Operation Acid Capitalist – Launch On Warning

“Launch on warning (LOW) is a strategy of nuclear weapon retaliation that gained recognition during the Cold War between the United States and the Soviet Union. With the invention of intercontinental ballistic missiles (ICBMs), launch on warning became an integral part of mutually assured destruction (MAD) theory. Under the strategy, a retaliatory strike is launched upon warning of enemy nuclear attack while its missiles are still in the air and before detonation occurs. U.S. land-based missiles can reportedly be launched within five minutes of a presidential decision to do so, and submarine-based missiles within 15 minutes.”

Union Of Concerned Scientists, 2015

Background

I have spent many years researching nuclear weaponry, with my interest stemming from the Minuteman III missile silos I saw dotted around remote areas of North Dakota during otherwise soothing crawls around Google Earth.

I was fascinated by these structures, being both hidden and in plain sight, with the promise of potential apocalyptic destruction within an operational range of 8,083 miles (13,000 km) sitting in the middle of green pastures and fields of corn.

I am interested in the people, systems, and infrastructure involved in the development of this weaponry over the last seventy years, as well as the impact upon the landscape and communities associated with both the construction, deployment, and aftermath of nuclear devices.

My feelings on this topic are messy. From my research I am fully aware of the tremendous costs in terms of both loss of life and the impact on the natural world. At the same time, I still feel a sense of excitement and awe when looking at images of Yucca Flat at the Nevada National Security Site, described by Clarfield and Wiecek as "the most irradiated, nuclear-blasted spot on the face of the earth" (1984:202). There’s tension in the feelings of delight in the destruction, and sober acknowledgement.

What perhaps seemed a chapter of the Cold War we had agreed to move beyond, the nuclear arms race has returned to public consciousness over the last few years, with a number of states starting to develop new weapons, capable of killing more people more quickly and with greater reach.

I will be visiting Nevada and New Mexico in August 2019 for my research piece Acid Capitalist to view Yucca Flat and other sites associated with both the historic and current development of weapons of mass destruction.

Artist Survival Suit V1, 2019

This piece was seen in the recent OpenHand OpenSpace (OHOS) exhibition *Process*, where I worked on the jacket and discussed all things nuclear with visitors to the space. The suit is a deconstructed US Army M65 snow suit, an oversized coverall designed to go over combat dress to provide camouflage in cold climates. The M65 has been shortened, reduced in width, and augmented with a new padded collar, reflective foil, embroidery, and trimming.

The freestyle machine embroidery and applique takes the form of White Oleander flowers; the White Oleander is the official flower of the city of Hiroshima, so chosen as it was the first flower to bloom in the aftermath of the atomic bombing on the 6th of August 1945.

The hood has been cut off and extended, with reflective tape and portions of a sniper camouflage veil added to shield the wearer's face.

In its construction, I am keen to show commitment to the authenticity of the materials used with regards type, purpose, and aesthetics, but with acknowledgement of the impracticality of this garment in the real world. The work should insulate the wearer, engendering feelings of comfort and protection when worn, even if within a couple of seconds from detonation the wearer has been vaporised.

If the wearer was lucky enough to be outside the radius of the initial fireball, anti-flash white might initially offer some level of additional protection from the thermal radiation, however the buildings brought down, window glass shredding whatever it touches, and fires set ablaze from broken pipes would quickly negate any benefits.

The 2017 population of the borough of Reading is estimated to be around 160,000.

Taking this venue as ground zero, a 350 kiloton (kt) airburst at 2200m altitude from the single W-78 warhead found in most Minuteman III intercontinental ballistic missiles (ICBM) would result in an estimated 110,000 fatalities, with 159,000 injuries (Wellerstein, 2019).

For reference, the devices used in the 1945 attacks on Hiroshima and Nagasaki had yields of 15 kt and 20 kt respectively.

Yield data on the United Kingdom's submarine-based Trident system (manufactured and maintained 11 miles away in Aldermaston) has only been estimated, but is suggested to be 100 kt per warhead. Each missile carries five warheads.

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CLARFIELD, G. H., & WIECEK, W. M. (1984). Nuclear America: military and civilian nuclear power in the United States, 1940-1980. New York, Harper & Row.

Wellerstein, A. (2019). NUKEMAP by Alex Wellerstein. [online] Nuclearsecrecy.com. Available at: https://nuclearsecrecy.com/nukemap/ [Accessed 29 Jun. 2019].

