Press dossier

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The preparations for a new Fallujah?

ING and AXA invest in the modernisation of white phosphorus weapons

The military use of white phosphorus

White phosphorus (WP) is one possible form in which phosphorus can be found. It is a colourless to yellow translucent wax-like substance, which has a strong garlic-like smell. The form of white phosphorus used by the military ignites spontaneously when it is exposed to oxygen. A large amount of heat is produced by this reaction, as well as a yellow flame and a dense white smoke.[1] The use of White Phosphorus ammunition by the United States forces, during the attack on the Iraqi city of Fallujah in November 2004 has been condemned as “a war crime within a war crime within a war crime”.[2]

White Phosphorus has been used by the military since the 19th Century for signalling, smoke screening, and also as a highly flammable incendiary. It can be used to destroy the enemy's equipment or to limit his vision. It is used against vehicles, ammunition storage areas, enemy observers, etc. White phosphorus projectiles can be launched by howitzers, field artillery, tanks, mortars, as well as in hand grenades. Phosphorus also becomes luminous in the dark, and so white phosphorus can be used in "tracer bullets."

It is usually dispersed by explosive munitions, which detonate on impact with the ground. It can also be used with a timed fuse to obtain an explosion in the air.

The consequences of the military use of white phosphorus

The military use of white phosphorus releases phosphorus into the soil, as some phosphorus in the munitions remain unburned. In some cases this can be a significant proportion of the phosphorous in the ammunition.

The components of the smoke produced by the combustion of white phosphorus will spread in the air, where they form acids, and will ultimately enter either water or earth.

Just as with napalm, white phosphorus can have a very serious effect in plants including burned leaves, the defoliation of shrubs and trees, and the complete death of plants.[3]

White phosphorus also causes serious damage to humans. White phosphorus is extremely toxic[4]. During the military use of white phosphorus, people are exposed to large doses of white phosphorus.
Direct exposure to the skin leads to very painful chemical burns. The burns appear as dead skin surrounded by blisters. The wound has a yellowish colour and characteristic garlic-like odour.

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[1] Non-military uses of White Phosphorus include the production of phosphoric acid and other chemicals for use in the production of fertilisers, additives in foods and drinks, cleaning compounds and other products. Small amounts of white phosphorus have been used as rat and roach poisons and in fireworks. In the past, white phosphorus was used to make matches, but another chemical with fewer harmful health effects replaced it in the early 20th Century.
[2] http://www.monbiot.com/archives/2005/11/22/a-war-crime-within-a-war-crime-within-a-war-crime/
[3] Energy Citations Database, “Transport, transformation and ecological effects of phosphorus smokes in an environmental wind tunnel”
http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=5613999&query_id=0
[4] Other forms of Phosphorus (including red and black) are much less toxic.

White phosphorus is highly soluble in fat, and ignites rapidly. This can lead to second or third degree burns. The fact that the substance can penetrate further into the body once particles are embedded under the skin results in delayed wound healing. White phosphorus burns can also cause liver, heart and kidney damage. This can lead to an inability to urinate, decreased functioning of the kidneys and increased blood phosphorus levels.[5]
In many circumstance, exposure to high concentrations of white phosphorus leads to death. The bodies of victims show signs of extreme burns, with the flesh burnt away to the bone.

Breathing white phosphorus fumes can cause irritation of the respiratory system, and coughing. The smoke can also cause serious eye irritation with cramps in the face, sensitivity to light, and the over-production of tears. High concentrations of white phosphorus fumes are irritating to the nose, throat, lungs, skin, eyes, and mucus membranes. Exposure to white phosphorus can also cause nausea, jaundice, anaemia, physical wasting with loss of weight and muscle mass, dental pain, and excess saliva.[6]

Ingestion of white phosphorus typically causes severe vomiting and diarrhoea, Other signs and symptoms of severe poisoning might include abnormal heart rhythms, low blood pressure, coma and death.[7]

The accepted lethal dose is 1 mg per kg of body weight, although in some cases the ingestion of a total quantity of also as little as 15 mg has resulted in death.[8]

