

4p+ ---> 1He+2 + 2e+ + 2ne + energy



#### The Final Word On 911

we'll be exploring a seemingly complex and convoluted chemical stew of both rare and common elements with an unseen, carefully hidden and well organized choreography of human culpability just below the surface of the brew – and casings, radars, altimeters, boost-gas delivery systems, neutron generators, detonators, batteries, integrated circuits, fuzing systems, arming systems and permissive action links have all been reduced to miniature scale with nano-tech

featuring open source data reproduced for educational purposes from:

The Delta Group, UC Davis & the United States Geologic Survey (With Dozens Of High Quality Previously Unpublished Images)

Jeff Prager

the truth won't set you free but it sure beats ignorance

It's clearly impossible to explain the deuterium-tritium fusion reaction in detail because the evidence is severely suppressed. However, I'll do my best to familiarize you with the technical aspects of explosive nuclear fusion devices based on the available data. This is an extraordinarily complex, elaborate and convoluted issue and this book will attempt to succeed in familiarizing you with the basic concepts, the technology, advancements and the science that supports it.

A fusion or fission reactor is no different than a fusion or fission bomb. One is a controlled fusion or fission reaction and the other is simply an uncontrolled fusion or fission reaction. Same.

Nano-technology was started by the nuclear industry in the 1950s. The nuclear industry works with atoms. It's critical to remember this when discussing energetic compounds, the Twin Towers and the demolition that happened on September 11th. Nano technology was invented by, started by and garnered the largest technology investment for the US nuclear industry.

Nano started with Nuclear. Remember that.

A Quote From First Responder Nurse Shirley Hoofard: "Several victims told me they saw people engulfed in a fireball and disintegrating. One man said he was at work when he heard a loud noise and at the far end of the cubicles he saw a man running toward him with a fireball coming after him. The running man just exploded, flying into pieces... I heard stories like that from people from both towers...

neutrons are attracted to metal and water, steel and humans (97% water) they pass right through paper The Images In This Magazine:

This eMagazine is a large download because it's filled with high resolution very large never before published images from Ground Zero. These were hard to find. These images can be zoomed multiple times and should be examined carefully, closely. That's why they're here. Please share the link to this book if you like it.

most Ground Zero images are huge • use zoom

A Quote From 1964: "Live loads on these [perimeter] columns can be increased more than 2,000% before failure occurs. One could cut away all the first-story columns on one side of the building, and part way from the corners of the perpendicular sides, and the building could still withstand design loads and a 100-mph wind force from any direction." *from Engineering News-Record, April 2, 1964* 



only nuclear energy could have demolished these towers

**66** And interestingly enough, and also connected

to this, is the fact that we know from various papers that have been published that the Gulf War veterans, the US Gulf War veterans, have also had a very high and statistically significant increase in congenital malformations in their children. But the uranium source of this has been excluded on the basis of urine tests which show that there is no depleted uranium. But of course, what we have discovered is that there wouldn't be deplet-

ed uranium because it is enriched uranium. 9 9

 $\sim$  Dr. Christopher Busby  $\sim$ from his published report

# The European Committee

"The present cancer epidemic is a consequence of exposure to global atmospheric weapons fallout in the periods 1959-1963 and that more recent releases of radioisotopes to the environment from the operation of nuclear fuel cycle will result in significant increases in cancer and other types of ill health." (ISBN# 1-897761-24-4 - C. Busby)

Enriched uranium is used in nuclear bombs and if nuclear bombs were used in Fallujah they would have been considered safe to use for civilians and the soldiers deploying them based on practical military cost-benefit analysis which would include a certain number of acceptable deaths and future birth defects. We now know they were definitely used thanks to Dr. Christopher Busby. They were very small. They were predetermined by computer modeling to be safe based on military/political/banking standards as applied to large civilian populations during analysis of various military strategies, actuary and statistical analysis spreadsheets and their corresponding agendas. Like NYC.

on Radiation Risk (ECRR) concludes:

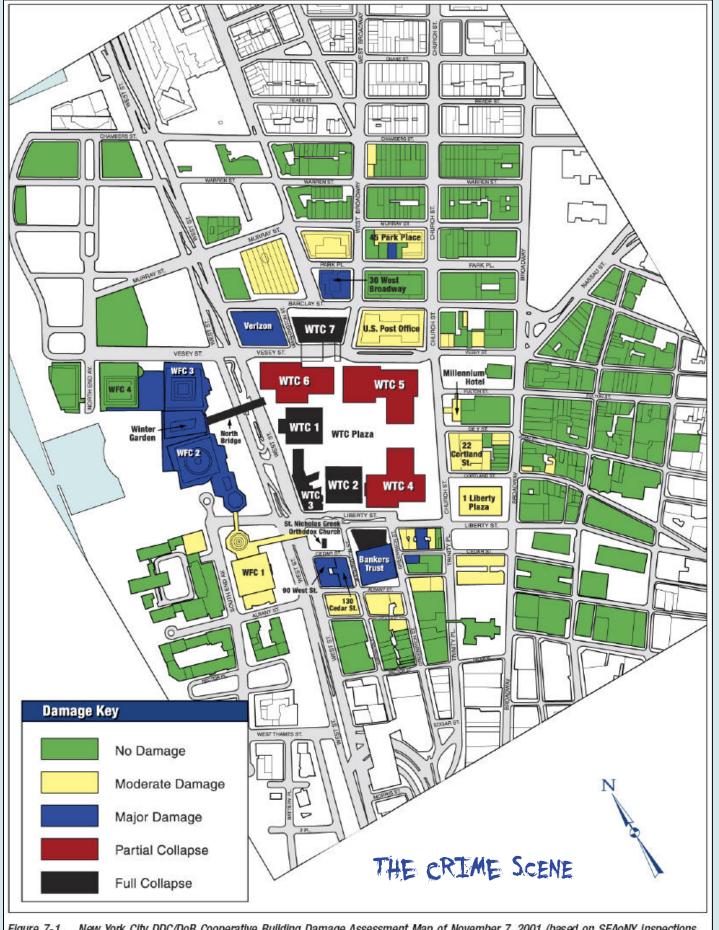


Figure 7-1 New York City DDC/DoB Cooperative Building Damage Assessment Map of November 7, 2001 (based on SEAoNY Inspections of September and October 2001).

"The latest week 30 mortality statistics (through July 30, 2011) issued by the Centers for Disease Control and Prevention now indicate that the number of excess deaths in the U.S. since the Fukushima nuclear power plant disaster now stands at:

"... You may think a professor at a university must actually know something about their subject. But this is not so. Nearly all of these experts who appear and pontificate have not actually done any research on the issue of radiation and health. Or if they have, they seem to have missed all the key studies and references..." ~ Dr. Christopher Busby

## 27,752

## PRIMARY DATA SETS.

#### USGS Open-File Report <sup>#</sup>01-0429 Environmental Studies Of The World Trade Center Area The September 11, 2001 Attack Version 1.1

Roger N. Clark <sup>(1)</sup>, Robert O. Green <sup>(2)</sup>, Gregg A. Swayze <sup>(1)</sup>, Greg Meeker <sup>(1)</sup>, Steve Sutley <sup>(1)</sup>, Todd M. Hoefen <sup>(1)</sup>, K. Eric Livo<sup>(1)</sup>, Geoff Plumlee <sup>(1)</sup>, Betina Pavri <sup>(2)</sup>, Chuck Sarture <sup>(2)</sup>, Steve Wilson <sup>(1)</sup>, Phil Hageman <sup>(1)</sup>, Paul Lamothe <sup>(1)</sup>, J. Sam Vance <sup>(3)</sup>, Joe Boardman <sup>(4)</sup>, Isabelle Brownfield <sup>(1)</sup>, Carol Gent <sup>(1)</sup>, Laurie C. Morath <sup>(1)</sup>, Joseph Taggart <sup>(1)</sup>, Peter M. Theodorakos <sup>(1)</sup> and Monique Adams <sup>(1)</sup>.

1. U. S. Geological Survey, Denver, Colorado

2. Jet Propulsion Lab Pasadena, California

3. U.S. Environmental Protection Agency, Region 8 Denver, Colorado

4. Analytical Imaging and Geophysics, LLC Boulder, Colorado

Published November 27th, 2001.

Free public access - full text at this link (last accessed March 1, 2012): http://pubs.usgs.gov/of/2001/ofr-01-0429/

Aerosol Science and Technology • Volume 38, Issue 2, 2004 Analysis of Aerosols From The World Trade Center Collapse Site, New York Detection and Evaluation of Long-Range Transport of Aerosols - (DELTA Group) October 2 to October 30, 2001

The Delta Group, Department of Applied Science, University of California, Davis, California, Department of Meteorology, University of Utah, Salt Lake City, Utah, Center for Accelerator Mass Spectrometry, Lawrence Livermore National Laboratory, Livermore, California, Department of Chemical Engineering and Materials Science, UC Davis, Davis, California, Department of Chemistry, UC Davis, Davis, California, Redlands University, Redlands, California and the Environmental Measurement Laboratory (EML), Department of Energy New York, New York.

\*Professor Thomas A. Cahill, Steven S. Cliff, Kevin D. Perry, Michael Jimenez-Cruz, Graham Bench, Patrick Grant, Dawn Ueda, James F. Shackelford, Michael Dunlap, Michael Meier, Peter B. Kelly, Sarah Riddle, Jodye Selco & Robert Leifer.

Available online: August 17th, 2010.

Free public access - full text at this link (last accessed March 1, 2012): http://www.tandfonline.com/doi/abs/10.1080/02786820490250836

Theory of Low-Energy Deuterium Fusion in Micro/Nano-Scale Metal Grains and Particles ICCF-14 • International Conference on Condensed Matter Nuclear Science • 2008 • Washington, DC • Yeong E. Kim

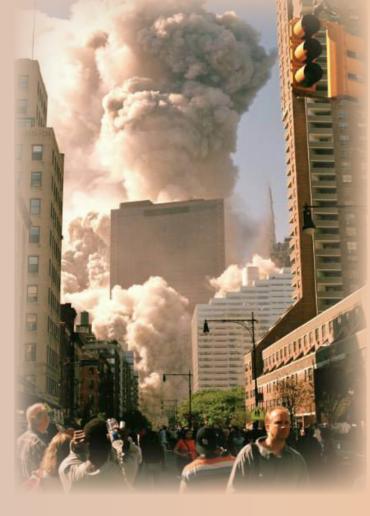
> Purdue Nuclear and Many-Body Theory Group (PNMBTG) Department of Physics, Purdue University West Lafayette, IN, USA

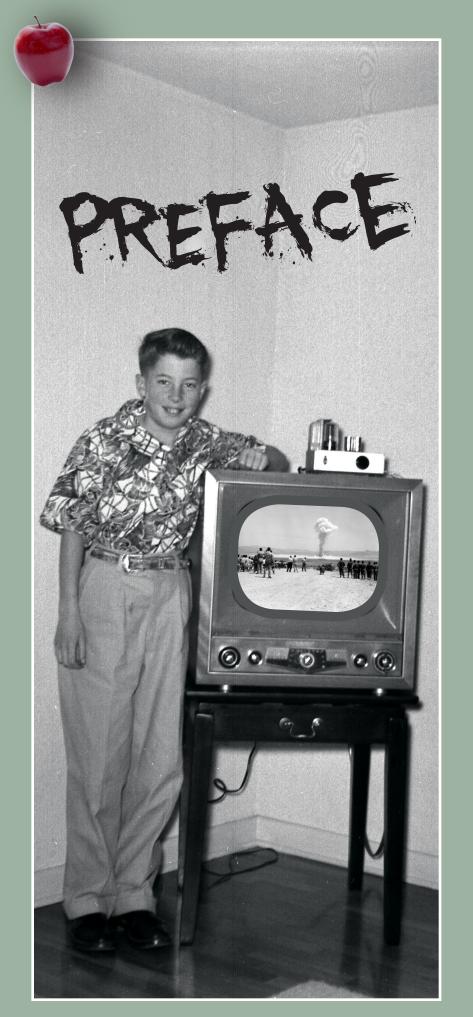
Free public access - full text at this link (last accessed March 1, 2012: http://lenr-canr.org/acrobat/KimYEtheoryoflo.pdf

Additional mainstream media sources whether they be internet web sites like Acronym.org.uk, the New York Times and/or Trade Publications among others have been used for certain credibly sourced quotes, for example a quote from Dr. Thomas Cahill, Delta Group, UC Davis, (*above*) and many others, for supporting statements they've confirmed in print, on video or in audio interview recordings.

Both images (this page) picture the 'spire,' well known because it turns to dust in just seconds in video circulating freely across the internet. On the left it's still standing looking whole and on the right it's turning to dust. Surely you've seen the videos?









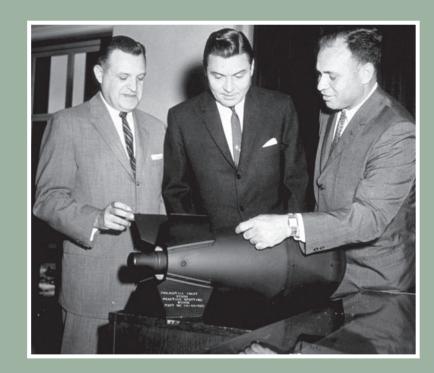
1950 Chevrolet Deluxe (above)

1946 Farnsworth model ET-066 AM Radio in wood (below)



We got the set (at left) in late 1952 or early 1953; the photo is probably from the same time and was taken in Eugene, Oregon. Until a local station started broadcasting, we only got a very fuzzy picture from a UHF station in Portland.

A Crosley telephone (above) is a 1950's original style desk phone converted to touch tone with original bell ring and volume buttons. Works without using electrical power. Available on the internet for \$165.



The Davy Crockett (*above*), 11 inches in circumference at its widest point and just 17" inches long (*31" total length end to end with parts not related to the bomb itself*) was a nuclear bomb fired from a 3-man tripod in 1961. Yet the 911 truth community discusses nuclear technology as though it came to a dead stop in 1945. But they love to discuss nano-technology as it applies to energetic compounds as though it were the greatest invention since sliced bread. Energetic compounds have been with us since the 1940s. They've been used in the mining industry for decades. I've read over 50 patents from the 1940s through 2000 and beyond on the internet. Nuclear power and nuclear demolition have been with us since the 1940s also. There aren't a great many patents on the internet to choose from in this area. Yet there is a great deal of complex physics which has forced me to, literally, learn a new language. My assertions herein are my own but they are also the result of personal relationships with physicists whose names will remain, in most cases, unknown and they're based on volumes of very good data.

Which industry has had the most money to advance its technology within the military industrial complex? Nuclear? Nano-Tech? Both? Nano started with nuclear technology, of course.

Wake up. Apple-sized nuclear devices, maybe smaller, do exist. I believe we can prove that here. In fact I believe we can prove that they were used.

## ABOUT THIS BOOK

Some of the information in this book is complex and much of it will be new. It was *all* new to me at one time. This is not a re-hash of my older books. It also contains dozens of neverbefore published Ground Zero images.

This book provides 5 basic reports: The Cancers, The Science, The Demolition, The Technology and Energetic Nano Compound Technology (mislabeled as thermite).

I prefer the term Metastable Intermolecular Compounds (MIC) or explosive Sol Gels at nano-scale but we'll discuss them as they relate to the newest incendiary advances, explosive technologies and practices directly as they might apply to the destruction of the Twin Towers.

This includes thermite use since the 1940s in an historic view of nano-technology beginning in 1959 and covering through 2000 and beyond including advances in theoretical technologies we now know were available in 2001. We also cover certain little known nuclear technologies unknown to most; technologies that leave little to no normally detectable radiation. Newer nuclear explosive technologies that have patterns of blast sequence, debris fields, radiation paths or lack thereof and illnesses that mimic what we've seen at Ground Zero in New York City as of January, 2012.

Certain well known and tested nuclear reactions leave little to no radiation and can produce radiation requiring only very specialized and highly sophisticated equipment to detect. Decay is complete in just a matter of days and then it's virtually undetectable.

The military industrial complex; companies such as Raytheon, Boeing, SAIC and many, many others, the military itself included, should be expected to have developed advanced technologies in the field of nano-explosive demolition by the year 2001 in both nano-energetics and nanonuclear devices; especially triggering and staging components. Miniaturization in the nuclear field would have been on the forefront of technology and, in fact, it was. Dr. Stephen Jones' experiments in the field of muon catalyzed nuclear fusion reactions was just that: the latest in fusion technology.

The simplest, least expensive and least time consuming method in terms of manpower to rig two enormous buildings for demolition would have been to use numerous easily manufactured and disguised micro-nuclear devices the size of an apple or a grapefruit, as described by Dr. Christopher Busby in a low of 29,000 metric tons and his high estimate was 144,000 X-Ray Fluorescence (S-XRF) these groups, together, provide

radio interview transcript within this text and as described in my public internet post to the CDC and NIOSH web sites for commentary regarding the Zadroga Bill and whether it should cover cancer. Cancer coverage was not included in the bill. Just a few individuals could have placed such easily disguised devices within the buildings in just a few days at the most. This explains the continued anomalous discussion regarding 'wiring' the buildings and how dozens of technicians would have been required, ad nauseam. Micronuclear electronic detonation in rapid sequence means two men could have prepared the buildings in a day or two at the most and the same two could have detonated the explosive sequence.

This becomes especially apparent after Dr. Neils Harrit (Jones, et al.) was asked to estimate the quantity of his iron oxide and aluminum energetic compound found in his dust samples or how much weight he thought

> Some of the research equipment used:

scanning electron microscopy (SEM) at USGS and Delta Group scanning transmission ion microscopy (STIM) at USGS and Delta Group high temporal resolution aerosol mass profiles (Mass STIM) (in vacuum) AT the Center for Accelerator Mass Spectrometry, at Lawrence Livermore National Laboratory proton elastic scattering analysis (PESA) (in vacuum) at LLNL Na-U, synchrotron x-ray fluorescence (in vacuum) (S-XRF) and digital Si (Li) analysis at Advanced Light Source, Lawrence Berkeley National Laboratory laser desorption ionization time-of-flight mass spectrometry (LDITOF/MS) (in vacuum) and synchrotron-induced X-Ray Fluorescence (S-XRF) at University of California

would have been used to demol-

ish the towers based on those samples. Dr. Harrit's low estimate in an email reply to T. Mark Hightower and others was a

a critical dust analysis. The work of dozens of people doesn't metric tons. The low estimate alone would have required need to be questioned. Especially once that work becomes exover 1,500 tractor trailer loads with crews working 100 days pressly revealing and enters the realm of criminal evidence. straight, 24/7, just to unload the delivery of 29,000 one metric These samples provide parts per million interpretations of over ton crates. Non-stop. 24/7. 100 days. That's if they could un-40 elements of World Trade Center Ground Zero ground dust load a one ton crate from inside the trailer at the loading dock on a rather complete and complex scale. The *atmospheric* dust to its final destination every 15 minutes. Working regular daily eight-hour shifts this process would have consumed over 300 analysis is in the nano-scale range and described in microns days. Just to unload the materials. The manpower alone makes with 100s of elements tested. With this data we know virtually everything there is to know about the dust from the destrucit less then likely. 29,000 metric tons seems wholly implausible if not impossible when even 10 tons becomes severely tion of the Twin Towers on 911 in New York City. AVARIS samples, other satellite photography and additional accepted intractable and difficult to explain. scientific data are also included in this analysis where noted. The dust tells a very certain and credible story as one would This report asserts its theories based on advances in nuclear technology, miniaturization and nanotechnology between the expect from the dust related to any spectacular explosive event.

late 1940s and 2000 and the elements discovered in the atmo-Would you care to know the content of Sodium, Potassium, spheric dust by the Delta Group and Dr. Thomas Cahill, nuclear Lanthanum, Cerium, Uranium, Yttrium, Beryllium, Zinc, Copatmospheric physicist, along with the United States Geologic per, Lead, Thorium, Molybdenum or any other element found Survey and their scanning electron microscopy (SEM) in the dust? Or the size of those elements? Or where exactly analysis of 35 dust samples mapped and retrieved they were dispersed and in what quantities across lower Manfrom Ground Zero. Also considered are the hattan? opinions of nuclear physicists whose names will remain unknown for now. These dust samples are simply the Would you be interested in why it matters? best data available for an independent analysis by civilians The parts per million dispersal of these elements as they appear like myself. With help.

