DUST

PART 3

The China Syndrome

This report states clearly and provides proof that fission took place in New York City on September 11th, 2001. This report doesn't seek to develop an opinion regarding what type of atomic device caused that fission. The science to make an accurate determination in that vein is beyond the scope of this report but we will discuss possible scenarios from bombs to reactors beginning in this section and we'll even address nuclear theory of 4th and 5th generation nuclear devices later on.

"If the radiance of a thousand suns
were to burst at once into the sky
That would be like the splendor of the Mighty one
I am become Shiva
The Destroyer of Worlds"

These are the words spoken by Robert Oppenheimer
after the Trinity Test, the first atomic bomb of the modern age.
This was at Alamagordo, New Mexico, 5:29:45, 16th July, 1945:
Ground Zero of the Manhattan Project.

What type of nuclear devices could have been used to individually demolish the two World Trade Center twin towers and Building 7 without destroying half of New York at the same time?

One assumption is that the device could have been an underground nuclear bomb, perhaps as large as 150 kilotons. It may have been a smaller nuclear device detonated at lower sub-basement level, a micro-nuke. More technically this is referred to as a SADM, Small Atomic Demolition Munition. It could have also been the deliberate explosion of a clandestine nuclear reactor installed under each building. Called a "core meltdown," this is associated with the China Syndrome.

It's interesting to note that the church at the World Trade Center was called the Trinity Church.

The program to develop the atomic bomb is best known as the Manhattan Project. One of the main project planning and control offices was located in Manhattan. The name of the first atomic bomb test itself was Operation Trinity. Did the original or later Manhattan Project involve the installation of nuclear reactors under Manhattan?

The MADM, TADM & SADM

In the 1960s, US Marines and Special Forces were training to use Small Atomic Demolition Munitions (SADMs) to sabotage enemy installations. In one scenario, an operative would jump out of a helicopter some distance off shore, with a SADM attached to a flotation device. Once in the water, the operative would swim or row a dinghy towards the shore based target such as an enemy port, dockyard or naval installation. The SADM would then be left in the harbor or nearby on a timed fuse.

A nuclear artillery shell called "the Davy Crockett" was also deployed by the US Army in the 1960s and 70s. The shell weighed 76 pounds and had a low yield of about 10 tons of TNT equivalent. The latest SADMs built by the Russians in the 1990s were known to have a yield of below 10 tons – ideal for destroying a very large building or a city block.

The seismic interpretation by the Palisades Earth Observatory estimates the magnitude of the short impulsive seismic event just before each tower collapsed at Richter Magnitude 2.3. With good coupling between the explosion and the ground, the TNT equivalent of the blast would be between 2 and 5 tons. We know that the ground coupling is in fact poor (*explained in a later section*), so the actual explosive power was higher – and since we may not be able to view the seismic data as reliable – there isn't very much reliable data on 911 – the total tonnage could be anywhere from very low, 2-20 tons, to very high, 100-200 tons.

Any estimate between 2 and 200 tons are well within the range of "possibility" for either older generation nuclear demolition munitions or the latest generation of modern "micro nuke," or SADM, which have been under development since the beginning of the 1990s. The same applies to the Tactical Atomic Demolition Munition, TADM.

Below right, a photograph of a MADM – Medium Atomic Demolition Munition from the 1950s-1960s and at left an older version of the backpack portable SADM. The fire-extinguisher hanging on the wall just to the left of the device gives you an idea of its size.

Weapon Sizes

Operation Storax, Sun Beam, and Roller Coaster
1962-1963: Nevada Test Site, Nellis Air Force Range (Nevada)

The plutonium warhead of the Davy Crocket had a diameter of 10.9 inches, a length of 15.7 inches, and weighed 50 lb. At left are pictures of the Davy Crockett, the first shows it mounted on a stand-alone recoilless rifle launcher. Operation Storax was the second fiscal year based “test series”, running from 1 July 1962 and through 30 June 1963 for nuclear detonation and likely used the Davy Crocket. This series was concluded before the signing of the Atmospheric Test Ban Treaty on 5 August 1963, and included the last U.S. atmospheric tests of any description. The last zero-yield plutonium dispersal test, Roller Coaster Clean Slate III, was fired 9 June 1963.

The majority of the Storax tests were conducted underground, just as had been true during Nougat, although with better confinement of radiation than practiced at that earlier series. Storax included several Plowshare tests, including the spectacular (and thus very well known) Sedan shot. These tests were intended to develop nuclear explosives for non-military uses.

Containment

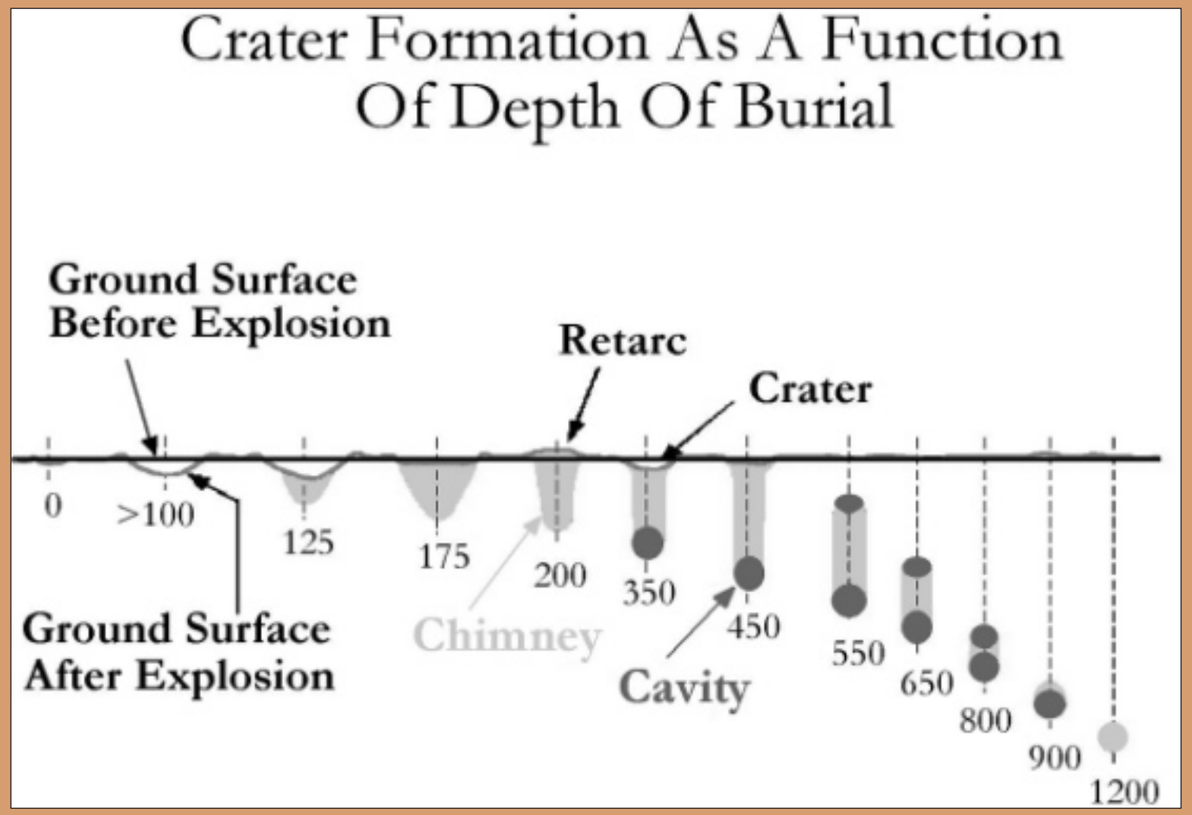
Just how deep must an underground nuclear explosion be buried in order for the blast and fallout to be contained?

The US conducted a series of underground nuclear explosions in the 1960s — the Plowshare tests — to investigate the possible use of nuclear explosives for excavation purposes. Those performed prior to the 1963 Atmospheric Test Ban Treaty, such as the Sedan test shown previously, were buried at relatively shallow depths to maximize the size of the crater produced. Deeper burials can produce no crater at all or at times a minimal depression.

In addition to the immediate effects of blast, air shock, and thermal radiation, shallow nuclear explosions produce especially intense local radioactive fallout. The fireball breaks through the surface of the earth, carrying into the air large amounts of dirt and debris. This material has been exposed to the intense neutron flux from the nuclear detonation, which adds to the radioactivity from the fission products. The cloud typically consists of a narrow column and a broad base surge of air filled with radioactive dust which expands to a radius of over a mile for a 5 kiloton explosion. In the Plowshare tests, roughly 50 percent of the total radioactivity produced in the explosion was distributed as local fallout — the other half being confined to the highly-radioactive crater.

Buried deep enough, an underground nuclear detonation can produce no surface radiation at all but this was hardly the case with the Twin Towers and Building 7 in New York City.

In order to be fully contained, nuclear explosions at the Nevada Test Site must be buried at a depth of 650 feet for a 5 kiloton explosive — 1300 feet for a 100-kiloton explosive. Even then, there are many documented cases where carefully sealed shafts ruptured and released radioactivity to the local environment.



Crater Depth and Fallout

Underground nuclear tests must be buried at large depths and carefully sealed in order to fully contain the explosion. Shallower bursts produce large craters and intense local fallout. The situation shown here is for an explosion with a 1 KT yield and the depths shown are in feet. Even a 0.1 KT burst must be buried at a depth of approximately 230 feet to be fully contained.

One can see that the devices on the previous pages are certainly small enough to be installed without too much difficulty in the basement or lower sub-levels of a tall skyscraper, if required.

The Argument For A Reactor Generated Explosion

There is evidence to support both a nuclear weapon detonation and a reactor generated core meltdown. We lack the current science to make a clear determination regarding this issue and we also lack the current information and science to estimate size or kilotons. What we know, beyond doubt and conclusively, is that nuclear fission occurred in New York City on September 11th, 2001 and there will be lifetime consequences. The rest of this section is speculation and opinion based on the available evidence.

Some factors indicate core meltdown is possible:

1. An atomic bomb may not have been capable of residual heat left persisting for months after the blast.

2. The sheer quantity of measurable fallout in the USGS dust sampling data, the extraordinarily high ppm's of certain daughter products of the fission process points towards a larger source of fissile material then would be found in the atomic bomb science we have access to. What we know is that these atomic weapons would generally contain 10-20kg of Uranium or Plutonium.

Evidence For Core Meltdown

What factors lead to a conclusion that the nuclear fission seen in New York on September 11th can be attributed to a core meltdown of a nuclear reactor rather than an atomic bomb?

The WTC Light Memorial

When a nuclear fission chain reaction occurs a very distinctive signature is produced which shows that an extraordinary reaction is underway. That signature is the emission of an intense blue light, known as Cerenkov Radiation. This is an extremely intense and dangerous radiation, though also eerily beautiful. A well known example of Cerenkov Radiation occurs when cosmic rays enter the atmosphere from outer space. Traveling at high speed, the cosmic rays can exceed the local speed of light in the atmosphere itself. If radiation traveling in a medium (air or water as examples of mediums) exceeds the speed of light in that medium then

this beautiful blue Cerenkov light is emitted. Cerenkov Radiation is therefore a signature of a highly energetic and intense radiation. When the Chernobyl nuclear power plant exploded in 1986, causing a core meltdown, the lid of the reactor, weighing 2000 tons, was blown clean off. The reactor core was exposed. An interview with the eyewitness Alexander Yuvchenko was published by New Scientist on August 24th, 2004, a month after the interview with Mark Loizeaux. A coincidence?

Yuvchenko described the sight when he went outside to try and obtain a clearer idea of what had happened to reactor number 4:

"*From where I stood, I could see a huge beam of projected light flooding up into infinity from the reactor. It was like a laser light, caused by the ionization of the air. It was light-bluish and it was very beautiful. I watched it for several seconds. If I'd stood there for just a few minutes I would probably have died on the spot...*"

Yuvchenko then went up to the reactor hall with three other workers.

"*What happened when you got back to the reactor hall?*"

"*We climbed up to a ledge. I stayed behind propping up the door. I stood there listening to their reaction to what they saw, which looked like a volcano crater...*"

It is important to remember that the Chernobyl disaster happened in the middle of the night, so the blue light was clearly visible streaming up into the sky.

Several months after the World Trade Center collapse, an event occurred which lends circumstantial evidence or support to other indications that the nuclear explosion in NYC was caused by an induced runaway chain reaction and core meltdown.

In early 2002, a Light Memorial was set up to "commemorate" the Twin Tower. Two banks of 44 halogen spotlights were set up at the World Trade Center site to project an intense beam of light into the sky where the towers once stood. The lights were only switched on from dusk until late night, each night between the 11th of March and the 13th of April, 2002. This would have been after the main clean up operation and perhaps when the concrete was being placed over the site. The color of these two beams of light was blue, Cerenkov Radiation blue.

It's possible that by Spring 2002, as the last clearance work was being undertaken and the site was being rather strangely covered with concrete (for which a plausible explanation exists, no doubt), that the reactor cores were exposed to the atmosphere for at least some of the time. In order to cover up the the intense blue light that would otherwise attract attention – and advertise what lay beneath the rubble – these two light projectors could have been set up with the cover story of being a "Light Memorial" for a period of one month. They were used to shine up into the sky in the same position and place as the Cerenkov Radiation being emitted by the reactor cores to mask them or at least to provide a cover story to explain the light.

Why Was The Light Memorial Switched On For Only A Few Hours From Dusk Until Late Night?

Perhaps for security reasons work was started on the exposed reactor cores at dusk when most office workers were gone to prevent people overlooking the site from seeing what was happening. Most office workers would have gone home by then. Work would also have to be of limited duration per person to limit radiation exposure to the personnel working on the final phase of the operation and to limit radiation escapes that might be picked up by people with Geiger counters. It's also possible that if work were carried out during the day on the exposed cores, the Cerenkov Radiation would be much less visible and possibly even invisible. The light projectors from the Memorial may have only been needed at dusk and beyond to camouflage the Cerenkov Radiation light emissions. Again, this is merely speculation based on evidence and may or may not prove, one day, to be accurate.

Residual Heat And Molten Steel

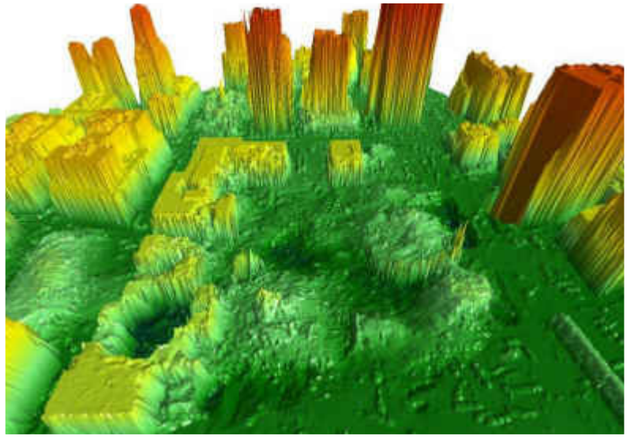
As we have seen, one of the primary indicators that a nuclear explosion took place, besides the conclusive evidence of decay paths, is the intense heat that persisted for months at Ground Zero. The possibility that this was generated not from bombs but a nuclear reactor core meltdown is that heat.

An atomic bomb, as far as we know and barring the unknown and new technology, would simply explode with all of its material fissioning and that would be that. There would, generally speaking, be no residual heat source that would continue to vaporize glass, concrete and steel for weeks after the detonation. There may be bombs we're not familiar with, other answers, or it could have been a reactor core or cores meltdown.

