15 December 2008

Chem-Bio News

1. SEAWORLD SIZES UP TERROR RISK OVER CHEMICALS STORED AT PARK:
"SeaWorld Orlando could become a target for terrorists trying to obtain chemicals, according to a preliminary review of businesses, universities and other facilities across the country by the federal government."

2. MUGABE CLAIMS CHOLERA WAS RELEASED BY THE BRITISH: *"Robert Mugabe's government has blamed "biological warfare" waged by Britain for the cholera outbreak that has killed at least 800 people in Zimbabwe."*

3. TERRORISM INSURANCE: STATUS OF COVERAGE AVAILABILITY FOR ATTACKS INVOLVING NUCLEAR, BIOLOGICAL, CHEMICAL, OR RADIOLOGICAL WEAPONS:
"The Terrorism Risk Insurance Act of 2002 (TRIA) is credited with stabilizing insurance markets after the September 11, 2001, attacks by requiring insurers to offer terrorism coverage to commercial property owners (property/casualty insurance), and specifying that the federal government is liable for a large share of related losses."

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1. US ARMY CHEMICAL MATERIALS AGENCY - ENSURING COMMUNITY SAFETY THROUGH SECURE CHEMICAL WEAPONS STORAGE: *"To accomplish this, chemical agents and munitions are housed in designated storage areas and specially designed earth-covered magazines, commonly referred to as storage igloos or bunkers located on highly secure military installations where all Department of Defense and Army safety and security regulations are followed."*

2. US ARMY CHEMICAL MATERIALS AGENCY - CHEMICAL WEAPONS DISPOSAL: UNDERSTANDING SCHEDULED DOWNTIME AT DISPOSAL FACILITIES: *"Like a car that is modified to meet certain operating conditions, such as driving in snow, disposal facilities go through specific processes and modifications when munitions must change and/ or a different chemical agent needs to be destroyed."*

CB Daily Report

Chem-Bio News

SEAWORLD SIZES UP TERROR RISK OVER CHEMICALS STORED AT PARK
By Jason Garcia
OrlandoSentinel.com
December 11, 2008

"SeaWorld Orlando could become a target for terrorists trying to obtain chemicals, according

to a preliminary review of businesses, universities and other facilities across the country by the federal government.

The finding by the U.S. Department of Homeland Security is tentative.

SeaWorld expects that the decision -- which could require the theme park to submit detailed security blueprints for approval by federal security officials -- will be reversed in coming months as the department reviews a more thorough assessment of the park.

"We anticipate that we will not be included once the process is completed," SeaWorld spokeswoman Becca Bides said."

The full article can be found at: http://www.orlandosentinel.com/business/orl-chemical1108dec11,0,2967482.story

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MUGABE CLAIMS CHOLERA WAS RELEASED BY THE BRITISH
By Sebastien Berger
The Telegraph [UK]
December 13, 2008

"Robert Mugabe's government has blamed "biological warfare" waged by Britain for the cholera outbreak that has killed at least 800 people in Zimbabwe."

"Mr Mugabe has long sought to portray the suffering of his country's people as the result of a dispute between London and his own government, blaming the former colonial power for a range of ills. But the cholera claim is further and more bizarre than his Zanu-PF party has ever gone before."

The full article can be found at: http://www.telegraph.co.uk/news/worldnews/africaandindianocean/zimbabwe/3725130/Mugabe-claims-cholera-was-released-by-the-British.html

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TERRORISM INSURANCE: STATUS OF COVERAGE AVAILABILITY FOR ATTACKS INVOLVING NUCLEAR, BIOLOGICAL, CHEMICAL, OR RADIOLOGICAL WEAPONS
US Government Accountability Office
December 12, 2008