The Delta Group and USGS data combined provide the largest total data-set on atmospheric samples and ground samples of dust ever conducted at Ground Zero, perhaps even anywhere in the world. Using a variety of advanced technoloincluding gies scanning electron microscopy (SEM), scanning transmission ion microscopy (STIM), to measure high temporalresolutionaerosol mass profiles (Mass STIM) (in vacuum) at the Center for Accelerator Mass Spectrometry, Lawrence Livermore National Laboratory (LLNL), Proton elastic scattering analysis (PESA) (in vacuum) at LLNL, Na-U, synchrotron x-ray fluorescence (in vacuum) (S-XRF), digital Si (Li) analysis at Advanced Light Source, Lawrence Berkeley National Laboratory (LBNL), laser desorption ionization time-of-flight mass spectrometry

(LDITOF/MS) (in vacuum) at UCD and Synchrotron-induced

across dozens of locations and how the amounts they appear in as they vary from place to place, increase and decrease, and correlate to one another and interact in a seemingly complex chemical stew with a carefully hidden and well organized human choreography seen only after and under difficult, tedious and very close human scrutiny is what we investigate.

For anyone with a serious interest in how the Twin Towers were destroyed this book and the numerous links within it are required reading for an accurate final analysis of what took place that day regardless of what your own final analysis might be. We know. We know because the dust weeps a tale ... vet people seem to want to exclude miniaturization and advances within the field of nuclear development as though nuclear technology dead stopped in the 1960s. Even 911 truth discussions about nuclear technology are steeped in 1960s rhetoric because that's when nuclear technology stopped being published, for the most part. But nuclear technological advances and the science of physics as it applies to explosives didn't stop by any means. This science kept right on moving along, perhaps even faster then most other technologies.

The advertising in this book is parody with the free positive economic benefit of exposure that any controversial advertising would provide for those lucky advertisers. As regards parody, I sometimes just can't help myself.

It's occasionally funny, non-routine and humorous and a little humor helps with the gloomy picture this book often paints. I do have a sense of humor. In the end, it's all in the 911 dust ... the answers are there, hidden in the dust. Along with what humor I might still have left.

# When you've tried everything ...



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and you have a nuclear zít



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#### etymology

noun (pl. -gies) the study of the origin of words and the way in which their meanings have changed throughout history. the origin of a word and the historical development of its meaning.

# THE ETYMOLOGY "GROUND ZERO"

The term "Ground Zero" always designated the precise center of an explosive nuclear detonation in every dictionary ever published, from the early 1940s until the year 2000 or so. From third grade elementary school when we hid under our desks after watching nuclear propaganda films in semi-serious almost frightening 'drills,' through adulthood when the thought of a nuclear war never entered my mind, the words had one singular meaning.

Newer dictionaries now have much broader definitions. At one time the definition was limited to, "the point on the earth's surface directly above or below an exploding nuclear bomb." The standard, conventional and customary dictionary definition has been changing over a rather short period of time in our very recent past. Why on earth would the entire population of the USA believe that the words suddenly and literally overnight took on a completely different meaning? People discuss symbolism with me all the time and I'm happy to admit that I'm not a big believer in symbolism when we discuss these issues but "Ground Zero?" Are you kidding me? It is, was and always has been used to describe the center of a nuclear explosion.

I suspect the word came from or was coined by; I mean the etymology of the term Ground Zero as it applies to the center of the tragic meltdown of the Twin Towers, came to us through people very closely related to the event that had every reason to use the term, perhaps a bit prematurely, certainly and genuinely unfortunate yet easily manageable. It caught on perfectly very early on to describe the site. Let's face it, a site where almost 3,000 Americans perished (over 1,000 more First Responders since but we won't discuss Iraq, Libya, Yemen, *Congo and 75 other countries we have an armed military presence in today*) desperately needed a name.

Someone, somewhere or someones somewhere with the power and wealth to control the message gave us the terms Ground Zero to describe Buildings One through Seven at the World Trade Center in lower Manhattan, New York City, New York.

It describes the site accurately: Ground Zero is and always has been the center of a nuclear event.



## IN THE BEGINNING ... FINE TUNING GEOPOLITICS USING DEAD CIVILIANS

Unlike aristocrats capitalists are not tied to a country or to the maintenance of a country. Capital is disloyal and mobile – it flows to where the most growth can be found, as it flowed from Holland to Britain, then from Britain to the USA, and most recently from everywhere to China. Just as a copper mine might be exploited and then abandoned, so under capitalism a whole nation can be exploited and then abandoned, as we see in the rusting industrial areas of dying America and already dead Britain. And we see capital flowing to Africa, Iraq, Kazakhstan and many other countries in the form of resource extraction; oil, gases, minerals, water, agricultural, manufacturing – even human resources are usurped for capital gains.

This detachment from country and people leads to a different kind of geopolitics under capitalism, as compared to aristocracy. A king goes to war when he sees an advantage to his nation in doing so. Historians can 'explain' the wars of pre-capitalist days, in terms of the aggrandizement of monarchs and nations.

A capitalist stirs up a war in order to make profits, and in fact our elite banking families have financed both sides of most military conflicts since at least World War One and before. Hence historians have a hard time 'explaining' World War 1 in terms of national motivations and objectives. Explaining it and any other wars since means admitting the mass murder of millions under the disguise of war. Propaganda still works, even in the alleged enlightened, intellectual and learned 20th and



they engineer boom and bust cycles, and they print money from nothing and then loan it at interest to governments.

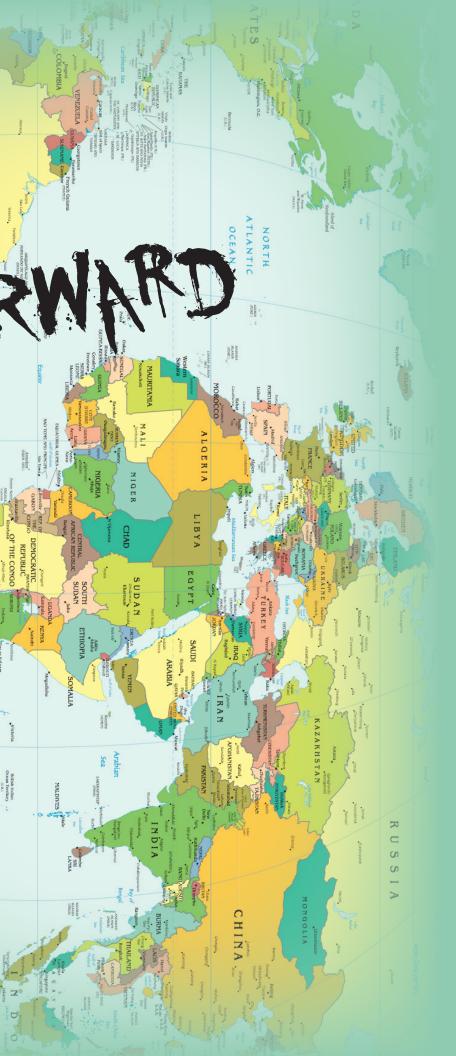
#### 21st centuries.

In pre-capitalist days warfare was like chess, each side trying to win. Under capitalism warfare is more like a casino, where the players battle it out as long as they can get credit for more chips, and the real winner always turns out to be the house – the bankers who finance both sides of the war (*with the corporations that make the bullets and bombs*) and they decide who will be the last man standing. Not only are wars the most profitable of all capitalist ventures; the most profitable of all human endeavors, but by choosing the winners, and managing the reconstruction, the elite banking families are able, over time, to tune the geopolitical configuration to suit their own interests and gobble up even more currencies and resources. Gold, silver, oil, gas, timber, minerals, agriculture, water, cheap labor (humans) ... these are their currencies.

Nations and populations are but pawns in their games. Millions die in wars, infrastructures are destroyed, and while the world mourns, the bankers are counting their winnings and making plans for their postwar reconstruction investments. It doesn't really matter who wins although that's decided well in advance. What matters is how much money is loaned to whom and what the price for those loans really is in terms of lost lives; murders for capitalism, essentially. The spoils matter.

From their position of power, as the financiers of governments, the banking elite have over time perfected their methods of control. Staying always behind the scenes, they pull the strings controlling the media, the political parties, the intelligence agencies, the stock markets, and the offices of government. And perhaps their greatest lever of power is their control over currencies. By means of their central-bank scam, print meney from nothing and then lean it at interest to governments.

The power of the banking elites is both absolute and wholly concealed ... much like the explosives in the Twin Towers ... wholly concealed. As an anarchist I'm opposed to capitalism and all of its components. While capitalism is an absurdity I've made it a point to include integrity and accuracy within these pages in spite of the capitalists urge to suppress it.





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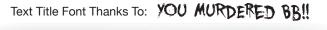
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American National Institute Of War-Making Crimes & Financial Offenses (ANIOWMCAFO) and the United States 'How'd They Do It?' Civilian Peace Authority (USHTDICPA)

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The Sound Track for this book is available for \$2.43 with any certified organic food donation to: Stop-Children-What's-That-Sound Music<sup>™</sup> only with the coupons on the following three pages. The sound track includes the world famous Buffalo Springfield and their 60s hit, "For What It's Worth," Thunderclap Newman's masterpiece, "Something In The Air" with Humble Pie belting out "30 Days In The Hole" A critical musical tour-de-force for anyone searching for the truth. All rights reserved through May, 2011.

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## ON THE BROTHERS GRIMM

Bush and Cheney, the Brothers Grimm as I like to hear them called, have repeatedly been referred to as less than stellar performers. They're bad-press magnets of course. In fact Bush is frequently referred to in civilian commentary across the internet as mindless, empty-headed, vacuous, vapid, dim, moronic, dopey, bird-brained, ignorant and just plain stupid.

In fact these men were brilliant and that they fooled many of us as regards their brilliance is a significant characteristic of their brilliance-in-action. They're master social, financial, global currency, commodity and population manipulators capable of amassing fortunes which they use to amass more fortune. The longer they do it the better they get. Like anything.

To call them less-than-brilliant, considering the master military operation that 911 was is to short sell the complexities of the event itself.

It short sells the complexity of the manipulations and propaganda dividing the post-911 truth movement right up until today which was surely pre-planned with the same or even greater vigor, exactitude and perfection than that used to plan 911 itself.

It makes sense. Highly sophisticated planning, strategy, social modeling potentials, societal considerations, sociology, human psychology and manipulation schemes were deployed post-911. Confuse us all.

Just Brilliant.

Ladies and Gentleman, synchronize your watches ...





## JUST ONE LAST WORD ON THE PENTAGON, OR TWO ...

This book seeks to cover only the Twin Towers but the Pentagon is important and we need a final word. The Pentagon was not hit by a Boeing commercial jet. If you've read this far you probably already know or suspect that. There isn't a lot more to say about the issue. The mainstream media, all of them, parrot the same mantra that a Boeing 757 hit the Pentagon early on the morning of September 11th, 2001 and of course this is patently absurd and clearly impossible.

Pictured below (left) in a rarely reprinted photo is an enhanced enlargement of the initial alleged impact sight which shows clearly and unequivocally that a Boeing 757 or any other commercial aircraft did not hit the building. What did hit the Pentagon remains a mystery still today and the damage is suggestive of internal detonations combined with the possibility of a small external missile of some type. Explosives within the building, as outlined perfectly by Barbara Honegger, make it clear there were bombs pre-planted inside the Pentagon. Only the military industrial (*corporate political, financial banking, pharmaceutical health care, petroleum and in-ground resources, commodities and McBuyMeNow and ConsumerMart*) complex could accomplish such a feat.

The circled hole is where Ms. April Gallop walked out of the Pentagon carrying her young child. She saw absolutely no evidence of an aircraft strike or crash. No bodies. No plane parts. With attorney William Veale she sued Dick Cheney, a general and one other person related to the event in federal court. I exchanged a couple of emails with Mr. Veale. The case was dismissed; thrown out would be more accurate, notwithstanding that the un-hon-

this hole is where Ms. April Gallop crawled with her infant child out of the Pentagon before all of the foam had been sprayed and before many rescue personnel had arrived she exited the building just a few moments after crawling through the debris in her office to locate her infant child



orable Judge Walker, cousin to George Bush, was one of the three-panel federal judges refusing to even examine any evidence. Veale was eventually fined \$10,000 as punishment for filing the suit.

The lack of aircraft parts, seats, bodies, other expected debris from a 757 along with a pristine Pentagon lawn, yada, yada, yada, doesn't compare to the initial impact sight seen in the image at left. A Boeing 757 did not hit this building. That is as obvious as the sun rising.

Even the glass windows above the alleged impact sight are still unbroken meaning even this crime was poorly choreographed and executed when scrutinized closely. There were bombs in the building, like Ms. Honegger says.

Source:

http://www.datafilehost.com/download-0c99b14c.html

and

http://www.datafilehost.com/downloadb498239d.html

It's my understanding that an anonymous benefactor is offering a 1 million dollar reward for anyone that can find the Boeing on the following three pages. Contact me for more info.

## DAVID MARRA AND TIME MAGAZINE TELL A LIE

David Marra, 23, an information-technology specialist, had turned his BMW off an I-395 exit to the highway just west of the Pentagon when he saw an American Airlines jet swooping in, its wings wobbly, looking like it was going to slam right into the Pentagon: "*It was* 50 feet off the deck when he came in. It sounded like the pilot had the throttle completely floored. The plane rolled left and then rolled right. Then he caught an edge of his wing on the ground. There is a helicopter pad right in front of the side of the Pentagon. The wing touched there, then the plane cart-wheeled into the building."



S. Star

8

# RALPH WILEY AT ESPN TELLS LIES

"What — or who — caused Flight 77 to hit ground first, diffusing most of its destructive energy before it slammed into the Pentagon? If Flight 77 hits the Pentagon flush, like Flight 175 out of Boston hit World Trade Center tower No. 2 at 9:08 a.m., then we woiuldn't have a Pentagon anymore."

Millio





# CBS LIES

"The jetliner disappeared from radar at 9:37 and less than a minute later it clipped the tops of street lights and plowed into the Pentagon at 460 mph. Some eyewitnesses believe the plane actually hit the ground at the base of the Pentagon first, and then skidded into the building."



The Powers That Be fear that we, the masses, will find out the truth and we'll realize that we have nothing to lose with regimes like this in power. Every 911 truther is only helping these regimes, these mass murderers, by failing to comprehensively investigate the nuclear component of the World Trade Center demolition on 911 in New York City while accepting unproven or impossible theories [29,000 metric tons (Harrit 2011)], or in many cases by saying let's not dwell on this because it's too complex. And it is. That's what makes it so intriguing. The more I explore this complex material and the more I learn about fusion, fission, ionizing radiation, thermal capacity, disease and illness and the effects of various nuclear devices the more I realize and confirm that the nuclear component to the events of 911 is the only real truth we seem to be missing, still. Yet it's true. Here in these pages we'll prove it to your satisfaction.



## WHY THE TRUTH MATTERS

The truth matters, in and of itself — and inherently includes an infinite number of plausible and often personal reasons, some known and some unknown at any given time.

The truth matters in the legal sense, as this is also a legal matter of mass murder and high treason, and war-making crimes against humanity. And actual criminal details are part of catching and trying the perpetrators — even if the trials are in other countries or carried out by regular citizens groups here in the US.

The truth matters to the World Trade Center First Responders (*and their families*) who are dead (*1,003 as of March 1, 2011*) and dying of rare cancers. We might also expect others living and working in New York City will be experiencing higher rates of rare cancers well into the future. If my theories are correct, they are dying from cancers caused by exposure to nuclear radiation – in particular a newer and very short-lived radiation resulting from fusion of Deuterium and Tritium and which results in high levels of Uranium and Tritium, both of which were, indeed, found in high levels at Ground Zero. The truth matters for the medical treatment and prevention of disease. The truth matters so we can prevent this from happening again.

The truth matters because the latest technology in nuclear bombs being used on innocent American citizens will outrage Americans more than anything else. Much more than learning about energetic compounds in the dust. Is not the most important goal in this to cause the people to wake up and act, before it's too late? Nuclear annihilation and radiation are perhaps the most odious things conceivable. This is precisely why the regime put out so many disinfo agents and theories! The pancakes, thermite, and DEW theories were all put out to keep the people from finding out that the World Trade Center and its thousands of human inhabitants were nuked — vaporized, irradiated — like they were worthless pieces of less than nothing at all. Skin bags.

# ONCE UPON A TIME ...

It was precisely 9:59 a.m. on Tuesday, September 11th, 2001, when someone somewhere pressed a button that sent a single coded radio signal to a small receiver inside the worlds smallest and most sophisticated explosive device ever invented; a neutron bomb the size of an apple located on the 80th floor of the North Tower of the World Trade Center in the largest financial center in the world; New York City exploded.

An unseen circuit closed and a primer fired, then one-millionth of a single second later, a terrible fireball formed on the 80th floor of the Tower. The fireball was small.

Less than six inches in diameter and burning at a staggering 10 million+ degrees, the fireball was a perfect shimmering sphere, unseen, made possible by a fusion reaction between Tritium and Deuterium leading to a very short lived fission reaction. Just 6 inches across, this was the latest technology we've developed. Micro Nuclear Devices.

Five microseconds passed while this fusion monster from hell expanded, then the already-cooling fireball sent it's searing, invisible and angry radioactive heat throughout the structural steel vaporizing everything in its path including all of the human victims standing within 100 feet while simultaneously spreading tons of deadly microscopic building shrapnel in a lethal arc throughout several floors of the Tower.

Less than ten-millionths of a second after the monster achieved critical mass, its searing thermal wave turned everything to plasma, dust, their base elements, in the immediate area of floors 75 through 85 (approximate). This was repeated sequentially 10 to 15 more times per building with just fractions of a second between detonations on every tenth floor. A total of less than 10 seconds. It spontaneously ignited automobiles parked blocks away from Ground Zero. Witnesses describe people vaporized. yet neutrons pass through paper thus we had un-burned paper all over NYC. But as you will read later in this report, no ordinary Geiger counter from any nation could detect radiation from this weapon.

First tested in 1961, this weapon reduced radioactivity by 97% and newer technologies assist to produce short-lived radioactivity that can't be detected by a Geiger counter; it requires sophisticated equipment few people possess. Detectable radioactivity lasts just 5 or 6 days ...



It won't pass through skin but when it's inhaled it's deadly.

lower Manhattan, New York City, NY, September 11, 2001

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Notice that the facade, the components that make up the facade, are sheared off of the building from the force of the demolition. Just imagine the force of microscopic debris that impacted this building to cause the damage you see to the facade pictured, as though it were ripped away (*this high quality image can be zoomed repeatedly and you should closely examine the dark impact spots on the lower facade and the exposed construction adhesive with loose bricks behind it on the upper facade. Look at the car, the sheet metal to the left and the cracked window sill on the right and study the details*). This building is just blocks from Ground Zero and this building experienced severe exterior structural damage from just dust and debris? Energetic compounds alone can not produce the total thermal output required to cause this type of damage, blocks away from the Towers. Look closely at the cracked window sill at the bottom right and think about the impact pressure, imagine the force involved required to produce that damage ... in less than ten seconds.

# JAPANESE ACTIVISTS CLAIM THAT 911 RELATED CANCERS ARE SIMILAR TO THE ILLNESSES IN HIROSHIMA AND NAGASAKI AFTER THE DROPPING OF NUCLEAR BIOMBS IN WORLD WAR II

New York City's mainstream media reported in June 2006 nearly 300 WTC responders including cops, fire fighters and construction workers have been diagnosed with cancer, and 33 of them have already died of cancer. Many of them are diagnosed with Blood Cell cancer such as Leukemia and Plasma cancer or Multiple Myeloma. Earlier in April the same NY media also reported 6 police officers died of brain cancer. Americans who know nothing about Hiroshima and Nagasaki would instantly attribute this to airplane fuel's Benzene contents.

Meanwhile many of the mainstream doctors and specialists have given their seal of approval that WTC dust carcinogen poses a very small cancer risk. Numerous different rare cancers only associated with radiation exposure would be mathematically impossible. These several types of cancer are very familiar to we, Japanese, who once experienced the disastrous effect of two different types of nuclear bomb ionizing radiation. A Plutonium bomb and a Uranium bomb. What kind was yours? (See: Ionizing Radiation 911 link on following page)

Neutron ray exposure can evoke such disease 5 -10 years after exposure to radiation. The same thing is happening among WTC responders 5 years after their services at Ground Zero. Furthermore, it seems many of the responders are also suffering from heart disease. And we had the same clinical records among Hiroshima patients. It also indicates what the real cause of WTC syndrome is.