The shame of Fallujah
US officers describing the attack on Fallujah have stated:
"WP proved to be an effective and versatile munition. We used it for screening missions at two breeches and, later in the fight, as a potent psychological weapon against the insurgents in trench lines and spider holes when we could not get effects on them with HE. We fired 'shake and bake' missions at the insurgents, using WP to flush them out and HE to take them out."[9]

The attack on Fallujah

The city of mosques, Fallujah, is located about 70 km to the west of the Iraqi capital Baghdad. The traditionally Sunni city had been a stronghold of Sunni resistance since soon after the US invasion. According to the US, it was also the base for the fugitive Al-Qaida leader, Al-Zarqawi. Despite continual "precision bombardment" the US was unable to get Fallujah under control. The shocking image of four US military contractors being killed and mutilated by a screaming mob, before being hung on a bridge over the Euphrates, was the direct provocation for a renewed US offensive. The world had seen that the US was not in charge in the city, and this had to be corrected.

On 7th November 2004, the interim Iraqi prime minister Allawi announced a "state of emergency", and during the night of 7th-8th November US troops began the attack.

[5] Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological Profile for White Phosphorus. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA, 1997
http://www.atsdr.cdc.gov/toxprofiles/tp103.html
[6] http://www.epa.gov/ttn/atw/hlthef/whitepho.html
[7] Centers for Disease Control and Prevention - Department of Health and Human Services http://www.bt.cdc.gov/agent/phosphorus/casedef.asp
[8] http://www.emedicine.com/EMERG/topic918.htm
[9] Captain James T. Cobb, First Lieutenant Christopher A. LaCour, and Sergeant First Class William H. Hight "TF 2-2 IN FSE AAR: Indirect Fires in the Battle of Fallujah", In: Field Artillery March-April 2005 http://www-tradoc.army.mil/PAO/ProfWriting/2-2AARlow.pdf

Everyone remembers the images of US soldiers mercilessly shooting badly injured Iraqi fighters.
But it appears that far from the few cameras in the city, there were further cruel acts being carried out. Rumours of the use of chemical weapons were not new, and mainly ignored in the western press. At the end of January 2005 the Study Centre for Human Rights and Democracy, based in Fallujah, sent a well documented report to Kofi Annan. It contained reports, witness statements and photographs which had been submitted to them, detailing the atrocities that had been committed during the US onslaught from 7th November to the end of December.[10] One of the accusations was the use of chemical weapons. It was ten months later, after a documentary from the Italian state broadcaster RAI[11] on the use of white phosphorus in Fallujah, that the world took stock of the reality of the use of these weapons by the United States. Before the documentary was broadcast on November 2005 (exactly one year after the start of operation "phantom fury") Washington had already admitted to the use of white phosphorus during the Fallujah-offensive, but only to illuminate enemy positions, or as a smoke screen. The horrific images of victims covered in burns did not fit with this account, on 16th November the Pentagon stated that white phosphorus had been used in the form of incendiary bombs, but not against civilians.
It is only logical that the use of such a weapon, a gas, in an urban environment, also has an effect on unarmed civilians.
Since then, photographs, video, and interviews with US soldiers who participated in the attack on Fallujah, point to the widespread use of phosphorus weapons, without a distinction between civilian and insurgents. Jeff Englehart, who served with the US forces in Fallujah reports how he heard the order for the use of white phosphorus on the military radio. He describes the consequences as follows: "Burned. Burned bodies. I mean, it burned children, and it burned women. White phosphorus kills indiscriminately… And when it makes contact with skin, then it's absolutely irreversible damage, burning of flesh to the bone."
The US siege of Fallujah forced most of the 250,000 to 300,000 resident of the city to leave. More than half of the houses have been destroyed. On 8th November 2004, there were still an estimated 50,000 to 100,000 people in the city. The number of insurgents was estimated by the US forces at between 1,000 and 6,000.
The number of Iraqis killed remains unknown.