"The Terrorism Risk Insurance Act of 2002 (TRIA) is credited with stabilizing insurance markets after the September 11, 2001, attacks by requiring insurers to offer terrorism coverage to commercial property owners (property/casualty insurance), and specifying that the federal government is liable for a large share of related losses. While TRIA covers

attacks involving conventional weapons, insurers may use exceptions that may exclude coverage for attacks with nuclear, biological, chemical, or radiological (NBCR) weapons, which has raised concerns about the potential economic consequences of such attacks. TRIA's 2007 reauthorization directed GAO to review (1) the extent to which insurers offer NBCR coverage, (2) factors that contribute to the willingness of insurers to provide NBCR coverage, and (3) policy options for expanding coverage for NBCR risks. To do this work, GAO reviewed studies and reports and interviewed more than 100 industry participants about the availability of NBCR coverage in the market. GAO provided a draft of this report to the Department of the Treasury and the National Association of Insurance Commissioners (NAIC). Treasury and NAIC said that they found the report informative and useful. NAIC did express what it said was a philosophical difference of opinion with GAO's characterization of risk-based premiums for workers' compensation insurers."

"Consistent with the findings of a September 2006 GAO report on the market for NBCR terrorism insurance, property/casualty insurers still generally seek to exclude such coverage from their commercial policies. In doing so, insurers rely on long-standing standard exclusions for nuclear and pollution risks, although such exclusions may be subject to challenges in court because they were not specifically drafted to address terrorist attacks. Commercial property/casualty policyholders, including companies that own high-value properties in large cities, generally reported that they could not obtain NBCR coverage. Unlike commercial property/casualty insurers, insurers in workers' compensation, group life, and health lines reported generally providing NBCR coverage because states generally do not allow them to exclude these risks. Commercial property/casualty insurers generally remain unwilling to offer NBCR coverage because of uncertainties about the risk and the potential for catastrophic losses, according to industry participants. Insurers face challenges in reliably estimating the severity and frequency of NBCR attacks for several reasons, including accounting for the multitude of weapons and locations that could be involved (ranging from an anthrax attack on a single building to a nuclear explosion in a populated area) and the difficulty or perhaps impossibility of predicting terrorists' intentions. Without the capacity to reliably estimate the severity and frequency of NBCR attacks, which would be necessary to set appropriate premiums, insurers focus on determining worst-case scenarios (which with NBCR weapons can result in losses that would render insurers insolvent). For example, a nuclear detonation could destroy many insured properties throughout an entire metropolitan area. Workers' compensation, group life, and health insurers that generally cannot exclude NBCR coverage from their policies also face challenges in managing these risks. For example, workers' compensation insurers said they face challenges in setting premiums that they believe would cover the potential losses associated with an attack involving NBCR weapons. GAO reviewed two proposals that have been made to address the lack of NBCR coverage in the commercial property/casualty market. The first proposal, part of an early version of the bill to reauthorize TRIA in 2007, would have required insurers to offer NBCR coverage, with the federal government assuming a greater share of potential losses than it would for conventional attacks. Some industry participants supported this proposal because insurers otherwise would not offer NBCR coverage and because a substantial federal backstop was necessary to mitigate the associated risks. However, others said that some insurers might withdraw from the market if mandated to offer NBCR coverage, even with a substantial federal backstop. In a second proposal by some industry participants, the federal government would assume all potential NBCR risks through a separate insurance program and charge premiums for doing so. However, critics said the

government might face substantial losses on such an NBCR insurance program because it might not be able to determine or charge appropriate premiums."

The full report can be found at: http://www.gao.gov/new.items/d0939.pdf

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US ARMY CHEMICAL MATERIALS AGENCY - ENSURING COMMUNITY SAFETY THROUGH SECURE CHEMICAL WEAPONS STORAGE
US Army Chemical Materials Agency Fact Sheet
December 3, 2008

"Safe and secure storage is an important component of the overall mission of the U.S. Army Chemical Materials Agency (CMA) that also encompasses recovery, treatment and elimination of the nation's chemical warfare materiel.

