

The following are excerpts of UMRC's proprietary Field Team Report on Afghan Trip #2 (September/October 2002). Readers will gain an inside view of the Field Team's work, the situation in Afghanistan and the conditions of the people. Personal reports of survivors' experiences of Operation Enduring Freedom (OEF) are presented. Technical, logistical and UMRC field collection data reports, patient and study subject medical histories and other related data have been removed from these excerpts to protect the privacy of individuals. All materials are the copyright of UMRC and cannot be reproduced without the expressed permission of UMRC.

## **Afghan Field Trip #2 Report: - Precise Destruction – Indiscriminate Effects**

[Introduction](#)

[Background – discovery of a new type of uranium weapon](#)

[Objectives and overview of trip accomplishments](#)

[General impressions of the public health](#)

[Determining the cause of the effect – variables of contamination in Jalalabad area](#)

[Bombsite characteristics and blast effects](#)

[Eyewitness accounts and immediate effects of the bombing](#)

[A survivors personal experience](#)

### **Introduction**

UMRC's field collection and investigations team completed its second Afghan trip October 3, 2002, four months following Field Trip #1. New specimens were collected from Control and Experimental populations, broadening the original study area around Jalalabad and expanding the research to the capital city, Kabul. Kabul, with a population of 3.5 million, is the most densely populated of the areas bombed. It contains the greatest concentration, if not the highest number, of fixed (immobile), strategic and tactical targets acquired by the suspected uranium alloyed, precision-destruction weapons used by Operation Enduring Freedom (OEF).

### **Background – the discovery of a new type of uranium weapon**

Mass spectrometric analysis conducted by the NERC Geoscience Laboratory of the 8 urine specimens taken from selected subjects in the Jalalabad area, Nangarhar Province, May/June 2002, showed abnormally high concentrations of Uranium. Unlike UMRC's previous research into radiological and heavy metal contamination of NATO conflict zones, which found Depleted Uranium (DU) in the urine of Operation Desert Storm soldiers, the Jalalabad subjects have abnormally high concentrations of Non-depleted Uranium (NU).

The concentrations of Non-depleted Uranium in the Jalalabad community subjects are 400% to 2000% higher than normal populations. This concentration of radioisotopes is not known to have occurred before in civilian populations.

The results of the analysis of the Jalalabad area specimens rule out contamination by depleted uranium, enriched uranium and/or uranium recycled from the nuclear reactor waste stream. The Jalalabad area subjects' uranium signature cannot be explained by the any known geological or other features in the area. These anomalous research findings pose an unexpected investigative challenge to UMRC and NERC. One of the main objectives of Trip #2 was to investigate the variables that could explain these findings.

## **Trip #2 objectives and overview of accomplishments**

In order to (1) corroborate the anomalous scientific findings in the urine collected in Trip #1, (2) identify potential causal variables, and (3) determine the scope of the NU contamination, UMRC and NERC instructed the Field Team to increase the size of the study population and geographic range of the investigation. The team secured urine specimens from control populations in Jalalabad. Control subjects were selected from populations that do not report health problems indicative of internal contamination by uranium but who live and work within the radius of exposure.

Urine was collected from new experimental populations who were directly exposed to three precision target bombsites in the capital city, Kabul. Geological samples of water, soil and silt were taken from the control and experimental populations' environs. One set of soil and water samples was collected in the immediate environs of each urine donor (or donor group or locality).

## **General impressions of the public health**

The UMRC field team was shocked by the breadth of public health impacts coincident with the bombing. Without exception, at every bombsite investigated, people are ill. A significant portion of the civilian population presents symptoms consistent with internal contamination by Uranium.

The Field Team was careful to question all subjects about the timing of the on-set of their illnesses, which all reported to be coincident with the actual attacks and which have persisted without abatement. Some symptoms and physical reactions to the weapons may be indicative of exposure to chemical or biological weapons.

All experimental subjects, in all locations, present identical symptom profiles and chronologies. Of the more conspicuous and most often reported symptoms are pain in the cervical column, upper shoulders and basal area of the skull, lower back/kidney pain, joint and muscle weakness, sleeping difficulties, headaches, memory problems and confusion/disorientation.

