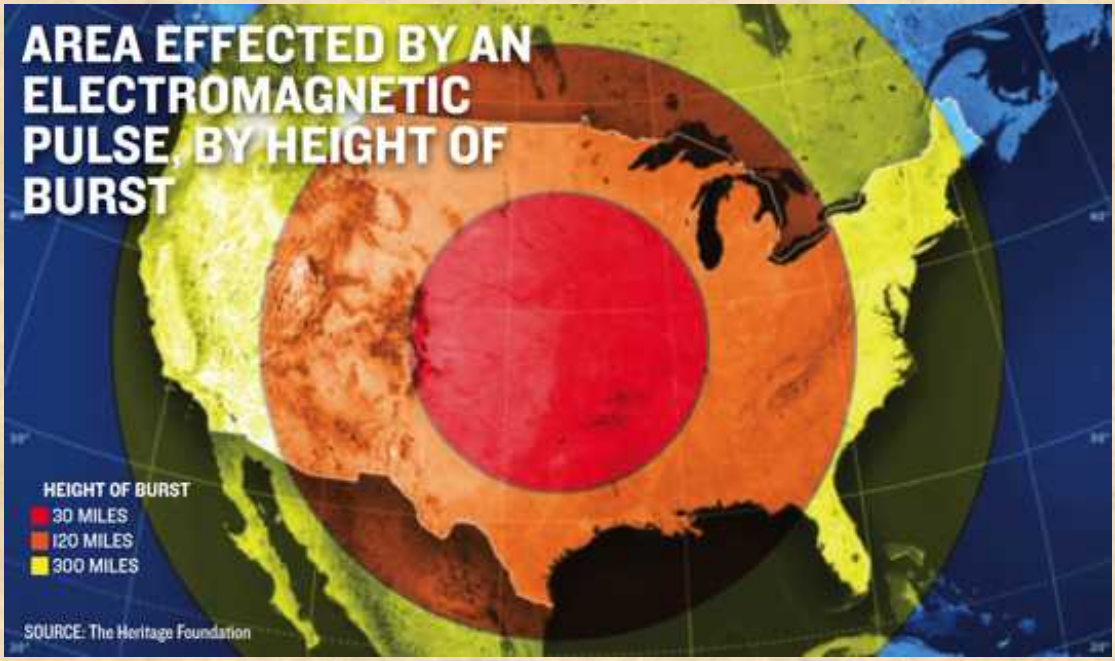
Frontpage Interview's guest today is Dr. Peter Vincent Pry, Executive Director of the Task Force on National and Homeland Security who advises Congress on the full spectrum of security issues. He is now focused on preventing a nuclear or natural electromagnetic pulse (EMP) catastrophe–the greatest threat now facing civilization.
Dr. Pry has spent his entire career protecting America from Weapons of Mass Destruction and EMP, first at the Central Intelligence Agency, then at the House Armed Services Committee, on the Congressional EMP Commission and Strategic Posture Commission. He is the author of the new book, Civil-Military Preparedness For An Electromagnetic Pulse Catastrophe, *a Kindle e-book available on Amazon.com*

FP: Dr. Pry, welcome to Frontpage Interview.
Pry: Jamie, thanks for this opportunity to inform your readers about the threat our nation and families face from a nuclear or natural electromagnetic pulse (EMP) event.
The gravity of the EMP threat is still insufficiently understood by most political leaders and the general public, despite the efforts of two Congressional Commissions and several major U.S. Government studies over the past decade to educate and warn that EMP is the most immediate and gravest danger to our nation.

FP: Let's begin with the "electromagnetic pulse." What exactly is it?
Pry: An EMP can be generated by a nuclear weapon, any nuclear weapon, detonated above the atmosphere. Or an EMP can be generated naturally, by the Sun sending a solar flare or coronal mass ejection that causes a geomagnetic storm on Earth. In either case, whether the EMP is generated by a nuclear weapon or the Sun, the effects are very similar. An EMP is like a super-energetic radio wave, harmless to people in its direct effects, but lethal to electronics and electronic systems–and everything, including human life, is directly or indirectly dependent upon electronics. The EMP by destroying electronics can collapse everywhere, nationwide, all the critical infrastructures–electric power, communications, transportation, banking and finance, food and water–that sustain modern civilization and the lives of 300 million Americans.
That EMP can pose such a threat to the nation is not controversial, but the official consensus of the Congressional EMP Commission, that examined the EMP threat and possible solutions for nearly a decade. Several subsequent major Congressional and U.S. Government studies re-examined the facts. All independently arrived at the same conclusion as the EMP Commission, including the National Academy of Sciences, the Congressional Strategic Posture Commission, the Department of Energy, and the U.S. Federal Energy Regulatory Commission. Not one official study by the Congress or the USG dissents from the original conclusions of the EMP Commission.

FP: Why is EMP the greatest threat now facing the civilized world?
Pry: EMP is in the category of a very small number of threats that can literally end civilization as we know it. The Congressional EMP Commission estimated that, given our nation's current state of unpreparedness, within one year of a nuclear or natural EMP catastrophe, about two-

thirds of the population, 200 million Americans, could perish from starvation, disease, and societal collapse. Other credible estimates indicate the loss of life could be even higher, on the order of 90 percent, because it may be optimistic to assume, as the EMP Commission did, that America's largely urbanized population could learn the survival skills necessary to live without modern technology and the critical infrastructures. If the EMP is from a great geomagnetic storm, like the 1859 Carrington Event, the effects would not be limited to the United States but would be global. If another Carrinton Event happened today, it could collapse electric grids and critical infrastructures worldwide, putting at risk the lives of billions.