Union of Concerned Scientists (2015). Frequently Asked Questions About Taking Nuclear Weapons Off Hair-Trigger Alert. [online] Ucsusa.org. Available at: www.ucsusa.org/sites/default/files/attach/2015/01/Hair-Trigger%20FAQ.pdf

Artist Statement

Aileen Creegan

Lives and works Reading, UK

I am interested in exploring how the absent can be made visible.

I enjoy collecting and organising information to help her better understand the world, on subjects that, at first glance, might not always appear obviously useful. Information is my comfort blanket; Wikipedia trawls and Google Earth explorations a way to self-soothe, with journeys within digital environments as valuable as real-world field trips.

From this secure standing, I seek to exploit flaws and deconstruct accepted perspectives and narratives, often exploring the tension that comes along with breaking what is designed to be immersive and real.

I wish to draw attention to what is not meant to be seen, elevating the out-of-place, or objects and places that can elicit complex and messy feelings, revelling in aesthetic enjoyment whilst being keenly aware of the destructive nature and processes involved.

Solo Exhibitions

Aug 2017	Poised For Peace, Filament 14, Magdalen Road Studios, Oxford

Selected Group Exhibitions

July 2019	Process, OHOS, Reading
May 2019	Seven Counties Open, OVADA, Oxford
Apr 2019	Chromantics, Cornerhouse Arts Centre, Didcot
Dec 2018	Monitor, Air Gallery, Altrincham
Mar 2018	Hatched 2018, Jam Factory, Oxford
Aug 2017	Americas 2017: All Media, Northwest Art Center, Minot State University, Minot, North Dakota
Aug 2017	DING, Turbine House, Riverside Museum, Reading
June 2017	Beyond Surface, Glass Tank, Oxford Brookes
May 2017	Seven Counties Open, OVADA, Oxford
Jan 2017	Healing Forces, Nuffield Orthopaedic Centre, Oxford
Dec 2016	Icky:rus, Rising Sun Arts Centre, Reading
Oct 2016	Evolving Forces, Oxford Brookes
Jul 2016	Open For Art 2016 Artist Trail, Jelly, Reading
Mar 2016	Realisation, Pop Up Artist Teacher exhibition, Harcourt Hill, Oxford
Jan 2016	Resistant Forces, OVADA, Oxford
Jul 2015	Reading Arts Week, Town Hall, Reading