Those exposed at the time of the bombing report immediate health effects within minutes to hours of the attacks. Reports include a common profile of flu-type illnesses throughout entire neighborhoods, beginning within the first few weeks and lasting two or more months after the bombing. The more seriously ill show progressive symptoms, which have persisted for 10 to 12 months, up to the present.

Although the field team did not have a generic, medical symptoms' profile for the effects of uranium contamination on foetal development and new-borns, the community reports -- corroborated by the Team's examination of two infants -- may indicate that up to 25% of new-borns suffer congenital and post-natal health problems. These infants' musculature is underdeveloped, their heads appear disproportionate to body weight, and they have unusual complexions and skin problems.

The two infants examined were so lethargic and weak that they did not have the energy to cry. They appear malnourished although there are sufficient supplies of nutritious foods available to the mothers. Parents and elders were distraught at the health conditions of their infant children and communities in general. Detailed medical examinations and public health assessments are required in these neighbourhoods.

## Determining the cause of the effect – variables of contamination in Jalalabad area

The results of Field Trip #1 indicated a radiological and heavy metal contamination problem for Jalalabad area residents. If these results are corroborated by the study of a broader population, Afghanistan is facing a public health crisis.

Although UMRC's/NERC's analysis of the urine collected in Trip #1 may point to the OEF Alliance partner's use of new and experimental weapons' systems in the Afghan theatre, alternative hypotheses have been suggested to explain the Jalalabad area findings. These are discussed below in the context of the field information collected by the team:

A geological anomaly: According to geological data, the level of contamination discovered in the Jalalabad area cannot be explained by any currently known, geological phenomenon. The retired Chief Engineer of the Marble Factory (sample collection site), now an independent engineering consultant, stated that uranium ore deposits have been found in Helmand Province, several hundred kilometres south-west of Jalalabad. These deposits were reportedly of interest to the Soviet Union during its 12-year military incursion, and 6-year proxy war in Afghanistan, but no known mining or mineral exploitation activities have been undertaken.

Phosphate, limestone and gypsum mining, secondary manufacturing and local use of these products: There are no reported phosphate or gypsum mines in the areas inspected, although there was a report that Afghanistan has a significant supply of gypsum that has been mined and exported in the past. The study team witnessed heavy truck convoys carrying imported concrete in bags, implying that there is currently no local concrete production.

There is a major construction project (building of a mosque) using concrete, about 1 kilometre from Jalalabad area. The study area is situated in a major agricultural district where phosphates may have been used as fertilizers. The community is suffering from its sixth year of a drought exacerbated by severe destruction of irrigation and electrical systems by the Soviets. Farming is now reduced to a very low level of non-commercial subsistence and market gardening.

Local excavation activities: There are many facilities producing sun-baked and artificially-fired brick, using locally excavated, surface-materials. The digging of wells and karaizes ("kah-rays" – hand-dug, underground mountain channels feeding wells on the agricultural plains) and annual channel maintenance takes place in the Jalalabad area. The karaiz is a traditional water mining and transport system used for thousands of years in villages situated at the base of mountains high enough to produce snowmelts to restock the watercourses. This type of well is used only where geological features of the rock and soil are favorable to allow digging and preserve the integrity of the channels.

The mountains of Afghanistan are peppered with caves excavated in a search for gemstones and various ores, for food storage, and for defensive fortifications. Soil and water samples have been taken from the karaiz supplying Lal Mah and the fields irrigated by this water source.

Soviet, "scorched earth" practices: Jalalabad area is 1 kilometre from Arda Kelai, the site of a famous battle between Soviet troops and Afghan mujahiddeen. The Soviets won this battle due to superior weapons but suffered one of their highest losses of troops of any single battle fought with the indigenous freedom fighters. It is not implausible that the Soviets laced the

village with uranium contaminants to punish the people. These two villages share access to the same karaiz; reportedly sourced from the mountains close to the heavy bombing in the Tora Bora area.

Local, industrial and/or military uses of Natural Uranium in the region: There is no uranium mining in the Nangarhar Province nor any known deposits of uranium ore. There are no modern or active industrial facilities in the area at all, and no publicly known industrial, research or military facilities known to possess uranium in any form. OEF reports of advanced, weapons research laboratories are highly suspect given the conditions of the country and the emigration of its scientific community.