Unfortunately, these threats are not remote theoretical possibilities, but clear and present dangers. Iran is on the verge of developing, or may already have nuclear weapons. Iranian military writings openly describe making a nuclear EMP attack on the United States, to eliminate the U.S. as an actor on the world stage. Iran has practiced missile launches and high-altitude fusing to perform an EMP attack. Iran does not need a sophisticated ICBM to make an EMP attack, but could launch a short-range missile off a freighter near the U.S. coast–and has practiced doing a ship-launched EMP attack too. Iran has already twice successfully orbited satellites, and so already has an ICBM capability for delivering to the United States a small warhead, like a nuclear artillery shell.

Former CIA operative Reza Kahlili, who still has sources in the Iranian Revolutionary Guard, reports that Iran already has several Russian tactical nuclear warheads, neutron artillery shells, that would be ideal for making an EMP attack, because warheads designed to emit neutrons also emit a lot of gamma rays, which is what causes the EMP effect. If Iran or terrorist proxies can make a ship-launched EMP attack against the United States, without launching from their own territory, they could deliver an EMP catastrophe upon us anonymously. The high-altitude EMP detonation leaves no bomb debris for forensic analysis, as would detonating a bomb in a city. EMP attack leaves no fingerprints. We might never know who attacked us.

Even more troubling are the prospects of a great geomagnetic storm. The Congressional EMP Commission estimated that a Carrington Event class geomagnetic storm, that would effect the entire world, occurs about once a century. It does not take a genius to do the arithmetic that 1859 was more than a century ago, that we are overdue for another Carrington Event. Most scientists are concerned that another great geomagnetic storm might occur during the next solar maximum. Every eleven years, the Sun enters a phase, lasting about a year, where it emits many more solar flares and coronal mass ejections, very significantly increasing the prospects for a great geomagnetic storm. The next solar maximum is only months away now, will begin in December 2012 and last through 2013.

Sooner or later, another Carrington Event is inevitable.

EMP is the greatest threat to the civilized world because of the magnitude and likelihood of an EMP catastrophe.

FP: What is being done about this threat?

Pry: The good news is that there is no excuse for the United States to be vulnerable to EMP. The Department of Defense has been hardening military systems against EMP for 50 years, and the technology for EMP protection is transferrable to civilian critical infrastructures. EMP protection is also affordable, very low cost compared to the cost of vulnerability. At bare minimum, the U.S. should protect the 300 EHV transformers servicing the major cities, which would cost only $100-200 million, and give us some chance of saving the 200 million lives that would be lost in an EMP catastrophe, at a cost of about one dollar per life. Robust protection of the national electric grid would cost about $1-2 billion.

The Federal Energy Regulatory Commission estimates that robust grid protection could be paid for easily, by merely increasing the electric bill to the average rate payer by 20 cents annually. The Congressional EMP Commission estimated that robust protection of ALL critical infrastructures could be achieved for $10-20 billion over 3-5 years. The EMP Commission plan to protect the critical infrastructures from EMP would also mitigate all other hazards–cyber threats, sabotage, natural disasters like hurricanes. When the EMP Commission made its estimate in 2004 that EMP preparedness could be achieved in 3-5 years, the solar maximum was then eight years in the future, a future which then looked bright for EMP preparedness, since there was plenty of time to implement the EMP Commission's recommendations.

The bad news is that none of the EMP Commission's recommendations to protect the electric grid and other critical infrastructures have been implemented. And now we are running out of time to protect ourselves from the nuclear EMP threat from Iran and the natural EMP threat from the Sun.

Some Members of Congress have heroically fought to implement the EMP Commission's recommendations, forming a Congressional EMP Caucus, and aggressively trying to pass legislation like the SHIELD Act (HR 668) that would protect the national electric grid from EMP. But lobbyists for the electric power industry, like the North American Electric Reliability Corporation, have deep pockets and an army of lawyers to stop bills like the SHIELD Act. They oppose the SHIELD Act because it is the job of industry lobbyists to oppose any increase in government regulatory power over their industry, no matter how important and necessary.

Bureaucrats in the Department of Homeland Security are also a big part of the problem. Except for one high ranking official in DHS who was a personal friend, no one in DHS would even agree to receive a briefing from the Congressional EMP Commission. DHS refused to add nuclear EMP attack to its National Emergency Planning Scenarios, that are the basis for training and resourcing emergency responders at the federal, state, and local levels. So thanks to DHS, there is no planning and preparedness for a nuclear EMP catastrophe at any level of government, except in DOD. Dr. William Graham, Chairman of the EMP Commission, when asked in a congressional hearing to account for this behavior by DHS, replied: "It is at times like these I wish, instead of having a Ph.D. in Electrical Engineering, that my degree was in Abnormal Psychology."

FP: What role does your Task Force play in protecting the nation and people from EMP?