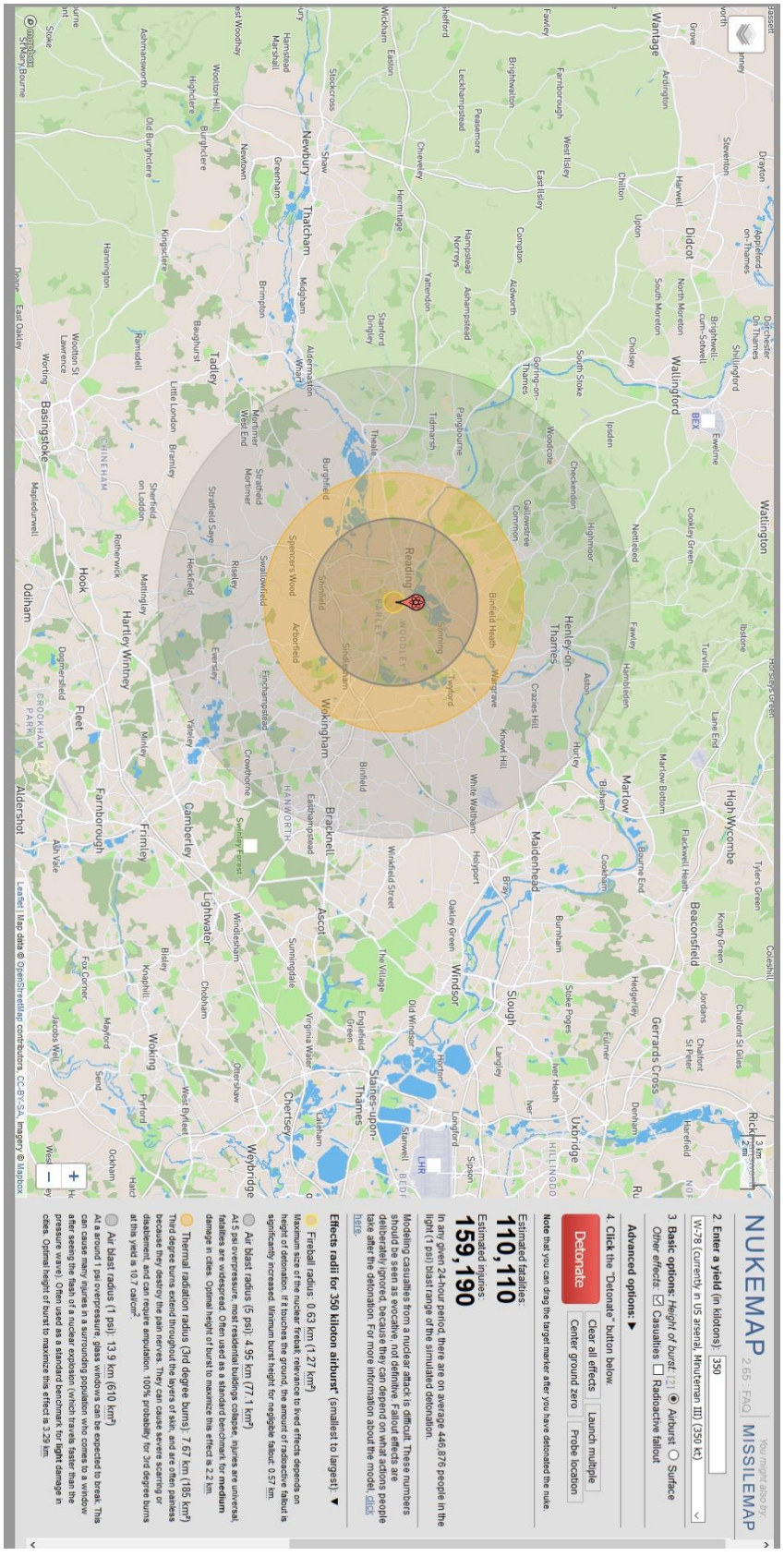
Residencies

Aug 2015	A Conversation Space, Jelly, Reading

Education

2017	Artist Teacher Scheme MA in Education, Oxford Brookes University
2006	PGCE Art and Design, Secondary, University of Reading
2004	BA Art, University of Reading

Research Appendices



Anti-flash white

From Wikipedia, the free encyclopedia

Anti-flash white is a white colour commonly seen on British, Soviet, and U.S. nuclear bombers.[1] The purpose of the colour was to reflect some of the thermal radiation from a nuclear explosion, protecting the aircraft and its occupants. [*citation needed*]

British Avro Vulcans with dark roundels in 1957

Contents [hide]

China [edit]

Some variants of the Xian H-6 had the underside of the fuselage painted anti-flash white.

Soviet Union/Russia/Ukraine [edit]

Some nuclear bombers had the underside of the fuselage painted anti-flash white with the upper surfaces painted light silver-gray. This was true for the specially fitted, single Soviet Tu-95V bomber that test-deployed the most powerful bomb of any kind – the 50+ MT-rating *Tsar Bomba* on 30 October 1961 – as it had the anti-flash white on all its undersurfaces and sides.[2] The Tupolev Tu-160 of the 1980s was the first series-built Soviet/Russian bomber aircraft to be painted anti-flash white all over, leading to its *Beliy Lebed* ("White Swan") Russian nickname.[3]

A Tupolev Tu-22M with anti-flash white on the underside

United Kingdom [edit]

Anti-flash white was used on the Royal Air Force V bombers force and the Royal Navy Blackburn Buccaneer when used in the nuclear strike role. Nuclear bombers were given – though not at first, until the problem was considered – salmon pink and baby blue roundels and fin flash rather than the traditional dark red, white and blue.

Anti-flash white was applied to several prototype aircraft, including the British Aircraft Corporation TSR-2. Paint used on the Avro Vulcan was manufactured by *Cellon*, and that on the Handley Page Victor by Titanine Ltd.[4]

Ukrainian Tupolev Tu-160 in all-over anti-flash white with pale fin flash

United States [edit]

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An RAF Victor bomber circa 1961 in anti-flash white with pale roundels and fin flash

Many Strategic Air Command nuclear bombers carried anti-flash white without insignia on the underside of the fuselage with light silver-gray or natural metal (later light camouflage) on the upper surfaces.[*citation needed*]

The United States Navy A-5 Vigilante carried anti-flash white without insignia on the underside of the fuselage.[*citation needed*]

The Boeing E-6 in TACAMO role was painted anti-flash white but its roundels were not subdued.[*citation needed*]

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Anti-flash gear

From Wikipedia, the free encyclopedia

For the personal protective equipment used against electrical arc flash, see Arc flash § Arc flash protection equipment.

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Find sources: "Anti-flash gear" – news · newspapers · books · scholar · JSTOR *(November 2008) (Learn how and when to remove this template message)*

Anti-flash gear, also known simply as **flash gear**, is basic personal protective equipment consisting of a fire-resistant hood and fire-resistant gloves,[1] often made of Nomex.