The Taliban government, which controlled the government (but not all territory) for 5 years, inherited a country virtually bankrupt from 23 years of war. Its unlikely it could afford to finance WMD research or production. Virtually all industrial infrastructure and government facilities were destroyed during the 6-year Soviet-US proxy war. The Afghan rupee is valued at 1/10,000 of the Pakistan rupee which is in turn, valued at 1/60 US dollar.

Afghanistan is an impoverished agricultural economy with little to no research and development, and no industrial or public works/public utility capacity. Irrigation systems have been largely destroyed. There are no telephone or electrical systems other than in the major cities. Even the major roads and historically, well-maintained highways between major cities are now virtually impassable except by 4 wheel drive vehicles with heavy axles and heavy-duty suspension. With the exception of Iran and Pakistan, Afghanistan has been isolated from access to technical and capital assistance for 30 years. The country has no viable military capacity except light-armored, equipment captured from the Soviets or supplied by the United States, EU and NATO (sponsoring the war against the Soviets).

Al Qaeda: The US Defense Department and White House accused Osama Bin Ladin/Al Qaeda of acquiring uranium to develop "uranium dispersion bombs." Nangarhar Province was one of Al Qaeda's centers. To date, the US's accusations refer to "dirty uranium" and "dirty bombs" made from reactor waste composed of uranium isotopic ratios inconsistent with UMRC's/NERC's findings of NU. The isotopic ratios, decay products and transuranic agents present in reactor waste would present a measurably different signature from Natural Uranium.

The US Secretary of Defense stated that OEF Special Forces found some DU penetrators in Al Qaeda weapons caches. Admittedly, -- according to the Pentagon -- no Afghan weapons' delivery systems (surface or air) have been found that are capable of firing these alleged munitions.

New/experimental, precision-destruction and hard-target weapons: deployed for the first time and tested in Afghanistan: The British Ministry of Defence and Parliament categorically deny using Depleted Uranium weapons in Afghanistan. They have not yet been queried as to the use of Natural Uranium alloyed weapons.

The United States and its weapons' contractors acknowledge the development, expansion and deployment of weapons and delivery systems that use low, medium and high altitude, air-to-surface and ship-launched, uranium alloyed munitions.

It has been suggested that the US replaced Depleted Uranium with Natural Uranium. This would allow for plausible deniability when the uranium was discovered (attributed to naturally occurring, geological conditions). It may also be to modify their battlefield performance: pyrophoricity, kinetics and inertial features.

## **Bomb site characteristics and blast effects**

Of note are eyewitness reports in Kabul, of waterspouts rising from bomb craters immediately following impact. These points of impact are not situated close to public or private, water-works' infrastructure; they are reported to be natural springs and underground watercourses. In Bagrami, a farming community outside of Kabul, the bombs penetrated an underground river, causing a flash flood over several hundred hectares of crops and grazing land.

### Kinetics and target effects

Blast and kinetic effects vary by target. With the exception of the collateral damage site in Bibimahro, the impact sites investigated in Kabul were government-owned buildings receiving direct hits. There are no signs of missed targets (i.e. bomb craters in the vicinity or at the perimeters of the targeted buildings). The precision of the weapons was surprising and exceeds the efficiency-levels reported in previous US/NATO interventions.

Each of the 8 buildings inspected in Kabul, at three independent locations, were hit directly and destroyed. Although partial walls and roof elements remain in some of the larger buildings, the destruction has rendered the facilities non-functional and irreparable.

The Kabul bombed sites differ from the Jalalabad area sites inspected in Field Trip #1. The Jalalabad buildings are made of baked brick, targeted with cement or mud (clay). The one exception in Jalalabad was the government ammunition depot at Farm Arda. Inspected in Trip #1 (a soil sample was collected in Trip #1), it was constructed of heavily reinforced concrete, "bunkerized" with earth berms. It is the only facility seen by the team that was built close to military grade. The ammunition depot was completely destroyed by at least one, and perhaps several direct hits -- with no misses. The kinetic features would clearly indicate the use of precision guided, hard-target, penetrator warheads.

Whereas all the Jalalabad building targets (except the ammo depot) were reduced to rubble, with a characteristic cratering, the ammunition depot and all the government facilities in Kabul displayed different blast effects. The heavier buildings' remains are composed of significantly larger pieces of concrete with some wall structures remaining.