Pry: The Task Force on National and Homeland Security was established to help Congress achieve national EMP preparedness on an accelerated basis by doing whatever is necessary, because we are running out of time. The Task Force is aggressively trying to educate policymakers and the public on the EMP threat and solutions, on the very urgent necessity of achieving national EMP preparedness. We hope that if the American people can be mobilized to demand EMP protection from federal, state, and local governments, that this will break the logjam.

The Task Force is the successor to the EMP Commission, which Congress tried but could not re-establish because of bureaucratic politics on the Hill and with DHS. We are also an experiment, to see if a major national and homeland security issue can be advanced by the people themselves, spearheaded by a Task Force that is funded by donations. Congress has no money to fund the Task Force.

All of our operations depend on donations. Our Task Force is an experiment in returning to an earlier era, when the private sector played a much bigger role in U.S. security, as in the War of 1812, which was not won at the Battle of New Orleans, but on the high seas by American privateers who crippled Britain's merchant shipping. I like to think of our Task Force as a group of expert intellectual privateers, operating on a shoe string, but achieving decisive

results by raiding and sinking the myths, propaganda, and bad ideas of lobbyists and bureaucrats who would leave our nation vulnerable to an EMP catastrophe.

FP: Is there anything the average American can do, or is this Washington's problem?

Pry: Call and write your Congressman and Senator and tell them to support the SHIELD Act (HR 668), sponsored by Rep. Trent Franks, and the legislative initiatives of Congressman Roscoe Bartlett to protect our national electric grid from EMP.

–Contribute to Congressman Roscoe Bartlett's re-election campaign. Bartlett, who has been the national leader on EMP preparedness, is fighting to keep his seat because his district was gerrymandered.

–Demand that your Congressman and Senator join the Congressional EMP Caucus and start becoming part of the solution.

– Call and write Rep. Fred Upton, Chairman of the House Energy and Commerce Committee, and demand that he support the SHIELD Act and pass the bill out of his committee. Upton's office number is 202-225-3761.

–Call and write your state and local representatives and demand that they take steps to protect state and local critical infrastructures, and to ensure that police, fire, and other emergency services are prepared to operate after an EMP catastrophe.

–BE PREPARED YOURSELF. EMP preparedness is largely just common sense and prudence that will better enable you and your family to survive all hazards, any catastrophic scenario. For example, start stockpiling food and water, or means to purify water, plant a garden, so you and your family can survive without the local grocery store for a protracted period. Have an emergency medical kit and know how to use it. Read the Task Force book *Civil-Military Preparedness For An Electromagnetic Pulse Catastrophe* which has been circulated to the White House, Congress, DOD and DHS–but which should be read by every American, not just the Washington elite. The book is basically a blueprint for how to protect our nation, your community and yourself from EMP or any catastrophe.

FP: Dr. Pry, thank you for joining Frontpage Interview.

Jamie Glazov *is Frontpage Magazine's editor. He holds a Ph.D. in History with a specialty in Russian, U.S. and Canadian foreign policy. He is the author of the critically acclaimed and best-selling,* **United in Hate: The Left's Romance with Tyranny and Terror.** *His new book is* **Showdown With Evil.**

Israel's EMP Attack Can Send Iran Back to the Stone Age

By Dr. Joe Tuzara

Source: http://www.israelnationalnews.com/Articles/Article.aspx/12017#.UCFF96AaLJZ

There is no question that Iran is now a de facto nuclear state - a "casus belli" for Israeli military action.

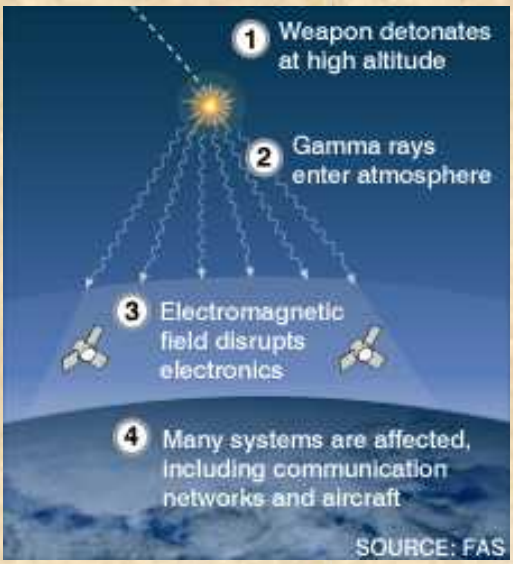
As Iran miscalculates Israeli resolve, it is clear that the diplomatic dance of deceit and empty bluster for years is over. The die is cast and Israel has crossed the Rubicon, since a significant spectacle of events is set to begin to work against Iran come October.

While the onus is on Iran to abide by its international obligations, the wild card is in Israel's hand - with Electrnonic Magnetic Pulse (EMP) inscribed on it. Since diplomacy and sanctions were an abject failure, war has become inevitable and preparations for preventing Iran's rapid nuclear progress have, thus far, accelerated.

Despite Israel's highly advanced technology and strategic military advantage, Israel's fear of an Iranian existential threat is understandable. In any case, Israel has done it the past with flawless precision when it destroyed Iraq's Osiraq reactor in 1981 and a Syrian reactor being built by North Koreans in 2007. Both surprise attacks were immensely successful and kept Israel's enemies scratching their heads in disbelief, stunning the world.