#### Environmental radiation induced non-Hodgkin lymphoma

According to sources who worked with the Federal Emergency Management Agency (FEMA) at Ground Zero on and after 911, residents of southern Manhattan and rescue and clean-up workers involved in the recovery operations at the site of the former World Trade Center are experiencing an unusually high rate of non-Hodgkin lymphoma and Multiple Myeloma – rare cancers that are common among individuals who have been exposed to extremely high levels of ionizing radiation, such as that from nuclear blasts and major nuclear reactor leaks. In addition to the respiratory problems among rescue workers at Ground Zero who breathed toxic "pulverized" concrete and other debris into their lungs, the radiation cancer is of extreme interest to researchers who suspect that the World Trade Center towers and Building 7 were brought down with the help of high energy releases. Wayne Madsen Report (WMR )spoke to a number of individuals who were at Ground Zero on 911 who are now experiencing symptoms resulting from severe damage to their immune systems -- a condition that is common among those exposed to high levels of radiation.

Sources close to FEMA in New York confirmed to WMR that the lymphoma cases are believed to be the result of a release of extremely high levels of radiation from a series of nuclear events on the morning of 911. They believe that explains the reason for the "pulverization" of concrete, molten metals, pyroclastic surges and fallout, and other anomalies resulting from the catastrophe. It was also pointed out that some vehicles parked on the west side of the World Trade Center were "fused" on the sides facing the towers -- the doors being melted into the body frames. Other cars parked nearby were not similarly affected. There is also evidence of explosions and fires on top of the Woolworth Building, three blocks away from the World Trade Center, during the attack on the towers.

#### Fascist oppression of the critical collection and review of evidence

FEMA officials from Washington, DC were quick to ban any unofficial photography in southern Manhattan in the weeks following 911. Any photographers who had not received prior permission from FEMA to be in southern Manhattan found their photographic and filming equipment confiscated by the government.



# ~ RADIATION CONTRMINATES THE WORLD TRADE CENTER TOWERS ~ 911 SICKNESS IS CONSISTENT WITH ENVIRONMENTAL RADIATION CONTRMINATION

A group of 9/11 responders has contracted blood cancers at an unusually young age, and top doctors suspect the disease was triggered by an unprecedented "synergistic mix" of toxins at the World Trade Center site. The growth of these cancers among Ground Zero workers, and others, are also consistent with exposure to environmental radiation contamination associated with the destruction of the 911 targets.

The WTC Medical Monitoring Program is now studying a group of Ground Zero workers, including cops, construction workers and volunteers, suffering from cancers such as leukemia, lymphoma and multiple myeloma.

"The kind of thing that worries us is that we have a handful of cases of multiple myeloma in very young individuals... a condition that almost always presents late in life," said Dr. Robin Herbert, co-director of the program at Mount Sinai Hospital. He also stated:

"That's the kind of odd, unusual and troubling finding..."

The Deuterium-Tritium fusion reaction could be developed to cause minimal and virtually undetectable neutron radiation, especially with any standard radiation testing equipment, which may even last for a maximum of five or six days, possibly less.



The base clouds developed rapidly, advancing through the streets, emanating from subway exits

#### Ionizing Radiation 911

Part 1: http://www.box.net/shared/9ilkg3pkfs

Part 2: http://www.box.net/shared/h5gvyev9q8

Part 3: http://www.box.net/shared/ctdmz7la4j

## FIREFIGHTERS RADIATION CANCERS "OFF THE SCALE"

Firefighters who recovered bodies at Ground Zero are developing cancer at a faster rate than those who worked before the atrocity, medical officials have revealed.

A seven-year study by the New York Fire Department has claimed that there are 'unusual rises' in the number of cancer cases among firefighters who worked in the aftermath of 9/11.

Some types of cancer among 9/11 firefighters are even 'bizarrely off the charts', according to sources who have seen the as-yet-undisclosed federal-funded study.

Dr. David Prezant, the Fire Department's chief medical officer, has reportedly said that cancer cases across 'all ranks' of the FDNY who worked at Ground Zero are 'up significantly'.

It is thought that the report – due to be officially disclosed in time for the 10th anniversary of the terror attacks in September – cites unusual rises in leukemia, non-Hodgkin's lymphoma and multiple myeloma; three cancers known to increase together in people exposed to radiation.

The report also states increases in esophageal, prostate and thyroid cancers. These cancers also increase in people exposed to radiation.

Although officials have yet to confirm the increase, sources who attended a recent steeringcommittee meeting said Dr. Prezant's report will document the cancer increase.

One source told the New York Post: 'The only conclusion that could have been reached was that there was an increase in the cancer rate for firefighters after 9/11.'

Minutes of the meeting quote Prezant as saying that 'we have completed our seven-year cancer study' and that he planned to present it to the fire unions.

A doctor from the National Institute for Occupational Safety and Health is said to have asked Dr. Prezant: 'In the past, you mentioned about the rates before being somewhat similar — what led to the change that you noted the increase?'



Prezant said researchers have compiled medical records for three years and had access to state cancer registries, though New York's is three years behind.

Dr. Prezant reportedly told the group: 'Those things keep adding cases. The report would be the first to document a cancer-rate increase among rescue and recovery workers.

The city recently settled lawsuits by 10,000 WTC workers, more than 600 of whom have developed cancer. But officials have so far insisted there is no scientific proof that Ground Zero smoke and dust caused cancer.

An FDNY spokesman gave a statement for Dr. Prezant, saying: 'The study is ongoing, and no conclusions have been reached on whether cancer rates have increased for firefighters.'

But fire union bosses in New York have expressed their concern about the findings.

Al Hagan, head of the fire-officers union, told the New York Post: 'I'm led to believe that the numbers for those cancers across all ranks in the Fire Department of people who worked at Ground Zero is up significantly, and we're all very concerned about it, as are our families.'

Steve Cassidy, president of the firefighters union, said Ground Zero's 'toxic stew' has proven lethal.

He said: 'It's a fact that New York City firefighters are dying of cancer in record numbers.

'We have buried 10 firefighters in just the last 15 weeks, seven with cancer. On Sept. 10, 2001, they were young, healthy firefighters.'

In 2007, doctors at Mt. Sinai Medical Center, which monitors World Trade Center rescue workers, noted blood cancers like multiple myeloma, which normally strikes in the 60s or 70s, were being found in relatively young officers. The New York state Health Department has confirmed that 345 Ground Zero workers have died of various cancers as of June 2010.

## The

## New York State

## Health Department

## has confirmed

# that 345 Ground Zero

## First Responders

have died

of various cancers

## as of June 2010.

# HUNDREDS OF 911 FIRST RESPONDERS RAPIDLY DIE OF CANCER

New York's emergency services were among the first on the scene of the 911 disaster but put their personal safety in jeopardy. Those involved in the rescue and clean-up operation quickly became national heroes.

But now 85 per cent of them are suffering from rare cancers, sometimes more than one, and lung diseases which they say were caused by the huge clouds of dust. Those people are now calling on the state for medical support. So far the US government has refused to help, as might be expected based on past performance.

John McNamara is the most recent ground zero first responder to die from cancer. He battled to save lives that day but lost his own battle at aged just 44 - a victim of his own bravery. His courage was commemorated at St. Patrick's cathedral, where McNamara's funeral took place.

Today his son Jack McNamara is still too young to understand his father's actions that day. All he knows is that dad was a firefighter and he's dead.

"I and the other families of the victims are so devastated that so many of these valiant firefighters who struggled to find my son and to save others are now paying the price," says Sally Reigenhardt whose son died in the 911 attacks.

City, state and federal officials have not acknowledged a direct link between the cancer cases and ground zero toxins. They will not discuss radiation. Ever. Congress has yet to approve 911 health legislation calling for federal financial coverage of health costs for rescue workers.

John McNamara spent about 500 hours at ground zero aiding in rescue and recovery. Nearly eight years later, the scene here is all about rebuilding. But as the hole in the ground grows smaller the list of 911 related deaths is growing longer and longer.



"The government pays for these and I pay for these"

Retired police officer Mike Valentin has had four biopsies for a precancerous tumor in his throat and has to take 15 pills a day. He calls 911 America's Chernobyl.

"The people that will die from illnesses will surpass the number of people that were killed on 911. I am talking about thousands, tens of thousands of people that will come down with cancers," forecasts 911 first responder Valentin.

> Valentin says he spent four months digging through debris at ground zero, after US officials announced the air was safe. The father of three, says he spends \$15,000 a year on medication the government won't cover and that the US leaders have turned their backs on the heroes they promised never to forget.

"Our families are not looking to put Mercedes Benz on the front yard. We're not looking to take European trips," says Valentin, "We're looking to take care of our families when we die."

With the time he has left, Mike Valentin vows to continue fighting for the compensation he believes 911 first responders deserve. Valentin founded a 911 police foundation to help retired first responders in need of medical assistance – among them Patrick Triola who spent months searching the ground zero and then became a victim of kidney cancer.

During those days, Stephen Grossman's son Robert was also aiding in rescue and recovery. He was diagnosed with terminal brain cancer in 2006, at just 39 years old. Today, he remains in a coma.

Cancer deaths, rapid onset rare and various cancers are off the charts. Cancers specific to radiation exposure and the mainstream still fails to acknowledge the most obvious well-known, documented cause for these various rare cancers.

## MULTIPLE MYELOMA IN THE GENERAL POPULATION — MULTIPLE MYELOMA IN FIRST RESPONDERS —

In the general population Myeloma occurs at the rate of 3-9 incidents per 100,000 people. That rate also occurs 99% of the time in people over 65. Just 1% are under the age of 65 in the general population and the average age of those afflicted is 71.

See: Multiple Myeloma - A CDC Study of K-25 Workers http://www.cdc.gov/niosh/oerp/pdfs/k25\_7-06-09.pdf

In the population of 40,000 First Responders the rate is 1 in 534 people. This means 75 First Responders *(Source: John Feel, Feelgood Foundation, March 1, 2010\*)* have died from Myeloma. What's more, they have all been between 37 and 60 years of age with most under 55. These are extraordinary figures, unprecedented, and this report confirms why this is happening. Worse, there are approximately 10,000 sick First Responders today and many that have already died have succumbed to not one, not two, but sometimes 3 different rare cancers.

\*As of March 1st, 2011, according to a telephone conversation I had with John Feel of the Feelgood Foundation for First Responders there were 1,003 dead First Responders.<sup>JP.</sup>

Multiple Myeloma in First Responders occurs at an unprecedented rate of over 180 people per 100,000.

The pelvis (right) contains numerous lytic lesions without reactive sclerosis which have an almost "soap-bubbly" appearance in the ischia. There are also lytic lesions in both proximal femora. This is Multiple Myeloma.

According to the CDC and the Mayo Clinic Staff the exact cause isn't known but doctors do know that multiple myeloma begins with one abnormal plasma cell in your bone marrow — the soft, blood-producing tissue that fills in the center of most of your bones. This abnormal cell then starts to multiply.

We also know that radiation exposure causes a measurable increase in even minimally dosed nuclear workers based on a CDC nuclear industry study on Multiple Myeloma and nuclear workers who were briefly exposed to almost negligible doses, provided with immediate cleanup and/or quarantine and the best care and analysis because they worked within the nuclear industry. Even under these conditions Multiple Myeloma increased a measurable four percent. We also know from vast comprehensive studies of Chernobyl, Hiroshima and Nagasaki.

Because abnormal cancerous cells don't mature and then die as normal cells do, they accumulate, eventually overwhelming the production of healthy cells. In healthy bone marrow, less than 5 percent of the cells are plasma cells. But in people with multiple myeloma, more than 10 percent of the cells may be plasma cells. Because myeloma cells may circulate in low numbers in your blood, they can populate bone marrow in other parts of your body, even far from where they began. That's why the disease is called multiple myeloma. Uncontrolled plasma cell growth can damage bones and surrounding tissue. It can also interfere with your immune system's ability to fight infections by inhibiting your body's production of normal antibodies. Researchers are studying the DNA of plasma cells to try to understand what changes occur that cause these cells to become cancer cells. Though they haven't yet discovered the cause of these changes, they have found that almost all people with multiple myeloma have genetic abnormalities in their plasma cells that probably contributed to the cancer. Maybe.

In the **general population** Myeloma occurs at the rate of 3-9 people per 100,000 people. That rate also occurs 99% of the time in people over 65. Just 1% are ever under the age of 65 in the general population. The average age of those afflicted is 71.

**First Responder** Myeloma Rate = 180 per 100,000 **Ages At Diagnosis or Death** = 37 to 60 years of age



The genetic abnormalities associated with multiple myeloma include:

- chromosome (translocation)
- Extra copies of certain chromosomes (hyperdiploidy)
- An abnormality in which part or all of chromosome 13 is missing

Multiple myeloma (deteriorated "soap-bubbly" appearance in the bones, above and left) almost always starts out as a relatively benign condition called monoclonal gammopathy of undetermined significance (MGUS). In the United States, about 3 percent of people older than age 50 have MGUS. Each year, about 1 percent of people with MGUS develop multiple myeloma or a related cancer. MGUS, like multiple myeloma, is marked by the presence of M proteins — produced by abnormal plasma cells — in your blood. However, in MGUS, no damage to the body occurs.

Total US Cancer Deaths Per Year = 5.71 per 100,000 people per YEAR First Responder Cancer Deaths = 862 per 100,000 people in just 10 YEARS First Responder Deaths = 86.2 per 100,000 people per YEAR\*

• A defect related to chromosome 14 in which a piece of one chromosome moves to a different

#### A connection with MGUS

\* The authors use a cohort of 40,000 total First Responders, a total of 345 cancer deaths found printed in multiple credible mainstream sources to reach a total cancer death rate in a cohort of 100,000 (2.5 x 345 = Deaths Per 100k) of 862.5 total deaths rounded to the lowest 100th or 862 even. Over a ten year span that equates to a rate of 86.2 cancer deaths per 100,000 adults which is, considering some of the short periods of rapid cancer growth, unprecedented in any cohort or similarly selected population. The authors use the more conservative estimate based on 40,000 First Responders as opposed to the mainstream's erroneous use of '10,000' when describing the First Responders. While our use of 40,000

as the First Responder cohort produces more conservative results, the results are unprecedented nevertheless.



# This Is What First Responders Experience:

A building (left) impaled by a massive ejection of Twin Tower structure

## POSSIBLE CAUSES OF MULTIPLE MYELOMA IN FIRST RESPONDERS

We do not know what causes Multiple Myeloma except that we do know, based on CDC studies, that radiation increases the risk and does cause Multiple Myeloma in even minimally irradiated Nuclear Industry employees. Multiple myeloma is not contagious. Most people who develop multiple myeloma have no clearly identifiable risk factors for the disease except for nuclear industry workers exposed to radiation.

See: Multiple Myeloma - A study of K-25 workers - http://www.cdc.gov/niosh/oerp/pdfs/k25 7-06-09.pdf

Some factors that may increase your risk of multiple myeloma include:

• Age. The majority of people who develop multiple myeloma are older than 50, with most diagnosed in their mid-60s. Few cases occur in people younger than 40.

- Sex. Men are more likely to develop the disease than are women.
- Race. Blacks are about twice as likely to develop multiple myeloma as are whites.

• History of a monoclonal gammopathy of undetermined significance (MGUS). Every year 1 percent of the people with MGUS in the United States develop multiple myeloma.

• Obesity. Your risk of multiple myeloma is increased if you're overweight or obese.

Other factors that may increase your risk of developing multiple myeloma include exposure to radiation and working in petroleum-related industries. Multiple myeloma is cancer of the plasma cells in bone marrow

## POSSIBLE CAUSES, INCIDENCE, AND RISK FACTORS

Plasma cells help your body fight infection by producing proteins called antibodies. In multiple myeloma, plasma cells grow out of control in the bone marrow and form tumors in the areas of solid bone. The growth of these bone tumors makes it harder for the bone marrow to make healthy blood cells and platelets. Multiple myeloma mainly affects older adults. Past treatment with radiation therapy raises your risk for this type of cancer.

## FIRST RESPONDER SYMPTOMS

Multiple myeloma causes anemia, which makes a person more likely to get infections and have abnormal bleeding. As the cancer cells grow in the bone marrow, bone or back pain, most often in the ribs or back.

If the bones in the spine are affected, it can put pressure on the nerves, resulting in numbness or weakness of the arms or legs.

## OTHER SYMPTOMS INCLUDE:

- Bleeding problems
- Fatigue due to anemia
- Fevers without any other cause
- Shortness of breath due to anemia
- Unexplained broken bones

## FIRST RESPONDER SIGNS AND TESTS

Blood tests can help diagnose this disease. They may include:

- Complete blood count (CBC)
- immunoglobulins (nephelometry)
- Bone x-rays may show fractures or hollowed out areas of bone.
- Bone density testing may show bone loss.

The goal of treatment is to relieve symptoms, avoid complications, and prolong life. People who have mild disease or where the diagnosis is not certain are usually carefully watched without treatment. Some people have a slow-developing form of multiple myeloma that takes years to cause symptoms. First

**Responders** are experiencing rapid onset.

Medications for the treatment of multiple myeloma include:

- (Velcade) can be used alone or combined together.
- Bisphosphonates (pamidronate) to reduce bone pain and prevent fractures.
- Radiation therapy may be done to relieve bone pain or treat a bone tumor.

Two types of bone marrow transplantation may be tried:

- has been shown to increase survival.
- chance of a cure.
- kidney function. They should also be cautious when having x-ray tests that use contrast dye.

## FIRST RESPONDER EXPECTATIONS (PROGNOSIS)

Survival of people with multiple myeloma depends on the patient's age and the stage of disease. Some cases are very aggressive, while others take years to get worse. Over 75 First Responders have died from Multiple Myeloma. Chemotherapy and transplants rarely lead to a permanent cure.

## NORMAL COMPLICATIONS

- Bone fractures
- High levels of calcium in the blood, which can be very dangerous
- Increased chances for infection (especially pneumonia)
- Paralysis from tumor or spinal cord compression

• Blood tests to check calcium level, total protein level, and kidney function

• Blood and urine tests to check to identify proteins, or antibodies (immunofixation) • Blood tests to quickly and accurately measure the specific level of certain proteins called

If your doctor suspects this type of cancer, a bone marrow biopsy will be performed.

## FIRST RESPONDER TREATMENT

• Dexamethasone, melphalan, cyclophosphamide, doxil, thalidomide, lenalidomide (Revlimid), and bortezomib

• Autologous bone marrow or stem cell transplantation makes use of one's own stem cells. In younger patients, it

• Allogeneic transplant makes use of someone else's stem cells. This treatment carries serious risks but offers the

• People with multiple myeloma should drink plenty of fluids to prevent dehydration and help maintain proper

• Kidney failure is a frequent complication. Other complications may include:

## FDNY STUDY CONFIRMS RAPID RISE IN CANCER AFTER 911

A city official for the first time is revealing a rise in cancer among firefighters who served at Ground Zero. Dr. David Prezant, the Fire Department's chief medical officer, has found that firefighters who dug for victims at the World Trade Center are getting cancer at a higher rate than firefighters before 911 – and some types of cancer are "bizarrely off the charts," say sources briefed on the seven-year, federally funded study. Prezant discussed the findings with members of a WTC medical-monitoring committee last month, several attendees said. He has not yet disclosed the data, but sources say he has cited unusual rises in three blood cancers – leukemia, non-Hodgkin's lymphoma and multiple myeloma – as well as esophageal, prostate and thyroid cancers.

The bombshell report, planned for publication around the 10th anniversary of 911, would be the first to document a cancer-rate increase among rescue and recovery workers.

The city recently settled lawsuits by 10,000 WTC workers, more than 600 with cancer.

But officials have so far insisted there is no scientific proof that Ground Zero smoke and dust caused cancer. An FDNY spokesman gave a statement for Prezant, saying, "The study is ongoing, and no conclusions have been reached on whether cancer rates have increased for firefighters."

But three who attended the March 2 steering-committee meeting told The Post that Prezant reported otherwise.

"The only conclusion that could have been reached was that there was an increase in the cancer rate for firefighters after 911," one said.

Minutes of the meeting quote Prezant as saying that "we have completed our seven-year cancer study" and that he planned to present it to the fire unions, FDNY brass and Mayor Bloomberg's office. A doctor from the National Institute for Occupational Safety and Health asked Prezant, "In the past, you mentioned about the rates before being somewhat similar – what led to the change that you noted the increase?" Prezant said researchers have compiled medical records for three years and had access to state cancer registries, though New York's is three years behind. "Those things keep adding cases," he told the group.

Al Hagan, head of the fire-officers union, said he's alarmed.