The purpose of anti-flash gear is to provide protection to the head, neck, face and hands from short-duration flame exposure and heat. This equipment is donned by shipboard navy personnel whenever a fire breaks out or during periods of heightened readiness.[1]

Anti-flash gear may be accompanied by other protective gear, such as life belts, helmets, gas masks, etc. While it may be worn by first-response fire-fighting parties, regular shipboard fire-fighters will usually wear full flame-resistant and insulating protective gear similar to civilian fire fighters.

Royal Navy Sailors during the Falklands War wearing anti-flash gear

History [edit]

Anti-flash gear was introduced in the Royal Navy following the Battle of Jutland,[2] when a number of British warships had been destroyed or damaged by flash from burning cordite propellant passing through the shell handling room into the magazine. It was found that the anti-flash hoods and gloves were more effective if flame-proofed with borax or boric acid.[3]

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Launch on warning

From Wikipedia, the free encyclopedia

Launch on warning (**LOW**) is a strategy of nuclear weapon retaliation that gained recognition during the Cold War between the United States and the Soviet Union. With the invention of intercontinental ballistic missiles (ICBMs), launch on warning became an integral part of mutually assured destruction (MAD) theory. Under the strategy, a retaliatory strike is launched upon warning of enemy nuclear attack while its missiles are still in the air and before detonation occurs. U.S. land-based missiles can reportedly be launched within five minutes of a presidential decision to do so, and submarine-based missiles within 15 minutes.[1]

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History [edit]

Before the introduction of intercontinental ballistic missiles (ICBMs), the U.S. Strategic Air Command had multiple bombers on patrol at all times[2] like, presumably, its Soviet counterpart.[citation needed] In the event of a nuclear strike by one of the nations, the other nation would order its bombers to fly to the other country and drop their nuclear payload on predetermined targets. In the United States, the bombers were typically either B-47 Stratojets or B-52 Stratofortresses, and there were three major flight routes. Keeping bombers in the air assured that a second strike would be feasible even if the first strike were to impair ground facilities. At the height of the Cold War, the United States had special Boeing EC-135 "Looking Glass" aircraft equipped as control centers for the nuclear arsenal. The battle staff included a general or flag officer who was authorized to order a retaliatory strike if the President could not be contacted.[3]

Launch on warning has its roots in US President Dwight Eisenhower's "Positive Control" strategy but really took shape with the introduction of the Minuteman missile. Since many ICBMs (including the Minuteman) were launched from underground silos, the concern arose that a first strike, by one nation, could destroy the ground launch facilities of the retaliating nation.

In 1997, the Clinton administration changed the official policy away from launch on warning to one of retaliation after withstanding an initial first strike.[4]

The introduction of nuclear-tipped ICBMs required new strategies because unlike bombers, ICBMs cannot be recalled after launch. There were two primary options. One option, "retaliation after ride-out", required the second-strike nation to wait until after it was attacked to launch their missiles. Some portion of the nuclear arsenal would inevitably be destroyed in such an attack, which led to both superpowers investing heavily in survivable basing modes[5] for their nuclear forces, including hardened underground missile silos for ICBMs,[6] and submarine-launched ballistic missiles. The other choice was "launch on warning", launching nuclear missiles before the other side's missiles could destroy them. That became possible primarily because of improvements in missile technology that allowed for faster launches,[7] along with invention of the Ballistic Missile Early Warning System in the early 1960s, which made it possible for the US to detect the launch of Soviet missiles.[citation needed] The capability was further enhanced in the 1970s with the deployment of space-based launch detection technology on both sides, the American geosynchronous Defense Support Program and Soviet Oko satellites. Evidence found in declassified documents suggests that launch on warning was at least in part the policy of the United States from the late 1950s through to at least the 1970s.[7]

Strategies are available that can reduce the effectiveness of a launch-on-warning stance. For example, the first-strike nation can use a technique called X-ray pin-down to delay a retaliatory response. It involves a barrage of submarine-based missiles fired from close range in a "depressed trajectory" mode that reaches its targets in minutes. The warheads would be set to explode every minute or so at high altitudes, which significantly disrupts the ability of the attacked nation to launch its own ICBMs.[8] Additionally, submarines could launch a depressed-trajectory strike against the capital of the targeted country in an effort to destroy its command structure before any retaliatory decision could be made; that is known as a decapitation strike.[citation needed]