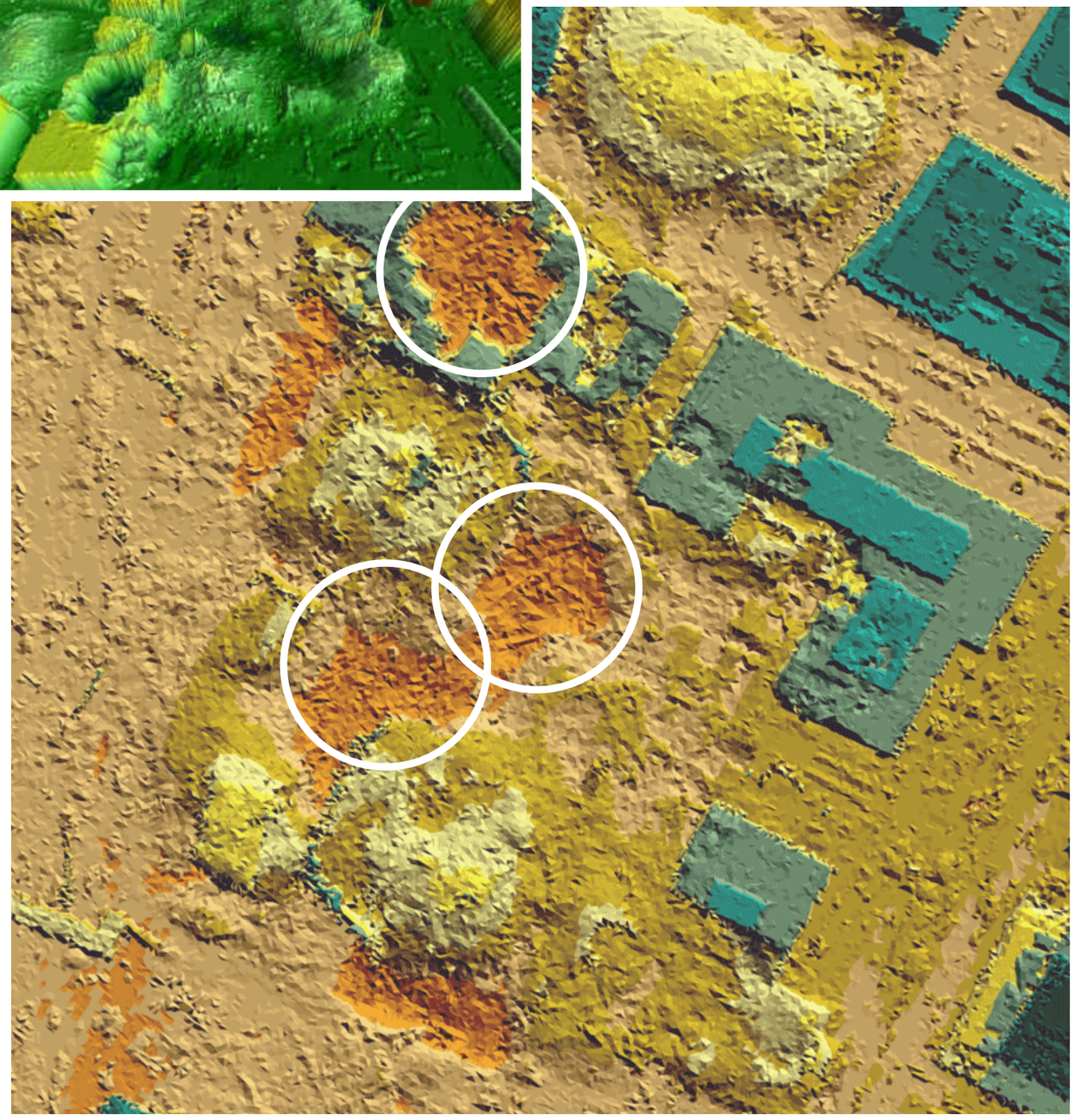
If a core of an operating nuclear reactor is not cooled properly and sufficiently, for whatever reason, it will melt, reaching a temperature of over 2,700C. The heat to do this is generated by the natural radioactive decay of the nuclear fuel in the core – that is without even having to remove the moderator control rods that control the rate of the fission chain reaction. Even if the reactor is shut down – i.e. the fission chain reaction is stopped – heat generated by the continued radioactive decay will melt the core if the cooling system is not kept operating.

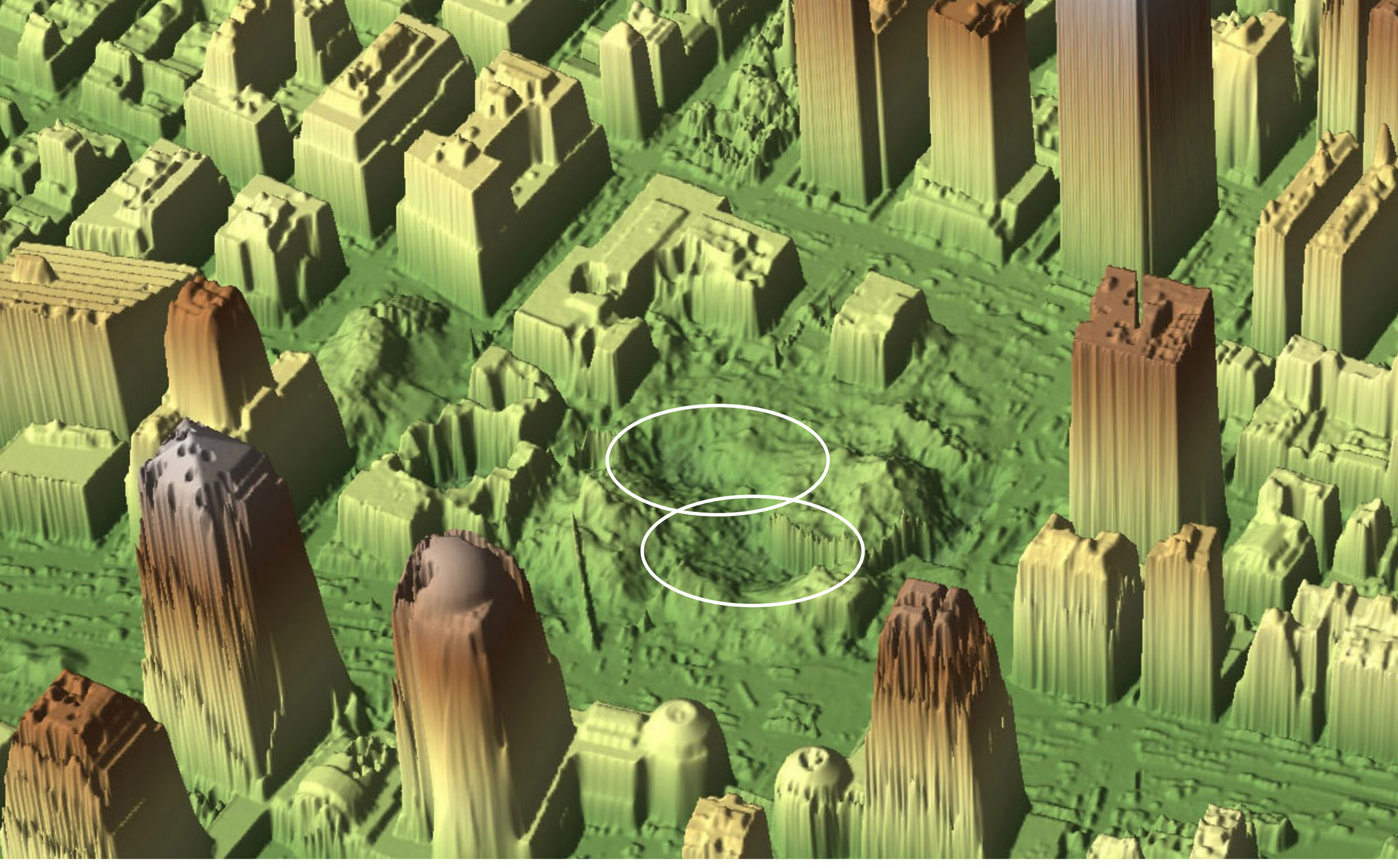
A core meltdown would leave a large pool of molten steel (and other materials), from the hundreds of thousands of tons of stainless steel pressure vessel and associated equipment that surround the core. In the so-called China Syndrome, the molten nuclear fuel, molten steel and other material literally melt their way through the concrete bio-shield of the reactor and then the underlying bedrock until eventually it runs out of thermal energy. The name "China Syndrome" comes from the original suggestion that the core would head towards China if it kept on going. The pools of molten steel, still present 5 weeks after the collapse, are strong evidence that a core meltdown is what occurred. A core meltdown temperature of 2,700-3,000 degrees Celcius would certainly account for the volcanic temperature encountered at the site, the vaporization of glass and soil, the emission of Chromium and Nickel aerosols and the presence of molten steel long after the event.

Alexander Yuvchenko's description of the reactor core as a "volcano crater" vividly describes Ground Zero, especially to people that have seen the NASA Lidar maps at right and on the following pages..

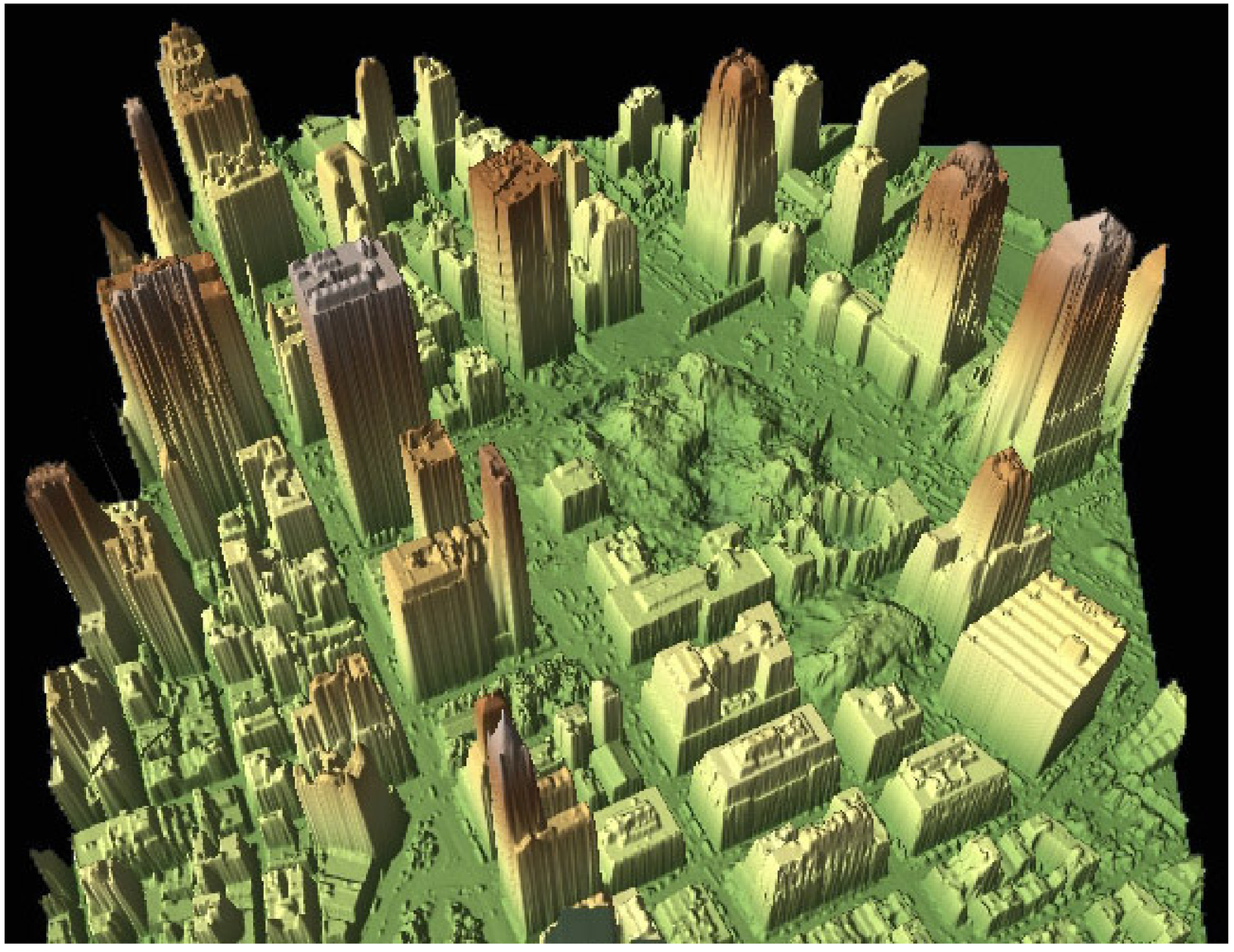


The craters left by the demolition (circled in the overhead image below and seen in the image at left) were between -30 and -55 feet below grade and 200-300 feet across. They are easily seen in these NASA Lidar (Light Detection And Ranging) images.





High resolution Lidar image of Lower Manhattan. Large craters are clearly visible at Buildings 1, 2, 6 and 7. Building One and Two craters are circled.



Lidar Maps

Recent advancements in remote sensing technologies have introduced new and efficient methods to acquire information about the earth. One such technology currently being investigated by the NGS Remote Sensing Research and Development Team is Light Detection and Ranging (LIDAR). LIDAR is an active remote sensing system that can be operated in either a profiling or scanning mode using pulses of light to illuminate the terrain. LIDAR data collection involves mounting an airborne laser scanning system onboard an aircraft along with a kinematic Global Positioning System (GPS) receiver to locate an x, y, z position and an inertial navigation system to monitor the pitch, roll, and heading of the aircraft. By accurately measuring the round trip travel time of the laser pulse from the aircraft to the ground, a highly accurate spot elevation can be calculated. Depending upon the altitude and speed of the aircraft along with the laser repetition rate it is possible to obtain point densities that would likely take months to collect using traditional ground survey methods.

LIDAR has been tested in a wide variety of applications including assessing post storm damage to beaches, mapping the Greenland ice sheet, and measuring heights within forest timber stands. NGS is examining the possibility of implementing LIDAR into the production of shoreline manuscripts and airspace obstruction charts. LIDAR is also playing a role in recent research into automated shoreline definition by using the VDatum tool to derive a mathematical shoreline from the LIDAR point data.

After viewing enough various Lidar images of the Lower Manhattan Ground Zero craters it’s easy to see that the craters are unexplainable with anything other then the nuclear facts. These craters are not the result of the sub-basement levels caving in. These sub-basement levels had no place to cave in to and should have filled with debris. Essentially, there’s no logical reason other then a nuclear demolition.

Smoke streaming from Ground Zero illuminates the night skyline of Lower Manhattan in a view looking east from New Jersey.
Photo taken the night of Sept. 16, 2001, by USGS field-crew members Todd Hoefen and Gregg Swayze.

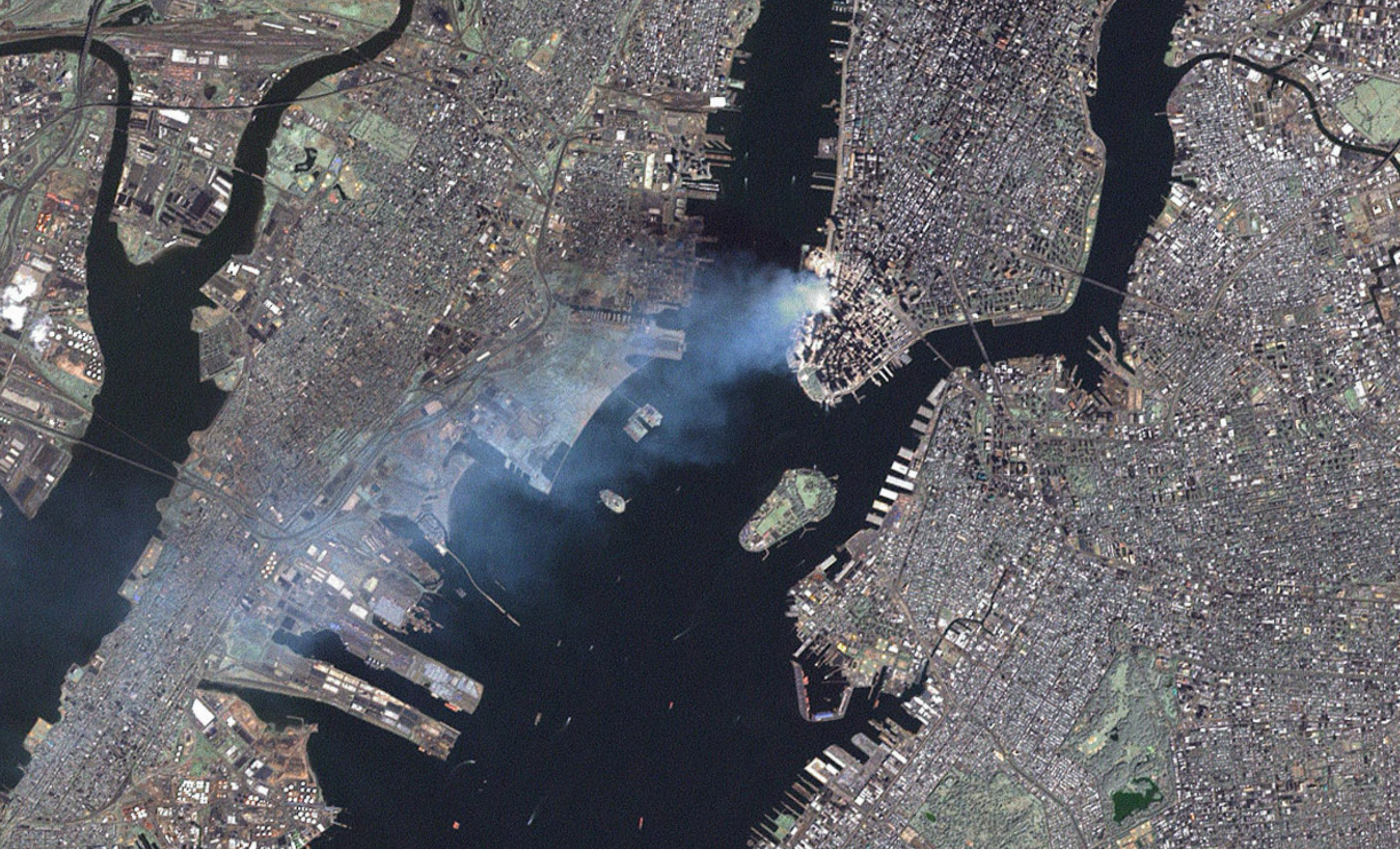
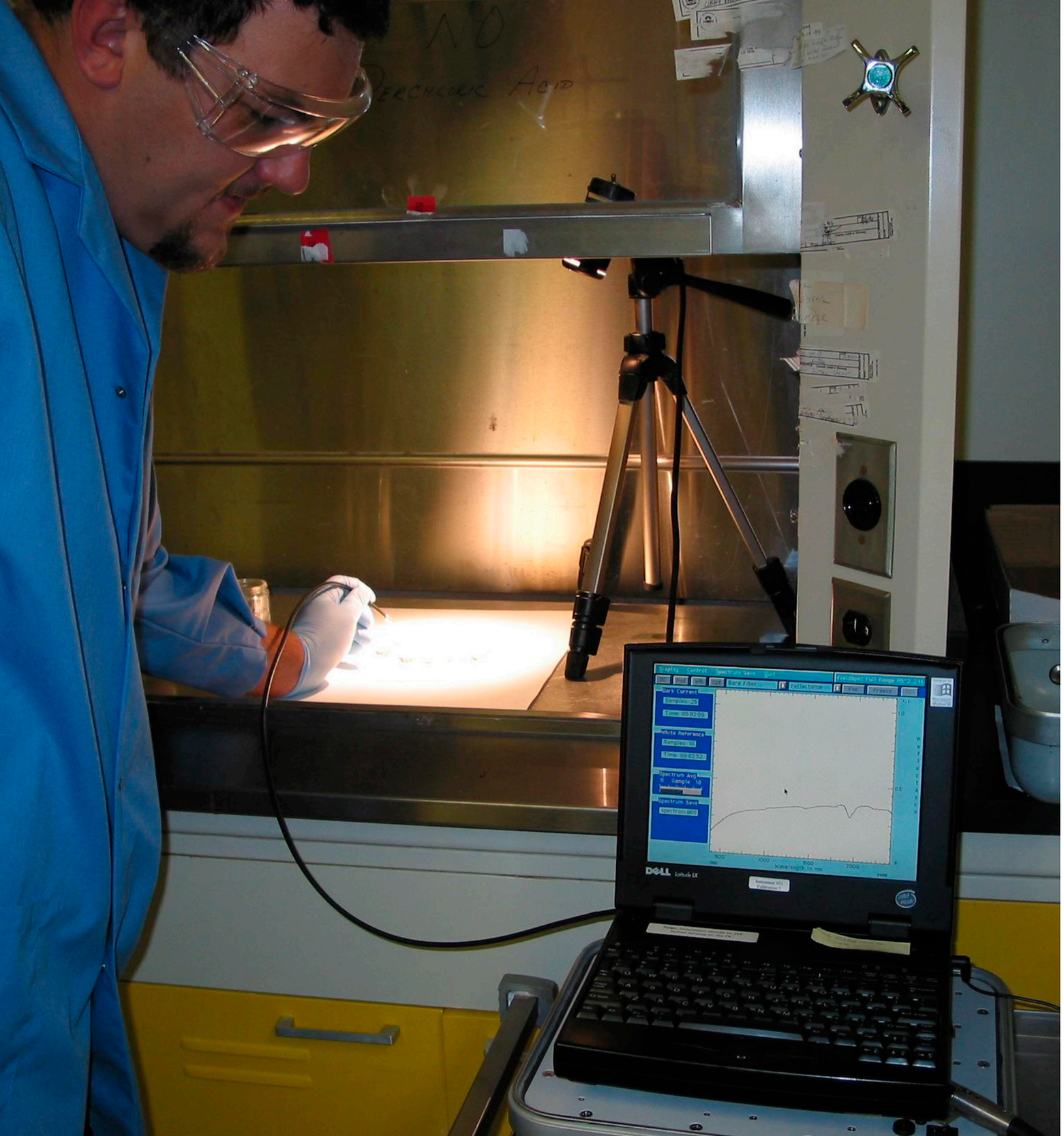