Safe and Secure storage
CMA oversees the secure storage of the nation's chemical agent and munitions at chemical depots across the country, ensuring that chemical agents and munitions are safely protected and monitored. To accomplish this, chemical agents and munitions are housed in designated storage areas and specially designed earth-covered magazines, commonly referred to as storage igloos or bunkers located on highly secure military installations where all Department of Defense and Army safety and security regulations are followed. CMA manages the National Inventory Control Point and National Maintenance Point to ensure that the stockpile is maintained in accordance with Army regulatory guidance during storage.

The igloos are specially constructed with many security and safety measures and processes, designed for the storage of chemical agents, ammunition and explosives. The igloos help keep chemical agents and munitions secure and protected from natural forces or man-made threats.

Among the many security and safety procedures conducted are routine and random around-the-clock patrols to verify the security of chemical agent storage areas. Crews conduct regular, routine visual inspections of the munitions to ensure that safe storage practices are maintained and the physical condition of the igloo will continue to protect the chemical munitions.

When entering an area where chemical munitions are stored work crews operate under the "two man rule"—a minimum of two specially trained personnel work together inside any area where chemical agent is stored or accessible. Storage sites are also subjected to external inspections conducted on a regular basis by the Technical Secretariat for the Organisation for the Prohibition of Chemical Weapons, the Department of Army Inspector General and the

Army Materiel Command.

In addition to inspections, mobile monitors in Real Time Analytical Platforms (RTAP) conduct low level monitoring of the air inside each igloo. Any time a leak is detected, even small vapor leaks, audible and visual alarms prompt immediate action to prevent release of chemical agent to the environment. Large negative pressure filters are attached to the igloo. The source of the leak is isolated and either corrected or the munition is overpacked in a vapor tight steel container. Overpacked munitions are moved to specially designated igloos and subjected to increased monitoring and inspection.

Security measures include, but are not limited to, restricted access, barriers and high-tech security locks, as well as security checkpoints, site-wide video monitoring and alarm/ warning systems. Workers take every precaution to ensure that stored chemical agent and munitions remain safe and secure.

Security and storage personnel undergo rigorous background checks and receive continuous training to ensure that they can safely and efficiently protect and handle stored chemical weapons. The Army's Chemical Personnel Reliability Program ensures that those working with chemical agent and munitions meet the highest standards of individual reliability.

Regularly scheduled exercises are conducted at each storage site to review emergency response procedures and to test security and storage personnel—ensuring that they are properly trained and can respond appropriately to any threat to, or unlikely incident/accident involving stored chemical agents and weapons.

Commitment to Safety

CMA is fully committed to the safety of the public, its work force and the environment. CMA will continue to ensure that chemical agent and munitions stockpiles remain safely and securely stored until they are demilitarized.

Graphic of US Chemical Agent and Munitions Stockpiles

Johnston Atoll
Percentage of original stockpile: 6%*
Blister and nerve agents stored in ton containers, rockets, projectiles, land mines, cartridges and bombs
100% of the Johnston Atoll stockpile has been destroyed.

Umatilla Chemical Depot, Ore.
Percentage of original stockpile: 12%*
Blister and nerve agents stored in ton containers, spray tanks, rockets, projectiles, land mines and bombs

Deseret Chemical Depot, Utah
Percentage of original stockpile: 44%*
Blister and nerve agents stored in ton containers, spray tanks, rockets, projectiles, land mines, cartridges and bombs

Pueblo Chemical Depot, Colo.
Percentage of original stockpile: 8%*
Blister agent stored in projectiles and cartridges

Pine Bluff Arsenal, Ark.
Percentage of original stockpile: 12%*
Blister and nerve agents stored in ton containers, rockets and land mines

Newport Chemical Depot, Ind.
Percentage of original stockpile: 4%*
Nerve agent stored in ton containers
100 % of the Newport stockpile has been destroyed.