The following WP weapons were used by the United States forces in their attack on Fallujah:[12]

M110 White Phosphorus (WP) projectiles fired from 105mm howitzers. These weapons are used for screening, spotting and signalling purposes. They have an additional incendiary effect on a target and can cause casualties.[13]

The **M825** WP projectile (155mm) is fired by field artillery, and is designed to produce a smoke screen on the ground for between 5 and 15 minutes. The projectile is loaded with 116 WP-saturated felt wedges, which fall to the ground in an elliptical pattern, up to 1500 meters in length. Each of the 116 subprojectiles becomes a source of smoke.[14]

[10] The full report can be downloaded from www.brusselstribunal.org
[11] The documentary can be downloaded from http://www.rainews24.rai.it/ran24/inchiesta/video/fallujah_ING.wmv
[12] Captain James T. Cobb, First Lieutenant Christopher A. LaCour, and Sergeant First Class William H. Hight "TF 2-2 IN FSE AAR: Indirect Fires in the Battle of Fallujah", In: Field Artillery March-April 2005 http://www-tradoc.army.mil/PAO/ProfWriting/2-2AARlow.pdf
[13] Global Security, "M110 155mm Projectile", http://www.globalsecurity.org/military/systems/munitions/m110.htm
[14] Global Security, "M825 155mm Projectile", http://www.globalsecurity.org/military/systems/munitions/m825.htm

The **M929** Cartridge is designed for use with the M120 and M121 120mm Mortar Systems, for screening and obscuring. The steel projectile is loaded with felt wedges which are impregnated with white phosphorus (WP). When the fuse functions it ruptures the projectile and disperses the WP-saturated felt wedges in the air. The WP begins to burn upon contact with air and generates the required smoke cloud.[15]

It is also likely that US Marines also used improvised White Phosphorus weapons based on 60mm or 81mm white phosphorus mortar rounds, during the assault on Fallujah:
"A 60mm or 81mm white phosphorus mortar round, wrapped three times with detonation cord, and a one-quarter or one-half stick of C4. Used when contact is made in a house, and the enemy must be burned out."[16]

Legal framework
As an incendiary weapon, the use of white phosphorus is prohibited under Protocol III of the "Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects". There are 100 state parties to the treaty, including the United States and Belgium.
However, not all states are bound by all of the Protocols to the treaty, and although 93 states have signed up to Protocol III forbidding the use of incendiary weapons, the United States has not agreed to be bound by this part of the treaty.[17]

Although the United States is not directly banned from using white phosphorus by any treaty that it has signed, the United States remains subject to the universal principles which govern the way in which wars can be fought. Just as with other "controversial weapons" such as landmines, cluster bombs, nuclear weapons and weapons with depleted uranium, there is a double problem with the use of white phosphorus weapons:

- they cause unnecessary suffering, and
- they may not be able to distinguish between civilians and military targets.

The use of white phosphorus can therefore be seen as a breach of International Humanitarian Law.
This is recognised by a United States armed forces training manual which states: *"It is against the law of land warfare to employ WP against personnel targets".*[18]

Who produces these white phosphorus munitions?
Pine Bluff Arsenal in Arkansas is the only factory in North America that can produce WP weapons. The factory is owned and operated by the US military, and the manufacturing work at the site, including the filling of white phosphorus ammunition, is carried out by US military personnel. As well as producing white phosphorus ammunition, it currently manufactures chemical, smoke, and another munitions. Alongside manufacturing activities, Pine Bluff Arsenal is also involved in the destruction of the United States' stockpiles of chemical weapons.[19] It was the producer of the white phosphorus munitions used by the US armed forces in Fallujah.