Image of the World Trade Center taken on 9/12/01 by Landsat 7 flying 438 miles up.
(Processed and archived at USGS EROS Data Center, Sioux Falls, SD)

Closeup of sample WTC01-14 being measured with a spectrometer. The black cord with the steel tip is the fiber-optic probe of the spectrometer.



A two-person U.S. Geological Survey team (authors Hoefen and Swayze) collected settled dust and coarser airfall debris samples from 35 localities within a 1 km radius centered on the WTC site on September 17 and 18, 2001. Samples collected outdoors were exposed to wind and precipitation during a rain storm on the night of September 14 prior to collection. One sample (WTC01-20) was collected indoors near the gymnasium in the World Financial Center across from the WTC site on West Street. A sample of dust (WTC01-36) blown by the collapse into an open window of an apartment, located 30 floors up and 0.4 km southwest of the center of the WTC site, was also acquired a few days later. Two samples of insulation coatings (WTC01-8 and WTC01-9) were collected from steel beams that had been removed from the debris pile of the WTC. Samples of concrete (WTC01-37A and WTC01-37B) were collected from the WTC debris at the same location as WTC01-8 and WTC01-9, respectively.

On Sept. 17 and 18, 2001, samples of settled dust and airfall debris were collected from 34 sites within a 1-km radius of the WTC collapse site, including a sample from an indoor location unaffected by rainfall, and samples of insulation from two steel beams at Ground Zero. Spectral and XRD analyses of the field samples detected trace levels of serpentine minerals, including chrysotile asbestos in about two-thirds of the dust samples at concentrations at or below ~1 wt%. The chrysotile content of the dust is variable and may indicate that chrysotile asbestos was not distributed uniformly during the three collapse events.

Spectral Measurements

Reflectance spectra of the samples were measured in a laboratory High Efficiency Particulate Air filter (HEPA) fume hood with an Analytical Spectral Devices (ASD) Full Range Spectrometer® over the wavelength range from 0.35 - 2.5 µm using a halogen lamp for illumination and Spectralon® panel for reference. The ASD spectrometer has 5 nm spectral resolution from 0.35 - 1.0 µm and 11 nm spectral resolution from 1.0 - 2.5 µm. The entire sample was first poured from the plastic sample bag onto white paper, then the sample was mixed with a spatula leaving a relatively flat pile about a centimeter thick for spectral measurement. By mixing the sample, we hoped to avoid possible inadvertent effects of particle sorting that may have occurred during transport or pouring from the bag.

Given that VIS - NIR reflectance spectroscopy detects materials down to a few millimeters, in most cases, beneath the surface of the dust, ten spectra of the pile were measured, using a six second integration time for each spectrum, and then the pile was re-mixed before collecting an additional ten spectra, to expose previously unmeasured material at the surface. The spectrometer optical fiber was held a few centimeters above the pile and moved constantly in an elliptical manner to spatially average the surface of all but the edges of the pile. This method allowed about 40-60% of the entire sample volume to be spectrally characterized. Spectra of each dust sample were averaged and corrected to absolute reflectance. Low levels of noise observed in the averaged spectra indicate that we achieved a very high signal-to-noise ratio of 28,000:1 based on the standard deviation of reflectance values in a flat portion of the spectral average of a relatively dark (23% reflectance) dust sample (WTC01-31) near 1.38 µm. Sample splits for analyses were obtained by the cone and quartering method.

Image (left) of Todd Hoefen making a spectral measurement of World Trade Center sampls WTC01-14.

Quantity Of Fallout

Another indication that the device might have been a reactor is the quantity of fallout. The 'fallout' refers to the ppm's found in the dust from the World Trade Center by the USGS.

Different estimates are available for the mass of the towers and how much of that mass was steel as opposed to concrete. These estimates are very close to 200,000 tons of steel and 400,000 tons of concrete for the two Twin Towers together, total.

Conservatively, we can estimate that 100,000 tons of structural concrete from each of the towers was pulverized into dust from the force of the explosions.

With a minimum of 600ppm of Strontium and 1000ppm by weight of Zinc present in the dust, that translates into 60 tons of Strontium and 100 tons of Zinc in the dust. If we generously assume that as much as one third of the Uranium originally present transmuted into Strontium, this would put the original mass of Uranium present at about 470 tons, per tower. This is a staggering amount. If a lower portion of the Uranium in reactors fissioned into Strontium, then even more Uranium would have been present.

How Much Uranium Is There In Nuclear Devices?

This depends upon size and power alone. Taking the example of the Indian Prototype Fast Breeder Reactor, this contains 1,758 fuel subassemblies in the core; each subassembly is made up of 217 tubes or fuel pins with an outside diameter of 6.6mm, an internal diameter of 5.7mm and a length of 2.7m. This gives a volume of 6.9 x $10^{-5}m^3$ per pin and a total fuel volume of 26.3 m^3 in the core. The fuel used is normally an 80% - 20% mixture of Uranium Oxide and Plutonium Oxide but enriched Uranium was used on earlier FBR reactors. Let's assume we use a pure Uranium fuel, which means we are exaggerating the amount of Uranium present in an FBR, but on the other hand FBRs (there are only a handful in operation) have a smaller core than a conventional thermal reactor – so this estimate will actually be lower than what we would expect in a conventional nuclear reactor.

Uranium has a density of 18,950 kg m^{-3}. Therefore with a volume of 26.3m^3 of fuel, this equates to nearly 500 tons of Uranium present in the cores.

These estimates may not be so far off the mark and they seem to support the view that if these explosions were caused by reactors and not bombs that there were two reactors, and perhaps more. With one larger reactor under each tower this would account for the seismic signals and nuclear blast signatures. So the amount of fallout may be consistent with more then one reactor.

For another example we can consider the small Magnox nuclear reactor first built at Calder Hall in the UK, which went live in 1956. This contained 10,200 fuel elements, each rod of Uranium one meter long with a diameter of 25mm. The total volume of Uranium was therefore 5m3 and the total weight of Uranium fuel in the core was 95 tons. This was a small reactor by modern standards but still contains over 1000 times as much Uranium as would be found in a small atomic bomb.

The quantity of fallout that was measured in the World Trade Center dust is quite high and provides evidence that the explosions might have been caused by reactors yet there is equal potential that bombs were used since we aren't privy to current high technology used or the infinite possibilities achieved by the nuclear research industry and the real truth is, we just don't know.

We know, with conclusive data obtained from following decay paths that fission occurred in New York City on September 11th, 2001 but we don't know what type of device caused it.

The Complications Attached To Examining The Type Of Bomb Or Reactor That May Be Responsible For The Conclusive Evidence Of Fission In NYC On 911

North Korea's 2006 nuclear blast was so tiny that the seismic wave was almost indistinguishable from routine subterranean background noise, experts say. That means it will take a long time, harnessing supercomputers and the minds of top physicists, to find any telltale spikes that confirm the blast was nuclear, and not say a stockpile of TNT blown up as a hoax.

"There is a series of differentiations to be done" to sift out the blast from background noise, says Xavier Clement for France's Atomic Energy Commission.

"It is possible that this cannot be done, given the weakness of the signals compared to the background noise," he says.

In the absence, so far, of any known radiological evidence, scientists also note the very small size of North Korea's explosion. Only Russia has described the blast as a full-fledged nuclear event, equivalent to 5-15 kilotonnes of TNT. Meanwhile the Norwegian institute of seismology Norsar describes it as a "medium-sized bomb" at 1-10 kilotonnes. But other national monitors put it at less than 1 kilotonne, with one figure as little as 200 tonnes. Such low yields are feasible with a nuclear warhead, but they are traditionally reserved for established members of the nuclear club that have mastered arts of miniaturisation.

"The easiest size of weapon to build is 10-20 kilotonnes. It's harder to build one that's smaller, and it's harder to build one that's larger," says James Acton of Vertic, an independent UK watchdog that carries out research into the verification of international treaties. The assumption among experts is that North Korea used plutonium rather than uranium to make its bomb, given the plutonium-making reactor and fuel rods known to be in its possession. Uranium bombs, like Little Boy dropped on Hiroshima in 1945, are bombs that are relatively easy to make, in which a uranium slug is fired into a ball of uranium to achieve critical mass. But plutonium bombs are more complicated. They entail a small ball of plutonium that, like the centre of an onion, is swathed by conventional explosives. These explosives compress the plutonium and fire a neutron into the mass to initiate a chain reaction. But the explosives must be "very, very carefully shaped", and the detonation must be precisely timed to ensure that the neutron is fired at the right time, says Acton.

Another possibility, again, still in the realm of hypothesis, is that the material used in the test had impurities of plutonium isotopes that emit neutrons and this caused the chain reaction to start prematurely. "They will almost certainly have gained information from this test which will have enabled them to build a better weapon next time around."

As can be seen, this is a complicated issue even for experts. We've established fission but we don't know what caused it and we may never know, but we can speculate using the available evidence.

Oops!

Examining Nuclear Accidents You Didn't Know About

The SL-1 Reactor 1961

The following details are an extraction from the Rasmussen Report which describes a number of transients or "power excursions" which have occurred in nuclear reactors. A "transient" is a situation such as an uncontrolled increase in reactor power or a loss of the normal flow of coolant.

In January 1961, a nuclear excursion (accident) occurred in the SL-1 reactor in Idaho. The total energy released in the excursion was approximately 130 MW-sec. Of this, 50 MW-sec was produced in the outer fuel elements in the core. This portion of the energy was slowly transferred to the water coolant over a 2 second period, and no melting of the outer fuel elements occurred. About 50 to 60 megawatts-seconds of the total energy release was promptly released by 12 heavily damaged inner fuel elements to the water coolant in less than 30 milliseconds (a millisecond is 1 one-thousandth of a second). This prompt energy release resulted in rapid steam formation in the core which accelerated the water above the core and produced a water hammer that hit the pressure vessel lid. The vessel, weighing about 30,000 pounds, or 15 tons, with its internal mechanisms, sheared its connecting piping and was lifted approximately 9 feet into the air by the momentum transferred from the water hammer. Calculations of the mechanical deformation of the vessel indicate that about 12% of the prompt energy release or 4.7 percent of the total nuclear release was converted into mechanical energy.

SPERT 1-D Reactor

During test of the destructive test program with the SPERT 1-D core, damaging pressure generation was observed. Pressure transducers recorded the generation of a pressure pulse larger than 3,000psi which caused the destruction of the core. The pressure pulse occurred some 15 milliseconds after initiation of the power excursion. The power excursion rapidly overheated the fuel plates and the increased temperature melted the metal and the cladding of the fuel plates. After the transient, much of the fuel that had been molten was found dispersed in the Cobalt.

Borax I Reactor

In 1954, at the National Reactor testing station in Idaho, the Borax I reactor was deliberately subjected to a potentially damaging power excursion in reactor safety studies; A power excursion lasting approximately 30 milliseconds produced a peak power of 19,000 megawatt-seconds. The power excursion melted most of the fuel elements. The reactor tank (1/2 inch steel) was ruptured by the pressure (probably in excess of 10,000 psi) resulting from the reaction between the molten metal and the water. The sound of the explosion at the control station 1 half mile away was comparable to that from 1 to 2 pounds of 40% dynamite.

In the Idaho SL-1 incident described above, the release of 50MWsecs of energy in only 30 milliseconds is an instantaneous power output of 1.66 billion Watts.
That's quite a lot, right?

Speculation On The 1993 World Trade Center Truck Bomb

Earlier in this report we commented on the location of the centrifugal chiller units at the sub-basement level of the World Trade Center and provided a map of sorts that portrays their location. These produced chilled water for the air conditioning system at the World Trade Center. We noted that the amount of the cooling system equipment seemed to be almost twice as much as would be expected for the area of office space it was required to serve.

In 1993 a truck filled with urea nitrate was exploded in the car-park on the B-2 level under the World Trade Center. This caused extensive damage and put the 7,000 ton centrifugal chillers located in the three-high floor space from level B-3 to B-6, out of commission.

Is it possible that this was an earlier attempt to destroy the entire World Trade Center site by destroying the coolant system for nuclear reactors located beneath the buildings? By instantly destroying the coolant system, an emergency would be created giving the reactor personnel perhaps only seconds in which to react to prevent a catastrophic power excursion. The fact that this did not occur indicates that there may have been a separate emergency cooling system, also sourced from the Hudson River – or perhaps the reactor(s) were shut down for maintenance, leaving more time for personnel to react. We'll probably never know.

During the second attack in 2001, the explosions in the basement which went off at about the same time that the alleged aircraft struck may have been used to make certain the job worked fully, destroying both the primary cooling system and the backup ECCS and decay heat cooling systems. Again, we will very likely never know whether the device that caused fission in New York City on 911 was a nuclear bomb or nuclear reactors that failed.

Still, if there were reactors, who would have knowledge of their existence and the security arrangements and equipment configurations and who would be able to penetrate that security effectively to critically sabotage nuclear reactors synchronized with aerial diversions?

Steel core columns (at left) curled into complete circles. The outside radius is free of rips and tears indicating that enormous temperatures were needed to create this effect. Far higher temperature then needed to just melt steel. In the lower image the box end can be seen to have warped inwards. Again, this requires incredibly high temperatures that only a nuclear blast would be capable of producing. The secret to 911 is that it was nuclear.

Evidence Of Underground Facilities?

Is there any direct evidence for the existence of underground facilities, cities, that might house a nuclear reactor, or two, or more, that were apparently so extensive that they required their own power supply from these reactors? An intriguing photograph (below) was taken during the collapse of the World Trade Center from the north side of the site, looking due south. The photograph shows the dust cloud from the collapse of one of the towers and on the left hand side we can see a street covered with dust but now clear of active clouds. This indicates that the collapse we see must be the second collapse in progress.

In the middle of the image at the front and on the right hand side we can see two powerful upwellings of dust clouds from independent sources in or on the ground.

The source on the right in front of the office block with the stepped roof is particularly clear. The source in the middle also looks like a dense upwelling, whereas the dust cloud behind it filling the street as it flows down from the World Trade Center is much less dense.

These upwellings are some distance from the World Trade Center itself. Assuming there was an extensive underground facility or small city under Manhattan, there would have been a certain number of air vents and other exits to the surface. When the alleged reactors exploded, the force of the blast would also have been channelled though the underground corridors and hollow spaces, forcing dust and debris up into the atmosphere through these exits. These upwellings could be showing the location of other entrances or access points to underground facilities. They show strong dust and smoke sources at ground level, several blocks away from the World Trade Center.

The smaller cloud at the very front and lower center of the expanding cloud front in the image at left has closely knit cloud bubbles and doesn't look as though it drifted down the street with the clouds forming behind it. It looks as though it's being sent up from an underground vent directly below its base. It looks oddly separate from the rest of the cloud structures. In the image above rescue workers are seen descending into the recesses left by the demolition of the Twin Towers and Building 7 in New York City.

Great Spherical Caryatid

Now in Battery Park (left), this sculpture sat in the open public space between the two main buildings at World Trade Center. Over the years it saw many an office worker eat lunch in its shadow (below).