The deployment of submarine-launched ballistic missiles (SLBMs) decreases the strategic need for a launch-on-warning strategy. These submarines are capable of hiding in the ocean during an attack, thus ensuring that a second strike can be made even if the attacked country is unable to launch a land-based counterstrike.[citation needed]

Nuclear weapons

Background
History · Warfare · Design · Testing · Delivery · Yield
Effects and estimated megadeaths of explosions
Winter · Workers · Ethics
Arsenals · Arms race · Espionage · Proliferation · Disarmament · Terrorism · Opposition

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The House in the Middle

From Wikipedia, the free encyclopedia

The House in the Middle is the title of two American documentary film shorts, respectively from 1953 and 1954, which showed the effects of a nuclear bomb test on a set of three small houses. The black-and-white 1953 film was created by the Federal Civil Defense Administration to attempt to show that a clean, freshly painted house (the middle house) is more likely to survive a nuclear attack than its poorly maintained counterparts (the right and left houses). A color version was released the next year by the National Clean Up – Paint Up – Fix Up Bureau,[1][2][3][4] a "bureau" invented by the National Paint, Varnish and Lacquer Association trade group (now known as the American Coatings Association).[1][2]

In 2001, the Library of Congress deemed the 1954 film "culturally, historically, or aesthetically significant" and selected it for preservation in the National Film Registry.

Footage for the film was recorded during the Upshot-Knothole Encore test at the Nevada Test Site on May 8, 1953.[3]

See also [edit]

- *Fallout Protection*
- *The Bomb*

References [edit]

1. ^ Mike Mashon (March 10, 2015). "The Cold War Meets Commerce: The House(s) in the Middle". *Now See Hear!*. Library of Congress. Retrieved August 6, 2015.
2. ^ "Past to Present". American Coatings Association. Retrieved August 6, 2015.
3. ^ Eden, Lynn. "Whole World on Fire: Organizations, Knowledge & Nuclear Weapons Devastation". Retrieved 9 June 2017.

External links [edit]

- Internet Archive copy of the 1954 film
- Library of Congress copy of the 1953 film
- Library of Congress copy of the 1954 film
- *The House in the Middle* on IMDb


The House in the Middle


THE HOUSE IN THE MIDDLE


HOUSE DEPOSIT...? WHAT HOUSE DEPOSIT?
$$
ACID CAPITALIST

Upshot-Knothole Encore

From Wikipedia, the free encyclopedia

Upshot–Knothole Encore was a nuclear weapons test conducted by the United States as part of Operation Upshot–Knothole. It took place on May 8, 1953 in Yucca Flat, in the Nevada Test Site.[1]

Test location [edit]

The test device, codenamed *Encore*, was detonated at 8:30 local time by performing an airdrop of a Mk-6D bomb from 19,000 feet with a B-50 Superfortress over Area 5 at the Nevada Test Site. At 2,423 feet, the bomb detonated, although it was fifteen feet west and nine hundred and thirty seven feet south of its designated target. The estimated yield of the weapon was 30-36 kilotons, although it yielded twenty-seven kilotons. In the codename "Encore", the letter "E" was a reference to the "effects" of weapons testing.[2]

Effects testing [edit]

As Encore was an effects test, multiple objects were subjected to the blast, including trees. Since the Nevada Test Site sits in a desert and does not contain trees, the United States Forest Service transported 145 Ponderosa pines from a nearby canyon to Area 5. The trees were then placed in holes at Frenchman Flat, and cemented into the ground, 6,500 feet from ground zero. The initial release of thermal radiation ignited many of the trees, and the subsequent blast wave blew them over.[3] Model houses built for the test were recorded to produce the Civil Defense film *The House in the Middle*.[4]

Soldiers were brought in to view the blast as part of the Desert Rock exercises.[5] 3,500 soldiers from all over the country participated in the exercises, and were formed into Combat Battalion teams. In addition to this, six hundred high-ranking personnel and congressmen were on hand to view the exercises, which were aimed to "indoctrinate troops in atomic weapons in order that they will know how to protect themselves and their equipment in event of an enemy atomic attack in combat situations".[6]

Upshot–Knothole Encore

The explosion, viewed from the air

Information

Country	United States
Test series	Operation Upshot–Knothole
Test site	Nevada Test Site, Area 5
Date	May 8, 1953
Test type	Atmospheric
Yield	27 kt

Test chronology

← Upshot-Knothole Simon
Upshot-Knothole Harry →

Emmet Gowin
Subsidence Craters, Northern End of Yucca Flat, Nevada Test Site, 1996
Photograph
25.5x27cm