[15] Global Security, "XM929/XM929E1 120mm Mortar Smoke (White Phosphorus) Cartridge", http://www.globalsecurity.org/military/systems/munitions/m929.htm
[16] Catagnus, Sgt. Earl J., Brad Z. Edison, LCpl James D. Keeling, and LCpl David A. Moon, "Infantry Squad Tactics," *Marine Corps Gazette,* September 2005.
http://www.smallwars.quantico.usmc.mil/search/Articles/Infantry%20Squad%20Tactics.pdf
[17] http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterXXVI/treaty2.asp
[18] US Army Command and General Staff College, "Student Text 100-3 Battle Book"
http://www.fas.org/man/dod-101/army/docs/st100-3/c5/5sect3.htm
[19] http://www.pba.army.mil/Ammun.htm

In September 2005, a contract for modernising the White Phosphorus Plant at the Pine Bluff Arsenal was awarded to Shaw Environmental, Inc., (part of The Shaw Group Inc.). The contract is worth $23 million. Work will continue until January 2007.[20]

Shaw Environmental Inc. is a subsidiary of The Shaw Group Inc.[21] This US group has an annual turnover of $3.3 billion. The company is not only active on the military market, but also on the energy market (with many contracts for the nuclear sector).

In October 2005 ***Teledyne Brown Engineering***[22] was granted an important subcontract, worth $10 million, as part of this modernisation. . Under the contract, Teledyne Brown Engineering will design, procure, fabricate, assemble, integrate, test and deliver new white phosphorus processing components and subsystems at the facility. Teledyne's work will concentrate in areas including the system for filling the munitions. The company will also provide installation support, system test and training support. The munitions fill station system, which is the heart of the facility, will be assembled, integrated, and tested at the Huntsville manufacturing facility before delivery to Pine Bluff Arsenal. [23]

Teledyne Brown Engineering supplies high technology system engineering and production solutions in sectors including aerospace, security and defence. The company is part of Teledyne Technologies Inc.

Investments in white phosphorus
AXA and ING, two international bank groups that are very active on the Belgian market, invest a combined total of almost $37 million (€31.8 million) in Teledyne Technologies and The Shaw Group, the two companies that are currently modernising the white phosphorus factory in the United States.

Table: the investments[24] of AXA and ING in the producers of white phosphorus weapons[25]

	AXA		ING	
	Value of shares in US dollar	% of the shares	Value of shares in US dollar	% of the shares
The Shaw Group	14,901,447	0.56%	4,306,819	0.16%
Teledyne Technologies	5,802,322	0.52%	11,929,848	1.07%
Total	20,703,769		16,236,667	

AXA and ING are investing in companies that are preparing the future production of white phosphorus weapons. In this way that are actually involved in the preparation for new war-crimes to be committed against civilians; just like the crimes committed against the population of Fallujah in Iraq.

The investment of AXA in this weapon production is unfortunately not surprising. After 3 years of campaign by Netwerk Vlaanderen and peace organisations, AXA group has still not adopted a stronger policy regarding weapons, and the group continues to invest in even the most controversial weapons.

[20] http://www.defenseindustrydaily.com/2005/09/modernizing-willy-pete/index.php
[21] http://www.shawgrp.com/
[22] http://www.tbe.com/
[23] http://www.tbe.com/whatsnew/newsrel/pinebluff.asp
[24] Both direct and indirect. With direct, we refer to shares bought for own portfolio. Indirect refers to shares bought via investment funds offered to clients.
[25] Shareworld database, consulted in March 2006

ING Group has already partly withdrawn from anti-personnel mines, cluster bombs, uranium weapons, biological, chemical and nuclear weapons.[26] These investments in white phosphorus indicate the risks that banks take if they do not fully withdraw from the arms industry. Time and time again, investments will involve them in absolutely unacceptable practices, weapons or weapon sales.

As investors in these companies, AXA and ING must at least demand that the two involved companies withdraw from the project for the production of white phosphorus weapons. If the companies refuse to do this, both bank groups should end their investments in The Shaw Group and Teledyne Technologies for ethical reasons.

It is only through a complete withdrawal from the arms industry that the bank groups can avoid being involved in war crimes.

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[26] More info on the weapon policy of ING and AXA can be found in the report 'Banks disarm(ed)' from Netwerk Vlaanderen;
http://www.netwerkvlaanderen.be/en/files/documenten/campaigns/banksandweapons/ReportApril2005Eng.pdf