Then on one day in 2001...

Built on high-priced land in lower Manhattan, the World Trade Center (WTC) contained a statue central to the purpose of the building. The Great Spherical Caryatid rested between the two 110 story pillars of the WTC, built to promote the breakdown of national sovereignty through supranational economic agreements.

The sculpture is not a caryatid in a plain sense – a caryatid is a sculpted female figure serving as an architectural support taking the place of a column or a pillar supporting an entablature on her head. The use of the descriptive term caryatid promotes the understanding that the WTC is no mere building, but a temple complex. Moreover, bronze is a metal alloy consisting primarily of copper, usually with tin as the main additive. The use of this metal suggests the bonding together of opposites, or different substances – the stated purpose of the building was to bind together nations under supranational economic agreements.

David Rockefeller has committed his life to the propagation and installment of supranational economic agreements. Of NAFTA (North American Free Trade Agreement), implemented in 1994, he said:

"*Everything is in place – after 500 years – to build a true 'new world' in the Western Hemisphere... And what happens if we don't pass NAFTA? I truly don't think that 'criminal' would be too strong a word for rejecting NAFTA.*"

Evidence Of Advanced Technology

In “Dust” part 1 we provide conclusive forensic evidence that ternary fission and probably quaternary fission occurred in New York City on September 11th. We have the bullet, which means there must have been a gun, but the gun disintegrated with the Twin Towers and we can now only speculate on what type of gun it was. In “Dust” part 2, we confirm beyond any doubt the existence of pools of molten metal and continuing high heat regenerating larger particulates that can only be accounted for as a result of nuclear activity. In “Dust” part 3, we examine Myeloma, Controlled Demolition and the China Syndrome. Here we will examine the evidence related to technologies that are advanced and technologies we have very little information on, but we do have some, and enough to know they exist.

What do we know for certain?

1. We see fission occurring in New York City on September 11th.

2. The large amount of Zinc produced is atypical of known nuclear explosion types.

3. The speculation that hundreds of tons of Uranium may have been present based on the very high levels of Barium and Strontium found in the World Trade Center dust samples.

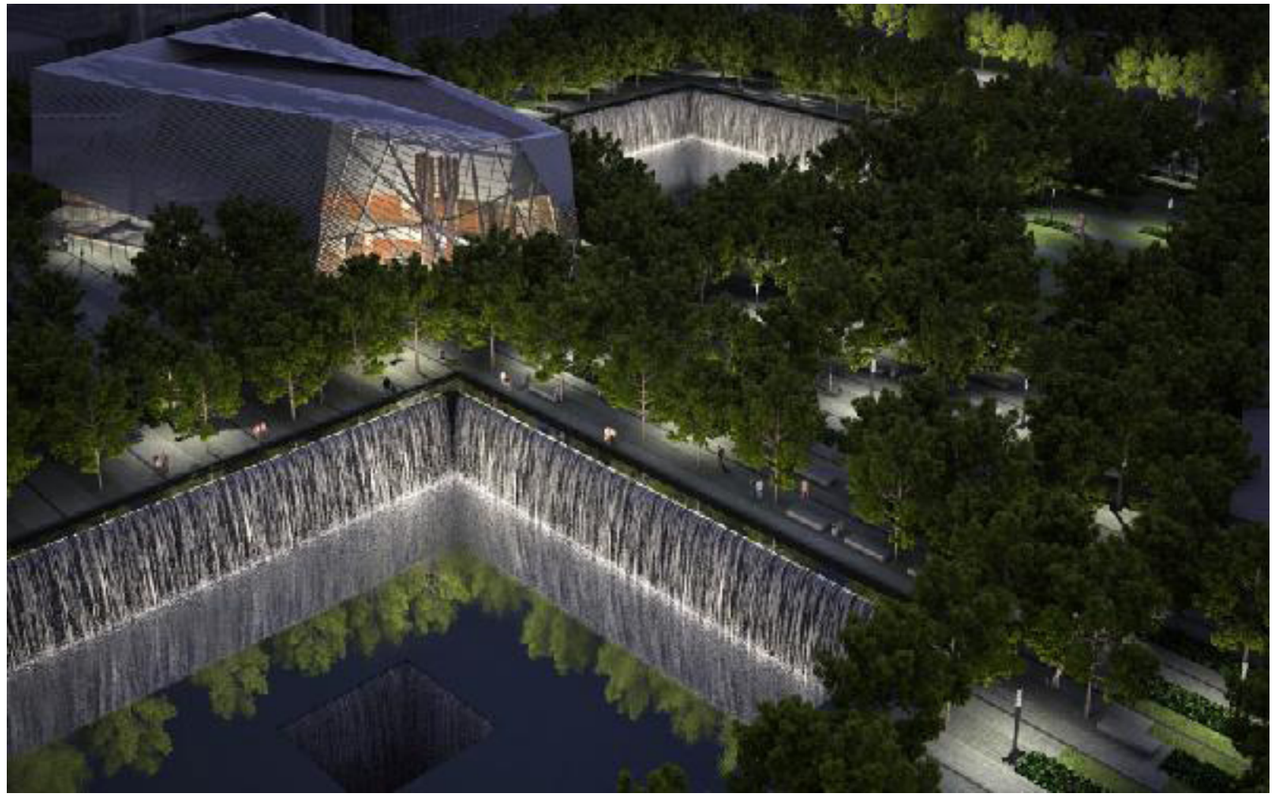
4. An area of 50 miles around New York City was not destroyed.

When the World Trade Center was constructed, the famous “metal Sculpture” was commissioned from the German artist Fritz Konig. It was installed in the plaza between the towers, where it rotated once every 24 hours. Konig called it the “Great Spherical Caryatid”. A caryatid is a female version of Atlas, who carried the world on his shoulders. The sculpture was supposed to signify world peace through commerce. “Konig’s Sphere” as it became known survived the destruction of the towers largely intact, can be seen in many photos taken at Ground Zero, and was re-installed in Battery Park in 2002. The original height of the sphere was 7.62 meters, which is a significant harmonic number in wave mechanics. (*Konig’s Sphere is pictured at Ground Zero on the next page*)

In the light of what we know, that there are advanced nuclear reactor designs and advanced weapons designs, this supposedly bronze and steel ‘metal sculpture’ that managed to survive pulverization by thousands of tons of falling steel and concrete, becomes an intriguing object. At first glance it looks more like a functional technical artefact then a piece of abstract modern art sculpture. It seems to have little to do with “peace through commerce” and more the function of a collecting device at the focus of a parabolic reflector or other type of wave concentrator.

The World Trade Center Memorial

After the collapse, an international competition was held to select an architectural design for a permanent memorial to mark the World Trade Center site. The winning design – and a number of other entries – have as their central feature a sunken pool of water covering the footprint of each tower. Visitors will descend through a passageway to the side of the pool, which they can then look at through a veil of falling water, cascading down the sides of the sunken enclosure. Water is one of the best radiation absorbers. It’s used to cover the control rods in nuclear reactors because it works to protect humans from the severe radiation that would otherwise be absorbed. It is also inconspicuous. Covering the footprint of each tower with water and protecting visitors with a curtain of water is an effective way to contain at least the direct radiation emitted upwards by the remains of whatever nuclear devices may remain down there, buried 100 meters below the ground.



THE MEMORIAL will remember and honor the nearly three thousand people who died in the horrific attacks of February 26, 1993, and September 11, 2001. The Memorial will consist of two massive pools set within the footprints of the Twin Towers with the largest man-made waterfalls in the country cascading down their sides. They will be a powerful reminder of the Twin Towers and of the unprecedented loss of life from an attack on our soil.

The names of the nearly 3,000 individuals who were killed in the September 11 attacks in New York City, Pennsylvania, and at the Pentagon, and the February 1993 World Trade Center bombing will be inscribed around the edges of the Memorial pools.

The Memorial pools will each be nearly one-acre in size. The names of the victims will be inscribed on parapets surrounding the pools, within groupings that will allow for family members, friends, and co-workers who shared life's journey and perished together to have their names listed side by side.

An eight-acre landscaped Memorial Plaza filled with nearly 400 trees will create a contemplative space separate from the sights and sounds of the surrounding city.

The Memorial design, created by architect Michael Arad and landscape architect Peter Walker, was selected from a design competition that included more than 5,200 entrants from 63 nations.

External Link for Memorial:

http://www.national911memorial.org/site/PageServer?pagename=New_Memorial_About

Ballotechnics

Ballotechnics is a speculative, controversial field of nuclear physics that studies ballotechnic nuclear reactions. A ballotechnic reaction occurs when a high-energy nuclear isomer makes a transition to a ground state, releasing gamma rays but no beta or alpha rays. Alpha and beta rays are actually bits of a nucleus, while gamma rays are pure electromagnetic energy. Because no matter is released in a ballotechnic nuclear reaction, but only energy, the substance itself does not experience a change in mass.

In a high-energy nuclear isomer, protons or neutrons in the nucleus are in an excited state, and the affected particles must undergo a change in spin to release their excess energy. Isomers can be induced to release this energy, but not all at once - there is no known chain reaction that could cause the immediate release of the isomeric energy. Many speculators without training in nuclear physics have suggested scientifically dubious ways that it can, leading to some labeling the entire field of ballotechnics as pseudoscientific.

Carl Collins of the University of Texas at Dallas claimed to induce gamma release in a nuclear isomer in 1991, but his results have never been duplicated, a strong indicator that his particular method is false. This incident has cast a shadow on the field of ballotechnics in general. The term ballotechnics was popularized by the inventor of the neutron bomb, Samuel Cohen, who probably also coined the term. The field is so obscure that very few papers on ballotechnics can be found, and there is certainly no physicist who has based his or her career around the field. However, nuclear isomers are a reality. There are at least five stable isomers, including tantalum-180m, osmium-187m, platinum-186m, hafnium-178m, and zinc-66m. The “m” after the atomic number labels the element as an isomer.

Tantalum-180m can be found in tiny quantities within tantalum-180, and happens to be the most expensive substance on earth, with a cost of 17 million US dollars per gram! The world’s supply of Tantalum-180m is only around seven milligrams. Tantalum-180m is also the only known metastable isomer with a half-life longer than a few decades. Other isomers have half-lives as short as a few days or even hours.

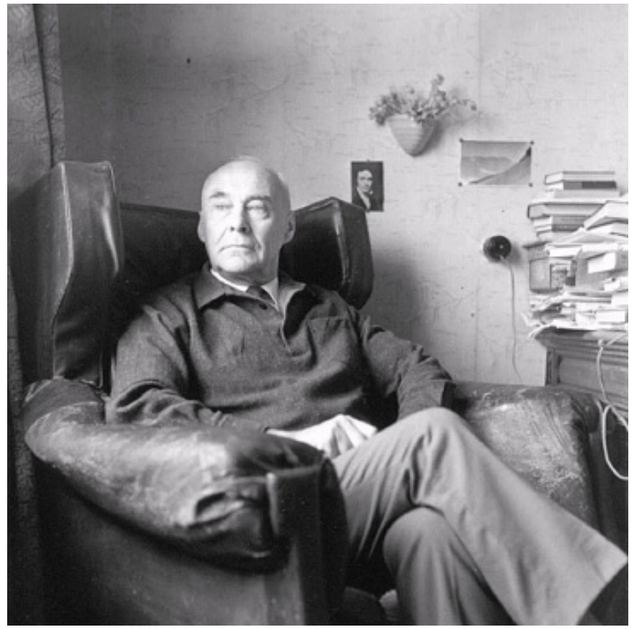
Ballotechnics received attention during the Cold War era because people feared that it could be exploited to create nuclear weapons or serve as a fissionless detonator for a fusion bomb. A shadowy substance known as “red mercury” was said to have been the subject of nuclear weapon research by Soviet Russia, and the material is said to have gone for 100,000 to 200,000 USD per gram. It is speculated that red mercury was one of the stable nuclear isomers. Calculations suggest that a kilogram of pure Tantalum-180m has as much as 900 megajoules of energy stored in the excited states of its nucleons, which would make it an excellent power source if it could be induced to release that energy.

For those of you that might like to experiment in this field, there’s Stable Isotopes at: https://www.cdnisotopes.com/

Torsion Physics

In 1913, Dr. Eli Cartan was the first to clearly demonstrate that the “fabric” (flow) of space and time in Einstein’s general theory of relativity not only “curved”, but it also possessed a spinning or spiraling movement within itself known as “torsion.” This area of physics is typically referred to as Einstein-Cartan Theory, or ECT. Cartan’s theory wasn’t taken too seriously at the time, as it came out before the days of quantum physics, when elementary “particles” such as electrons were believed to rotate or “spin” as they orbited the nucleus. Most people are unaware that it is now generally accepted that the space surrounding the Earth and perhaps the entire Galaxy has “right-handed spin,” meaning that energy will be influenced to spin clockwise as it travels through the physical vacuum. In 1996, Russian Drs. Akimov and Shipov wrote that:

To date, world periodicals reference to torsion fields amount to the order of 10,000 articles, belonging to about a hundred authors. Over one half of those theorists work in Russia alone. As we shall easily see, Dr. Kozyrev’s work was the main influence for the more than 5,000 Russian papers on this subject as of 1996. In classical physics models, torsion fields were never considered to be a universal force on the level of gravity or electromagnetic energy, largely because they only existed theoretically.



Noted Russian astrophysicist who in 1958 claimed to have discovered evidence of active lunar volcanism. The crater Kozyrev is named after him.

Cartan’s original 1913 theory speculated that torsion fields would be some 30 orders of magnitude weaker than gravitation, and gravity is already known to be 40 orders of magnitude weaker than electromagnetic energy! With such a miniscule level of influence, so said the theories, the naturally-spinning “torsion fields” were basically an irrelevant footnote that would not make any noticeable contributions to the phenomena that we can observe in the universe.

For those scientists who had maintained an open mind, the works of Trautman, Kopczyynski, F. Hehl, T. Kibble, D. Sciama and others in the early 1970’s triggered a wave of interest in torsion fields. Hard scientific facts exploded Cartan’s 60-year-old theory-based myth that such fields were weak, tiny and unable to move through space.

The myth of the Einstein-Cartan theory was that the spiraling torsion fields could not move, (i.e. they would remain static,) and could only exist within a space far smaller than the atom. Sciama et al. demonstrated that these basic torsion fields expected in ECT did exist, and they were referred to as “static torsion fields.” The difference was that “dynamic torsion fields” were demonstrated as well, with properties far more remarkable than Einstein and Cartan had assumed.

According to Sciama et al., static torsion fields are created from spinning sources that do not radiate any energy. However, once you have a spinning source that releases energy in any form, such as the Sun or the center of the Galaxy, and/or a spinning source that has more than one form of movement occurring at the same time, such as a planet that is rotating on its axis and revolving around the Sun at the same time, then dynamic torsion is automatically produced.

This phenomenon allows torsion waves to propagate through space instead of simply staying in a single “static” spot. Thus, torsion fields, like gravity or electromagnetism, are capable of moving from one place to another in the Universe. Furthermore, as we shall discover in later chapters, Kozyrev proved decades ago that these fields travel at “super-luminal” speeds, meaning that they far exceed the speed of light.

If you can have an impulse that moves directly through the “fabric of space-time”, travels at super-luminal velocities and is separate from gravity or electromagnetism, you have a significant breakthrough in physics – one that demands that a “physical vacuum”, “zero-point energy” or “aether” must really exist.

For further study: http://divinecosmos.com/index.php?option=com_content&task=view&id=95&Itemid=36

Effects Of A Nuclear Explosion On New York City

What will be the long term effects of these nuclear explosions in New York City and the civilian inhabitants that live there?

The best indication comes from the testimony of Dr. Henry Kelly, President of the Federation of American Scientists before the Senate Committee on Foreign Relations on March 6th, 2002. Dr. Kelly presented three hypothetical scenarios to illustrate the likely effects of a radiological attack on a US city, releasing radioactive material without using a nuclear explosion itself.

Dr. Kelly gives an example of a dirty bomb exploded at the tip of Manhattan, consisting of just one Cobalt 'pencil' used for food irradiation. Following is the complete Congressional testimony of Dr. Henry Kelly:

Testimony of Dr. Henry Kelly, President
Federation of American Scientists before the Senate Committee on Foreign Relations, March 6, 2002

Introduction

Surely there is no more unsettling task than considering how to defend our nation against individuals and groups seeking to advance their aims by killing and injuring innocent people. But recent events make it necessary to take almost inconceivably evil acts seriously. We are all grateful for the Committee's uncompromising review of these threats and its search for responses needed to protect our nation. Thank you for the opportunity to support these efforts.