Except the collateral damage site, all the Kabul buildings inspected were larger and more heavily constructed. The Kabul buildings were made of concrete, reinforced with steel rebar (reinforcing bar), steel roof decking, and steel roof framing. They were two or more stories tall, with the upper floors made of reinforced, concrete slabs. Inspection of the construction methods and materials indicate that none of these Kabul buildings were built to a military grade.

### Marble factory

The kinetic effects at the Marble Factory show a variety of warhead and weapons types. Five precision-destruction bombs were delivered in three separate sorties – destroying 5 buildings of varying size and height. The roofing materials were industrial, load-bearing, corrugated sheet metal with steel I-beams, trussed beams and heavy duty, compression rafters. The bombs penetrated the roofs without exploding – a clue to the weapons' sophistication.

The bomb destroying the building detonated above grade. The Chief Engineer corroborated this. OEF believed the largest building housed troops (it did not). The detonator

was set for anti-personnel, “maximum lethality”, exploding a few feet to meters above the floor. The blast buckled 12” - 24” steel beams. Sixty (60) ton power generators were lifted from their three-inch, steel, floor anchors and thrown across the building. The roof and all walls (interior and exterior) were blown out of the building.

In the smaller buildings on the Marble Factory property, the warheads were set to detonate below grade. They penetrated the roof and wall elements, proceeded into the buildings and punched through concrete slab floors to a depth of 3 or 4 meters. The blasts cracked, broke and lifted hundred-ton slabs, collapsed interior walls and twisted structural steel elements. Second floor concrete slabs collapsed down into the building rather than blown out as in the larger facility.

All bombs made dead centre hits on their respective targets. There was no evidence of fire or heat burn. The building materials and contents were non-combustible. A more detailed examination of blast characteristics and a search for bomb parts is warranted at the Marble Factory.

It appears that different weapon designs were used to destroy vehicles and military equipment. Trip #1 inspections of direct hits on vehicles showed high heat burn on the metal and other combustibles, which may point to pyrophoric warheads. Or, they may indicate fuel burning.

Cratering in the large and heavy buildings was deep and expansive. Most warheads penetrated the flooring materials before detonating. Building components were dispersed laterally, but many materials fell into the craters. The most robust buildings may have experienced delayed and incremental collapsing. The explosions launched building components horizontally, which then fell back into the craters.

When the weapons arrived vertically, cratering in the lighter constructed (brick) buildings was symmetrical. Where the bomb entries were lateral and low, destruction pathways had a lateral, fan-shape ballistic effect. The craters in these buildings were “clean” and centrifugal with no significant amount of material remaining at ground zero and no fall-back. This probably reflects the nature of the building materials more so than the size, delivery angles or designs of the warheads. One crater at 81 Tank Division was enormously deep, wide and particularly symmetrical. It was reported to have been a command post although there is absolutely no resemblance to a building. The crater was composed of fist sized rubble, about 7 or 8 meters deep and 20 meters wide at the base.

### Yaka Toot Radio Station

The impacts and kinetic features of the bombs at the Short Wave Radio Station, Yaka Toot, are consistent with precision guided, elevation-calibrated weapons (set to explode at predetermined altitudes above or below grade). They combined significant explosive force with hard-target penetration features. These weapons punched through three or more layers composed of steel reinforced roofs and two or more concrete walls without detonating. They then passed through the concrete floor/foundation slabs, to bury 3 to 4 meters in the earth before exploding. These buildings are characteristic of Afghan engineering, which uses slab-on-grade foundations, not basements or perimeter foundation walls.

The craters were full of heavy steel and concrete debris, which fell back into the holes after the explosion. These bombs destroyed the buildings in every direction – vertically and laterally – with diagonal entry and lateral blow-out pathways, suggesting the warheads were delivered by low flying aircraft or inertial-guided, low flying missiles. Given the accuracy of the impacts, which were precisely targeted to dead center, they would have been “tagged” by

lasers from on-the-ground, target designators. The damage pathway extended 30 to 40 meters from ground zero, though opposing, concrete side-walls. The blast travelled through the walls, destroying equipment stored outside and damaging adjoining buildings and trees. No fire or heat effects were observed in the buildings or on the combustible materials (trees and wooden structures) outside the buildings.