"I'm led to believe that the numbers for those cancers across all ranks in the Fire Department of people who worked at Ground Zero is up significantly, and we're all very concerned about it, as are our families," he said.

Steve Cassidy, president of the firefighters union, said Ground Zero's "toxic stew" has proven lethal.

"It's a fact that New York City firefighters are dying of cancer in record numbers," he said. "We have buried 10 firefighters in just the last 15 weeks, seven with cancer. On Sept. 10, 2001, they were young, healthy firefighters."

FDNY Lt. Randy Wiebicke of Ladder Co. 1, who raced to the Twin Towers after the attacks, died March 2 from an aggressive form of multiple myeloma.

"I've seen so many firemen and cops at the hospital," said his widow, Madeline. She said Wiebicke worked nonstop the first few days on the WTC pile and at least two 24-hour shifts a week for months. "He came home with his gear, car and everything covered in gray dust," she recalled.

In 2007, doctors at Mt. Sinai Medical Center, which monitors WTC responders other than FDNY, noted blood cancers like multiple myeloma, which normally strikes in the 60s or 70s, among relatively young cops.

> The state Health Department has confirmed that 345 Ground Zero workers have died of various cancers as of June, 2010, almost two years ago.

## THE GRIM TOLL

The following figures are under-reported and have increased since June, 2010

The state Health Department is studying 345 cancer deaths of 911 responders as of June 2010. A breakdown of the most common cancers and the number of deaths attributed to them according to the State Health Department, which are almost 2 years old as of this writing, are what we have for now:

- Digestive organs (esophageal, stomach, colon, liver, pancreas):
- Respiratory (lung, larynx):
- Blood cell (non-Hodgkin's lymphoma, multiple myeloma, leukemia):
- Urinary tract:
- Brain:
- Cancers Not Listed
- Total Cancer Deaths studied June 2010

The State Health Department

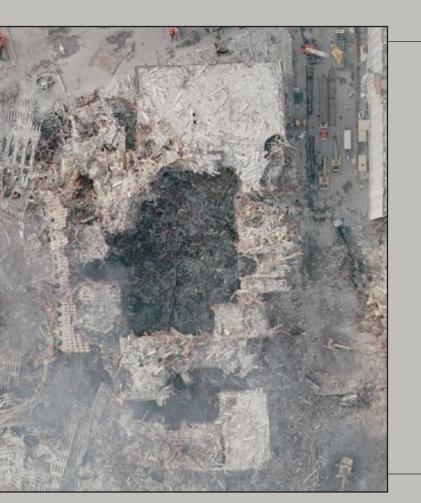
is studying

345 Cancer deaths 911 FIRST RESPONDERS

as of

**J**une 2010 (as of two years ago)

and there were and there are many more to come



97 deaths 96 deaths 49 deaths 19 deaths 18 deaths 66 deaths

345 deaths

Building 6 - The One That's Never Discussed

## THE MAINSTREAM INVESTIGATES THYROID CANCER

(New York, NY) - Health officials are investigating whether toxic conditions at Ground Zero may have triggered a wave of thyroid cancer cases among 911 rescue and recovery workers. The disease affects the thyroid gland at the base of the neck.

The "New York Post" reports the WTC Medical Monitoring and Treatment Program has started contacting 911 responders who have been diagnosed with thyroid cancer.

Doctors are already looking into the high incidence of certain blood cancers in patients who worked at the former World Trade Center site, but it's believed this is the first such probe to focus on a tumor cancer. Court papers filed in February 2009

as part of a case brought against New York City by tenthousand rescue and recovery workers cited 51 cases of thyroid cancer, making it the seventh most common type of cancer claimed by 911 responders.

From Susan Edelman at the New York Post

Doctors have begun probing whether 911 rescue and recovery work at toxic Ground Zero triggered thyroid cancer – apparently the first tumor cancer to come under close scrutiny, The Post has learned. The WTC Medical Monitoring and Treatment Program is contacting Ground Zero responders who came down with the disease. The thyroid is a gland at the base of the neck. NYPD cop Reggie Hilaire, 39, and retired FDNY firefighter Kenny Specht, 41, both diagnosed with thyroid cancer, hailed the study, saying the cases among WTC workers are alarming. "It's a small victory," Hilaire said.

Reggie Hilaire (right) stands outside the Memorial Sloan Kettering Cancer Center in Manhattan. Hilaire, who clocked hundreds of hours at Fresh Kills

and Ground Zero as a rookie cop in the months following 911,

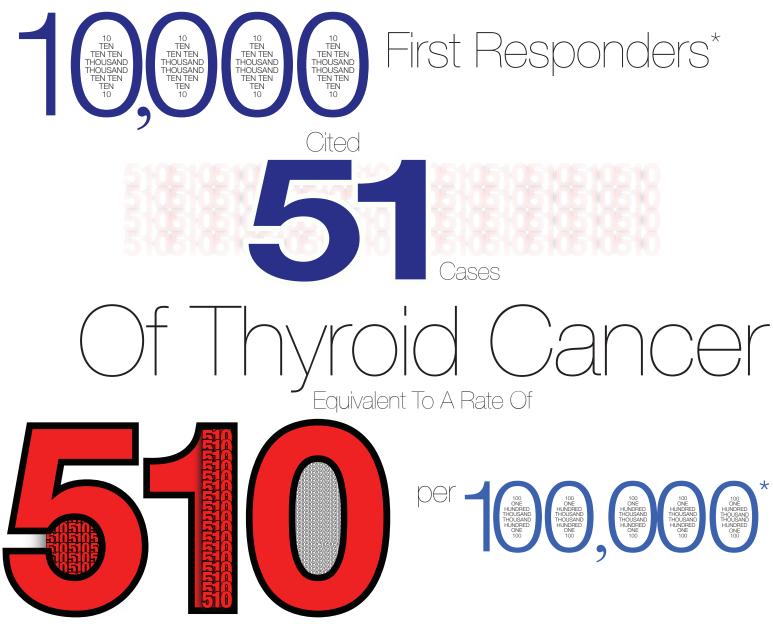
### has been diagnosed with multiple myeloma after recovering from thyroid cancer last year.

Thyroid cancer is the seventh most common of cancers claimed by 10,000 cops, firefighters, hard hats and others suing the city, according to a court report in February 2009. It listed 51 cases. It strikes mostly women. The National Cancer Institute puts the incidence rate at 4.3 per 100,000 men. City defense lawyer James Tyrrell urged caution. "Based on the current medical literature, we do not know of a connection between 911 exposure and thyroid cancer. We hope they consider all relevant factors, including prior medical history," he said.

A spokesman for the WTC program said, "We are closely monitoring the health of all the 911 responders using state-ofthe art statistical instruments for all forms of disease, including cancer and thyroid cancer."

In 2007, doctors noted blood cancers like multiple myeloma among unusually young 911 responders, including Hilaire, who suffered it after thyroid cancer.

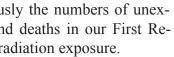


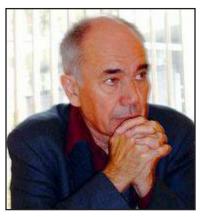


Keith Baverstock (right), long-time head of the Department for Radiation and Health of the World Health Organization states on Chernobyl:

"My main criticism is that the study claims to close the case on Chernobyl. But only 20 years have passed so far. This period of time is much too short to make final conclusions. Just consider that twenty years after the atomic bombing of Japan, we only knew that leukemia was a consequence of radiation. 24 years later we saw the rise in other types of cancer and 45 years later we saw the noncancer diseases appear."

At this point the reader should consider very seriously the numbers of unexplained and rapid increases of very rare cancers and deaths in our First Responders, all of which are normally associated with radiation exposure.





\* The publishers of this report prefer to use the high estimate 40,000 cohort of First Responders in all studies, as opposed to the 10,000 quoted here, so our analysis concludes that the equivalent of 127 per 100,000, not 510 per 100,000 cases, are still seen as far in excess of what would be normal. The statistics above are based on mainstream reporting using the approximately 10,000 currently sick First Responders that were associated with the Zadroga Bill when it was being debated. The true total cohort of First Responders is closer to 40,000 and that's the estimate we prefer to use. It still, nevertheless, produces an unprecedented incidence of rare cancers including lymphomas, leukemias and myelomas along with organ and various system cancers.

## CANCER-STRICKEN WTC WORKER GETS \$0 SETTLEMENT CHECK

Cancer-stricken Ground Zero worker Edgar Galvis has finally received a compensation check -- for zero dollars. The 51-year-old Queens man, who suffered sinus problems and then throat cancer after months of removing toxic debris from the World Financial Center, was relieved to get a check in the mail for his court settlement with Merrill Lynch, whose offices he had cleaned. But he was stunned when he saw the amount: \$0.00.

His award had been \$10,005, but his lawyers at the firm Worby, Groner, Edelman & Napoli Bern lopped off \$2,579 for uniterized legal expenses. Then they took a 33.3 percent fee of \$2,124. They also subtracted \$352, a fee to the lawyer who referred him. The remaining \$4,950 was withheld for unspecified "liens," the letter says. Galvis thinks this was repayment of workers' compensation for aid.

"I have hit rock bottom," said Galvis, who is jobless and \$30,000 in debt. "I was expecting a check, and you can imagine how I felt when I opened it. I couldn't believe it. I thought it was a joke."

The father of two, who lives in Glendale with his fiancée and her two kids, said he had to sell his car and relies on relatives for rent. "I get collection agencies whenever I open the mail. What little credit I had I don't have anymore," he said.

Galvis said he arrived in New York from Bogota, Colombia, in February 2001. Hired by contractors clearing dust and rubble from Merrill Lynch offices next to Ground Zero, Galvis said he toiled 16 hours a day for six months in a jumpsuit and paper mask that would tear when he sweated. At \$8 an hour, he made close to \$800 a week.

In May 2005, a friend gave him a business card passed out by the law firm. A representative came to his home.

"The man told me that more than likely I will get sick and I would get 60 percent of whatever he won," Galvis said. "He even mentioned the words 'millions of dollars."

In April 2010, he got a \$10,000 offer. A letter from the law firm said he could expect about \$5,000 after expenses and fees. It warned that if his case went to trial and he lost, he could owe the firm up to \$100,000 in costs. He took the settlement.

His claim cited chronic rhinosinusitis and sleep disorders. He was diagnosed with throat cancer last August and began chemotherapy and radiation. But it was "too late" to adjust his claim. "It was our pleasure to represent you in this matter," the law firm says in a note that arrived with the zero-dollar check. It was no pleasure for Galvis.

Chart Does Not	At Ground N	irefighters lot At iround Zero
CANCER	ACTUAL CASES	ACTUAL CASES
All types	263	135
Prostate	90	45
Melanoma	33	15
Colon	21	9
Non-Hodgkin lymphoma	21	9
Lung	9	8

In Pink are Firefighters that spent at least one day at Ground Zero between September 11th, 2001 and July 25th, 2002 when the site officially closed and in Green are Firefighters that did not spend any time at all at Ground Zero. The chart covers a period of seven years from the end of 2001 through 2008.

"I think they are taking advantage of the ignorance of people such as myself," he said. The total Merrill settlement came to \$18 million for about 400 clients, documents show. Galvis is one of nearly 10,000 Ground Zero workers represented by Napoli Bern, which led talks for a separate settlement with the city for \$712 million. Anger is also stirring among those clients, who have started getting checks for 40 percent of their total awards. Several told The Post the payouts were less than those estimated by Napoli Bern. Some said they felt duped. Attorney Paul Napoli wrote in an e-mail that Edgar Galvis had already received "tens of thousands of dollars" in other claims involving his work at the Merrill Lynch offices in the World Financial Center.

Galvis "is also eligible for settlements from other buildings [near the trade center] that he worked in that have not even begun to roll in," Napoli added. But Galvis said that "never in my life, ever, have I gotten any money from Napoli" — other than a check that started at \$10,005 but that was made out for \$0.00 after various deductions.

"This is the only check I've gotten from them," he said. "I never got a single dollar."

## EDGAR GALVIS GETS TO \$0 (ZERO, NADA, NOTHING): But starts with \$10,005.00



Edgar Galvis, a Ground Zero worker who has throat cancer, holds the settlement check he got from a law firm. This is how we take care of our First Responders that have been stricken with deadly cancers. "I have hit rock bottom," said Galvis, who is jobless and \$30,000 in debt. "I was expecting a check, and you can imagine how I felt when I opened it. I couldn't believe it. I thought it was a joke."



## 911 FIRST RESPONDERS DEATH TOLL PASSES 1,000

March 1st, 2011 – As the death toll of first responders surpasses 1,000 (*1,003 as of March 1st, 2011 according to John Feel at the FeelGood Foundation in NYC. This may differ from official figures*), local politicians are demanding that autopsy standards be developed to pinpoint the causes. The number of Ground Zero first responders has risen past 1,000 to date, yet oddly no one knows what really killed them, or no one is willing to say.

A film documentary, Dust To Dust—The health effects of 9/11, made by Heidi Dehncke-Fisher, provides the backdrop and necessary data to understand the second round of the ongoing 911 slaughter-fest.

Here's a "*short list*" of some of the 2,500 deadly contaminants that erupted from the explosion of the World Trade Center Towers, that is, towers 1, 2, 3, 4, 5, 6, 7, plus two fuel-laden jetliners that all turned into a toxic gray dust that hung in the air, as well as settled in people's lungs, on area streets, vehicles, buildings, residences, both outside and inside the city for months ... from the film:

- Over 400 tons of asbestos, which once inhaled in any quantity cannot be expelled by the lungs.
- 90,000 liters of jet fuel containing benzene, toluene and other carcinogens that suppresses the immune system and causes leukemia.
- Mercury from over 500,000 fluorescent lights that is toxic to the nervous system, and damaging especially to the kidneys.
- 200,000 pounds of lead and cadmium from personal computers, toxic to the respiratory system and especially damaging to kidneys.
- Polycystic aromatic hydrocarbons (plastics burning) that cause lung, laryngeal and throat cancers from 1000s of tons of various types of petroleum based plastics.
- 130,000 gallons of transformer oil with PCBs, causing serious skin rashes and liver damage.
- Crystalline Silica from 420,000 tons of concrete, sheetrock and glass (tiny particulates that lodge in the heart, causing ischemic heart disease).
- An unknown amount of vaporized structural steel and other metal components.
- 4 Acres of Marble.
- And then there's the highly elevated uranium, tritium, zinc, vanadium, thorium, beryllium, and dozens of other harmful elements in anomalous amounts.

Chemist Kevin Ryan cites energetic materials as a potential cause of 911 First Responders' Illnesses. Dr. Neils Harrit posits that a minimum of 29,000 metric tons to a maximum of 144,000 metric tons were used to reduce the towers to dust centered on his analysis of the dust found by Dr. Stephen Jones. This will be discussed in more detail later but the calculation for a low of 29,000 one metric ton boxes loaded and unloaded comes to 1,500 tractor trailer loads with a crew working 24 hours a day, seven days a week, unloading a one-ton crate every 15 minutes from truck to final destination = 97 days. Working a normal eight-hour day would require almost 300 days. JUST to unload the material. This energetic compound theory presents inadequacies and frailties.

Is it surprising to anyone that the this toxic brew could trigger nearly 1,000 deaths? Look at the list of illnesses and organs they affect: the lungs, the immune system, the respiratory system, the kidneys, laryngeal and throat areas, the skin, the heart, most all of the vital organs. But also remember we've had people exposed to almost all of these elements before and we also understand that none of these chemicals could lead to *rapid cancer* onsets and swift deaths in such short spans of time. Sometimes they die from two or three deadly cancers at the same time. One First Responder finally rid his body of Thyroid cancer with devastating radiation treatment only to come down with Multiple Myeloma. *"The air is safe to breathe"* is one of the 21st centuries most famous outright criminal frauds on American society.

Christine Todd Whitman Fabricator Extraordinaire?

# Dr. David I rezant,

NYC Fire Department's

chief medical officer has cited

# in three RARE cancers

- leukemia,

### as well as esophageal, prostate & thyroid cancers

they've been described as.

# the charts **7**

It didn't help either that then-Mayor Giuliani rushed the GZ crews to work round the clock with only paper masks, not real respirators. In fact, there was no encouragement to use either, and the first responders often worked without either. Despite the fact that Giuliani had two and a half years to get this project done, it was completed in eight months, and at what cost: to destroy the most important crime scene of the greatest crime committed in global history; and to help sicken thousands of First Responders while dooming them all to an early death and to also kill a thousand or more with great immediacy. Get Wall Street open at all costs!

Add to that, Christine Todd Whitman, the EPA administrator, at the time constantly told New York and the world there was "no reason for the general public to be concerned." Perhaps now she realizes there was a great deal of reason to be concerned. Of course, warnings had come from Dr. Stephen Levin, head of the Mount Sinai Center for Occupational and Environmental Medicine. He had told of how he and his colleagues could see early on that these people were being exposed to cancer-causing materials that would end in disaster, even as Whitman reassured everyone that we were "Not getting elevated levels causing concern."

In fact, by September 13, 2001, the inadequate ambient air samples led the EPA to claim the air was "Below levels of concern." Yet, many contaminants had simply not been tested for. The EPA ombudsman, said, "You can't find what you don't look for." So we know where the EPA stands, old news as we pass the tenth anniversary of 911 and the living survivors are battling for their lives while over 1,000 of them have lost that misery filled battle. And that same misery never ends for the fatherless families left behind.

Also, Michael Brown, who was deputy director of FEMA at the time, consistently told New York and the world there was "No reason for the general public to be concerned." Of course, former President Bush, V.P. Dick Cheney, and Secretary of State Colin Powell appeared without facemasks, briefly, to make sure no one asked for one. Talk about role models. Former President Bush's head of the White House Environmental Council, James Connaugton, previously represented large corporations like ARCO in disputes about cleaning up toxic waste sites. Adding insult to injury, he had formerly worked against the EPA, such as it was.

But as early as September 14, 2001, the EPA started reading out "samples [that] showed levels of asbestos ranging from 2.1% to enough, as time has shown, to hurt or kill people, especially given repeated exposure. So any numbers games here were criminal.

> In contrast, the first responders working at the Pentagon site in Washington, D.C., had to wear respirators to go to work at the

disaster site, absolutely, no questions asked. But in NYC, we had to get Wall Street working again, so the money came first. Lives were expendable.

"It was heart-rending," said Joe Zadroga, who watched his NYPD officer son, James, for whom the bill is named, slowly deteriorate from his scarred lungs until he died in 2007.

Relatives and friends know in their hearts what really killed the hero in their family - even if health officials refuse to recognize it. The city later relented, but Zadroga is one of only a handful of people whose death has been officially linked to the toxins of the ruined twin towers. "I mean, we knew what he died from. We dealt with it for four years," Zadroga added.

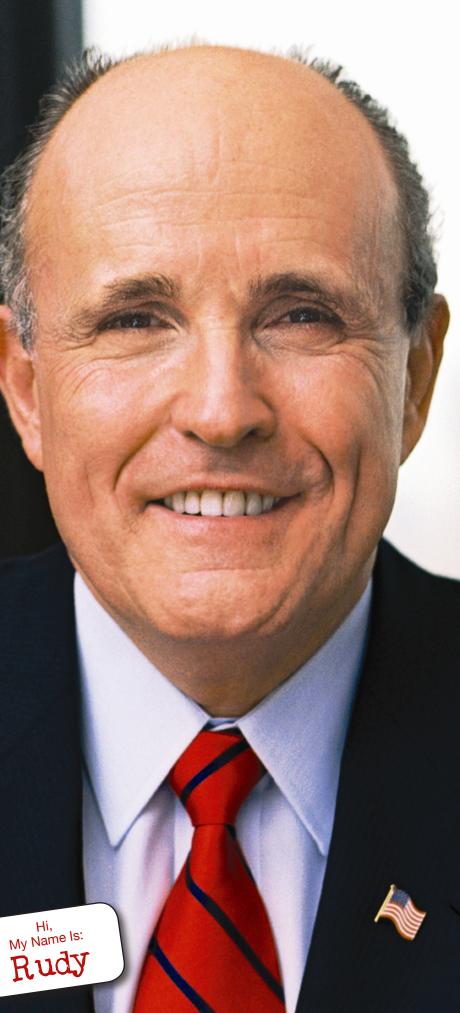
A medical examiner in New Jersey had ruled James Zadroga died from 911 exposure, only to have the city declare - for a time - that drug abuse killed him.