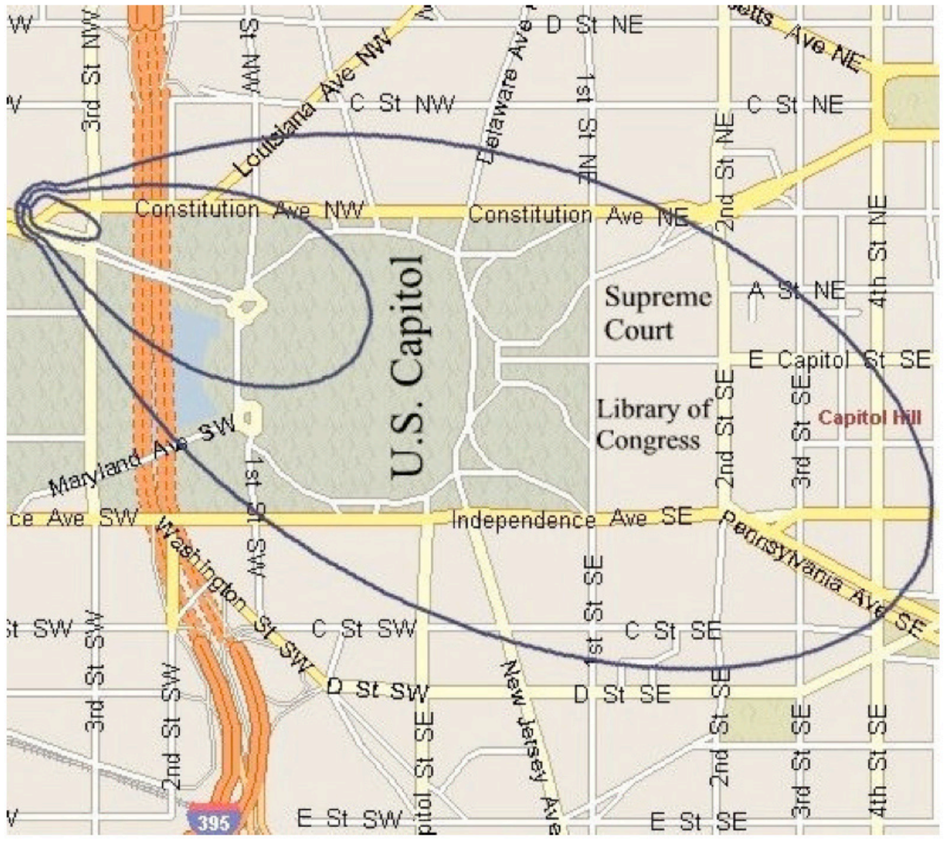
My remarks today will review the dangers presented by radiological attacks, situations where nuclear materials that could be released, without using a nuclear explosive device, for the malicious purpose of killing or injuring American citizens and destroying property. Our analysis of this threat has reached three principle conclusions:

1. Radiological attacks constitute a credible threat. Radioactive materials that could be used for such attacks are stored in thousands of facilities around the US, many of which may not be adequately protected against theft by determined terrorists. Some of this material could be easily dispersed in urban areas by using
conventional explosives or by other methods.

2. While radiological attacks would result in some deaths, they would not result in the hundreds of thousands of fatalities that could be caused by a crude nuclear weapon. Attacks could contaminate large urban areas with radiation levels that exceed EPA health and toxic material guidelines.

3. Materials that could easily be lost or stolen from US research institutions and commercial sites could contaminate tens of city blocks at a level that would require prompt evacuation and create terror in large communities even if radiation casualties were low. Areas as large as tens of square miles could be contaminated at levels that exceed recommended civilian exposure limits. Since there are often no effective ways to decontaminate buildings that have been exposed at these levels, demolition may be the only practical solution. If such an event were to take place in a city like New York, it would result in losses of potentially trillions of dollars.

Figure 1: Long-term Contamination Due to Cesium Bomb in Washington, DC



Inner Ring: One cancer death per 100 people due to remaining radiation
Middle Ring: One cancer death per 1,000 people due to remaining radiation
Outer Ring: One cancer death per 10,000 people due to remaining radiation
EPA recommends decontamination or destruction

The analysis I will summarize here was conducted by Michael Levi, Director of the Strategic Security Program at the Federation of American Scientists (FAS), and by Dr. Robert Nelson of Princeton University and FAS.

Background

Materials are radioactive if their atomic nuclei (or centers) spontaneously disintegrate (or decay) with high-energy fragments of this disintegration flying off into the environment. Several kinds of particles can so be emitted, and are collectively referred to as radiation. Some materials decay quickly, making them sources of intense radiation, but their rapid decay rate means that they do not stay radioactive for long periods of time. Other materials serve as a weaker source of radiation because they decay slowly. Slow rates of decay mean, however, that a source may remain dangerous for very long periods. Half of the atoms in a sample of cobalt-60 will, for example, disintegrate over a five year period, but it takes 430 years for half of the atoms in a sample of americium-241 to decay.

The radiation produced by radioactive materials provides a low-cost way to disinfect food sterilize medical equipment, treat certain kinds of cancer, find oil, build sensitive smoke detectors, and provide other critical services in our economy. Radioactive materials are also widely used in university, corporate, and government research laboratories. As a result, significant amounts of radioactive materials are stored in laboratories, food irradiation plants, oil drilling facilities, medical centers, and many other sites.

Commercial Uses

Radioactive sources that emit intense gamma-rays, such as cobalt-60 and cesium-137, are useful in killing bacteria and cancer cells. Gamma-rays, like X-rays, can penetrate clothing, skin, and other materials, but they are more energetic and destructive. When these rays reach targeted cells, they cause lethal chemical changes inside the cell.

Plutonium and americium also serve commercial and research purposes. When plutonium or americium decay, they throw off a very large particle called an alpha particle. Hence, they are referred to as alpha emitters. Plutonium, which is used in nuclear weapons, also has non-military functions. During the 1960s and 1970s the federal government encouraged the use of plutonium in university facilities studying nuclear engineering and nuclear physics. Americium is used in smoke detectors and in devices that find oil sources. These devices are lowered deep into oil wells and are used to detect fossil fuel deposits by measuring hydrogen content as they descend.

Present Security

With the exception of nuclear power reactors,

commercial facilities do not have the types or volumes of materials usable for making nuclear weapons. Security concerns have focused on preventing thefts or accidents that could expose employees and the general public to harmful levels of radiation. A thief might, for example, take the material for its commercial value as a radioactive source, or it may be discarded as scrap by accident or as a result of neglect. This system works reasonably well when the owners have a vested interest in protecting commercially valuable material. However, once the materials are no longer needed and costs of appropriate disposal are high, security measures become lax, and the likelihood of abandonment or theft increases.

Concern about the intentional release of radioactive materials changes the situation in fundamental ways. We must wrestle with the possibility that sophisticated terrorist groups may be interested in obtaining the material and with the enormous danger to society that such thefts might present.

Significant quantities of radioactive material have been lost or stolen from US facilities during the past few years and thefts of foreign sources have led to fatalities. In the US, sources have been found abandoned in scrap yards, vehicles, and residential buildings. In September, 1987, scavengers broke into an abandoned cancer clinic in Goiania, Brazil and stole a medical device containing large amounts of radioactive cesium. An estimated 250 people were exposed to the source, eight developed radiation sickness, and four died.

In almost all cases, the loss of radioactive materials has resulted from an accident or from a thief interested only in economic gain. In 1995, however, Chechen rebels placed a shielded container holding the Cesium-137 core of a cancer treatment device in a Moscow park, and then tipped off Russian reporters of its location.

Enhanced security measures at commercial sites that use dangerous amounts of radioactive material are likely to increase the cost of using radioactive materials and may possibly stimulate development and use of alternative technologies for some applications.

Health Risks

Gamma rays pose two types of health risks. Intense sources of gamma rays can cause immediate tissue damage, and lead to acute radiation poisoning. Fatalities can result from very high doses. Long-term exposure to low levels of gamma rays can also be harmful because it can cause genetic mutations leading to cancer. Triggering cancer is largely a matter of chance: the more radiation you're exposed to, the more often the dice are rolled. The risk is never zero since we are all constantly being bombarded by large amounts of gamma radiation produced by cosmic rays, which reach us from distant stars. We are also exposed to trace amounts of radioactivity in the soil, in building materials, and other parts of our environment. Any increase in exposure increases the risk of cancer.

Alpha particles emitted by plutonium, americium and other elements also pose health risks. Although these particles cannot penetrate clothing or skin, they are harmful if emitted by inhaled materials. If plutonium is in the environment in particles small enough to be inhaled, contaminated particles can lodge in the lung for extended periods. Inside the lung, the alpha particles produced by plutonium can damage lung tissue and lead to long-term cancers.

Figure 2: Long-term Contamination Due to Cobalt Bomb in NYC – EPA Standards

Inner Ring: One cancer death per 100 people due to remaining radiation
Middle Ring: One cancer death per 1,000 people due to remaining radiation
Outer Ring: One cancer death per 10,000 people due to remaining radiation
EPA recommends decontamination or destruction

Case Studies

We have chosen three specific cases to illustrate the range of impacts that could be created by malicious use of comparatively small radioactive sources: the amount of cesium that was discovered recently abandoned in North Carolina, the amount of cobalt commonly found in a single rod in a food irradiation facility, and the amount of americium typically found in oil well logging systems. The impact would be much greater if the radiological device in question released the enormous amounts of radioactive material found in a single nuclear reactor fuel rod, but it would be quite difficult and dangerous for anyone to attempt to obtain and ship such a rod without death or detection. The Committee will undoubtedly agree that the danger presented by modest radiological sources that are comparatively easy to obtain is significant as well.

Impact of the release of radioactive material in a populated area will vary depending on a number of factors, many of which are not predictable. Consequences depend on the amount of material released, the nature of the material, the details of the device that distributes the material, the direction and speed of the wind, other weather conditions, the size of the particles released (which affects their ability to be carried by the wind and to be inhaled), and the location and size of buildings near the release site. Uncertainties inherent in the complex models used in predicting the effects of a radiological weapon mean that it is only possible to make crude estimates of impacts; the estimated damage we show might be too high by a factor of ten, or underestimated by the same factor. The following examples are then fairly accurate illustrations, rather than precise predictions.

In all three cases we have assumed that the material is released on a calm day (wind speed of one mile per hour). We assume that the material is distributed by an explosion that causes a mist of fine particles to spread downwind in a cloud. The blast itself, of course, may result in direct injuries, but these have not been calculated. People will be exposed to radiation in several ways.

• First, they will be exposed to material in the dust inhaled during the initial passage of the radiation cloud, if they have not been able to escape the area before the dust cloud arrives. We assume that about 20% of the material is in particles small enough to be inhaled. If this material is plutonium or americium (or other alpha emitters), the material will stay in the body and lead to long term exposure.

• Second, anyone living in the affected area will be exposed to material deposited from the dust that settles from the cloud. If the material contains cesium (or other gamma emitters) they will be continuously exposed to radiation from this dust, since the gamma rays penetrate clothing and skin. If the material contains plutonium (or other alpha emitters), dust that is pulled off the ground and into the air by wind, automobile movement, or other actions will continue to be inhaled, adding to exposure.

• In a rural area, people would also be exposed to radiation from contaminated food and water sources.

The EPA has a series of recommendations for addressing radioactive contamination that would likely guide official response to a radiological attack. Immediately after the attack, authorities would evacuate people from areas contaminated to levels exceeding these guidelines. People who received more than twenty-five times the threshold dose for evacuation would have to be taken in for medical supervision.

In the long term, the cancer hazard from the remaining radioactive contamination would have to be addressed. Typically, if decontamination could not reduce the danger of cancer death to about one-in-ten-thousand, the EPA would recommend the contaminated area be eventually abandoned. Decontaminating an urban area presents a variety of challenges. Several materials that might be used in a radiological attack can chemically bind to concrete and asphalt, while other materials would become physically lodged in crevices on the surface of buildings, sidewalks and streets. Options for decontamination would range from sandblasting to demolition, with the latter likely being the only feasible option. Some radiological materials will also become firmly attached to soil in city parks, with the only disposal method being large scale removal of contaminated dirt. In short, there is a high risk that the area contaminated by a radiological attack would have to be deserted.

We now consider the specific attack scenarios. The first two provide examples of attacks using gamma emitters, while the last example uses an alpha emitter. In each case, we have calculated the expected size of the contaminated area, along with other zones of dangerously high contamination. The figures in the Appendix provide a guide to understanding the impact of the attacks.

Example 1- Cesium (Gamma Emitter) – Figure 1

Two weeks ago, a lost medical gauge containing cesium was discovered in North Carolina. Imagine that the cesium in this device was exploded in Washington, DC in a bomb using ten pounds of TNT. The initial passing of the radioactive cloud would be relatively harmless, and no one would have to evacuate immediately. But what area would be contaminated? Residents of an area of about five city blocks, if they remained, would have a one-in-a-thousand chance of getting cancer. A swath about one mile long covering an area of forty city blocks would exceed EPA contamination limits, with remaining residents having a one-in-ten thousand chance of getting cancer. If decontamination were not possible, these areas would have to be abandoned for decades. If the device was detonated at the National Gallery of Art, the contaminated area might include the Capitol, Supreme Court, and Library of Congress, as seen if figure one.

Example 2 – Cobalt (Gamma Emitter) – Figures 2 and 3

Now imagine if a single piece of radioactive cobalt from a food irradiation plant was dispersed by an explosion at the lower tip of Manhattan. Typically, each of these cobalt "pencils" is about one inch in diameter and one foot long, with hundreds of such pieces often being found in the same facility. Admittedly, acquisition of such material is less likely than in the previous scenario, but we still consider the results, depicted in figure two. Again, no immediate evacuation would be necessary, but in this case, an area of approximately one-thousand square kilometers, extending over three states, would be contaminated. Over an area of about three hundred typical city blocks, there would be a one-in-ten risk of death from cancer for residents living in the contaminated area for forty years. The entire borough of Manhattan would be so contaminated that anyone living there would have a one-in-a-hundred chance of dying from cancer caused by the residual radiation. It would be decades before the city was inhabitable again, and demolition might be necessary.

Figure 3: Contamination Due to Cobalt Bomb in NYC – Chernobyl Comparison

Inner Ring: Same radiation level as *permanently closed* zone around Chernobyl
Middle Ring: Same radiation level as *permanently controlled* zone around Chernobyl
Outer Ring: Same radiation level as *periodically controlled* zone around Chernobyl

For comparison, consider the 1986 Chernobyl disaster, in which a Soviet nuclear power plant went through a meltdown. Radiation was spread over a vast area, and the region surrounding the plant was permanently closed. In our current example, the area contaminated to the same level of radiation as that region would cover much of
Manhattan, as shown in figure three. Furthermore, near Chernobyl, a larger area has been subject to periodic controls on human use such as restrictions on food, clothing, and time spent outdoors. In the current example, the equivalent area extends fifteen miles.

To summarize the first two examples, materials like cesium, cobalt, iridium, and strontium (gamma emitters) would all produce similar results. No immediate evacuation or medical attention would be necessary, but long-term contamination would be render large urban areas useless, resulting in severe economic and personal hardship.

Example 3 – Americium (Alpha Emitter) – Figures 4 and 5

A device that spread materials like americium and plutonium would create present an entirely a different set of risks. Consider a typical americium source used in oil well surveying. If this were blown up with one pound of TNT, people in a region roughly ten times the area of the initial bomb blast would require medical supervision and monitoring, as depicted in figure four. An area 30 times the size of the first area (a swath one kilometer long and covering twenty city blocks) would have to be evacuated within half an hour. After the initial passage of the cloud, most of the radioactive materials would settle to the ground. Of these materials, some would be forced back up into the air and inhaled, thus posing a long-term health hazard, as illustrated by figure five. A ten-block area contaminated in this way would have a cancer death probability of one-in-a- thousand. A region two kilometers long and covering sixty city blocks would be contaminated in excess of EPA safety guidelines. If the buildings in this area had to be demolished and rebuilt, the cost would exceed fifty billion dollars.

Recommendations

A number of practical steps can be taken that would greatly reduce the risks presented by radiological weapons. Our recommendations fall into three categories:

1. Reduce opportunities for terrorists to obtain dangerous radioactive materials,

2. Install early warning systems to detect illicit movement of radioactive materials, and

3. Minimize casualties and panic from any attack that does occur.

Since the US is not alone in its concern about radiological attack, and since we clearly benefit by limiting access to dangerous materials anywhere in the world, many of the measures recommended should be undertaken as international collaborations.

Reduce Access To Radioactive Materials

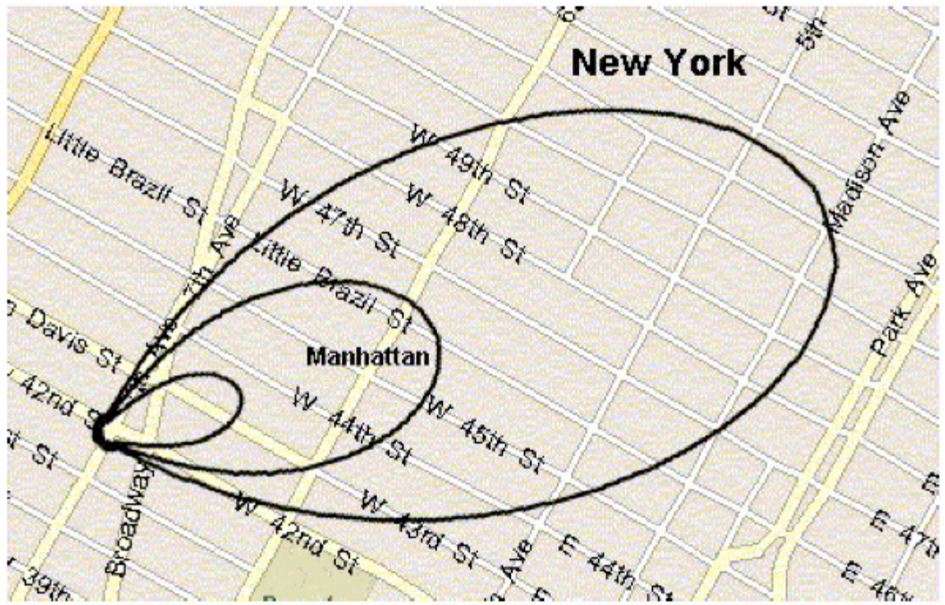
Radioactive materials facilitate valuable economic, research and health care technologies. Measures needed to improve the security of facilities holding dangerous amounts of these materials will increase costs. In some cases, it may be worthwhile to pay a higher price for increased security. In other instances, however, the development of alternative technologies may be the more economically viable option. Specific security steps include the following:

• Fully fund material recovery and storage programs. Hundreds of plutonium, americium, and other radioactive sources are stored in dangerously large quantities in university laboratories and other facilities. When these materials are actively used and considered a valuable economic asset, they are likely to be well protected. But in all too many cases they are not used frequently, resulting in the risk that attention to their security will diminish over time. At the same time, it is difficult for the custodians of these materials to dispose of them since in many cases only the DOE is authorized to recover and transport them to permanent disposal sites. The DOE Off-Site Source Recovery Project (OSRP), which is responsible for undertaking this task, has successfully secured over three- thousand sources and has moved them to a safe location. Unfortunately, the inadequate funding of this program serves as a serious impediment to further source recovery efforts. Funding for OSRP has been repeatedly cut in the FY2001 and 2002 budgets and the presidential FY2003 budget proposal, significantly delaying the recovery process. In the cases of FY01 and FY02, the 25% and 35% cuts were justified as money being transferred to higher priorities; the FY03 would cut funding by an additional 26%. This program should be given the needed attention and firm goals should be set for identifying, transporting, and safeguarding all unneeded radioactive materials.