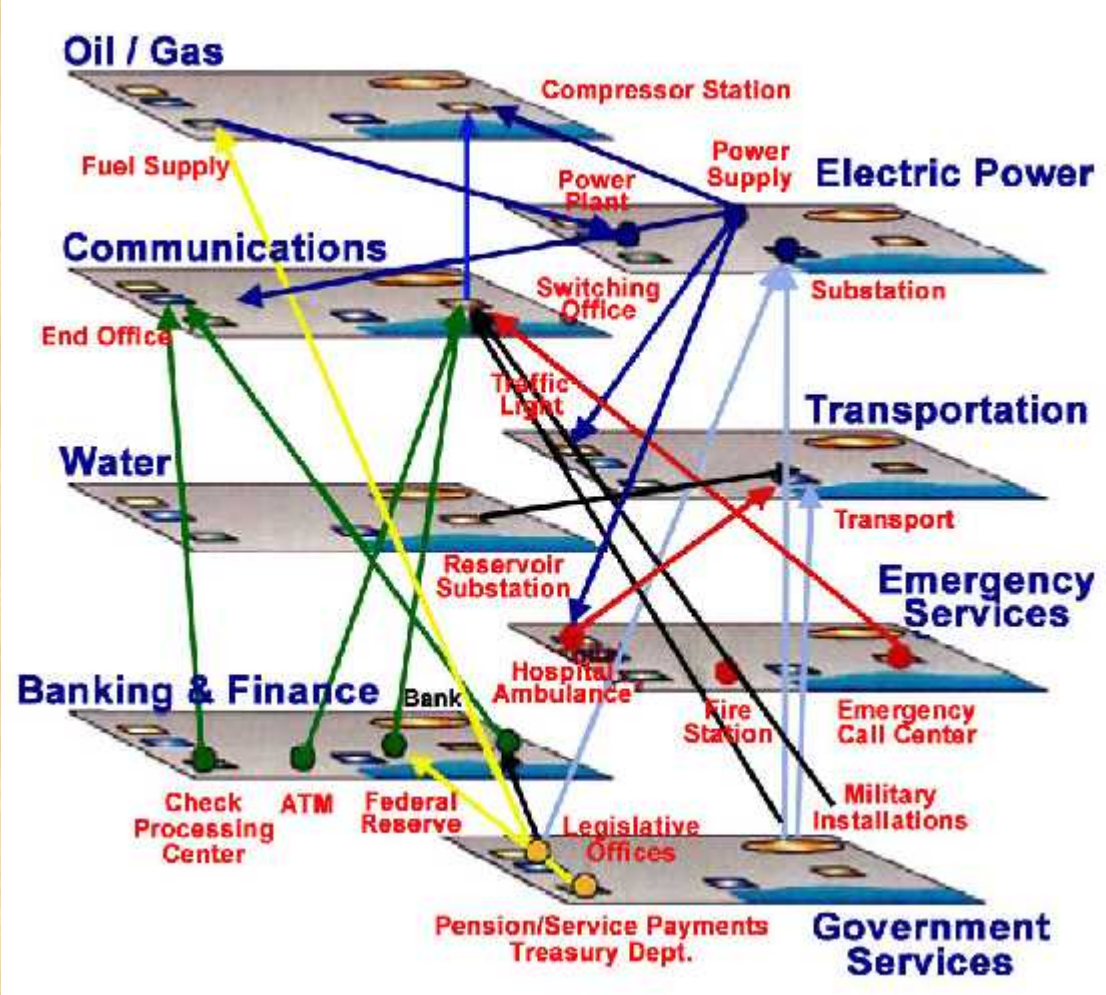
Iran has reached the 'zone of immunity.'

There are five solid reasons that Iran has now entered what Israeli Defense Minister Ehud

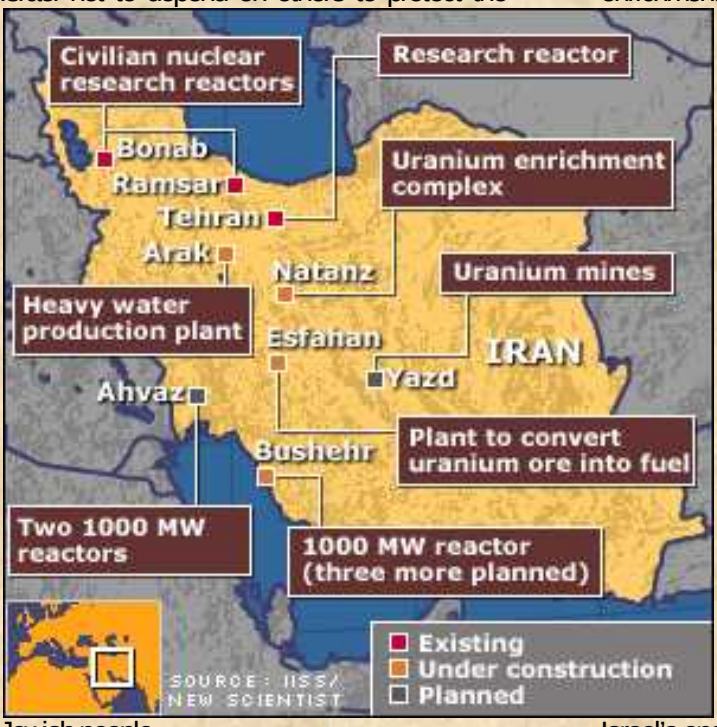


Barak termed as the "zone of immunity":
First, Iran plans to ratchet up enrichment up to 60 per cent uranium which is now on the way to an 80-90 percent weapons grade.