Reps. Jerry Naddler (D-Manhattan), (Pete King, R-L.I.) and Carolyn Malone (D-Manhattan) wrote in a letter to the feds, "In a study released in June last year, state officials identified 836 responders who have died since 911. Advocates know of at least 80 more, and doctors believe the total will be well over 1,000 in the next survey this year."

"We do not know to what extent WTC exposures contributed to their deaths, or whether their deaths were unrelated," the lawmakers wrote, seeking a set of guidelines. Frankly, unless those responders were hit by a bus, or obviously playing sick, I don't see how WTC exposures could be unrelated. So let's be real. If autopsies can help doctors understand Ground Zero illnesses in any way, they should be undertaken. Let's not worry about the so-called, cost-cutting Congress. Let them cut their expense accounts, their limos, or their health care.

Zadroga added, "Most of these guys who are dying are dying from lung conditions and cancers. My son's lungs were like leather."

And so it goes: always enough money for war, never enough for its victims. The Zadroga bill was originally budgeted at \$7.4 billion for the 10,000 or more currently sick victims of the 40,000 total potential victim First Responders. Of course it does not cover cancer.



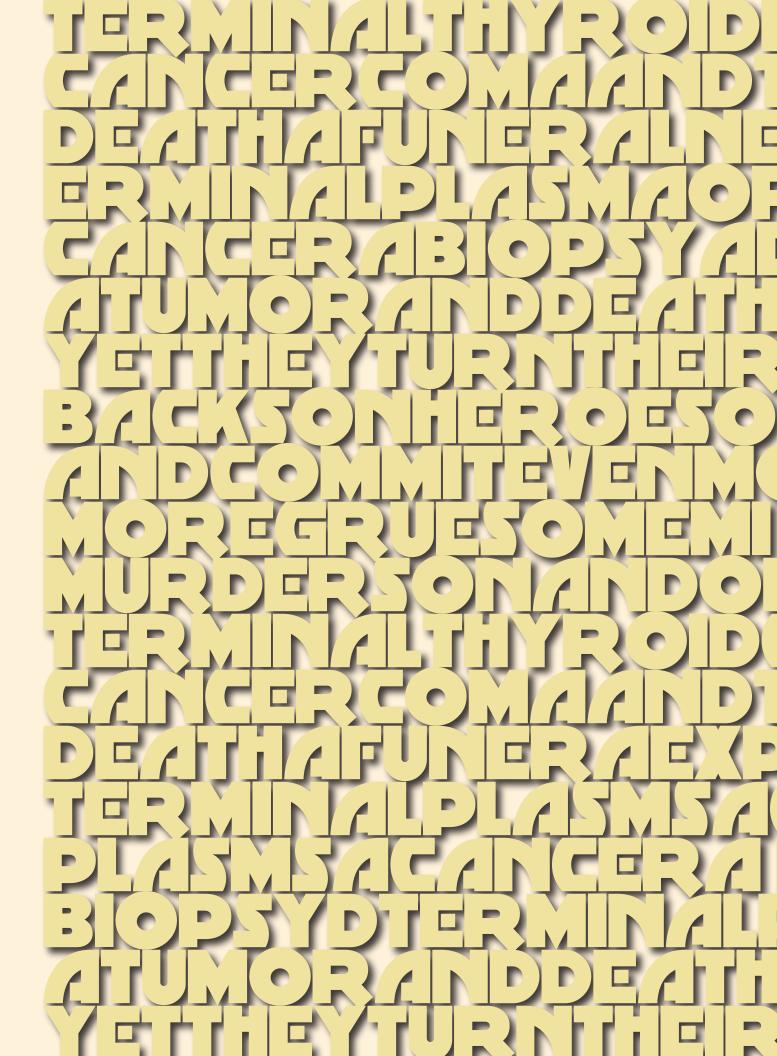
# THYROID CANCER

Lee, Hur and Ahn<sup>1</sup> stated that thyroid malignancy is said to be an infrequent occurrence found in 0.5 to 3 patients per 100,000 in the general population. They noted that in a subgroup of patients booked for mammography, a thyroid ultrasound was also performed. In this group, they found thyroid malignancy frequency was as high as 3 per 100,000. It is not known if their subgroup was at a higher risk for malignancy. Mittelstaedt<sup>2</sup> in the Globe and Mail states that thyroid malignancy was 15 per 100,000 yet the 40,000 cohort of First Responders cite 51 cases of thyroid cancer.

> That's 127 cases per 100,000 people. This could also be considered an increase to 20.32 cases per 100,000 per year based on the 6 year reporting period (2001-2007)

1. Lee HK, Hur MH, Ahn SM. Diagnosis Of Occult Thyroid Carcinoma By Ultrasonography – Yonsei Medical Journal, December, 2003.

2. Mittelstaedt, Martin. Globe and Mail, Toronto 2006 September 12, quoting Cancer Care Ontario publication August 2001 Cancer in Ontario Young Adults (20-44 years old).



### HARD EVIDENCE OF EPA KNOWN HEALTH EFFECTS AND THEIR ALREADY KNOWN CRIMINAL RESPONSE

As the events unfolded and as doctors and hospitals began seeing health effects in their patients, they began to see a need to mount studies. Unfortunately, though, many of these researchers had to delay their studies until funding could be secured, CRS notes. So there may have been missed opportunities for data, as a result.

According to Congressman Nadler, the agencies' lack of attention to indoor hazards loomed as a very real problem. Nadler claimed that it was absurd that the EPA claimed publicly that it didn't have the legal authority to do necessary environmental tests and remediation in response to the World Trade Center attacks when it has clearly done residential work throughout the country, said Congressman Nadler. "Why is New York being treated differently?"

His congressional hearings spurred an avalanche of new information about the Towers' collapse. Or did they? The EPA's Ombudsman's office launched an investigation into the actions and response of the agency around the World Trade Center. And the St. Louis Dispatch, in an article February 9, 2002, unleashed a bombshell when it reported that the U.S. Geological Survey had a "team testing the particulate dust covering the immediate area [of the World Trade Center. They] found that some of the dust was as caustic as liquid drain cleaner and alerted all government agencies involved in the emergency response." The article reported that USGS officials are unclear as to why the EPA didn't release the information. Source: http://pubs.usgs.gov/fs/fs-0050-02/fs-050-02 508.pdf

"With its world-class laboratories and sensors that can detect minerals on a distant planet, the Denver-based team was already making arrangements to get NASA's infrared sensors and aircraft over ground zero as the EPA and the U.S. Public Health Service requested its help," wrote Schneider. "Responding to requests from the White House science office, the NASA team flew over Manhattan four times between Sept. 16 and Sept. 23, while USGS scientists collected samples of the dust from 35 locations below."

The towers' collapse spewed enormous amounts of potentially lethal, extremely tiny particles of crushed and incinerated computers, glass, furniture and other building debris, unrecognized by the EPA's air monitoring. So why didn't EPA make that information known to the public, Schneider asked? In February, too, scientists at the University of California, Davis, reported that dust and fumes from the smoldering rubble exposed lower Manhattan residents to some of the highest levels of air pollution ever recorded. Thomas Cahill, a physicist and expert on air pollution who led the study, said his laboratory analyses of air samples showed that the towers' collapse spewed enormous amounts of potentially lethal, extremely tiny particles of crushed and incinerated computers, glass, furniture and other building debris unrecognized by the EPA's air monitoring.

At the time, the researchers claimed months worth of government readings on post-September 11<sup>th</sup> air pollutants' risks were woefully incomplete. The atmospheric research group called DELTA, short for Detection and Evaluation of Long-range Transport of Aerosols, researches weather patterns and aerosols, the tiniest bits of pollution dispersed into air from a wide variety of sources. From Oct. 2 through mid-December, the group's rooftop air monitor clicked away on top of the Department of Energy office one mile north of Ground Zero. Their

# United States Environmental Protection Agency

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#### North American Communities

\$1.3 million in grants will foster projects in the US, Mexico and Canada for healthy communities and ecosystems.

Read the news release

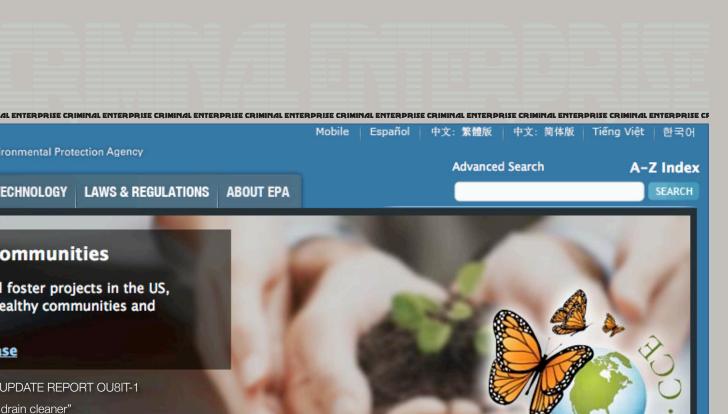
EPA 911 GROUND ZERO NEWS UPDATE REPORT OU8IT-1

"the dust was as caustic as liquid drain cleaner" "generating aerosols by boiling soil and glass"

"Myeloma, non-Hodgkins Lymphoma, Thyroid cancer. Leukemia, Prostate and Esophagial cancers have all risen alarmingly with over 1000 deaths"

#### 1 2 3 4

Mercury and Air Toxics	Ceneral Info   MATS   TRI by State	Popular Topics Acid rain Air cleaners Air ducts Air pollution Asbestos Asthma Bed bugs Carbon monoxide CFL cleanup Climate change Drinking water eCycling Emissions calculator	<ul> <li>&gt; Ir</li> <li>&gt; Ir</li> <li>&gt; K</li> <li>&gt; Lu</li> <li>&gt; M</li> <li>&gt; P</li> <li>&gt; R</li> <li>&gt; R</li> <li>&gt; R</li> <li>&gt; Si</li> <li>&gt; Si</li> <li>&gt; T</li> <li>&gt; U</li> <li>&gt; U</li> </ul>
Move your mouse over the map to see include Alaska, Hawaii, or the territorie:		<ul> <li>Fuels</li> <li>Global warming</li> <li>Greenhouse gases</li> <li>Hydraulic</li> </ul>	> V > 0 > W > W > W
<ul> <li>concerned citizen</li> <li>student, educator</li> <li>public health official</li> <li>state, local official</li> <li>member of a tribe</li> <li>business or non-profit</li> </ul>	<ul> <li>Federal Register</li> <li>Frequent Questions</li> <li>Hotlines, Clearinghouses</li> <li>Glossary, Acronyms</li> <li>Grants</li> <li>Publications, Newsletters</li> <li>Recent Additions to this Website</li> </ul>	fracturing More	



North American Partnership for Environmental Community Action

Indoor air Internships Kids Lead Mercury Mold Pesticides Radon Recycling Risk info Superfund Sustainability TRI Urban waters UV Index Volatile organics Wastes Water cycle Water pollution

ients

sroom



Assuring the safety of chemicals and cleaning up our communities are among Administrator Jackson's priorities.

> "so WHY was New York being treated differently?"

#### Sections Greenversations Read the latest blog post:

> What Do You Think About Our New Pesticides And Consumers **Resource Directory?** 

#### Sunwise-SHADE Poster Contest!

Students in K to 8th grade can make and enter





equipment was registering unprecedented clouds of "*very fine particles*," according to UC Davis researcher Kevin Perry, recently hired by the University of Utah to work as an assistant professor in the meteorology department. That, Perry said, should be a red flag in the evaluation of rescue workers' and residents' exposure levels. There is no definitive proof of the ill health effects from breathing gunk smaller than the PM2.5 standard.

"Everybody in our field knows ultra-fines are very likely to be hazardous to our health," Perry told a reporter for the Salt Lake Tribune. "The EPA can't regulate such things until they have proof in hand or they'll get hammered in court."

Perry said the importance of his group's very-fine pollution findings was not to prove the EPA lied or set out to deceive. Rather, it was useful to show that officials failed to take into account how much emergency workers, spending large amounts of time on-site, may have been breathing in known carcinogens. Perry said EPA's PM2.5 measurements of the area mirrored DELTA's pollution readings near the site: "*But a more thorough sampling protocol would catch all the ultra-fines his group found and offer a clearer picture of worker exposure and, possibly, what is behind the mysterious cough.*"

And the not-so-mysterious extremely high cancer deaths ...



Heads should have rolled and people should have been jailed.

Congress of the United States Washington, DC 20515 CAROLYN B. MALONEY Member of Congress Member of Congress CHARLES E. SCHUMER As the sponsors of the James Zadroga 9/11 Health and Compensation Act, we write to file a retition number to Sec. 3312(a)(b) of the Zadroga Act requesting that you conduct an United States Senator As the sponsors of the James Zadroga 9/11 Health and Compensation Act, we write to 1 petition pursuant to Sec. 3312(a)(6) of the Zadroga Act requesting that you conduct an immediate review of new medical evidence abouting increased concerned concerned concerned for the first second petition pursuant to Sec. 3312(a)(6) of the Zadroga Act requesting that you conduct an immediate review of new medical evidence showing increased cancer rates among firefighters who served at ground zero and that you consider adding coverage for cancer under the Zadroga immediate review of new medical evidence showing increased cancer rates among firefighters who served at ground zero and that you consider adding coverage for cancer under the Zadroga Act We read with great concern -as we are sure you must have done- the study conducted by the New York City Fire Department and published last week in The Lancet that indicated an elevated rick CHARLES B. RANGEL We read with great concern -as we are sure you must have done- the study conducted by the New York City Fire Department and published last week in *The Lancet* that indicated an elevated risk of melanoma, thyroid and prostate cancer, and non-Hodekin's lumphome among freeficities Member of Congress York City Fire Department and published last week in The Lancet that indicated an elevated ri of melanoma, thyroid and prostate cancer, and non-Hodgkin's lymphoma among firefighters who served at ground zero compared to the general nonulation and an overall increase in of melanoma, thyroid and prostate cancer, and non-Hodgkin's lymphoma among firefighters who served at ground zero, compared to the general population, and an overall increase in cancers among firefighters exposed to toxins at the World Trade Center site, compared to who served at ground zero, compared to the general population, and an overall increase in cancers among firefighters exposed to toxins at the World Trade Center site, compared to these toxing. As your know, the call according to the set of th cancers among firefighters exposed to toxins at the World Trade Center site, compared to firefighters who were not exposed to those toxins. As you know, the only peer-reviewed study of possible 0/11 related cancers prior to this one was a small study showing a possible rise in CHAEL G. GRIMM firefighters who were not exposed to those toxins. As you know, the only peer-reviewed study of possible 9/11-related cancers prior to this one was a small study showing a possible rise in multiple myeloma among 9/11 responders mber of Congress On August 8, 2011, we wrote to Health and Human Services Secretary Kathleen Sebelius On August 8, 2011, we wrote to Health and Human Services Secretary Kathleen Sebelius requesting that she act quickly to form the Science/Technical Advisory Committee, as required by the 7adroga Act. A conv of that letter is enclosed. Since the 7adroga Act requires you to requesting that she act quickly to form the Science/Technical Advisory Committee, as required by the Zadroga Act. A copy of that letter is enclosed. Since the Zadroga Act requires you to take action on our petition within eixty days and since this committee is charged with reviewin by the Zadroga Act. A copy of that letter is enclosed. Since the Zadroga Act requires you to take action on our petition within sixty days, and since this committee is charged with reviewing scientific and medical evidence to make recommendations on adding coverage for additional take action on our petition within sixty days, and since this committee is charged with reviewin scientific and medical evidence to make recommendations on adding coverage for additional holds conditions are consistent and the Secretary and you to get up this need to We feel strongly that there must be a scientific basis for adding coverage for new conditions under the Zadroga Act. However, given the severity of the illnesses reported in The Lancel, we also want to make sure that this and other neer-reviewed etudies linking cancers to the attacks are under the Zadroga Act. However, given the severity of the illnesses reported in *The Lancet*, we also want to make sure that this and other peer-reviewed studies linking cancers to the attacks are evaluated as expeditionally as possible THE ZADROGA BILL DOESN'T COVER CANCER ~ CONGRESS KNEW ~

September 7, 2011

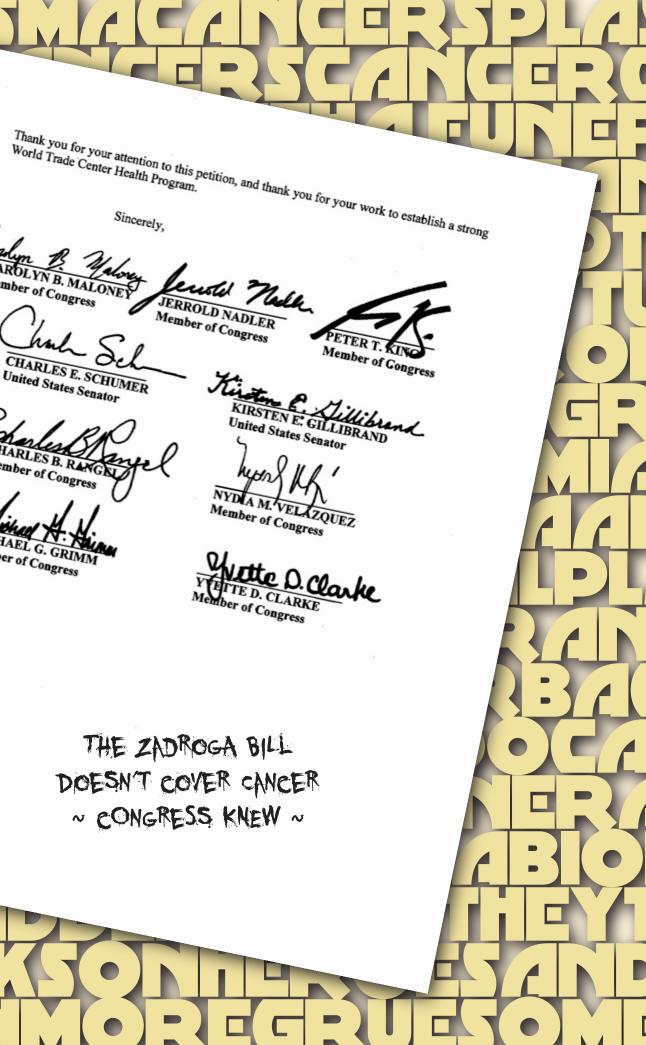
Director National Institute for Occupational Safety and Health John Howard, MD 395 E Street SW, Suite 9200 Patriots Plaza Building Washington, DC 20201

Dear Dr. Howard:

scientific and medical evidence to make recommendations on adding coverage for additional health conditions, we once again respectfully urge the Secretary and you to set up this panel in the next few weeks We feel strongly that there must be a scientific basis for adding coverage for new conditions

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evaluated as expeditiously as possible.



# ERICHED URANIUM IN FALLUJAH - THE MILITARY KNEW

May 29 2008 (Press TV) - Families in Fallujah are calling for an investigation into the rise of birth defects after the US used unknown weapons over the Iraqi city in 2004.

They have raised concerns about the weapons used by American forces in 2004, including constant bombardment with uranium depleted artillery shells and other depleted uranium ammunition - when Fallujah suffered the heaviest blitze following the overthrow of the Saddam regime of the entire war in Iraq. Hikmat Tawfeeq, deputy chairman of the Fallujah-based human rights group Al-akhiyar said: "We have around 200 cases of deformities recorded by our society. Most of these cases are birth deformities which have arisen after the bombing of Fallujah."

Campaigners say officials are reluctant to speak out publicly because of US pressure but at Fallujah's children's hospital one doctor told Sky News in the past month she has seen one or two cases of birth deformi-



ties every day. An opthalmologist said he deals with four or five cases of newborn babies every week suffering from some form of eye deformity. At one of the cemeteries in Fallujah, undertaker Mahmoud Hummadi said he usually buries four to five bodies of newborns every day and most of them are deformed.

This is not depleted uranium.

See: [http://www.geopoliticalmonitor.com/war-related-birth-defects-in-fallujah-741]

Fallujah today still bears the scars of a time when it represented the backbone of the Sunni insurgency - a power-base America decided it had to break. April and November 2004 saw some of the heaviest bombardments of the war in Iraq, including the controversial use of depleted uranium\*

The families say doctors have raised concerns to them about what kinds of materials were used by the Americans in order to achieve their military goals. Fatima Ahmed is three years old. Small and lifeless she barely moves, burdened by two heads on her tiny frame. Her mother Shukriya says doctors have been unable to diagnose exactly what has caused Fatima's condition. But her father Jassim, when asked who he held responsible for his daughter's condition, said: "It's because of the war - it's the flagrant aggression they launched against us. What they dropped in Fallujah God knows."