• Review licensing and security requirements and inspection procedures for all dangerous amounts of radioactive material. HHS, DOE, NRC and other affected agencies should be provided with sufficient funding to ensure that physical protection measures are adequate and that inspections are conducted on a regular basis. A thorough reevaluation of security regulations should be conducted to ensure that protective measures apply to amounts of radioactive material that pose a homeland security threat, not just those that present a threat of accidental exposure.

• Fund research aimed at finding alternatives to radioactive materials. While radioactive sources provide an inexpensive way to serve functions such as food sterilization, smoke detection, and oil well logging, there are sometimes other, though possibly more expensive, ways to perform the same functions. A research program aimed at developing inexpensive substitutes for radioactive materials in these applications should be created and provided with adequate funding.

Figure 4: Immediate Effects Due to Americium Bomb in New York City



Inner Ring: All people must receive medical supervision
Middle Ring: Maximum annual dose for radiation workers exceeded
Outer Ring: Area should be evacuated before radiation cloud passes

Early Detection

• Expanded use of radiation detection systems. Systems capable of detecting dangerous amounts of radiation are comparatively inexpensive and unobtrusive. Many have already been installed in critical locations around Washington, DC, at border points and throughout the US. The Office of Homeland Security should act promptly to identify all areas where such sensors should be installed, ensure that information from these sensors is continuously assessed, and ensure adequate maintenance and testing. High priority should be given to key points in the transportation system, such as airports, harbors, rail stations, tunnels, highways. Routine checks of scrap metal yards and land fill sites would also protect against illegal or accidental disposal of dangerous materials.

• Fund research to improve detectors. Low-cost networking and low-cost sensors should be able to provide wide coverage of critical urban areas at a comparatively modest cost. A program should be put in place to find ways of improving upon existing detection technologies as well as improving plans for deployment of these systems and for responding to alarms.

Effective Disaster Response

An effective response to a radiological attack requires a system capable of quickly gauging the extent of the damage, identifying appropriate responders, developing a coherent response plan, and getting the necessary personnel and equipment to the site rapidly. The immediate goal must be to identify the victims that require prompt medical attention (likely to be a small number) and to ensure that all other unauthorized personnel leave the affected area quickly, without panic, and without spreading the radioactive material. All of this requires extensive training.

• Training for hospital personnel and first responders. First responders and hospital personnel need to understand how to protect themselves and affected citizens in the event of a radiological attack and be able to rapidly determine if individuals have been exposed to radiation.

There is great danger that panic in the event of a radiological attack on a large city could lead to significant casualties and severely stress the medical system. Panic can also cause confusion for medical personnel. The experience of a radiological accident in Brazil suggests that a large number of people will present themselves to medical personnel with real symptoms of radiation sickness – including nausea and dizziness – even if only a small fraction of these people have actually been exposed to radiation. Medical personnel need careful training to distinguish those needing help from those with psychosomatic symptoms. While generous funding has been made available for training first responders and medical personnel, the program appears in need of a clear management strategy. Dozens of federal and state organizations are involved, and it is not clear how materials will be certified or accredited. Internet-based tools for delivering the training will almost certainly be

necessary to ensure that large numbers of people throughout the US get involved. In the US, there are over 2.7 million nurses and over a million police and firefighters who will require training, not to mention the medics in the US armed services. However, there appears to be no coherent program for developing or using new tools to deliver needed services, and to ensure that training and resource materials are continuously upgraded and delivered securely.

Decontamination Technology

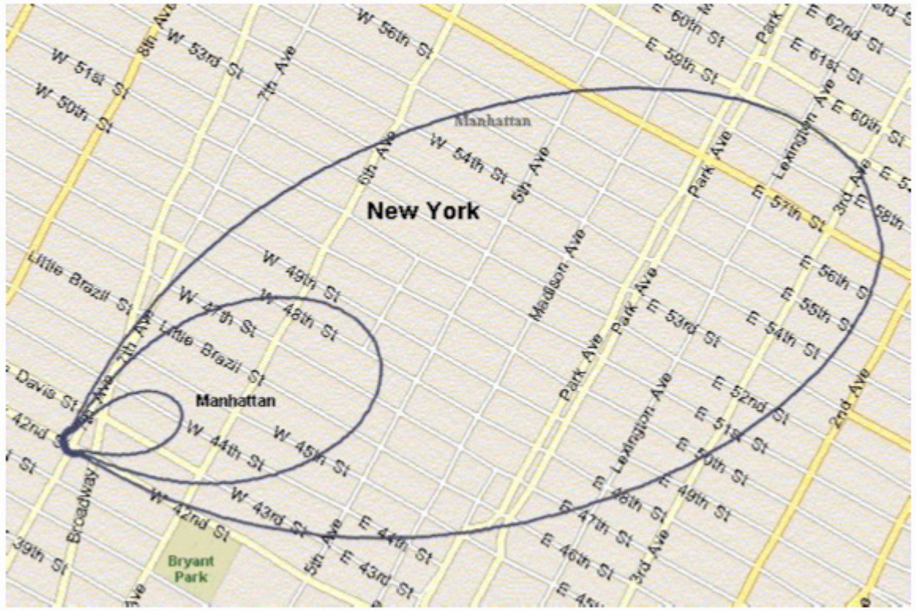
Significant research into cleanup of radiologically contaminated cities has been conducted in the past, primarily in addressing the possibility of nuclear war. Such programs should be revisited with an eye to the specific requirements of cleaning up after a radiological attack. As demonstrated above, the ability to decontaminate large urban areas might mean the difference from being able to continue inhabiting a city and having to abandon it.

Conclusion

The events of September 11 have created a need to very carefully assess our defense needs and ensure that the resources we spend for security are aligned with the most pressing security threats. The analysis summarized here shows that the threat of malicious radiological attack in the US is quite real, quite serious, and deserves a vigorous response. Fortunately, there are a number of comparatively inexpensive measures that can and should be taken because they can greatly reduce the likelihood of such an attack. The US has indicated its willingness to spend hundreds of billions of dollars to combat threats that are, in our view, far less likely to occur. This includes funding defensive measures that are far less likely to succeed than the measures that we propose in this testimony. The comparatively modest investments to reduce the danger of radiological attack surely deserve priority support.

In the end, however, we must face the brutal reality that no technological remedies can provide complete confidence that we are safe from radiological attack. Determined, malicious groups might still find a way to use radiological weapons or other means when their only goal is killing innocent people, and if they have no regard for their own lives. In the long run our greatest hope must lie in building a prosperous, free world where the conditions that breed such monsters have vanished from the earth.

Figure 5: Contamination Due to Americium Bomb in New York City



Inner Ring:	One cancer death per 100 people due to remaining radiation
Middle Ring:	One cancer death per 1,000 people due to remaining radiation
Outer Ring:	One cancer death per 10,000 people due to remaining radiation
	EPA recommends decontamination or destruction

What does Dr. Kelly know about New York City? Does he know that what's happened to New York is far, far worse? Does he know that some type of nuclear device(s) have been detonated at the tip of Lower Manhattan, contaminating the entire city and surrounding area to much the same degree as the remaining contamination at Chernobyl? Not one Cobalt pencil but thousands of Cobalt pencils?

Does he know that New York should have been evacuated and that much of Manhattan should be demolished?

Historical Radiation Exposure

Lest we think that the US Military - Industrial Complex would never commit such a crime against "its own people", the deliberate and clandestine exposure of US and other citizens to radioactivity and radiation is in fact a routine practice. Since the Second World War, the US Government has deliberately exposed and contaminated large numbers of its citizens systematically, both civilian and military, with some of the most dangerous and toxic substances known to man.

It is now well known how thousands of US and British military personnel were ordered to walk towards the nuclear fireball after atomic weapons tests in New Mexico and Australia in the 1950s and 1960s. The purpose was purely to see what effect the radiation would have on them.

In the 1960s, Plutonium was injected into pregnant women – again, just to see what would happen.

In November of 1986, the US Congressional Sub Committee on Energy Conservation and Power released a report under Congressman Edward Markey entitled, "American Nuclear Guinea Pigs: Three Decades Of Radiation Experiments on US Citizens." The report detailed the systematic injection and administration of radioactive isotopes and compounds to US citizens since the 1940s to see when and at what level damaging and irreversible effects would occur. In 1994, radioactive substances were still being surreptitiously administered to prisoners in New York penitentiaries.

These experiments are redolent of the barbaric practices of Joseph Mengele and his Japanese counterparts on human victims during the Second World War. Indeed, given what has come to light about Operation Paperclip, the mass transfer of Nazi War Criminal scientists to the USA after the Second World War, plus the recruitment by the CIA of numerous Nazi's, one could say it is merely a seamless continuation of those practices.

The deliberate contamination of New York with radioactive fallout is far from being exceptional. It is simply one in a long line of radioactive experiments stretching back over 60 years. These "experiments" are being continued today with the widespread use of Depleted Uranium munitions in Iraq, Kosovo, Afghanistan and elsewhere. To these individuals, the administration and release of radioactive contamination against the population is routine. It is Standard Operating Procedure.

To borrow another quote used by Stanley A Thompson from Ogden Nash:

"God rest you merry Innocents
While innocence endures"

This is the hand of a physician who was exposed to repeated small doses of x-ray radiation for 15 years. The skin cancer appeared several years after his work with x-rays had ceased. Cancer incidence depends on radiation dose. From Meissner, William A. and Warren, Shields: Neoplasms, In Anderson W.A.D. editor; Pathology, edition 6, St. Louis, 1971, The C.V. Mosby Co.

Conclusion

This report has presented indisputable and overwhelming evidence that the Twin Towers and Building Seven of the World Trade Center Complex were destroyed by the explosion of nuclear devices.

The key irrefutable evidence is the presence of radioactive fallout in the dust residue. This “smoking gun” evidence lays the framework for then understanding ALL of the other extraordinary physical anomalies – the intense volcanic subterranean heat that persisted for months, literally boiling away concrete, steel and glass, the seismic spikes, the U shaped core columns, the cars bursting into flames, the cars turned upside down, the eruption of dust and rubble high into the atmosphere and across Manhattan and the instant free-fall collapse of two structural steel towers and the disintegration of 200,000 tons of steel and 400,000 tons of concrete.

There is no doubt that this was one of the single worst atrocities ever committed by individuals intent on terrorizing the people of the world.

The question is – who are the terrorists? Who could have had the access, foreknowledge, skill and manpower? Who could have coordinated the deliberate attack which began with the crashing of two alleged commercial jets (if they really were commercial jets, and if there really were jets at all) into these skyscrapers? Why deliberately tell the residents of New York City that the dust was completely safe when even simple asbestos exposure precautions could have greatly reduced radiation exposure?

To ask these questions is to answer them. Only elements of the US Military Industrial Complex and so-called “Shadow Government” could have orchestrated this depraved and heinous act of *Agent Provocateurism*, from which has flowed an unprecedented War On Terror against the world.

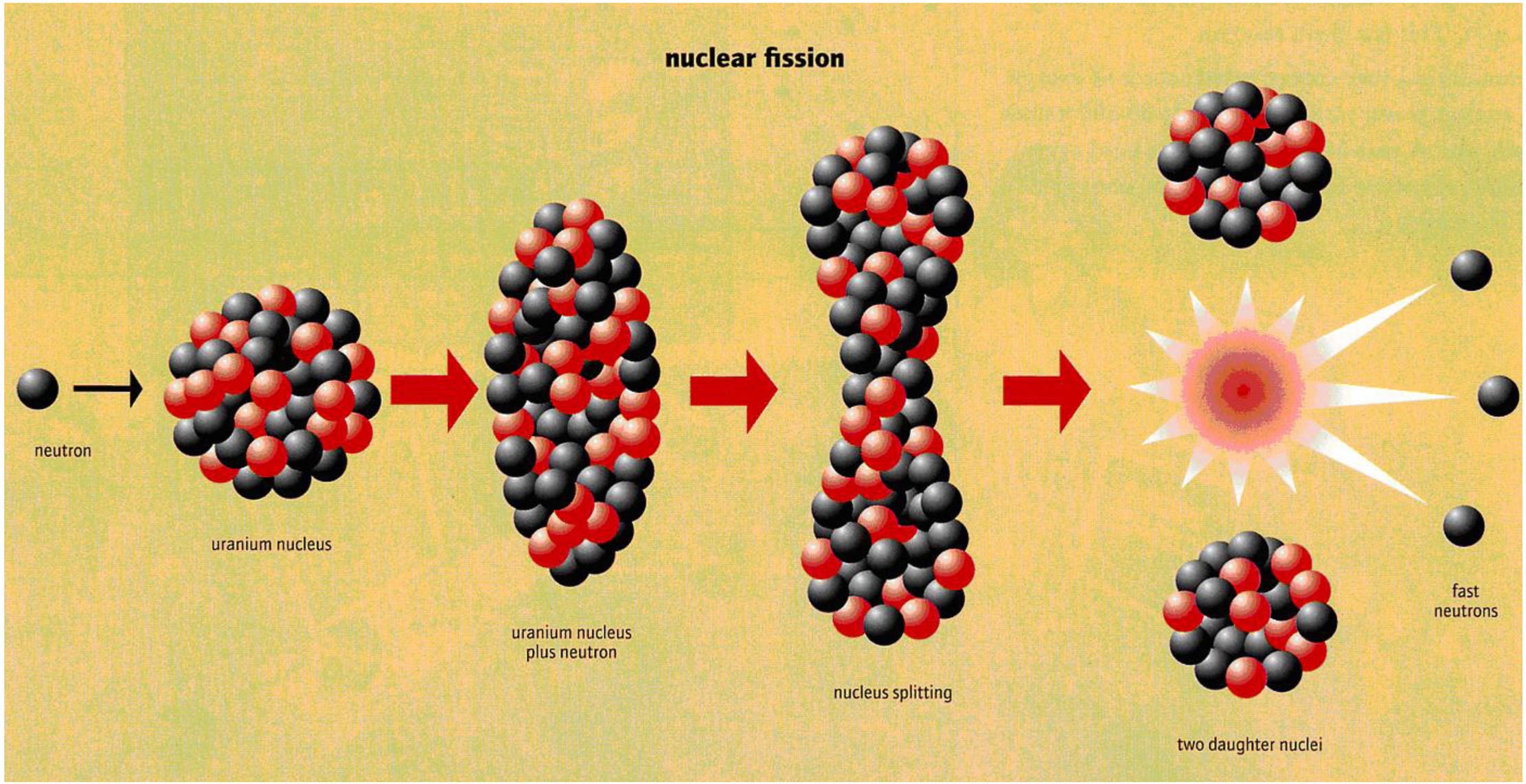
Cui bono?

A Last Word On The Complexity Of Fission

The Complexity Of Fission

Nuclear fission is far more complex than the various decay pathways described in the beginning of this report. The following diagrams and schematics show that when an atom of Uranium undergoes fission, into only two fission fragments or daughter nuclei, these can span the entire Periodic Table below Uranium, from Thorium to Helium. However, as we have seen, in a very energetic nuclear event – such as an atomic bomb – we do not see just two fission fragments per Uranium atom but three or more – the daughter nuclei are themselves disintegrated by the intense neutron flux into smaller atoms. The heavier fission fragment in particular – Xenon, Radon, Thorium, Lead and others – will in turn fission into lighter products. Something like this is what created the very high concentration of Zinc, so closely linked to the concentration of Barium.

You can probably appreciate that there is no public data available on what the distribution of elements produced would be from a nuclear explosion. Such "nuclear test data" is classified and would vary greatly depending on the conditions of the explosion, the type of bomb and other various elements. The schematic here is for 2 fission fragments only and applies to the relatively low energy fission of Uranium in a civilian power reactor. What can be said is that such extra levels of fission will be accompanied by an intense neutron flux and it may unfortunately be stretching coincidence too far to believe that the particularly high concentration on Zinc – the preferred option for the military "doomsday device" – arose purely by chance.



Abstract On Uranium Quantities

Several times in this report we have given a very broad estimate of the amount of Uranium that we suspect may have originally been present if the nuclear demolition was related to reactors under the towers. Keep in mind that new and unknown technology related to bombs may exist that we're unaware of.

We will derive these figures from the correlation of the fallout – Barium, Strontium, Zinc – in the dust.

For non-chemists, it is easy to fall into the trap of thinking that tons of Uranium would produce tons of Strontium, etc., but this is not the case at all. Things are a bit more complex than that. As you know, each atom of Uranium can split into two, even three, and possibly four or more fission fragments in many different ways. A wide range of fission pathways is followed and only some of the Uranium in the core will go down each path.