Eyewitnesses reported some bombs exploding in stages. The initial entry explosion was followed by a “deeper” second stage explosion, blowing material up and out of the crater. Survivors reported that collateral damage to other facilities as well as killing and wounding were often caused by steel reinforcing rods, which were launched like missiles, vertically and horizontally out of the explosion. In some instances the victims of the flying rebar were hundreds of meters from ground zero.

A couple of survivors reported that flying concrete walls saved their lives. By containing the pressure waves and acting as armor, the walls focused the ballistic forces and stopped bomb and building shrapnel. Some, sleeping on cots close to the walls, were lifted up and carried out of the buildings by these flying walls.

### **Eyewitness accounts and immediate effects of the bombing**

Witnesses to the bombing report a characteristic, green flash or green smoke/dust cloud upon detonation. The green flash and incumbent dust or smoke plume was observed at distances of several kilometers. Residents of Kabul would stand on the roofs of their homes, at night and before sunrise, to watch the spectacle. Some reported seeing water-spouts rising out of the craters from a distance of up to a kilometre.

Three subjects in Kabul were asleep in buildings that received direct hits by the OEF bombs. As reported above, heavy concrete walls protected them as they were thrown clear of the buildings. After regaining consciousness, these subjects (Trip #2 urine donors) retrieved the injured and corpses from the site.

All subjects interviewed, residing in villages adjacent to and down-wind of the bombing, report large, dense dust clouds and smoke plumes rising from the point of impact. They described the plumes as “rolling across” their fields and neighborhoods. Some indicated that the density of the plume was like a thick fog. They reported an acrid smell, followed by burning of the nasal passages, throat and upper respiratory tract.

Some reported that within minutes to hours of the passing of the dust clouds, they had bleeding noses. Nosebleeds persisted into the following day or two, followed by runny noses and nasal congestion for weeks to months. All people reported flu- and cold-like symptoms, persisting for weeks to months.

Most of the population of Kabul has frequent and continuous colds and flu symptoms. Runny and bleeding noses is a daily occurrence. Each morning's toilette routine includes cleaning the nose, nasal passages and throat of dried mucus often containing blood spots. Many of the urine donors have dry, unproductive coughs and eye irritation. Virtually no one smokes tobacco products, although 50% or more of the men use chewing tobacco.

The 6000' + altitude in Kabul, years of drought, frequent dust storms and very bad vehicle pollution may explain the respiratory and nasal problems. The UMRC field team had nasal and respiratory problems within a few hours of arriving in Kabul. Our noses bled every day and ran continuously with clear, light mucus. One member of the team developed an upper respiratory irritation, throat tickle and dry cough that persisted for over 10 days after leaving Kabul.

During the examination of the Marble Factory, the field team experienced burning sensations in their noses and throat. When the member who handled the dust, collected soil samples and shrapnel, washed his hands at the end of the visit to this site, his skin burned. It took several washes to eliminate the contaminant responsible for the burning. He developed a full body rash that persisted for several weeks.

### **A survivors' personal experience**

Bibimahro (pronounced "be-be-mah-row") is a large suburban neighbourhood in Southern Kabul. It lies at the base of a 300-meter hill (tapa) which bears the same name. Atop of the hill is a government radar installation. The hill is a long, narrow spur that separates Bibimahro from the city core. Its sides are steep with a 30 + degree grade. A gunship or bomber approaching on an axis perpendicular to the long side of the hill has a very narrow foreground on which to orient.

The configuration represents a target characteristic commonly known as easy-to-miss by overshooting. The target rises over the foreground grade; its line of sight breaks across the ridge top. The target is semi-transparent due to the target's structural features (a radar dish) and the dawn light. The sides of the hill are steep, and the launch trajectory is above the descending, diagonal pitch behind the target. This type of target requires extreme accuracy to prevent overshooting. Visual sighting rules stipulate that such a target would be approached parallel to the ridge.

Ethical rules of engagement would require targeting this location, so that a miss will bury the warhead into the ground behind the target, avoiding collateral damage.

It is 5:30 AM on a winter morning - the time when families are getting up for morning prayers, eating breakfast and preparing to leave for work and the market. The Afghan convention is to begin the day before sunrise.