\* Dr. Christopher Busby has published peer reviewed material on slightly enriched uranium, uranium enriched by human technology, in the hair of the residents of Fallujah.



ALL STRUCK

See.

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# THE BOTCHED RESCUE EFFORT YOU DIDN'T HEAR ABOUT

The scenes are explained in gripping and terrifying style, with hundreds of accounts of survivors and witnesses from which to choose. Painfully typical is the description of Judy Feeney, who receives a seemingly routine phone call from her son, Garth, and asks him what is new. He replies, "Mom, I'm not calling to chat .... I'm in the World Trade Center and it's been hit by a plane." His mother, already watching the television coverage of the attack but not previously aware that her son was attending a meeting at Windows on the World, says, "Please tell me you are below it," but Garth responds, "No, I'm above it. I'm on the top floor." Even if Dwyer and Flynn had achieved nothing beyond personalizing and memorializing some of the victims their accomplishment would be noteworthy.

"The people fighting the two worst building fires in the nation's history had no video monitors. No radio communications with other agencies. No way to get reports from police helicopters and only a limited ability to communicate among themselves." And although the Police Department "had installed [radio] boosters in 350 locations across the city to amplify their signals," the FDNY "had only a handful of boosters in place."

Interdepartmental rivalries and incompatibilities exacerbated these problems. The two groups of rescuers "*did not like each other*." In the past, "*fistfights [had] broke[n]* out at rescue scenes.... [The] two agencies didn't train together often or well. And they didn't share equipment." During the rescue effort, police helicopters took off without firefighters aboard, leaving the fire chiefs with little idea what was going on above them even as the police officers provided regular reports to their superiors. The last joint police-and-fire disaster drill at the World Trade Center had taken place in 1982, in response to an aircraft near-miss unrelated to terrorism. Fire dispatchers had to dial 911 if they wished to reach police dispatchers.

Deficiencies that before September 11 seemed to be little worse than technological glitches or turf wars may have cost as many as 200 firefighters their lives. The authors conclude that there were roughly that many firefighters in the lowest forty floors of the north tower when it fell. If these firefighters had immediately begun to evacuate the north tower when the south tower gave way, they would have had about half an hour "to go down no more than thirty or forty flights of stairs, and many people did, including eighty-nine-year-old Moe Lipson." But poor communications prevented most of these rescuers from knowing that the other building had collapsed.

Surviving firefighters stated that they were unaware of the seriousness of the danger in these final minutes even though TWO police helicopter pilots broadcast at least four radio warnings predicting the building's imminent failure, with one describing a collapse as "inevitable" and another stating "I don't think this has too much longer to go." For "twenty-nine minutes and twenty-six seconds . . . [the FDNY was on] notice that total calamity was not only possible but also imminent." The firefighters, meanwhile, continued their rescue efforts in a doomed, nearly empty building from which almost all of the approximately 6,000 civilians below the crash zone had already escaped. Approximately 100 firefighters were seen resting and catching their breath on the nineteenth floor shortly before the second building fell.





Even more frustrating than their discussion of institutional failures among the various groups of rescuers is Dwyer and Flynn's acknowledgment of how construction and safety decisions made as far back as the 1960s had negative consequences that would not become fully apparent until the buildings were tested on September 11. To begin with, New York City's building code had been relaxed in 1968 at the insistence of the real estate industry and over the objections of the Fire Department.

Moreover, as a bi-state agency, the Port Authority of New York and New Jersey was not bound by even this weakened code when it built the World Trade Center, although it claimed to have complied voluntarily. This compliance must have been grudging, however, as the Port Authority did not abide by other New York City fire safety laws—also not binding on the Port Authority—until after an industry challenge to these other laws had failed. As a result, the towers nearly were constructed without fire sprinklers.

To be financially viable, the towers needed floors with large expanses of space that were not divided by support columns. This challenge was met with the innovative use of lightweight floors that both supported and were supported by the exterior walls of the building. The use of this new, untested construction method, however, meant that no one had experience in fireproofing a structure of this type, and "[b]oth the architect and the structural engineer for the project refused to vouch for the ability of the floors to withstand fire." There is no evidence that anyone ever conducted tests to determine whether these elements of the structure were safe, even though such tests were required by the city codes with which the Port Authority claimed it would comply.

Shortly after the buildings opened, an arsonist set numerous small fires that caused several floors to buckle; no tests were conducted after this event

either. There were other indications that the Port Authority and the Fire Department had reservations about the buildings' safety long before the 2001 attack. The Port Authority refused to allow Windows on the World to run a gas line up the North Tower, apparently out of concern for the effects that an uncontrolled gas fire might have on the structure of the building.

During the course of litigation between the Port Authority and one of its suppliers over the use of asbestos in the buildings, "[e]xpert witnesses reported that hunks of the fireproofing, whether asbestos based or not, had fallen off the steel, leaving it exposed."

In some cases, they said, it appeared never to have been applied at all. "Following the resolution of this asbestos litigation, the Port Authority decided to triple the thickness of the fireproofing that had been sprayed on initially, which had been arbitrarily set at one-half inch without testing and now was arbitrarily set at one-and-one-half inches without testing. To minimize disruption to tenants, however, this change was phased in only as tenants renovated their space." Just thirty-one of the floors in the two towers had been upgraded by September 11. When an employee of one of the Center's tenants, Terence McCormick, began working in the building, his father, then a chief in the FDNY, "had implored him to find a job elsewhere. Chief McCormick believed that the towers were among the most dangerous buildings in the city."

Those caught in the buildings confronted additional design problems. Occupants could descend from upper floors either by elevator or by stairs. Although each building contained ninety-nine elevators, only two—one for passengers and one for freight—ran from the top of the building to the bottom. The buildings lacked the special refuge elevators that had become standard in newer skyscrapers, designed to function even during emergencies to help rescuers ascend and disabled occupants descend. Safety resistors had been installed following the 1993 attack, to comply with updated code requirements that were sensibly designed to prevent the doors from opening if an elevator car stopped more than four inches from a landing. Elevator mechanics at the complex had found this feature, designed to avoid more routine accidents, to be too unforgiving.

Expert mechanics were needed to override these resistors, but on September 11, all of the buildings' mechanics quite reasonably evacuated after the second tower was attacked, leaving those rapped in the elevators to attempt to pry the doors open from the inside. The towers, like many lesser high-rises, were built under the assumption that there would never be an occasion in which all occupants would need to vacate at once. The theory was that the evacuation of such a huge complex would be more hazardous than having occupants remain on unimpaired floors, and the chaotic uncontrolled emptying of the buildings after the 1993 bombing supported that belief. As a result, the number, width, and placement of the emergency stairways were insufficient to evacuate full buildings, or even partly full buildings, in their entirety.

The Empire State Building, completed in 1931 under the more demanding standards required by an earlier code, has nine stairwells at its broad base and six that run the entire height of the building, one of which serves as an air-locked fire tower that is supposed to be more impervious to smoke.

Each of the 1,350-foot tall World Trade Center towers, with slightly greater height, nearly double the rentable square footage, and the capacity for about 33% more occupants, had only three stairwells throughout—the same number as would have been required for a seventy-five-foot building—and no fire tower. All three of these stairwells were bunched together in the least



rentable space in the core of the building. Two of the three stairwells in each building went only as far down as the mezzanine, a feature that one fire chief had described as "*a major building design flaw*" in a report commissioned after the 1993 bombing. Those leaving the building then had to reach street level by escalator.

New York adopted the nation's first building code in 1850. Several trade organizations began promulgating building codes during the first part of the twentieth century, and different codes garnered acceptance in different regions of the United States. The Building Officials Conference of America (BOCA) published its Basic Building Code in 1950, which was widely adopted in the Northeast and Midwest. But large cities, facing unique construction issues and distinctive political pressures, began to develop their own codes, an approach that New York City followed when it adopted its new code in 1968, the year in which construction of the World Trade Center began. The wisdom of a building code provision, like that of any other health and safety measure, involves balancing the costs of enacting and enforcing it against the benefits to be gained from it. The costs of a building code measure include both the expense of constructing or retrofitting a structure to comply with the law and the income that is lost over time as a result of implementing the law. For example, if a city were to increase the minimum required width for fire stairs in new buildings, the cost of this law to the builder of a new structure would be equal to the sum of the cost of constructing and maintaining wider fire stairs (minus the cost of constructing and maintaining whatever else would have occupied that space) and the discounted present value of all rental income lost because of the floor area that now must be dedicated to fire stairs rather than to rentable office space. The benefit of this change would be equal to the statistical value of all lives saved, injuries avoided, and property damage averted in that structure, multiplied by the likelihood of these tragedies occurring at all, plus the "reassurance factor" enjoyed by building occupants aware that they are working in a safer building.

For many possible building code provisions, it is far easier to calculate the costs than the benefits. A builder can determine the additional price of building wider fire stairs and estimate the price of maintaining them,99 and can calculate how much extra space will need to be devoted to these wider stairs and forecast the discounted present value of what that space might rent for over the useful life of the building. The benefits—harms avoided—are much harder to estimate. No one knows the likelihood of a natural or human-caused disaster, and planners can only guess how much death, personal injury, or property damage will result from any such

disaster. And these numbers are moving targets that we continuously update to factor in all events that have occurred in the past, particularly in the recent past. The odds of a major terrorist attack on an office building surely seemed higher on September 12, 2001 than they had forty-eight hours earlier. There also are intangible costs and benefits to consider, and these can be extremely difficult to quantify. A building that is markedly safer may give its occupants a greater sense of ease, as just noted, or it may constantly remind them of their vulnerability. It may be more or less comfortable, more or less attractive, more or less rentable. Costs and benefits do not exist independently and can affect each other synergistically. Terrorists might choose to attack poorly protected buildings because they are easy targets, or they might select heavily fortified structures-particularly iconic or symbolically significant ones such as embassies—in the belief that a successful attack on a fortress demonstrates their strength and will be more demoralizing to victims and to the general public. In addition, the cost-benefit calculus is constantly shifting. It is widely believed that the rash of airline hijackings several decades ago abated at least in part because airplanes were redesigned so that hijackers could no longer parachute safely from an airborne passenger plane. Building costs increase after natural disasters, as labor and materials become relatively scarce and people react-and sometimes overreact—to the hurricane or tsunami that is freshest in their minds. Similarly, as an event fades from memory, the temptation is to argue that some restrictions enacted in response to it should be relaxed, that the benefits of building code changes were overstated in the emotional aftermath of the tragedy. And different types of structures merit different levels of protection.

Remember also that building professionals usually are the only people who spend much time thinking about building codes. Unless there has been a recent disaster, it is unlikely that citizens will lobby their local government representatives to strengthen building codes for greater worker safety or that a candidate will run on a pro-building-code platform. Those in building-related trades, however, may well lobby those same representatives on a regular basis to weaken codes as a means of reducing construction and operating costs. Their efforts may be sufficient to outweigh counter-arguments from the small number of customary opponents, such as building and fire officials.

The combined effect of these factors suggests that the strength of building codes can be expected to swing like a pendulum, with local governments beefing up codes dramatically in response to the outcry that follows a major tragedy and then weakening them gradually as that disaster recedes in the rearview mirror. Immediately after a crisis, the perceived benefits of a strengthened code, which will have become newly evident to the general public, will exceed the perceived costs, which had always been apparent to those in the building industry. As time passes uneventfully, the public turns its focus elsewhere and the balance of pressure on public officials slowly shifts the other way. This pattern of reform and relaxation based on perceived costs in response to the Triangle fire.

The code amendments that were enacted in response to the Triangle fire meant that buildings would be more expensive to build, and they met with



The Triangle Shirtwaist Factory fire in New York City on March 25, 1911, was the deadliest industrial disaster in the history of the city of New York and resulted in the fourth highest loss of life from an industrial accident in U.S. history. It was also the second deadliest disaster in New York City – after the burning of the General Slocum on June 15, 1904 – until the destruction of the World Trade Center 90 years later. The fire caused the deaths of 146 garment workers, who died from the fire, smoke inhalation, or falling to their deaths.



predictable objections from the real estate industry at the time. One Factory Investigating Commission member who represented real estate interests referred to the "*infinitesimal proportion of the population*" killed in factory fires. He was shouted down by a union representative who noted, "*They were human souls*. *It was a hundred percent for them*." The public reaction following this immense tragedy was sufficiently prolonged and deep that the reformers were able to see many of their recommended policies implemented.

But the same real estate interests that cannot block the passage of code amendments in the wake of a tragedy can attempt to undo them later. As time passes without further incidents, it begins to appear as though the initial response miscalculated the cost-benefit ratio. Building industry representatives may emphasize how excessively strong codes are leading to wasteful overspending on safety, while the earlier supporters of these stronger codes may cease to focus on this issue.

New York's code revision process, which began in 1962, came in response to building industry arguments that the 1938 code was obsolete. Why waste space—which is to say money—on "outsize-seeming safety requirements" or "artifacts of an earlier, more plodding age" that are "an imprudent and uneconomical regulation of business" New York's 1968 building code was less protective of building tenants than some of the post-Triangle reforms it replaced because the perceptions of costs and benefits had changed since the Triangle fire.

Before the new code was even adopted, the Port Authority—which was not bound to follow city laws—announced that it nonetheless would abide by the revised rules. The Authority implied that this discretionary safety consciousness was innovative and forward-looking, but by volunteering to comply with the newer code rather than with the older one, it also was saving on construction costs. A councilman noted that if the Pan Am building had been built in accordance with the newer code, its owners "would have had 2 percent more rentable space on each floor. That was worth about \$1.8 million annually in 1968."

One of the reasons New York was able to build the world's two tallest buildings during the early 1970s was that new construction methods coupled with these relaxed code restrictions made struc-March 25, 1911 **Triangle Shirtwaist Factory Fire** tures of this type economically feasible for the first time ever. "As it happened, the World Trade Center was planned at a moment of radical transformation in the construction of tall buildings, and its owner, the Port Authority, availed itself of those changes in spectacular fashion." By the time New York City revised its building code, more than half a century had passed since the Triangle fire, and certain safety measures were viewed as "the wasteful legacies of a bygone era that lacked modern fireproofing techniques." These cost savings, of course, came with a hidden price tag of their own, in the form of reduced safety benefits. The new code relaxed fire protection measures on the theory that the old rules were overly safety-conscious. Under the new code, buildings would need fewer fire stairs and no fire towers, and the original plans for the World Trade Center, which included fire towers, were modified to eliminate them. The fire stairs that remained could be located closer together in the building core, far from the more valuable window space that tenants coveted. Fire ratings for columns and floors would be reduced. New, less costly materials could be used. Yet contrary to this entire theory we have:

From "Engineering News-Record" on April 2, 1964, regarding the construction of the Twin Towers: "Live loads on these [perimeter] columns can be increased more than 2,000% before failure occurs. One could cut away all the first-story columns on one side of the building, and part way from the corners of the perpendicular sides, and the building could still withstand design loads and a 100-mph wind force from any direction." The buildings were sound, designed for aircraft strikes and more. Think.



# RARELY SEEN FIRST RESPONDER TESTIMONY



Firefighter Edward Kennedy states that he thought a "nuclear bomb" had demolished a tower. "We were on Liberty Street and we came out into there and it just look like something that -- it looked like a bomb, of course, had gone off, almost like a nuclear bomb... "

Here we learn that NYFD Lt. George DeSimone similarly thought the heat--without fire--impinging on him was Hiroshima-like:

"I thought it was some kind of thermal explosion where I'm either going to get burnt -- and I had kind of ideas that it was going to be something like Hiroshima where all this heat was coming at me and we were going to get burnt..."

Several hours after both tower "collapses", and despite official regime claims of total military and civilian flight termination, he said:

"... We saw jets overhead, commercial airliner, military jets, Air Force jets, and we didn't know what the hell was going on..."

Recall I have detailed how a nuke's thermal rays go farthest out, well beyond its destructive blast radius. Here NYFD Chief Jerry Gumbo's testimony is one of several I have cited, to say he felt heat far away from any actual fire. He stated:

"...At the time of the impact, we were able to feel heat that was generated from the explosion at the command post, which was across West Street, and West is a fairly large street with that island in there, and debris was showering all over West Street."

I believe this is again indication of the early basement nuclear detonation concomitant with the "plane crash" explosion above.

Another firefighter who thought the WTC destruction was nuclear is NYFD Lt Richard Smiouskas, whose statement is here. He was an official NYFD photographer, and has some startling testimony, regarding other matters, as well. It appears that with his telefoto lens, he witnessed people being pushed out of tower one. He said:

"...I was photographing the fire from the roof. I had a long lens on the camera, and I had people in the windows. It looked like they were being -- they

I do not believe this "glitter" was glass in the black smoke. Perhaps it is more likely that gamma or neutron rays from nuclear explosions which could readily traverse the black smoke, impinged on his retina. This is like the astronauts in earth orbit seeing (retinal) flashes from cosmic rays when they tried to go to a higher earth orbit, and like medical x-rays that go through you and onto a photographic plate.

weren't actually jumping. One or two people I saw, they seemed like they were being forced out by the people behind them. There was half a dozen faces. In between the smoke you could see people... I guess they were all trying to get air, and this guy was actually standing in the window, standing in the frame with each hand on each frame and he kind of like got nudged out."

In the second sentence, it looks like he just stopped himself from saying "pushed". The last incident may even indicate the NON-jumper was trying to keep himself from being pushed out!

Lt. Smiouskas believed that a nuclear bomb went off, due to the magnitude of Earth shaking that he felt. As a tower is being destroyed he recalls:

"It looked like an earthquake. The ground was shaking. I fell to the floor. My camera bag opened up. The cameras went skidding across the floor... I'm thinking maybe a bomb blew up. I'm thinking it could have been a nuclear...."

Then he writes of seeing "glitter" through the black smoke, during tower destruction.

"Everybody started running north, and this huge volume like ten stories

But note how Lt. Smiouskas found the ground shaking was intense enough that he surmised that a nuclear bomb went off. Now, I have been in 5.1 (Richter scale) Earthquakes, and in 2.3's. The latter I didn't feel at all, and the 5.1 sounds more like what Lt. Smiouskas (and I) experienced-at least a likely 4.0. At the World Trade Center six weeks after 911 we saw many cracked concrete sidewalks blocks away from the World Trade Center. I therefore make the following assertion. It is likely that the official 2.1 and 2.3 Richter scale recordings on 911 had their spikes adjusted down. NIST asked for a re-analysis of seismic data from one observatory before publishing their findings. I believe it's possible that the seismic recordings were likely doctored by this regime. And this fire-fighter's belief that the intense ground shaking was due to a nuclear bomb supports this.

The interview of Dr. Michael Guttenberg, of NYFD's Office of Medical Affairs, who may have witnessed EMP is here. Just after the second plane hit and before any tower collapse he noted the following two statements:

"...on the EMS radio, there was absolute silence for probably 10 or 15 seconds, you know, which to me, it seemed like 10 to 15 seconds, but it was absolute radio silence for a few seconds..."

high billowing, pushing black smoke and like a glitter. I guess it was glass that was glitter that was in the cloud of smoke."



#### He also stated:

"We were told that the air was so thick with debris that radio waves weren't able to travel. That was after the towers came down."

Note two things, the radios went dead—likely a sign of EMP, as I have previously described. The statement that radio waves would have been blocked by a conventional explosion, when they wouldn't have been, is a lie. And note also that this radio blackout occurred after the second "plane hit" explosion. My previous articles contained evidence, and my hypothesis, that the World Trade Center 1 "plane hit" explosion was used as cover for a nearly concomitant basement nuclear bomb explosion that vaporized a 50 ton steel press, and a garage level, and also caused phone outage. So we learn now that electronic communications also were affected after the second "plane hit", which may indicates that they also used nuclear devices in the basement of World Trade Center 2 at that time. I hypothesized that this was done in case the planned, subsequent, intricate, top-down demolition failed.

Guttenberg also provides more eyewitness testimony for early World Trade Center 7 explosions, as he went to the loading area of World Trade Center 7.

"...We all stuffed ourselves into this hallway [near the loading dock of WTC7], pulled the door shut, and the noise just got very loud and the room filled with dust. The noise stopped, and we opened up the door, and everything was pitch black. The way we got into the loading dock was not the way we were getting out. It was obstructed."

This appears to be a watered down way of saying the World Trade Center underwent internal explosions. This jives with one of my earlier books citing Deputy Director of the NYC Emergency Services Dept., Barry Jennings, that the World Trade Center 7 underwent attempted complete internal destruction at the same time that the first tower (and World Trade Center 3, 4, 5 and 6) were demolished.