So taking Strontium again, the mean concentration that the USGS measured in the dust was 726ppm. This means that if there were 200,000 tons of dust produced by the destruction of the buildings, and we know the USGS found high levels of Strontium in all of the samples they measured all over Manhattan, we can assume that the total amount of Strontium was:

200,000 tons x 726ppm

In Strontium (Si) units this equals

2×10^8 kgs x 0.000726 = 145,200 kgs (or 145 tons)

Now what we really don't know is – how much of the Uranium originally present fissioned through the Strontium pathway? Looking back at the original analysis for Strontium and Barium we see two of the main pathways going through Strontium and Barium. As we know, there are many others. The main point to realize here is that the lower the proportion of the original Uranium that fissioned through Strontium, the more Uranium there must have been there in total in the first place.

If all of the Uranium just followed the two Barium/Strontium pathways, then under 50% of the Uranium atoms present would have fissioned through Strontium to produce 145 tons of Strontium. If only 10% of the original Uranium produces 145 tons of Strontium, then there must have been a lot more Uranium present. But how much Uranium produces one ton of Strontium? The answer is not one ton! This is where we have to bring in the concept of the mole.

One atom of Uranium splits into two pieces to produce one atom of Strontium and one atom of Barium. But an atom of Uranium and an atom of Strontium do not weigh the same. The Uranium isotope that fissions has an atomic weight of 235 – the Strontium isotope has an atomic weight of 90.

Chemists discovered that 90 grams of Strontium or 235 grams of Uranium or 16 grams of Oxygen all contain the same number of atoms. This makes sense since each atom has a different weight – so the weight of that element in grams equal to the atomic weight of the element will contain the same number of atoms. That number is a constant (Avogadro's Number = 6.022×10^{23} mol^{-1}) and the weight of an element that contains that number of atoms is called a mole.

Simply think of it like this – chemical reactions and nuclear fission occur between atoms (or molecules, etc.) 1 Atom of Uranium produces one atom of Strontium. But 1 atom of Uranium weighs 235 atomic units while 1 atom of Strontium weighs only 90 atomic units (the other 145 atomic units go into a Barium atom and fee neutrons).

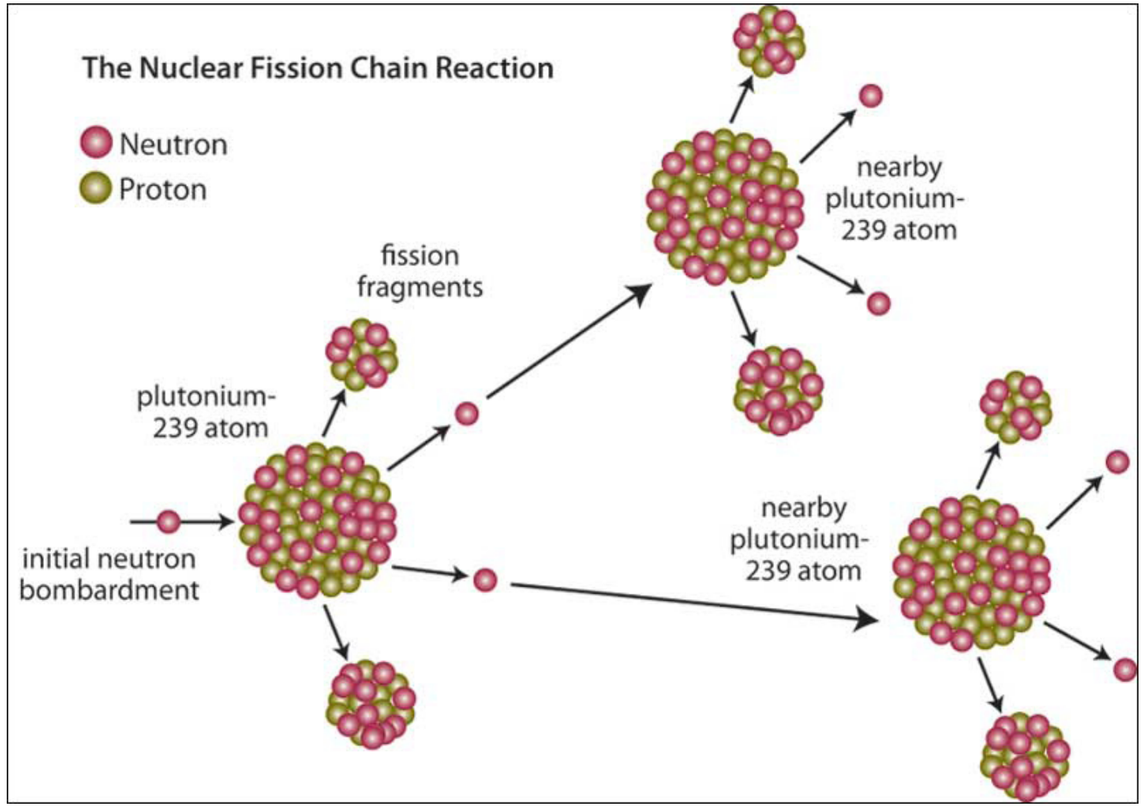
Since 1 atom of U235 weighs 235 atomic units and 1 atom of Strontium 90 weighs 90 atomic units, 235 grams of Uranium has the same number of atoms in it as 90 grams of Strontium.

1 mole of Uranium weighs 235g and 1 mole of Strontium weighs 90g.

To produce 145 tons of Strontium therefore, there must have been originally:

145 x 235/90 = 380 tons of Uranium

But this is only the Uranium to produce Strontium (and its associated Barium). If 50% of the Uranium fissioned through Strontium, then the total amount on Uranium would have been 760 tons. If only 30% of the Uranium fissioned through Strontium, then there would have been nearly 1300 tons of Uranium originally. This illustrates that the high concentration of radioactive fallout in all of the dust required a reactor source as opposed to a bomb source but again, we do not have the data on the latest nuclear technology developments to make that assertion conclusively. We know, unequivocally, that fission occurred in New York City on September 11th. We do not know whether strategically placed bombs or runaway reactors caused it.



Periodic Table Of The Elements

	1 IA	New Original											13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA	
1	1 H Hydrogen 1.00794	2 IIA																2 He Helium 4.002602	K
2	3 Li Lithium 6.941	4 Be Beryllium 9.012182											5 B Boron 10.811	6 C Carbon 12.0107	7 N Nitrogen 14.00674	8 O Oxygen 15.9994	9 F Fluorine 18.9984032	10 Ne Neon 20.1797	K L
3	11 Na Sodium 22.989770	12 Mg Magnesium 24.3050	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8	9 VIIIB	10	11 IB	12 IIB	13 Al Aluminum 26.981538	14 Si Silicon 28.0855	15 P Phosphorus 30.973761	16 S Sulfur 32.066	17 Cl Chlorine 35.453	18 Ar Argon 39.948	K L M
4	19 K Potassium 39.0983	20 Ca Calcium 40.078	21 Sc Scandium 44.955910	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938049	26 Fe Iron 55.8457	27 Co Cobalt 58.933200	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.92160	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798	K L M N
5	37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.90585	40 Zr Zirconium 91.224	41 Nb Niobium 92.90638	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.90550	46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.760	52 Te Tellurium 127.60	53 I Iodine 126.90447	54 Xe Xenon 131.293	K L M N O
6	55 Cs Cesium 132.90545	56 Ba Barium 137.327	57 to 71	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.078	79 Au Gold 196.96655	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.98038	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)	K L M N O P
7	87 Fr Francium (223)	88 Ra Radium (226)	89 to 103	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (269)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (285)	113 Uut Ununtrium (284)	114 Uuq Ununquadium (289)	115 Uup Ununpentium (288)	116 Uuh Ununhexium (292)	117 Uus Ununseptium	118 Uuo Ununoctium	K L M N O P Q

57 La Lanthanum 138.9055	58 Ce Cerium 140.116	59 Pr Praseodymium 140.90765	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.92534	66 Dy Dysprosium 162.500	67 Ho Holmium 164.93032	68 Er Erbium 167.259	69 Tm Thulium 168.93421	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967
89 Ac Actinium (227)	90 Th Thorium 232.0381	91 Pa Protactinium 231.03588	92 U Uranium 238.02891	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)	97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

Alkali metals
Alkaline earth metals
Transition metals
Lanthanide series
Actinide series
Poor metals
Nonmetals
Noble gases

C Solid
Br Liquid
H Gas
Tc Synthetic

Atomic masses in parentheses are those of the most stable or common isotope.

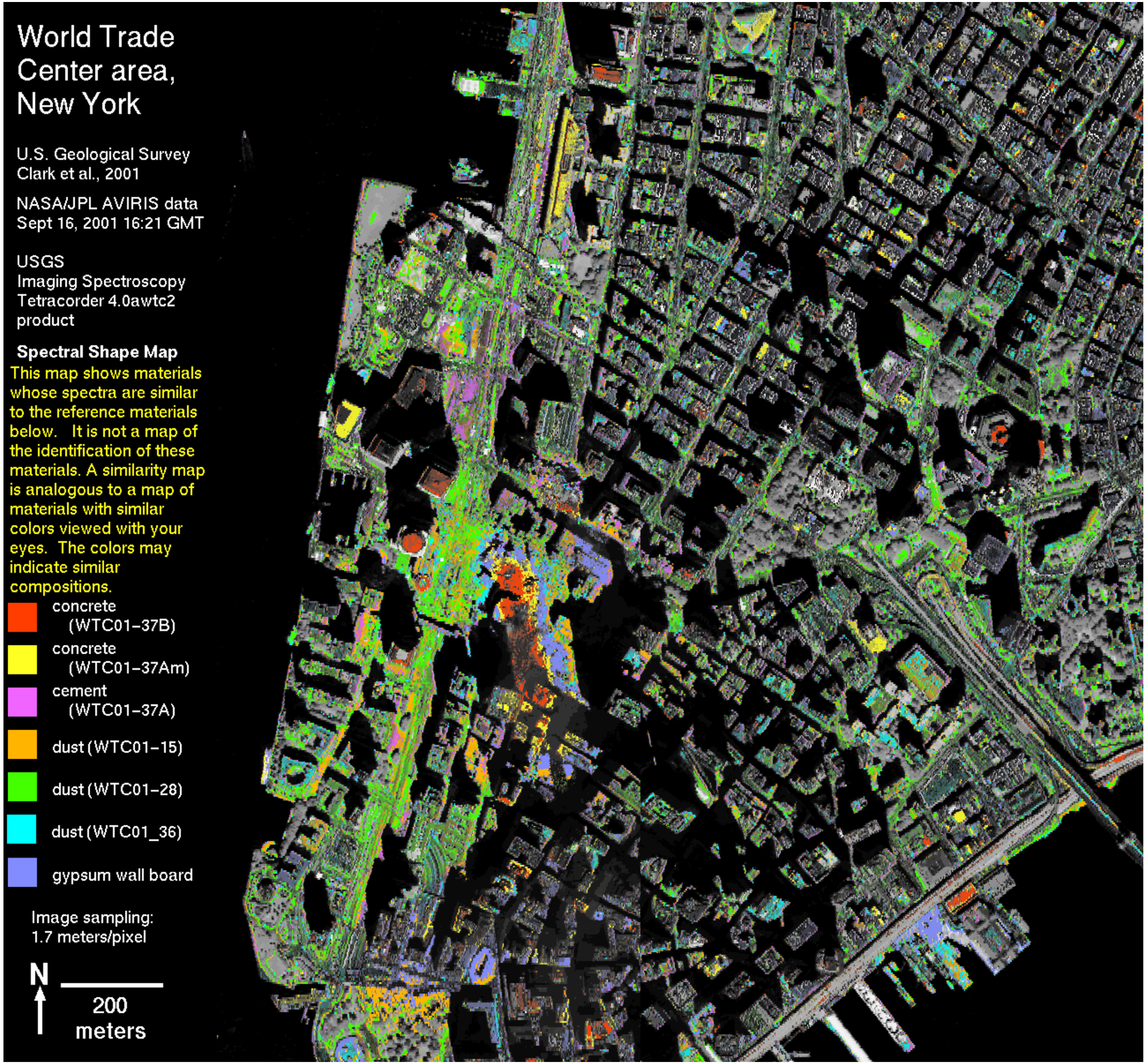
Note: The subgroup numbers 1-18 were adopted in 1984 by the International Union of Pure and Applied Chemistry. The names of elements 112-118 are the Latin equivalents of those numbers.

External Link for Plume data:

http://pubs.usgs.gov/of/2001/ofr-01-0429/dustplume.html

External Link for complete USGS Dust Analysis:

http://pubs.usgs.gov/of/2001/ofr-01-0429/#Contents



Negative Effects of Television on your Intelligence By My Dear Friend Justin Primm

Theoretically, it has been asserted that television has a bad impact on our emotional as well as our learning intelligence, if not directly, at least indirectly. It is difficult to quantify the extent of damage, but it has hampered our creative and imaginative mind. This is true particularly in the case of small children. Children who spend long hours in front of the television are often seen to face problems like being inattentive in class. It has been observed that the attention span of these children is quite low. Social and emotional skills fail to develop among teenagers due to the drastic decrease in social interaction, which results from spending long hours in front of the television and neglecting all other activities. It is also a common complaint that these teenagers often develop an attitude of disrespect towards elders and that they are losing out on the ability to think and react positively. Their ability to be creative often wanes. There are certain programs which show an abundance of violence and this is cited as the reason for growing intolerance.

TV Facts
Did You Know That:

• Most 2- to 5-year-olds watch TV an average of 31 hours each week, or more than 4 hours each day.
• Prime time TV has an average of 6 violent acts every hour; children's programming has an average of 26 violent acts every hour.
• The average American child witnesses 45 acts of violence on TV each day.
• Children watching TV may see 50,000 TV commercials each year.
• The average American family has the TV on for 6.2 hours every day.
• Forty-five percent of American homes watch news during dinner.
• The average news item runs no longer than 45 seconds.
• Only 10 percent of children's viewing time is spent watching children's television; the other 90 percent is spent watching programs designed for adults

TV Violence

Hundreds of research studies show that TV violence has serious effects on children and adolescents.
Children may:

• develop strong emotional fears;
• become less sensitive to the pain and suffering of others;
• become "immune" to the horror of violence;
• gradually accept violence as a way to solve problems;
• reenact the violence they observe on television; or
• identify with certain characters, victims and/or victimizers

I see the strongest and smartest men who have ever lived succumb to television. I see all this potential and I see squandering. Damn it, an entire generation pumping gas, waiting tables; slaves with white and blue collars. Advertising has us chasing cars and clothes, working jobs we hate so we can buy shit we don't need. We've all been raised on television to believe that one day we'd all be millionaires, and movie gods, and rock stars. But we won't. And we're slowly learning that fact. And we're very, very pissed off. So, you listen to me. Listen to me:

Television is not the truth!
Television is a God-damned amusement park!
Television is a circus, a carnival, a traveling troupe of acrobats, storytellers, dancers, singers, jugglers, side-show freaks, lion tamers, and football players.

TV is in the boredom-killing business and you're never going to get any truth from TV.
TV will tell you anything you want to hear; TV lies like hell.

TV deals in Illusions, man!
None of it is true!

But you people sit there, day after day, night after night, all ages, colors, all creeds... TV is all you know. You're beginning to believe the illusions TV is spinning here. You're beginning to think that the TV is reality, and that your own lives are unreal. You do whatever the TV tells you! You dress like the TV, you eat like the TV, you raise your children like the TV, you even *think* like the TV! This is mass madness! Right now, there is a whole generation; an entire generation that never knew anything that didn't come out of this TV. This TV is the gospel, the ultimate revelation; this TV can make or break presidents, popes, prime ministers; this TV is the most awesome goddamn propaganda force the whole godless world has ever seen and woe is us if it ever falls into the hands of the wrong people and it has!!! In God's name, you people are the real thing! TV IS the illusion! So turn off your television sets. Turn them off now. Turn them off right now. Turn them off and leave them off! Turn them off right in the middle of the sentence I'm speaking to you now! Turn Them Off!!!!

My friend Justin is telling you the truth, just like this book.

Missing Weapons From Veterans Today And Gordon Duff

This week, Bob Nichols, writing for Veterans Today, cited the ability to mask nuclear explosions, radiation, EMP and even seismographic signatures, particularly in newer weapons which include the highly secretive "4th generation" nuclear weapons. Nichols, who writes on defense and nuclear weapons issues told this reporter:

"There have been breakthroughs we never hear about. These programs went 'dark' years ago after a significant advance in physics. Small nukes have been used in Iraq and Afghanistan and people are getting sick, not just locals but Americans as well. These new weapons have little lingering radiation and can be easily hidden."

In a related story, 9/11 "first responder" Randy Wiebicke died March 3 after experimental stem cell treatments failed to stop the onset of multiple cancers and the total failure of his immune system. The cause of death was listed as multiple myeloma, a type of aggressive skin cancer blamed on toxic exposure at "ground zero." Myeloma is a form of radiation sickness. We've discussed it at length in this book.