Second, Iran has accelerated its forced projection and tested ballistic missiles delivery system in an EMP mode with North Korean assistance.
Thirdly, Iran's stockpile of low grade enriched uranium can be converted to five nuclear weapons if refined further, according to the Institute for Science and International Security.
Fourth, satellite imagery shows mega-fortification of underground nuclear facilities impervious to U.S. super bunker buster bombs.
Finally, Iran has started the process of loading 163 fuel rods into the core of Bushehr nuclear power plant reactor.
In light of the latest developments, there is no question that Iran is now a de facto nuclear state - a "casus belli" for Israeli military action.
Although the military option is unattractive and untenable, failure to act would be much worse if Iran got the atomic bomb.
A large majority of Israelis and Americans believes that Israel would be better off if the U.S. would lead the attack on Iran.



For the most part, Israel's dilemma is focused singly on the use of electromagnetic pulse (EMP) without informing the U.S. Regardless of the consequences, the U.S. would have no choice but to support Israel. The stakes are simply too high to ignore this time. However, trust deficit and loss of U.S. credibility compels Israel not to depend on others to protect the Jewish people.



The reality on the ground is revealing: Iran needs only one or two nuclear bombs to start a thermonuclear war against Israel and the United States, to hasten what these religious nuts believe is the coming of the Islamic messiah.

Evidentially, a nuclear-capable Iran can unleash a single atomic bomb on Israel with simultaneous asymmetric proxy attacks in the U.S. and other western targets. But thanks to heaven - and Israel - the Islamic republic is not there yet.

In addition, intelligence sources have now indicated Iran is within two years of bringing the Islamic revolution to the U.S. in the form of an EMP attack.

So the game-changer would be a significant EMP event that would take Iranians back to the Stone Age.

What would an EMP attack look like?

If Israel chooses one of its Jericho III missiles to detonate a single EMP warhead at high altitude over north central Iran, there will be with no blast or radiation effects on the ground.

Coupled with cyber-attacks, Iranians would not know it happened except for a massive shutdown of the electric power grid, oil refineries and a transportation gridlock. Food supply would be exhausted and communication would be largely impossible, leading to economic collapse. Similarly, the uranium enrichment centrifuges in Fordo, Natanz and widely scattered elsewhere, would freeze for decades.

Iran's response to an EMP attack would be futile and uncannily tragic. Before the elite Qods force could mine the Strait of Hormuz and wreak havoc to Arab Gulf states oil refineries, the Fifth Fleet and U.S. military installations, Iran's administrative-industrial-military complex infrastructures would have been laid to waste without the ruling clerical regime knowing about it

In this scenario, a rain of missiles from Lebanon's Hizbullah, Hamas in Gaza would have to be endured by Israel. Frankly, one thing is certain- Israel won't nuke Iran unless it unleashes chemical, biological or nuclear weapons to Israel's enemies.

Israeli Foreign Minister Avigdor Lieberman has stressed that Israel would consider the transfer of Syrian chemical weapons to Hizbullah a "casus belli" and act "without hesitation or restraint."

On a constructive note, Iranian Green opposition forces would have an opportunity to take to the darkened streets of Tehran and rid themselves of the fanatical regime.

Hence, if Iran doesn't blink, Israel certainly will attack in the fall with no ifs and or buts.

Furthermore, the mathematical probability of Iran winning the war is naught, since as Israel knows best, when it comes to Israel's security, there can be no substitute for victory.

Speculation aside, war becomes inevitable for reasons beyond logic and difficult to explain - and the consequences are actually unpredictable and messy. Typically, in these most challenging and uncertain times, it is very difficult indeed. This is yet another reason why Israel's risks and dilemmas, difficult as they are, will never be brought to a peaceful conclusion.

As former Mossad chief and national security adviser Ephraim Halevy, quoted by the *New York Times*, said, if he were Iranian he "would be very fearful of the next 12 weeks".