NYFD Lt. Robert Larocco here also noted that tower destruction seemed "nuclear" to him. He said,

"Of course the cloud was kind of like a nuclear winter thing. You're walking through fallout."

Near the towers, but **BEFORE** either tower "collapse", he noted:

"As I started walking onto the side street – actually as I stepped onto the side street, the strangest thing I noticed was there was like three inches of snow on the ground. The snow was probably pulverized concrete, sheetrock, loose tiles, insulation, asbestos or what-have-you."

Now this fine ash or 3 inches of snow-like "pulverized concrete" as he called it would not occur from a "plane hit" or conventional explosives.

During the commencement of World Trade Center 2 destruction, Lt. Larocco stated:

"The next second I heard that loudest noise in the world that I was describing before getting louder and louder.... it was the loudest noise I've ever heard in my life. It was in both ears. Kind of like those rockets that they launch the space shuttles with, it was like I had one going off in each ear. When I thought it was the loudest noise I ever heard, every second it was just increasing getting louder and louder."

Lt Larocco also describes very personal feelings of fear of death, and fellow firefighters "crying like babies" during and just after collapse. These revelations prove that the redactions in the published responders' statements were not because of wanting to hide the most personal of feelings.

Lt. Larocco also stated that hours after both towers were destroyed:

plane."

Could this fine, 3 inches of "snow" be from the early basement nukes that I have written about in several other books? Like the World Trade Center 1 basement blast that vaporized a steel press, and a parking garage level that eyewitnesses said was just "gone."

"...I still really didn't believe that the second tower was hit by a second



At this point, the interviewer, Monte Feiler, says, "Stopping the interview at 1306." Then, "Resuming the tape at 1308 hours. Same people present."

Now Lt. Larocco says:

"Like I said, the rumors were flying around, and they turned out to be quite factual, about the second tower getting hit. Although at the time I really didn't believe it until I saw it later on television. The thing about the Pentagon, the plane crashing out in Pennsylvania, it was all coming into the picture that this is something major going on."

Finally I note that when he was making his way out after "collapse," Lt. Larocco recalls:

"I thought to myself this is a locked exit. That's illegal."

We see, as some survivors have noted, many fire escape exits were locked. Someone — who may have had a master key — apparently locked numerous exits. If such a person is ever found and his actions proven to be deliberate he should be charged with mass murder.

Finally, for those who grasp the deeper conspiracies I have elucidated here I note that Firefighter Michael Wernick here stated "...I ran down to the corner of Church and Park Place, looked up and I saw the plane shooting out of the top of the towers. That's when I grabbed for my radio and yelled over the air, "I Adam. A bomb just went off in the Trade Center."... He wasn't referring to the plane on that call but rather, a bomb at ground level.

Wernick further said, "*Engine 33 went first*." All things nuclear... on 9/11. Yet, as I've stated before, I don't believe in symbolism here. This is all for money, power and resources. Yet for those of you that do ...

## PART ONE CONCLUSIONS

1. Leukemia, non-Hodgkin's Lymphoma and Multiple Myeloma, three rare cancers, have increased dramatically and in an unprecedented number, frequency and rapidity in very young age groups never seen before.

2. All three of these cancers, increasing **together** in a select population have previously always indicated radiation exposure. The CDC study (K25 Workers), Chernobyl, Nagasaki and Hiroshima data are all conclusive and in agreement on this issue as well.

[See: Robert W. Miller, M.D., and William J. Blot, Ph.D., and others, US National Academy of Sciences, National Research Council, Japanese National Institute Of Health Of The Ministry Of Health And Welfare, Atomic Radiation, Hiroshima and Nagasaki. Also see Ionizing Radiation 911, parts 1, 2 and 3 linked on a previous page. Also see: CDC study of K25 workers linked previously]

3. Increases in these cancers using September 11<sup>th</sup> as the 'start date,' specifically and most importantly; Leukemia, non-Hodg-kin's Lymphoma and Multiple Myeloma along with increases in esophageal, prostate & thyroid cancers with all of them very rapid increases often in young and otherwise healthy people indicates clearly, without ambiguity and with certainty that further study into a radioactive component of some type and design is critically required.

4. The government, in all its wisdom, decided not to cover cancer in the Zadroga Bill while cancer deaths in First Responders are exploding like the Twin Towers on 911.

5. The EPA, Congress and the military and other governmental and environmental agencies responsible for the disaster cleanup knew from the very beginning that the dust in New York City was highly toxic, caustic and contained 100s of known human poisons. Very few people knew it was radioactive. My personal opinion is that certain members of government and private organizations knew.

6. I believe it was known early on by the mainstream medical community that radiation was a factor. I emailed over 500 oncologists or people in the Oncology Departments at Sloan Kettering and Mount Sinai Hospitals, Cancer Section, with copies of pages 19-42 of the free eMagazine titled, "Dust" and I also posted it to the CDC and NISOH web sites (*link for source to original 'short' document below*) on March 14th, 2011, in a reformatted style to accommodate CDC and NIOSH web site requirements.

#### Source: http://www.datafilehost.com/download-94750b11.html

7. Parts 2, 3, 4, 5, 6 and 7 will show that there are and were bombs tested that were 'salted' such or designed such that over 97% of their radiation was eliminated from the detonation. There was radiation, but not much, not easily measurable without sophisticated equipment, certainly not with a Geiger Counter, and not long-lasting. And it wasn't alpha, beta or gamma radiation; these are the types we usually measure. But enough to kill people, as we're seeing now. It was neutron radiation.

8. The following chapters will prove a lot more. The reasoning by Dr. Jones and others used to explain the high levels of tritium are scientific frauds and we prove that here.

After Conclusions - Me and Dr. Jones

9. Although Dr. Jones addressed the following issues partially, loosely, imperfectly in a fragmented manner using poor science that is just good enough to fool most people, he failed to adequately and properly address the increased uranium, thorium (*two elements found only in radioactive form*) tritium and the high levels of zinc, barium, strontium, vanadium, and especially potassium and sodium (*these 2 are crucial*) among other elements found in the dust as the levels increase and decrease **together** across 35 sampled locations by the USGS. Dr. Jones failed to use the Product Momentum Correlation and the 't' test statistic, formulas he's intimately familiar with, to discuss the various levels of these elements as they are seen in the dust, "**together**".

#### Nano Technology

10. Forty years of technology has come and gone since 1961 (*up until 2001*) so we'll also examine nano-technology ijn susequent chapters because the nuclear industry grabbed hold of minia-turization even more quickly then the Metastable Intermolecular Compound (*nanothermite or MIC*) industry and well before. Why wouldn't they? Atomic grenades were coming down the pike. It was only a matter of time. The Davy Crockett, as you'll see in the next chapter, was a watermelon-sized nuclear bomb launched from a 3-man tripod style grenade launcher. 40 years later we have apples. But very, very special apples based on a deuterium-tritium design.

Dr. Stephen Jones himself studied Muon Catalyzed Fusion for the US Department of Energy in critical detail and is intimately knowledgeable in this area.

This report will further show that Dr. Jones' studies in muon catalyzed fusion involved deuterium, uranium and tritium which produce uranium and tritium as a by-product of fission and fusion and were both found in high amounts in NYC. This report will suggest that Dr. Jones should be fully aware of the nuclear component to the events of 911 based on the reasoning presented herein. Since he's obviously not and further seeks to hide the nculear component the only logical explanation is that he's been tasked with covering it up.

11. Lawrence Livermore has a long history of developing new materials, fabrication techniques, and characterization and diagnostic methods to address the important national problems it is asked to solve. From miniaturizing nuclear weapons in the late 1950s to proving fusion ignition on a laboratory scale five decades later, Livermore's can-do attitude consistently meets with success. 911 is certainly proof of that.



# PART TING TUSION FISSION

~ BIG IVAN, THE TSAR BOMBA OR "KING OF BOMBS" ~

THE WORLD'S LARGEST NUCLEAR WEAPON FROM 1961 YIELDS THE WORLDS MALLEST NUCLEAR WEAPON IN 2002, 40 YEARS LATER WITH MINIMAL FALLOUT... 911 WAS A NUCLEAR BOMB TEST

The device offically designated RDS-220, known to its designers as Big Ivan, and nicknamed in the west Tsar Bomba (and referred to as the Big Bomb by Sakharov in his Memoirs [Sakharov 1990]) was the largest nuclear weapon ever constructed or detonated. This three stage weapon was actually a 100 megaton bomb design, but the uranium fusion stage tamper of the tertiary (and possibly the secondary) stage(s) was replaced by one(s) made of lead. This reduced the yield by 50% by eliminating the fast fissioning of the uranium tamper by the fusion neutrons, *and eliminated 97% of the fallout* (1.5 megatons of fission, instead of about 51.5 Mt), yet still proved the full yield design. The result was the "cleanest" weapon ever tested *with 97% of the energy coming from fusion reac-tions.* A green H-bomb!

The nickname Tsar Bomba is a reference to a famous Russian tradition for making gigantic artifacts for show. The world's largest bell (the Tsar Kolokol) and cannon (the Tsar Pushka) are on display at the Kremlin [Kalinin 1994; pg. 33]. Having come to power by overthowing and assassinating the last royal family of Russia, the Soviet leadership would never have countenanced such a royalist name, but this designation has become popular in Russia since the collapse of the Soviet Union.

This high quality image (right) of a building adjacent to the Twin Towers which was then impaled by sections of the Twin Towers weighing many tons and ejected at an estimated 50-60mph can be zoomed repeatedly.



the most powerful nuclear device ever detonated equal to 3800 times the energy of the bomb used in Hiroshima eliminated 97% of its fallout



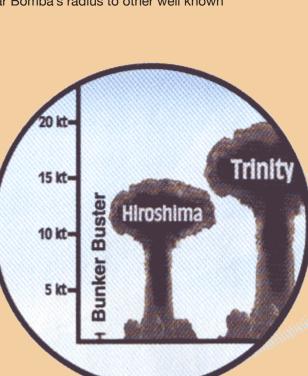
this reduced the yield by 50% by eliminating the fast fissioning of the uranium tamper by the fusion neutrons and eliminated 97% of the fallout (1.5 megatons of fission, instead of about 51.5 Megatons), yet still proved the full yield design the result was the "cleanest" weapon ever tested with  $97\%\,$  of the energy coming from fusion reactions now magine the Tsar Bomba in 2001 – at miniaturized or nano-scale ... the size of an apple ...

Because that's what you saw

# TSAR BOMBA COMPARISON CHARTS

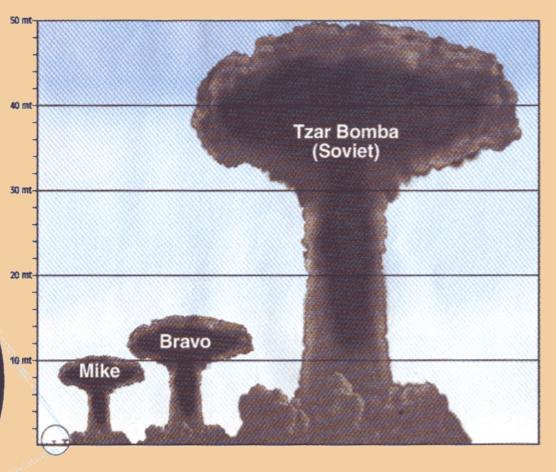
Here is the Tsar Bomba fireball radius compared to other nuclear bombs. On the left, you can see the fireball of the Hiroshima bomb magnified. This is another chart comparing the Tsar Bomba's radius to other well known nuclear bombs.

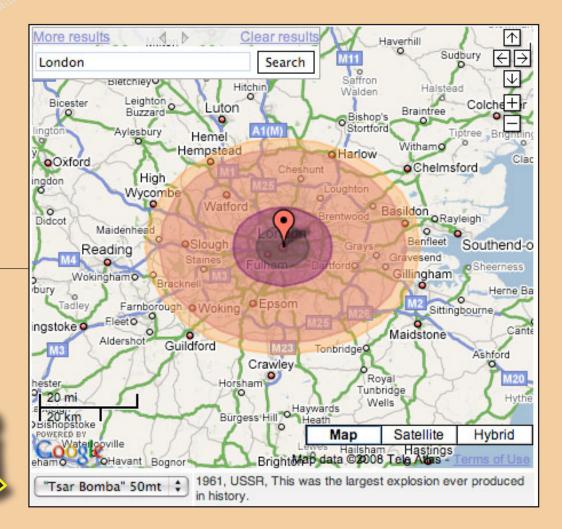
Below (right, map), you can see what the effects would be of Tsar Bomba if detonated in a populated area like London. The inner circle is where the conflagration would take place and most people would die, while the outer circle is where people would suffer 1st degree burns. Many of those burned severely would certainly suffer the most gruesome of painful, agonizing deaths.



Tsar

Bomba





# CODE NAME: BIG IVAN - TSAR BIOMBA

Time and date: 11:32 AM October 30, 1961 Location: D-2 Sector, Zone C, Sukhoy Nos Peninsula, Novaya Zemlya, Russia Height of detonation: 4,000 meters (12,800 feet) Yield: 50,000 kilotons (50 megatons) Weight: 25 tons Coordinates of detonation: 73.85N, 54.50E Dimensions: 8 m long, 2 m in diameter

# TSAR BOMBA FACTS

- Tsar Bomba was built in only 15 weeks
- It was dropped from a modified Tu-95 plane.
- The shockwave of the explosion travelled the Earth three times
- The mushroom cloud that formed had a diameter of around 40 km
- The parachute attached to the bomb weighed 800 kg.
- The modified Tu-95 was flown by Major Andrei Durnovtsev.
- The plane which dropped the bomb was able to fly around 45 km from ground zero during the 188 seconds until the bomb detonated.
- The mushroom cloud that formed was 64 km high, 168 times higher than the Empire State Building.
- The power produced during the fission-fusion process was 5.4 yottawatts, corresponding to around 1.4% of the power output of the Sun.

The plane piloted by Andrei Durnovtsev dropped the Tsar Bomba at 11:32 AM Moscow time, from a height of 6.5 miles (10.5 km) over Mityushikha Bay in Novaya Zemlya. The bomb detonated at a height of 2.5 miles (4 km). The descent from the height it was dropped from until the place of the detonation at 4,000 meters above ground took 188 seconds, just enough time for the pilot, Andrei Durnovtsev to fly to a safe distance. Just one second after the detonation, the fireball was already 4 miles wide, and the light could be seen at distances of over 2,000 kilometers. The mushroom raised to a height of about 64 km, over 7 times the height of Mount Everest.

So what do you think happened to this incredible technology? Was it shelved? Or was it developed; did it move along at an unbridled pace which our rapid technological advances in miniaturization and nano-technology allowed for and encouraged?

The test was conducted by air dropping the bomb from a specially modified Tu-95N "Bear A" strategic bomber piloted by mission commander Major Andrei E. Durnovtsev. It was released at 10,500 meters, and made a parachute retarded descent to 4000 meters in 188 seconds before detonation. By that time the release bomber was already in the safe zone about 45 km away. The drop area was over land at the Mityushikha Bay test site, on the west coast of Novaya Zemlya Island, above test field D-2, near Cape Sukhoy Nos. [Podvig et al 2001; pp. 466, 498], [Khalturin et al 2005]. Durnovtsev was immediately promoted to lieutenant colonel and made Hero of the Soviet Union. The Tu-95 was accompanied by a Tu-16 "Badger" airborne laboratory to observe and record the test. The time of the test is given by [Adamsky and Smirnov 1998] as 11:32 AM Moscow Time; it is listed in [Podvig et al 2001; pg. 498] as occurring at 06:33 Moscow Decree time.

The test location was about 55 km north of the Severny settlement and 250 km north of the headquarters at Belushya, from where it was observed by the State Commission. The bomb design team and the test supervisors, headed by Major General Nikolai Pavlov, Chairman of the State Commission, monitored the test at the airfield near Olenya station on the Kola Peninsula 1000 km away. Observers were also at many other locations. Among these were Soviet Minister of Medium Machine Building Efim Slavsky and Marshal of the Soviet Union Kirill Moskalenko, deputies to the 22nd Congress of the CPSU then in session, who had arrived by plane on the day of the test to ob-

serve the explosion. They observed the test aboard an II-14 "crate" at a distance of several hundred kilometers from ground zero. Sakharov himself stayed by the phone, presumably at Arzamas-16, waiting for a call from Maj. Gen. Pavlov.

The effects were spectacular. Despite the very substantial burst height of 4,000 m (13,000 ft) the vast fireball reached down to the Earth, and swelled upward to nearly the height of the release plane. The blast pressure below the burst point was 300 PSI, six times the peak pressure experienced at Hiroshima. The flash of light was so bright that it was visible at a distance of 1,000 kilometers, despite cloudy skies. One participant in the test saw a bright flash through dark goggles and felt the effects of a thermal pulse even at a distance of 270 km or 167.7 miles.

One cameraman recalled:

#### The clouds beneath the aircraft

and in the distance were lit up by the powerful flash. The sea of light spread under the hatch and even clouds began to glow and became transparent. At that moment, our aircraft emerged from between two cloud layers and down below in the gap a huge bright orange ball was emerging. The ball was powerful and arrogant like Jupiter. Slowly and silently it crept upwards.... Having broken through the thick layer of clouds it kept growing. It seemed to suck the whole earth into it. The spectacle was fantastic, unreal, supernatural.

Another observer, farther away, described what he witnessed as:

"... a powerful white flash over the horizon and after a long period of time he heard a remote, indistinct and heavy blow, as if the earth has been killed! "

A shock wave in air was observed at Dickson settlement at 700 km; windowpanes were partially broken to distances of 900 km. All buildings in Severny (both wooden and brick), at a distance of 55 km, were completely destroyed. In districts hundreds of kilometers from ground zero, wooden houses were destroyed, and stone ones lost their roofs, windows and doors; and radio communications were interrupted for almost one hour. The atmospheric disturbance generated by the explosion orbited the earth three times. A gigantic mushroom cloud rose as high as 64 kilometers (210,000 ft).

Despite being exploded in the atmosphere, it generated substantial seismic signals. According to a bulletin of the U.S. Geological Survey it had seismic magnitude mb = 5.0 to 5.25. The blast wave was detected circling the world.[Khalturin et al 2005]

> Some time after the explosion, photographs were taken of ground zero. "The ground surface of the island has been levelled, swept and licked so that it looks like a skating rink," a witness reported. "The same goes for rocks. The snow has melted and their sides and edges are shiny. There is not a trace of unevenness in the ground.... Everything in this area has been swept clean, scoured, melted and blown away." [Adamsky and Smirnov 1998]

> The radio blackout created by ionization from the explosion gave immediate indication to the command post on the Kola Peninsula that the explosion had occurred, but kept them from receiving any reports on the degree of success, or the fate of the bomber and the Tu-16 "Badger" airborne laboratory accompanying it for 40 minutes. Only when radio contact with Novava Zemlya was reestablished were they able to request information on the altitude of the cloud, and it became clear that the bomb had worked as designed.

> The Tu-95 was painted with a special white reflective paint to protect it from the thermal radiation of the fireball. The airborne laboratory plane was also covered with the same paint. In clear air, the 50 Mega ton test was capable in principle of inflicting third degree burns at a distance of up to 100 km or 67 miles.

The area of effectively complete destruction extended to 25 km or 15.5 miles, and ordinary houses would be subjected to severe damage out to 35 km or 21.7 miles. The destruction and damage of buildings occurred sporadically at much greater ranges than this due to the effects of atmospheric focusing, an unpredictable but unavoidable phenomenon with very large atmospheric explosions that is capable of generating localized regions of destructive blast pressure at great distances (even exceeding

1000 km - 670 miles).

Like the entire 1961 test series in which it was conducted, the creation of the Tsar Bomba was the result of political calculation by the Soviet leadership, especially of Premier Nikita Khrushchev. A de facto moratorium had existed



between the U.S., USSR and UK since the conclusion of the last U.S. and Soviet test series in 1958, and two years of discussion had been conducted regarding formal limitations on nuclear testing. But the Cold War continued at high pitch, with the occasional reductions in tension being only partial and transitory phenomena. Many high-stakes cards remained to be played by the Soviets - the erection of the Berlin Wall and the deployment of missiles to Cuba being notable examples. The decision to break the moratorium with a "testing spectacular" that coincided with the Twenty Second Congress of the Communist Party of the Soviet Union was a move cast in the same mold.