Anniston Army Depot, Ala.
Percentage of Original Stockpile: 7%*
Blister and nerve agents stored in ton containers, rockets, projectiles, land mines and cartridges

Blue Grass Army Depot, Ky.
Percentage of original stockpile: 2%*
Blister and Nerve Agent stored in rockets and projectiles

Aberdeen Proving Ground, Md.
Percentage of original stockpile: 5%*
Blister agent stored in ton containers
100 % of the Aberdeen stockpile has been destroyed."

The full article can be found at: http://www.cma.army.mil/include/docrendition.asp?DocID=003674231

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US ARMY CHEMICAL MATERIALS AGENCY - CHEMICAL WEAPONS DISPOSAL: UNDERSTANDING SCHEDULED DOWNTIME AT DISPOSAL FACILITIES
US Army Chemical Materials Agency Fact Sheet
December 3, 2008

"Introduction
The U.S. Army Chemical Materials Agency (CMA) is responsible for protecting and safely storing the nation's aging chemical weapons, while working toward the effective recovery, treatment and ultimate elimination of the nation's chemical warfare materiel and to enhance national security.

Aging chemical weapons, many created during World War II, Korean and Cold War eras are safely stored in secured sites within the continental United States. The weapons pose risks to our nation and those communities surrounding the storage sites, the longer they remain

in storage. These risks include ones posed by natural events, i.e., earthquakes, lightening and tornadoes, weapon degradation and the threat of terrorist attack. CMA has been charged by Congress to eliminate this risk to our nation using approved disposal technologies. These technologies are part of on-site disposal facilities designed to destroy chemical weapons in a safe and environmentally friendly manner.

Facilities are designed with engineering controls and safeguards to ensure the protection of workers, the public and environment. Once a facility begins destroying chemical agent, it will stop operations periodically for pre-scheduled preventative maintenance, and/or preparations for destroying a new type of munition [a 100-pound spray tank vs. an 8-inch projectile] or a different kind of chemical agent.

Preventive maintenance— maximizing safety

Approved preventive maintenance programs at each CMA disposal site achieve the same function as preventive maintenance and service programs for cars—they keep disposal facilities operating safely and efficiently. Preventive maintenance helps minimize unplanned and expensive breakdowns and repairs.

Chemical agent disposal facilities have equipment and systems that allow personnel to determine, maintain and control operational conditions while the facility is operating. To perform proper preventive maintenance, it is sometimes necessary to shut down portions (in some instances all) of the facility to check and service equipment. Because of CMA's commitment to safety, preventive maintenance is planned in the operating schedule of each disposal facility.

Standard, routine inspections and regular replacement of worn parts and equipment keep facilities operating safely. In fact, based on U.S Occupational Safety and Health Administration safety statistics, workers at CMA's six disposal sites are as safe as workers in public libraries. Regular calibration of monitoring equipment and testing of control equipment help ensure the efficient operation of the facilities, reducing operating costs and keeping emissions to the environment safely within the permit and regulatory limits.

Munition campaign and agent changeovers

Like a car that is modified to meet certain operating conditions, such as driving in snow, disposal facilities go through specific processes and modifications when munitions must change and/or a different chemical agent needs to be destroyed.

A change in munitions are required when chemical agents are stored in more than one type of weapon such as rockets, land mines, spray tanks, projectiles, mortars or large steel storage cylinders called ton containers. Some munitions, like various sizes of projectiles or spray tanks and ton containers, are dismantled using the same process lines and furnaces, with minor modifications to the equipment and furnaces. Other munitions use totally separate process lines and different furnaces, while some munitions use a mix of the same and separate process lines and/or furnaces.

Only CMA's disposal facilities that utilize incineration technology have multiple types of

chemical agents and multiple munition types to destroy. Those four sites will go through munition campaign changes and agent changeover phases. CMA's Johnston Atoll Chemical Agent Disposal System (JACADS) was the first facility to go through munition campaign changes and agent changeovers before completing its disposal mission in Nov. 2000. Lessons learned from experiences at JACADS, plus CMA's Tooele facility, have been shared with other incineration or alternative technology disposal sites to help ensure safe changeovers. Further, highly trained, skilled and committed employees, who were part of these processes at JACADS, are now working at other facilities, ensuring that those lessons are applied to operations.