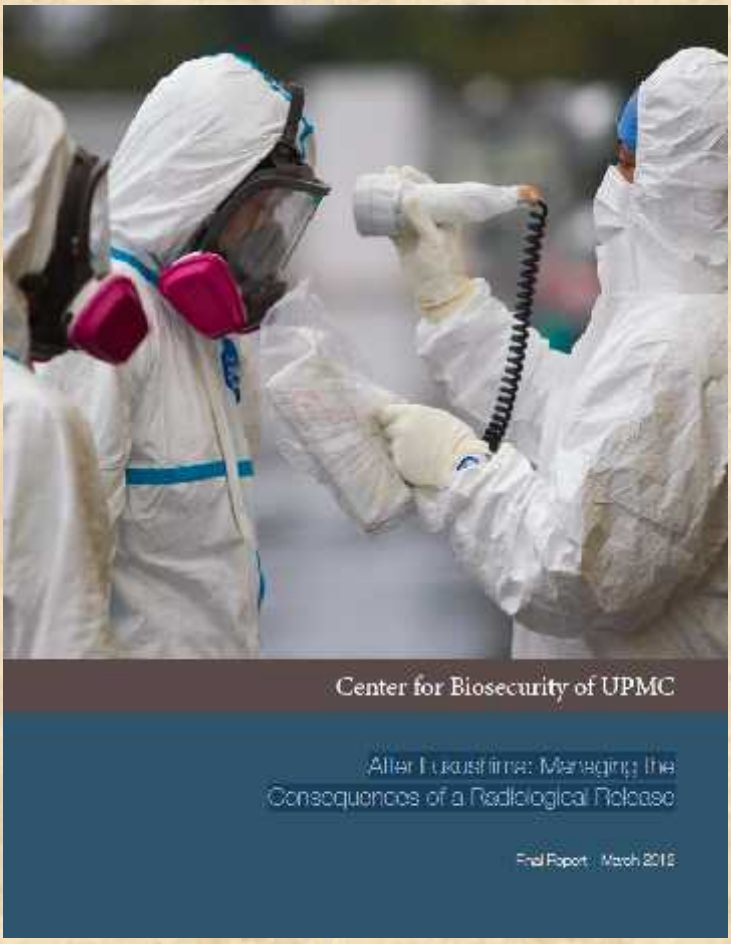
Dr. Joe Tuzara *was born in Manila, American by choice, he is a former clinical research-physician-general surgeon for Saudi Arabian, Philippine and American healthcare systems and currently an American freelance writer as well as op-ed contributor.*

After Fukushima: Managing the Consequences of a Radiological Release

Source:http://www.upmc-biosecurity.org/website/resources/publications/2012/pdf/2012-03-07-after_fukushima.pdf

EXECUTIVE SUMMARY

Outside the Fence Issues: Increasing Resilience and Protecting the Public



Even amidst the devastation following the earthquake and tsunami in Japan that killed more than 20,000 people, it was the accident at the Fukushima Daiichi nuclear power plant that led the country's Prime Minister, Naoto Kan, to fear for "the very existence of the Japanese nation."

While such low-probability, high-consequence releases have been rare throughout the operating histories of existing nuclear power plants, the growing number of plants worldwide increases the likelihood that such releases will occur again in the future. Nuclear power is an important source of energy in the U.S. and will be for the foreseeable future. Accidents far smaller in scale than the one in Fukushima could have major societal consequences.

Therefore, our purpose is to offer recommendations for policy and actions to ensure U.S. preparedness for managing nuclear accident consequences to reduce public exposure to radiation.

Given the extensive, ongoing Nuclear Regulatory Commission (NRC) and industry assessment of nuclear safety and preparedness issues, the Center's review was confined to offsite policies and plans intended to reduce radiation exposure to the public. This project was conducted and funded by the Center, in keeping with our longstanding mission to address pressing national policy challenges in homeland security and disaster preparedness.

Mission

The mission of the Center for Biosecurity's *After Fukushima* project is to assess U.S. policies and plans for consequence management to reduce public exposure to radiation following a

nuclear power plant accident and offer recommendations for strengthening those efforts.

Analysis and Workshop

The Center reviewed the events surrounding the response to the Fukushima Daiichi nuclear power plant accident in light of current U.S. government policies and practices, and performed a comprehensive review of the published literature and key U.S. government documents. We then identified and interviewed more than 90 domestic and international experts in federal, state, and local governments, industry, and academia. Interview findings informed a working group meeting that convened 20 experts. The following represents the key issues, findings, and recommendations based on the synthesis of the results from the Center's efforts.

ISSUES

Issue 1: Emergency Planning Zones and Protective Action and Guidelines

Following the Fukushima Daiichi accident, the Japanese government concluded that the country's existing framework for offsite emergency response—the Emergency Planning Zone (EPZ) structure—proved inadequate to guide evacuation decisions. Japanese officials have since reevaluated the EPZs and are planning to expand the size of planning zones to account for large-scale contamination events, with the expectation that such changes will improve timely decision making during a crisis. In the U.S., each nuclear reactor is surrounded by 2 circular planning zones: the Plume Exposure Pathway EPZ, covering a 10-mile radius around the reactor, and the Ingestion Exposure Pathway EPZ, which encompasses a 50-mile radius surrounding each reactor. Within these areas, state and local governments take predetermined specific preparedness precautions, including emergency exercises, community-wide public education programs, and possibly the predistribution of potassium iodide (KI).

Protective Action Guidelines (PAGs) were developed by the U.S. EPA to help state and local authorities make radiation protection decisions. The PAG manual currently provides advice for the early and intermediate phases of an accident based on levels of anticipated radiation exposure. The U.S. PAG manual differs from protective guides used by the international community, known as Operational Intervention Level (OIL), which are defined as the values of environmental measures of radiation, like radiation dose measurements, above which specific actions should be taken in emergency situations. OILs differ from PAGs in that they do not depend on projected dose calculations. Instead, they recommend actions based on real-time measurements, often using on-the-ground field measurements, possibly allowing for a faster response. The U.S. should reevaluate the relative balance of PAGs and OILs used in response planning to a nuclear power plant (NPP) radiological release given the disruptions to the radiation monitoring systems witnessed in Japan.