Mr. Saheeb Daad and his 12-year-old son, Hussein, are walking back home from prayers at the mosque. The dawn is approaching with a faint, golden, pink and purple hue advancing into the dark night sky from behind the eastern crest of the mountains ringing Kabul. Mr. Daad hears an odd, revolving or whirling sound. It is a strange mechanical sound coming from above and rapidly increasing in volume. The sound rushes downward, following a path parallel to the steep side of the tapa.

As Mr. Daad and Hussein approach their home, a brilliant green flash suddenly bursts out of the ground. It blinds them and is instantly followed by an explosion and pressure wave – knocking the boy and his father to the ground.

After regaining their orientation from the shock, they find they are uninjured. They quickly rise to their feet and run towards their house – a mud brick, one story structure where Mrs. Daad is preparing the morning meal and Hussein's younger brothers are still sleeping.

The neighbours house – which shared a common brick wall with the Daad's -, is nothing but a low pile of rubble, roofing materials and bodies. The Daad's house is still mostly intact; except for one room. In horror, they discover that nothing remains of the children's' sleeping room. It is flattened to rubble just like the neighbour's house. Buried under the remains are Mr. Daad's two youngest sons. Entangled in the remains of the neighbour's house are eight bodies – mother, grandmother and six little girls.

By this time the neighbours have filed into the street. People rush to look for survivors and pull out the bodies. Mr. Daad digs through the remains of their house to rescue his two young sons. They died in his arms as the sun rose over the mountain.



The neighbour's house received the rocket's impact directly. Nothing remains to indicate that a house sat on this lot a few minutes earlier.

No one heard the attack plane. It flew in low from the opposite side of Bibimahro Tapa. This is characteristic of the attack sequence. Tactical fighter-bombers, AC-130 gun-ships and A-10 Warthogs fly at low altitudes, often only 25 to 30 meters. They work their way through valleys, between hills and mountains so their engines' sounds will follow them rather than precede them. This prevents upcoming targets from receiving auditory warning of their arrival. The Field Team observed these aircraft flying at extremely low altitudes at several locations.

No one saw or heard the approach of the airship that missed the radar station. No one witnessed its attack or its departure. It left as stealthily as it arrived.

The functionality of this radar station was suspect. The government had already disbanded. It had no aircraft or anti-aircraft capability and no viable communications systems.

Kabul was occupied by US and British Special Forces troops by this time. There was no local resistance to the OEF air and ground forces, nor were there reports of anti-aircraft defensive responses. Government military facilities were abandoned.

OEF had established forward target-designators and on the ground intelligence operatives, whose tasks are to select the targets, direct fire with laser-sights and inspect the results to confirm the kill. Needless to say, no OEF forces visited the Bibimahro neighbourhood that day.

The approach and backdrop to the Bibimahro Tapa installation is surrounded by densely populated, residential neighbourhoods, including a hospital. This radar installation could have been approached so that weapon overshoots and near misses plough into the top of the hill. Instead, this bomber approached perpendicular to the hill, facing directly into a neighbourhood of thousands. The pilot would see a backdrop of lights and the glow of stove fires as he looked past his target into the valley below. He identified the target, locked on, fired and missed – perhaps only by a hair, or even glancing off the target.

The revolving, swirling sound of the rocket, heard by Mr. Daad, may indicate the weapon was tumbling from having made partial contact with its target. Portions of the weapon may have broken off during the initial contact with the radar dish. Whatever the case, the trajectory was fatal for anyone unfortunate enough to be in its line of descent.

It wasn't a large weapon. The angle of entry was about 35 degrees. The crater is shallow, perhaps a meter deep and 4 to 5 meters in diameter. This bomb would be considered small compared to the 6 meter deep by 30-meter diameter craters we investigated elsewhere. Rather than a high explosive, fragmentation or thermobaric weapon, designed for maximum body count, it was one of the new generations of "precision-destruction" warheads, intended to destroy "hard targets" and avoid collateral damage. But in Bibimahro that day, the immediate effects were not so discriminating. If tests show this warhead to be a uranium-alloyed weapon, its long-term effects will be pervasive. The afternoon we arrived at Bibimahro, a dozen young children were using the crater as a playground.

T. Weyman  
Afghan Field Team Lead  
[Tweyman@UMRC.net](mailto:Tweyman@UMRC.net)