The "toxic" material killing so many in Iraq and having sickened so many in New York are, as pointed out by former Soviet nuclear intelligence services officer, Dimitri Khalezov, actually ionizing radiation from nuclear weapons. Khalzov, while serving with the Soviet Army forces tasked with cataloging and overseeing all nuclear weapons use around the world, describes briefings about demolition devices, thermonuclear bombs, that were planted under the World Trade Center, information that was shared with the Soviet Union in accordance with their treaty with the United States;

Missing Nuclear Weapons

Israel went nuclear in the 1960s. Libya's leader, Colonel Gaddafi claims Israel had Kennedy murdered because he demanded they end their nuclear program. Gaddafi, while speaking before the United Nations General Assembly said;

"Why did this Israeli kill the killer of Jack Kennedy? The whole world should know that Kennedy wanted to investigate the nuclear reactor of the Israeli demon"

Yet we find a convoluted history of "love/hate" between Gaddafi and Israel. Libya and Israel have, for decades now, traded arms, WMD technologies, shared intelligence and even spied on America together as part of a consortium of rogue states whose membership has grown and shrunk over the years. Iran, East Germany and Czechoslovakia were overthrown by revolutions. Apartheid South Africa, another "rogue" friend, at one time a nuclear state. It was South Africa's nukes, built between 1975 and 1983, that created the first great "missing nuke" controversy, one that lasts till this day, one that may well have killed Dr. David Kelly and brought down British Prime Minister Tony Blair in the process.

There are nuclear weapons out there, maybe in terrorists hands, two or five, as many as seven or more. Iran and North Korea didn't build them. North Korea's nuclear program is a sham and Iran may simply be a scapegoat. Iran is not building nuclear weapons, they don't possess the necessary centrifuges to enrich uranium. Using their available technology, a nuclear weapon could not be produced in a century.

However, the threat of nuclear terrorism is very real, the facts are there but America is sitting on the truth. Remember three names, Valerie Plame and Dr. David Kelly and Mordechai Vanunu. Plame was "burned" as an American spy, burned by the Bush administration. Vice President Cheney's Chief of Staff, "Scooter" Libby (Liebowitz) was convicted of the crime but received a pardon from President Bush.

Plame wasn't looking for "yellow cake" uranium from Niger, she was looking for lost nuclear weapons. When she got close, she was destroyed and then silenced by the Justice Department. Dr. David Kelly was a weapons scientist in Britain until his very unexpected suicide while trying to report wrongdoing tied to missing nuclear weapons, wrongdoing he attributed directly to Prime Minister Tony Blair. A secret investigation currently being conducted has ruled his death a murder and top members of government, from Blair downward are being grilled about, not only this, but missing nuclear weapons, a subject newspapers are being threatened to stay silent on daily.

Mordechai Vanunu is a nuclear weapons specialist who worked at the illegal Dimona facility in Israel. When he fled the country and alerted the world about the nuclear program there, he was kidnapped, returned to Israel and put in solitary confinement for 18 years. He has been under house arrest or in solitary confinement after his release. He is currently locked in a small cell in a secret prison in Israel for talking to someone not on his official list of contacts.

These three people and a number of people behind them hold the key to the biggest story in recent years, a massive worldwide cover-up so frightening it is treated almost as though it has involved secret UFO landings. Not everyone has all the information. Some key figures are waiting for the results of the investigations going on in London now, the findings of which will be above top secret.

Homegrown, Israeli, Or Bought?

In March, 2004, after Iraq was mistakenly believed to have been "stabilized," British Prime Minister Tony Blair flew to Tripoli for a "crash meeting" with Colonel Gaddafi to discuss "weapons of mass destruction." Libya had long been cited as having an advanced nuclear program and one of the largest biological and chemical warfare programs in the world. In December, 1988, Pan American flight 103 crashed in Lockerbie, Scotland, killing 11 local residents in addition to the 243 passengers and 16 crew members.

Colonel Gaddafi had ordered the plane destroyed and had arranged for a bomb to be placed on the flight. Blair would never mention this "minor issue." Instead, Blair returned with an oil contract and what was believed to be Libya's promise to disarm. Blair left Libya with an oil contract and an aircraft contract for BAE Systems in the UK. Blair and Gaddafi have been close ever since. Months before, in October 2003, America had seized advanced centrifuges capable of enriching uranium for nuclear weapons, centrifuges quite unlike those used in Iran. Israel claims they helped the US stop the sale to Libya. That is a lie.

Though reported as having been purchased from Pakistan through a Japanese company, the centrifuges were shipped from South Africa through an Israeli company. In September 2004, South Africa arrested Israeli, Johann Meyer for arranging the sale.

In September 2004, South African authorities arrested Johan Meyer, president of TradeFin Engineering, and charged him with three criminal counts of trafficking sensitive nuclear equipment between November 2000 and 2001. Six days after his arrest, charges were dropped against Meyer, who apparently agreed to testify against two other parties in the scheme: Gerhard Wisser, the owner of Krisch Engineering, and its managing director, Daniel Geiges. The final indictment has been served against them, and in March 2007 prosecutors applied for the bulk of the case against them to be heard in camera, in order to prevent proliferation-sensitive information from entering the public domain. A more honest and accurate telling of the story has Meyer escaping from custody with help from the French intelligence services. Meyer is currently residing in the State of Israel.

More revelations show that Meyer, an Israeli, was actually part of the "the Khan network." A.Q. Khan, the Pakistani scientist reputed to have been involved in widespread nuclear proliferation activities, continues to deny all involvement. No ties to South Africa, Israel or Myer, those actually found complicit in selling centrifuges to Libya, were ever established for A. Q. Khan.

Reliable reports indicate that Khan had offered “nuclear triggers” to “any and all” as part of a highly classified CIA operation looking for “possible” missing nuclear weapons.

Attempts by media to portray Meyer and Khan as partners in an arms program tied to former Pakistani President Musharraf are, according to informed sources, part of a CIA-Mossad disinformation program. With Israeli security companies openly operating inside Libya, in violation of UN sanctions, reportedly 50,000 “mercenaries” on the way to lead the crackdown on rebel forces, is there a chance that the covert arms relationship between Israel and Libya, alive and well and very “nuclear” in 2003, may be a factor in the recent “mishap?”

At left, Dr. Abdul Qadeer Khan and below, Muammar Muhammad al-Gaddafi, also known as Colonel Gaddafi, an Arabic honorific expression which can be translated, “The Brother Leader” or “The Guide,” has been the leader of Libya since his successful military coup of 1969. In early February 2011, major political protests (inspired by recent similar events in Tunisia, Egypt and other parts of the Arab world which were in turn “inspired” by the CIA, MI6 and Mossad), which quickly turned into a general uprising, broke out in Libya against Gaddafi’s government. By 26 February 2011, Gaddafi was reported as having lost control of much of the country. Today is March 6th, 2011.

Parting Shots And Last Words

On The Truck Washes

Large and elaborate truck washes were set up to wash all large debris-carrying vehicles leaving Ground Zero. Ostensibly this was performed to prevent the trucks from leaving Ground Zero carrying Asbestos or Chrysotile dust or fibers and depositing them throughout the city. This was done to protect the health of the civilian public. This is an outright lie. The trucks were washed to remove any remnants of potential radiation. The USGS report makes it perfectly clear that Asbestos or Chrysotile dust was deposited across the city and in many cases parts other then Ground Zero had far higher Asbestos dust content then Ground Zero itself. People, cars, rats and insects were moving Asbestos around the city and no one was worried about the trucks moving Asbestos into the city. Here is the USGS report on Asbestos or Chrysotile and a report on the truck washes.

The Reasoning Public Reason For Washes

Carwash OEMs partner for Ground Zero project
From Volume 25, Issue 12 - December 2001
Companies contracted to build three washes in two weeks.
by: Paul Quirini, News Editor

The tireless work of police officers and firefighters continues at the site of the World Trade Center, and a team of carwash and truck wash equipment manufacturers is now helping with the cleanup. In order to keep construction trucks from carrying dangerous asbestos all across New York City, such companies as InterClean Equipment, Inc., Ann Arbor, MI, and Worldwide Drying Systems, Broomfield, CO, have teamed up to build three complete washes and decontamination systems in two weeks' time at the accessible corners of Ground Zero. This might come to be remembered as one of the most remarkable carwash construction projects ever, considering its location, purpose and the quick turnaround in its construction. Normally, such a project would take up to six months. An indecent proposal? The firm contracted by the Environmental Protection Agency to clean up the World Trade Center site contacted InterClean toward the end of October, and asked if the company could build three complete truck wash tunnels in 14 days to decontaminate trucks from asbestos and other contamination found near Ground Zero, according to Olli Lamminen, the company's vice president of sales. InterClean, known for developing car, truck, and train washes in inhospitable conditions, received the official order November 3.

"My first reaction was that it was practically impossible, but then they said it was for the World Trade Center and I started making calls," Lamminen said. InterClean, which has handled vehicle decontamination at toxic sites in the past, put $8 million in orders on hold and devoted all its staff to the World Trade Center project. The final design concept used InterClean's standard CENTRI*SPINNERs to wash up to five feet of height the wheels, lower details and underchassis at the rate of about 150 trucks per day in each location. The washes have full-body rinse arches with optional sanitizing chemicals following the high-pressure spinners.

The USGS Report On Asbestos Distribution Across The City

The question of asbestos distribution was investigated and the results show an asymmetric distribution pattern. More chrysotile was detected in an east-west direction than south. This pattern occurs in both the AVIRIS maps and from field samples (Results Figure 2). While there is a general trend, it is not exclusive, meaning that chrysotile was detected in all directions. It also should be noted that samples obtained next to each other (on the map this means a city block apart) can show different results: one has asbestos, another has no chrysotile above the detection limit.

Composition of samples on a centimeter scale was examined with a spectrometer. Small variations in chrysotile content throughout a sample were observed. Thus from scales of cm to tens of meters, chrysotile content varies. Such variability makes sampling and overall assessment of a site difficult. The fact that some materials in the WTC debris were observed to contain higher levels of chrysotile (sample WTC01-08) on a steel beam, and that the coatings on the beams have largely been stripped, leads to the question of where did the coatings go and how well distributed/dispersed is the chrysotile? Because a patch of coating showed up to 20% chrysotile, and the field samples and the AVIRIS maps show varying levels of serpentine (chrysotile) leads to the possibility that other patches of chrysotile may exist in the debris.

The asymmetry in the AVIRIS iron-bearing materials map may be related to the asymmetry in the asbestiform minerals map. The AVIRIS data and the laboratory analyses of the field samples indicate a lower abundance of chrysotile in the the southern direction from the WTC, the same direction of the increase in iron-bearing materials. The one field sample, WTC01-08, from an iron beam, which had up to 20% chrysotile also contains a strong Fe2+ absorption. Thus one might expect a higher chrysotile content in iron-bearing materials. However, this is clearly not the case, at least in general. This may indicate other sources of the chrysotile besides the beam coatings. AVIRIS imaging spectroscopy mapping provides a synoptic view that samples more area than possible with other methods. The AVIRIS maps shown here represent only a portion of the data collected, and effectively provide data for about 4.7 million sample locations, all obtained within a couple of hours. The sampling includes land, air and water.

The fact that the field sampling missed the highest concentrations of serpentines in the AVIRIS maps shows the limitations of limited sampling methodologies. Ideally, the field sampling team would have the AVIRIS materials maps to guide the field sampling. Unfortunately, this was not possible in this rapid response case (but we routinely employ such methods in geologic studies where the region does not change rapidly). Even so, the materials maps for this study were produced faster than any other imaging spectroscopy effort to our knowledge. The AVIRIS data were received within 24 hours of acquisition, and the data were initially calibrated to help the field team obtain the final calibration data with real time feedback via cell phone. In this case, scientists in Denver communicated composition of field calibration sites using initially calibrated AVIRIS data (of the parking lot structure) while the field team was investigating where the best portion of the parking lot was located. The real-time feedback resulted in avoidance of portions of the parking lot with strong absorption features, not visible to the human eye, that could have compromised the quality of the final calibration.

With further development of on-board solar calibration targets on the aircraft with the AVIRIS sensor, the refinement of analysis software, the development of more reference spectral libraries, and the use of faster computers, an even faster response is possible in the future. The challenge is formidable. To analyze the data for this study, we used approximately 300 gigabytes of disk space and performed over 50 trillion calculations. The results of the AVIRIS mapping are limited by knowledge of the spectral properties of materials and the detection levels are limited by the sensor signal-to-noise. The detection limits could be substantially improved with existing technology in a new sensor design. The combination of field sampling with laboratory analysis and imaging spectroscopy remote sensing provide a powerful assessment combination. We estimate the analysis effort of this highly experienced team to be 1.8 person years to complete this study plus another 0.6 person-year for the AVIRIS data collection effort. This study includes analysis of 20% of the AVIRIS data from Sept 16, and 7% of the data from Sept 23 (thermal hot spot analysis only). The scientific data from this study is presented with no assessment of health effects. It is beyond the scope of this study to assess health effects of a fraction of a percent chrysotile asbestos, for example.

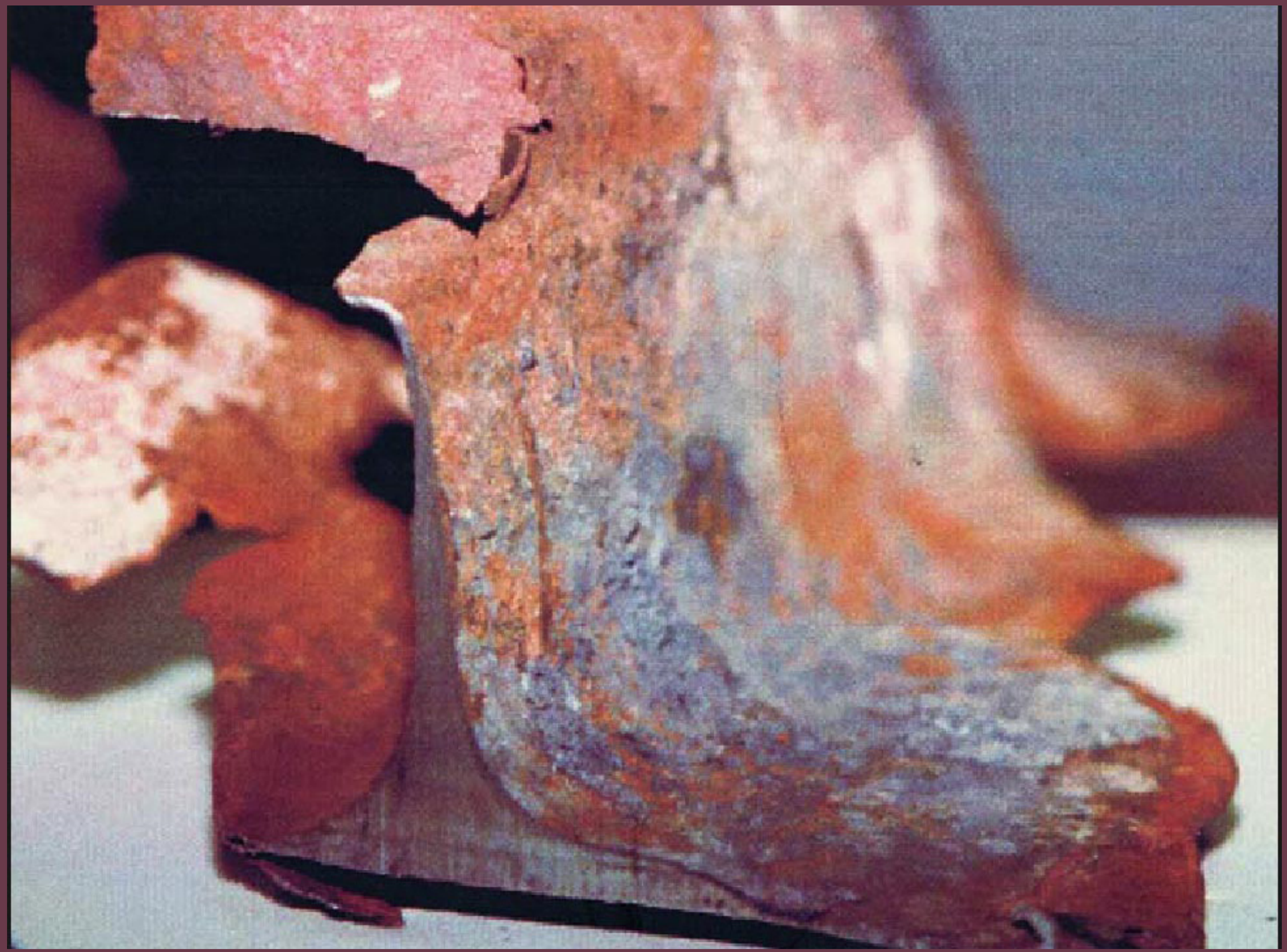
Called “meteors,” these concrete and steel conglomerations are fused and melted concrete and steel and only the intense heat from a nuclear demolition can do this.

Aircraft fuselage found on the roof of Building 5

A “thermate” collapse caused this? I have to laugh at even the thought of that.

Fresh soil was brought in during the first days of clean up

Cars and trucks were turned upside down, the force of the explosion was so fierce.




RESTRICTED


CAUTION: DO NOT ENTER
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“In our dreams, we have limitless resources and the people yield themselves with perfect docility to our molding bands. The present education conventions fade from their minds, and unhampered by tradition, we work our own good will upon a grateful and responsive rural folk. We shall not try to make these people or any of their children into philosophers or men of learning, or men of science. We have not to raise up from among them authors, editors, poets or men of letters. We shall not search for embryo great artists, painters, musicians nor lawyers, doctors, preachers, politicians, statesmen, of whom we have an ample supply.

The task we set before ourselves is very simple as well as a very beautiful one, to train these people as we find them to a perfectly ideal life just where they are. So we will organize our children and teach them to do in a perfect way the things their fathers and mothers are doing in an imperfect way, in the homes, in the shops and on the farm.”

– Occasional Letter No.1, The General Education Board, 1903, organized by J.D. Rockefeller, with Fred T. Gates, and Andrew Carnegie as a trustee.

– Letter written by Fred T. Gates.

Peace