Issue 2: Potassium Iodide (KI) Policy

Potassium iodide (KI) is an over-the-counter medical countermeasure that can diminish the uptake of radioactive iodine by the thyroid gland and prevent thyroid cancer in children and developing fetuses. That KI has no value in protecting adults from cancer is well known by professionals and backed by scientific data.

U.S. federal policy recommends that states consider stockpiling and distributing KI as an adjunct to evacuation, which is the single most important protective measure available. Of 35 U.S. states that lie within the 10-mile EPZ of a nuclear power plant, 24 states predistribute KI as part of their emergency planning, and 9 do not. The experience with Fukushima provided some foreshadowing of possible U.S. demand for KI: As the plume of radioisotopes released from the Japanese power plant blew across the Pacific, many in the U.S. began to demand KI.

Issue 3: Communications and Public Health Education

Ionizing radiation ranks near the top of the public's list of most feared threats. When a mass radiation event occurs, the public fear factor and low baseline knowledge about radiation create a major communications challenge. Federal communication efforts are further complicated by the need to coordinate information and messages from many agencies. The CDC, DOE, EPA, FEMA, HHS, NRC, and the White House were all included in the domestic response to the Fukushima accident. In contrast to the nuclear power plant accidents at Three Mile Island and Chernobyl,

the Fukushima Daiichi accident has highlighted the new challenges of communicating with the public in the "information era" of 24-hour news cycles and social media outlets.
In the absence of consistent, trustworthy messaging from government authorities, members of the public may act in ways that put them in harm's way. Without guidance from the government, residents of the town of Namie in Fukushima prefecture evacuated north, into the plume, believing that the winter winds would be blowing south. In later phases of the accident, the Japanese government struggled to communicate the relative risks of radiation exposure as residents of contaminated areas returned to their properties. Radiation education has since become a part of elementary education; the Japanese government has distributed textbooks to schools throughout the affected region.

Issue 4: Reentry and Recovery Policy

Prior to the Fukushima accident, planning for nuclear accidents in Japan had not taken into account the possibility of wide-scale contamination, major socioeconomic impact, and the possibility that large numbers of people would be displaced for extended periods of time, and perhaps indefinitely. The experience with that accident has raised questions about recovery from mass radiological events in which the health effects of residual ionizing radiation can be less threatening than the enormous socioeconomic impact of widespread contamination itself. The challenge is to define the acceptable level of post-accident population risk from radiation exposure.
Twenty years ago, the EPA published the PAGs as the official decision-making document to be followed during a radiological emergency. The PAGs establish principles for early and intermediate-phase response, but the agency deferred writing its chapter on the late phase, or recovery phase, to a later date. In January 2011, the EPA distributed a "significantly revised version" of the late-phase PAGs to the interagency working group for review. Until that review is completed and late-phase PAGs are published, there will not be clear federal policy for recovery and reentry after a nuclear accident.

Smiths Detection Expands Radiation Offering

Source: http://www.homelandsecuritynewswire.com/dr20120815-smiths-detection-expands-radiation-offering

Smiths Detection the other day announced a partnership with Mirion Technologies which will allow it to offer a full radiation detection and identification product line to U.S. customers. The company says that its technology suite will now meet all the needs of multiple security markets, including: military/defense, homeland security, ports and borders, aviation, and emergency response.

Lance Roncalli, Smiths Detection's VP of Sales-Americas, said: "This exciting partnership will ensure our customers can access the full range of radiation technologies available in the marketplace today. Such developments support all our customers as they develop a comprehensive and layered security approach to protect critical infrastructure and secure the free flow of trade."
Smiths Detection, which already markets the RadSeeker, an advanced handheld radiation detector and identifier, will be able to offer a range of Mirion products including a low-cost dosimeter (DMC-3000), a pocket-sized detector (RDS-31), and a

search and radionuclide identifier (PDS 100 G/GN ID).
RadSeeker is a next-generation radionuclide identifier with enhanced capability to distinguish radiological and nuclear threats and eliminate the background "false positives" produced by naturally occurring radiation or other legitimate everyday radiological materials.

DMC-3000

RDS-31

PDS 100 G/GN ID

Invasion at "Fort Knox of Uranium" raises security concerns

Source: http://www.homelandsecuritynewswire.com/dr20120822-invasion-at-fort-knox-of-uranium-raises-security-concerns

The Y-12 National Security Complex, where nuclear weapons components are manufactured, is regarded asthe Fort Knox of Uranium," so the fact that three anti-

nuclear activists, **one of them an 82-year old nun**, were able to breach the high-security complex's protective fences is not reassuring. That they did so using nothing more than bolt cutters, and after announcing their arrival from half-a-mile away, is even more worrisome

The *Washington Post* reports that Sister Megan Rice, an 82-year old nun, Michael Walli,and Greg Boertje-Obed used bolt cutters to get through three fences, tripping alarms in the process, but managed to stay in a secure area on the grounds for more than two hours — undetected. During that time the trio spray painted and threw blood on the walls of the Highly Enriched Uranium Materials Facility (HEUMF) located inside the complex.

Y-12 fashions the uranium components for war heads in the U.S. nuclear arsenal. The facility, which is the U.S.primary source for bomb-grade uranium,also dismantles old nuclear warheads.