Changing munitions campaigns

Just as cars must be prepared for changes in use, CMA workers must make preparations for the new munition type to be processed. For example, a rocket is processed in the explosive containment room on the rocket shear machine, with the liquid agent drained and sent to the liquid incinerator and the rocket pieces sent to the deactivation furnace. A projectile containing an explosive device is processed in the same room as the rocket in order to remove its explosives, but on a projectile-mortar disassembly machine. Explosives from the projectile are destroyed in the deactivation furnace and the liquid agent is destroyed in the liquid incinerator, but the projectile's steel casing is thermally decontaminated in the metal parts furnace. In addition, draining liquid agent from rockets and projectiles is accomplished in different areas of the plant using different equipment.

To prepare for different munition types, highly trained, certified CMA workers modify existing equipment or install new equipment according to permit and regulatory requirements. Procedures are updated, checked and double-checked. Computer codes for control systems are updated. As equipment and process lines are converted or upgraded, they are tested using practice munitions to ensure they function properly. Each piece of equipment is tested first individually, and then the entire process is tested to ensure safety and efficiency. This extensive work is very important because all of these processes are fully programmed. Once a munition is unloaded from its storage site, the disposal process is accomplished mostly by automation.

Chemical agent changeovers

A significant portion of the operation schedule at a chemical weapons disposal facility involves agent changeover. Agent changeover is similar to munitions campaign changes but includes decontaminating toxic process areas and recalibrating and certifying agent monitors and monitoring processes.

Before destroying a new or different agent, a thorough decontamination is performed in the toxic areas of the plant to allow personnel to work safely in those areas. Once decontamination has been achieved to the desired levels, the chemical agent monitors are calibrated, tested and certified for the new agent type. In addition, changes are made in support areas. For example, operators are trained in destroying the new agent type and operating procedures are reviewed.

Since the liquid agent itself is a major portion of the fuel used to run the furnaces, agent

changeover is similar in some aspects to converting a car from running on gasoline to burning propane. To convert a car to run on propane, changes to the carburetion and ignition systems are required. Similarly, adjustments need to be made to the furnaces to ensure that the different agents burn safely and efficiently at approved appropriate temperatures and flow rates.

After all these changeover activities, the disposal facility is not yet ready to destroy the new agent type. One last activity remains. Once preparations are complete, the disposal facility is tested and "test driven," a process known as systemization. This ensures that all of the equipment and processes function safely in accordance with the facility's operational permit. Systemization culminates with a series of trial burns. First the furnaces are tested using surrogate chemicals that are safer than the chemical agent while being of equal or greater difficulty to destroy. If the furnaces achieve a safe level of destruction for these "surrogates," a series of trial burns using actual chemical agent is performed.

All of the trial burns are overseen by the U.S. Environmental Protection Agency and state permit regulators. Only after CMA is certain the facility functions properly and approval is received from the state's permitting and regulatory agency does the facility start agent disposal operations. The start of operations is slow and deliberate to ensure safe destruction. Safety of the workers, the communities and the environment is always of paramount importance. Because of the amount of work and time involved with agent changeover, disposal facilities will usually process and destroy all munitions of a single agent type before switching to another agent. This minimizes the number of times agent changeover is required and keeps the destruction schedule for a site as safe and short as possible.

Conclusion

Disposing of chemical agent weapons or munitions is highly technical with a large number of pieces of machinery, equipment, monitors and controls and many process steps used to dismantle munitions, drain and destroy agent and treat and dispose of resulting wastes. With an effective preventive maintenance program in place at each site, and following tried and approved practices for munition campaign changes and agent changeovers, CMA is helping ensure the safe completion of the destruction of the United States stockpile of chemical agents and weapons— leading the way to a safer tomorrow."

The full article can be found at: http://www.cma.army.mil/include/docrendition.asp?DocID=003677537

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