Officials for Babcock & Wilcox Technical Services Y-12, LLC, the contractor managing the facility, insist that although the protestors went unchallenged for two hours, there was never a threat ofthem getting to any dangerous materials. The HEUMF itself is a

virtual fortress designed to withstand earthquake up to a 7.7 magnitude, tornado-force winds up to 200 mph,or the impact of a general aviation aircraft.

"Our (protection force) is deployed so that any serious attempt to attack the facility would be repulsed well in advance of any credible threat," Steven Wyatt, a spokesman for the National Nuclear Security Administration at Y-12, said in an email.

Former Department of Energy adviser Peter Stockton thinks that the issue is being undermined because there was not an immediate threat. "We were lucky in that regard that it was the nun and her cohorts, rather than a serious terrorist outfit," the *Washington Post* quotes him as saying.

Stockton called the intrusion the "only serious penetration of a plant" that he is aware of since being involved in nuclear issues in the 1970s.

"It is simply (expletive) unbelievable," he told the *Post*.

After the incident, Darrel Kohlhorst, the president and general manager of the Babcock & Wilcox division that runs Y-12, retired from his post. He told the *Knoxville News Sentinel* that the company would learn and grow from this incident.

"Well, I think it did show us we had some weaknesses. We had some deficiencies," Kohlhorst told the *Post*. "The team has really attacked those things and corrected them, and I think we're actually going to be a lot stronger coming out of this thing."

Stockton,however,was not as optimistic as Kohlhorst and thinks that the unclear response by Y-12 could have been much worse under different circumstances.

"You get through the fences, you get to the building, and if you have special forces guys — dedicated guys who are suicidal and heavily armed —all you do is blow the door off or blow a hole in the side of the building."

In the past protestors have rallied at the gates of the site around the anniversary of the bombing of Hiroshima. At times, people have tried deliberately to get arrested by blocking traffic or provoking police to bring attention to their cause. Prosecutors in the past have refused to throw the book at protesters, and the stiffest penalty that has been handed down was less than a year in prison.

Representatives of Y-12 may think that this intrusion was not serious, but federal prosecutors feel much differently, charging the group with a long list of violations that could carry cumulative prison sentences of up to **sixteen** years.

"That's the reaction to the embarrassment," said Ralph Hutchison of the Oak Ridge Environmental Peace Alliance.

Y-12 and operator error

By Lee Maril

Source: http://www.homelandsecuritynewswire.com/dr20120822-y12-and-operator-error

There is no hyperbole intended when labeling the security breach at the Y-12 Oak Ridge National Laboratories on 28 July as the most objective and eye-opening measurement of the status of our national security since the events of 9/11. On the one hand, we no doubt have come a long way. On the other, however, there is still much to be done if we would but learn from this singular event.

At dawn a Catholic nun named Sister Megan Rice, age 82, broke into the Y-12 facilities along with two other seniors. Y-12, which describes itself as, "one of four production facilities in the National Nuclear Security Administration's Nuclear Security Enterprise," is responsible for "the processing and storage of uranium and development of technologies associated with those activities." According to Y-12's Web site, Y-12 has some of the *most stringent security* in the world."

Nevertheless, an octogenarian nun and two accomplices, one 57, the other 63, attacked at dawn armed only with bolt cutters and flashlights. Ignoring signs warning that deadly force might be used against them, they somehow traversed three fences and eluded security guards along with security cameras and other layers of technologies to reach the Highly Enriched Uranium Materials Facility (see William J. Broad, "The Nun Who Broke Into the Nuclear Sanctum," *New York Times*, 11 August 2012, p. 1A; and Erik Schelzig, "New Charges Filed in Nuclear Weapons Plant Breach," *Yahoo!News*, 9 August 2012). While the alleged perpetrators did not penetrate the new $500 million Highly Enriched Uranium Materials Facility building, they did paint various slogans on its exterior. The three intruders had lots of time to paint these slogans; they were not discovered by security guards for several hours.

What can be learned from this breach?

While the contractors at Y-12 are reported to have added additional security training to their staff and replaced certain security managers who may bear some responsibility, there is a harder lesson to be learned. What is not being discussed is the fundamental problem of operator error. Operator error is an essential problem in national security that continues to be neglected. It is pervasive. And it is normal.

Certainly, if not supervised properly, or if the security technology has not been maintained — both signs the culture of the security contractors is dysfunctional — mistakes will surely occur.

But operator error is a more fundamental problem than the obvious solution of punishing the unsupervised, lazy, or incompetent. All human beings, regardless of how well supervised, make mistakes on a regular basis. So do their supervisors. The more essential question is: why did the redundant procedures and technologies fail for hours? Or, more to the point, were there even redundancies designed into this security system?

Firing security managers and providing additional training cannot be the only solutions to the breach at Y-12. Operator error is a fact of life in security surveillance which few are willing to address. If redundancies were absent, then why? Someone should share the blame besides those at the very bottom of the security ladder.

Until human error is considered normal and redundancies integrated into security systems, 82-year-old nuns will continue to breach our most secure facilities like Y-12 regardless of the resources expended. **We can and must do better.**

***Robert Lee Maril**, a professor of sociology at East Carolina University and founding director of the Center for Diversity and Inequality Research, is the author of* "The Fence: National Security, Public Safety, and Illegal Immigration along the U.S.-Mexico Border".

"Just Keep Driving around - We may come up with a solution yet!"