The Soviet weapons scientists had spent the three years since the last test series in 1958 developing new concepts and refining old ones, but they had not been preparing for a new test series per se until Khrushchev called a meeting with the "atomic scientists" - the leaders of the weapons program - on 10 July 1961. There was no discussion of whether more tests were necessary or desirable, which Sakharov, the senior weapon designer, very much doubted. Khrush-

July meeting. The detailed account by Adamsky and Smirnov [Adamsky and Smirnov 1998] do not address this at all. They do state that the development of the device began in the middle of July (i.e. immediately after the meeting) and that "We knew that the culmination of the series of tests planned in the USSR would be the explosion of the 50-Mt device, which was designed to produce explosions of up to 100 megatons" but do not indicate how they came to know this.

There was no previously existing military requirement for a 100 megaton weapon - such weapons are virtually useless for military purposes. The Soviet Union had only one delivery system capable of carrying a weapon of this size - a handful of the relatively slow prop-driven Tu-95 bombers - and it was incapable of intercontinental range with a pay-load this large. A 100 Mt weapon can level urban areas in a zone 60 km wide, cause heavy damage in a zone 100 km across, cause 3rd degree burns in a region 170 km across (only a bit smaller than the width of West Germany) and eye

more tests were necessary or desiral chev simply began the meeting with a speech declaring that tests would resume in the fall to 'show the imperialists what we could do', a decision that came as a surprise to the scientists present. Khrushchev specifically cited as the primary motivation a political rather than a technical justification - his view that the international situation was deteriorating [Sakharov 1990, pg. 215].

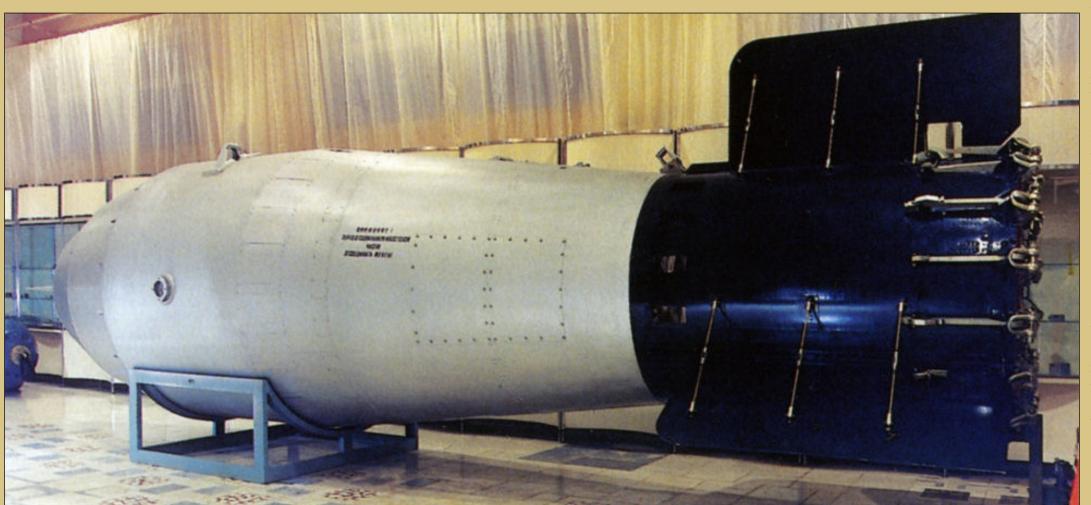
From there on until the end of the test series it was an all-out effort to ready as many designs, concepts, and devices for testing as possible.

Available sources do not make it clear where the idea of the 100 megaton device test originated. Sakharov does not mention this device being proposed at the 10 July meeting, but first refers to it in connection with a mid-August review:

"Khrushchev was already familiar with the test program, and in particular with our plan to explode a device of record-breaking power", implying that the idea of this test spectacular originated with the weapons team [Sakharov 1990, pg. 218]. Comments by Reed and Kramish [Reed and Kramish 1996] conversely indicate that the development and test of this device was a directive from Khrushchev at the Deuterium-Tritium fusion appears to be the best and most effective way to produce energy. By fusing the two isotopes of Hydrogen in to the heavier element Helium large quantities of energy are released. D-T fusion is the safest form of fusion, producing no waste and no harmful radioactive atoms. As long as there is available Deuterium and Tritium, we have an effective way to solve the energy crisis.

The sun generates its energy by fusing hydrogen atoms, which give off large amounts of energy. but scientists believe that the sun long ago fused Deuterium, an isotope of hydrogen, because it was a more easily achieved fusion (Conventional Fusion FAQ, May 2007). Deuterium-Tritium fusion is soon to be one of the most effective and efficient ways to produce energy. A normal hydrogen atom has only one proton in its nucleus, but deuterium is a hydrogen atom with one neutron and one proton, a tritium atom consists of two neutrons and one proton. Deuterium is also known as "heavy water" because it forms D-O-D (Wikipedia, 2007).

Many people are skeptical about nuclear energy, fearing accidents like Chernobyl will reoccur. Yet, D-T fusion is the cleanest methods of generating energy, producing only helium and neutrons as products. Deuterium if found in seawater about 1 part in every 6500, adding up to around 10^15 tons of deuterium, making it virtually inexhaustible. However, tritium must be bred. Tritium is very rare in nature, but it can be made from naturally occurring lithium (Hyper Physics, 2007).



damage to 220 km. Such a weapon can only be used as a means of destroying an entire urban region - a major urban complex including suburbs and even neighboring cities. This scale of destruction is much larger than any discrete urban area in Western Europe.

With its dense settlement, use of such a weapon in Europe is equivalent to an attack on a major portion of an entire nation and its population.

Fallout from a low altitude or surface burst in central England could produce lethal exposures extending into the Warsaw Pact nations; a similar explosion in West Germany could create lethal fallout as far as the Soviet border. Even in the United States there were only three urban regions at that time large enough to conceivably merit attack with such a weapon - New York, Chicago, and Los Angeles.

On any smaller target it would be simple overkill. Even if the Tu-95 were able to reach Chicago, the closest plausible U.S. target, (which is doubtful given the enormous payload, far in excess of normal for long-range missions, and the added drag from the belly bulge required to house the bomb) it would have been detected crossing the North American early warning line and then been over U.S. and Canadian territory for 8 hours – ample time for jet fighters to intercept and shoot it down [Zaloga 1993] not that this would ever have happened.

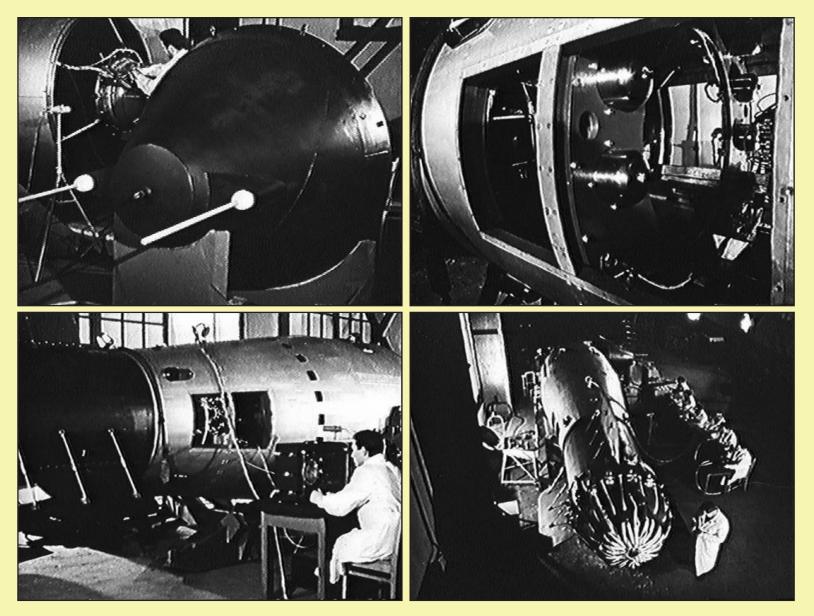
Since preparation of the 100 megaton bomb only began after the 10 July meeting at which Khrushchev ordered the test series be held, no more than 112 days elapsed from initial concept to detonation - exactly 16 weeks.

Upon returning to Arzamas-16, the secret nuclear weapons laboratory in the Urals, after the meeting Sakharov selected a team to develop the 100 megaton device. He included Viktor Adamsky, Yuri N. Babaev, Yuri Trutney, and the newly arrived Yuri Smirnoy,

then 24 years old ([Adamsky and Smirnov 1998], [Khariton 1993]). Sakharov indicates that the lead responsibility for the project lay with Adamsky and V.P. Feodoritov [Sakharov 1990, pg. 220].

Every aspect of the development was rushed. The mathematical analysis normally conducted by the Soviet weapon scientists for a new thermonuclear weapon design was skipped, substituting estimates and approximations of various kinds. This created uncertainties about the system performance that cropped up late in the preparations – leading to eleventh hour doubts, and last minute design modifications even while assembly was underway.

By the mid-August review, held after 13 August (Sakharov states that is was 'after the Berlin Wall had been built) and thus after about 4 weeks of work, Sakharov had decided to test a reduced yield "clean" version of the device with a yield of 50 megatons. At this review Khrushchev said that he had already disclosed the planned test of this device to visiting dignitaries from the U.S.. Khrushchev identified the dignitary as an unidentified U.S. senator (and his grown daughter), but Sakharov speculates that it was actually presidential adviser John McCloy [Sakharov 1990, pg. 218].



Khrushchev went public regarding the planned superbomb test with the announcement of the new test series issued simultaneously with the first shot fired on 1 September 1961 [Time 1961], [Adamsky and Smirnov 1998]. By pre-announcing the event, Khrushchev exhibited great confidence in his weapon development team, and also placed extreme pressure on them. In any ordinary test of a new weapon design a failure results in only a delay in successful completion (and the cost of the materials expended). Now any marked deviation in yield would result in the loss of the planned propaganda value in which Khrushchev placed so much emphasis. The make-or-break character of this test was heightened still further by its scheduling to coincide with the final sessions of the Twenty-Second Party Congress. The weight of this bomb - 27 tonnes - was nearly equal to

Inside

**RDS-220** 

"I decided to introduce some changes into the design of the Big Bomb, trying to minimize the margin of error in calculating the subtle processes which worried Rabinovich. I hurried off to David Fishman, the head of the design department, who did not even bother to complain – the matter was too serious. The designers did not go home that night until they had handed in revised blueprints; the actual design changes were made the following day." [Sakharov 1990, pg. 220]

Adamsky and Smirnov comment on the uncertainties experienced by the team:

"From time to time, we would naturally have doubts: would the device deceive us, would it fail at the moment of testing?" Alluding to this, Sakharov said: "If we don't make this thing, we'll be sent to railroad construction." [Adamsky and Smirnov 1998].

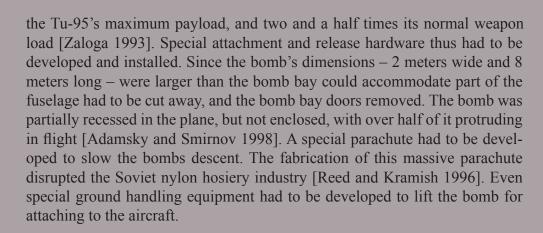
This was however a marked improvement over the days of Stalin when nuclear weapon designers ruminated over the prospect of being shot!

> The Drop

By October 24 (only 6 days before the actual test) the final report was complete, including the proposed design of the bomb and the theoretical and design calculations. The specifications in the report were sent to design engineers and bomb assemblers. The report was co-authored by Andrei Sakharov, Viktor Adamsky, Yuri Babaev, Yuri Smirnov, and Yuri Trutnev. Adamsky and Smirnov, two of the reports authors have recently quoted the following statement from the report: "A successful result from the test of this device opens the possibility of creating a device of practically unlimited power" [Adamsky and Smirnov 1998].

According to [Adamsky and Smirnov 1998] "even if the parachute system had failed during the test, the bomber's crew would not have been endangered, as the bomb contained a special mechanism which triggered its detonation only after the plane had reached a safe distance".

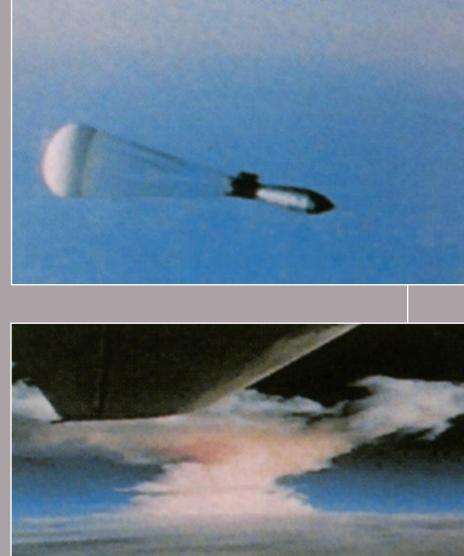
This suggests that the bomb was rigged with a proximity fuze (which could either be a timer, or a barostatic or radar altimeter) that would detonate it close to the ground (the pictures of the bomb do show nose mounted probes that have been identified as a radar altimeter [Janes Defense Weekly 1992]). Even with this technique, the free fall time to the ground was less than 60 seconds (46 seconds neglecting air resistance), allowing the Tu-95 release plane to get no more than 30 km from ground zero (since this requires maximum speed, and a virtually instantaneous turn after release, the real separation might have been less).



Assembly appears to have been conducted in parallel with the design effort - that is, they began building the device even while developing its design. The bomb was assembled on a railroad flatcar in a special workshop built over a railroad line. After completion, the workshop was dismantled and the flatcar was camouflaged as a regular freight-train car. The bomb was taken by train all the way to the airfield where it was loaded directly into the delivery aircraft [Adamsky and Smirnov 1998], [Sakharov 1990, pg. 219].

At the beginning of October Sakharov travelled to Moscow to discuss calculations for the 100 megaton bomb. After he returned to Arzamas-16, with the device almost ready for shipment, serious doubts about its design arose. This would have been about the middle of the month, no more than two weeks before the test.

The device had 'some risky new features' (according to Sakharov) and Evsei Rabinovich had become convinced that the device would not work. Rabinovich communicated his concerns to the rest of the project staff, without at first notifying Sakharov. His arguments were evidently persuasive, and could not be easily set aside. Sakharov was pulled into the debate, and he, with Adamsky and Feodoritov, developed counter-arguments that refuted Rabinovich's conclusions. Since both parties relied on approximations it was difficult to discern which was correct.



Sakharov explains his response to this crisis:

# Sequence

Shortly after the 30 October test the U.S. estimated the yield at 57 megatons. This value then circulated for 30 years as the actual yield of this device, quoted by Western sources and by the Soviet government. In his 1974 memoirs Khrushchev recollects: "*Our scientists calculated in advance that the force of the bomb would equal 50 million tons of TNT. That was in theory. In actual fact, the explosion turned out to be equivalent to 57 million tons*" [Khrushchev 1974; pg. 71]. However, all Russian sources since 1991 have consistently used a figure of 50 megatons, not 57. This includes the official Russian listing of all nuclear tests ([RFNC-VNIIEF 1996]), the personal account of the Arzamas-16's accomplishments by its long-time director Yuli Khariton ([Khariton 1993] ), and the account of this device given by its developers Viktor Adamsky and Yuri Smirnov [Adamsky and Smirnov 1994].

In preparing its estimate of the bomb's yield the U.S. had data about the test that was collected surprisingly close at hand. With the advance notice of Khrushchev's announcement,

and the other tests in the series, a crash program code-named Speedlight was organized at the behest of Hebert Scoville (Joint Atomic Energy Intelligence Committee chairman) and Gerald Johnson (assistant to the Secretary of Defense for atomic energy). A KC-135 Stratotanker was modified to carry broadband electromagnetic and special optical equipment (which would have included a high-speed photometer called a 'bhangmeter'). The modification was carried out under the supervision of Doyle Northrup by an Air Force unit headquartered at Wright-Patterson AFB called "Big Safari." The plane was ready for overseas deployment to its staging base by 27 October. Crossing over the Arctic Ocean, Speedlight was able to get quite close to the detonation point; close enough that the fuselage suffered scorching (suggesting it was closer than the 45 km separation of the Tu-95 drop aircraft).



The Tsar Bomba mushroom cloud seen from a distance of 160 km. The crown of the cloud is 56 km high at the time of the picture.

ing the detailed device design, and having conducted exhaustive studies of its effects on the ground. In the case of the 50 megaton test, the U.S. did not have the benefit of detailed information about the device. Nonetheless, given the up-close high quality data provided by Speedlight the yield magnitude of the discrepancy remains puzzling.

The reasons why the Soviets might use this high foreign estimate instead of correcting it with the actual lower figure are clear. The test was intended to be a spectacular demonstration of awesome Soviet capabilities. For this purpose the higher the yield the better. The Soviets had no reason to want to provide a more accurate, but lower, yield. Further, the underlying pathologies of the Soviet system encouraged self-deception. The capricious and very political nature of Khrushchev's decision making, and the fear and apprehension of the weapons scientist about the consequences of failure (*even if less extreme than during the Stalin years*) *illustrate how the system hardly encouraged feedback and truth-telling to the Soviet leader-ship. If Khrushchev heard of Western estimates as he surely did*) and was pleased with the

# 50 megatons or 57 megatons

The light emission profile of the explo-

sion collected by the "bhangmeter" would have been used to calculate yield; the electromagnetic monitoring equipment would have detected signals generated by each stage of the bomb as it ignited, allowing the interstage timing to be measured. The data was analyzed by the Foreign Weapons Evaluation Panel (better known as the Bethe Panel, after its chairman Hans Bethe) which assigned the yield estimate of 57 Megatons [Richelson 2006].

The discrepancy may be explained if the test were actually 50 megatons, but the U.S. estimate was high by 14%. This difference would not be an unusual deviation between actual and estimated yield. For example authoritative estimates of the yield of the Hiroshima bomb have varied from 12 to 16 kt, a 33% difference, despite U.S. advantages in knowweapons team "*exceeding their quota*" as it were, they could hardly be expected to risk themselves in disabusing the leader of the party and state of cher-

ished notions Further, it is not unusual for governments to use inaccurate and unofficial figures developed by others in public discourse, if the accurate official figures are classified. It was even more typical for the CPSU and the Soviet government to refuse to ever acknowledge error. If once upon a time, the leader of the USSR publicly accepted a yield of 57 megatons, then this figure was unlikely to be corrected in subsequent statements. After the fall of the USSR, and the dethronement of the Communist Party as the monopolistic holder of state power, then these motivations to continue with inaccurate estimates disappeared. We'll call it 50 Megatons.

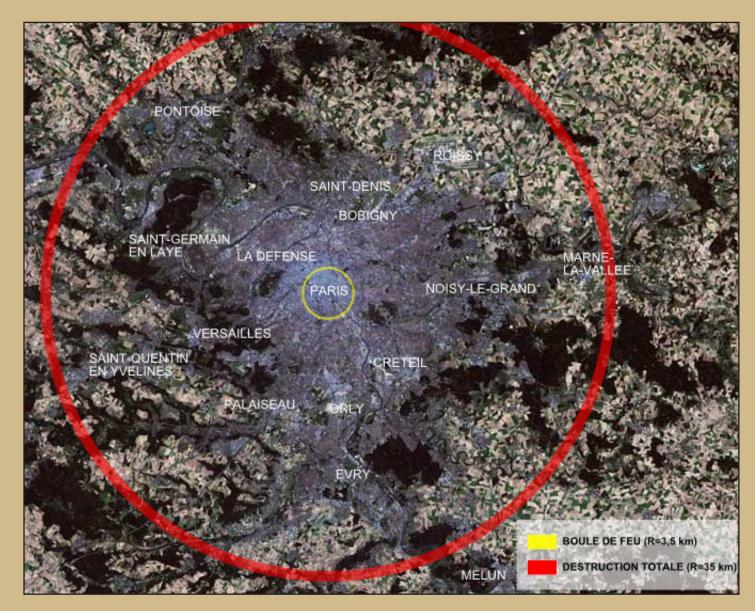
does it matter...

The Tsar Bomba is the single most physically powerful device ever used by man, though its size and weight precluded a successful delivery in case of a real war. By contrast, the largest weapon ever produced by the United States, the now-decommissioned B41, had a predicted maximum yield of 25 Mt, and the largest nuclear device ever tested by the US (Castle Bravo) yielded 15 Mt (*this was due to an unexpected runaway lithium-7 reaction; the design yield was approximately 5 Mt*). The largest weapons deployed by the Soviet Union were also around 25 Mt, as in the SS-18 Mod. 2 ICBM warheads.

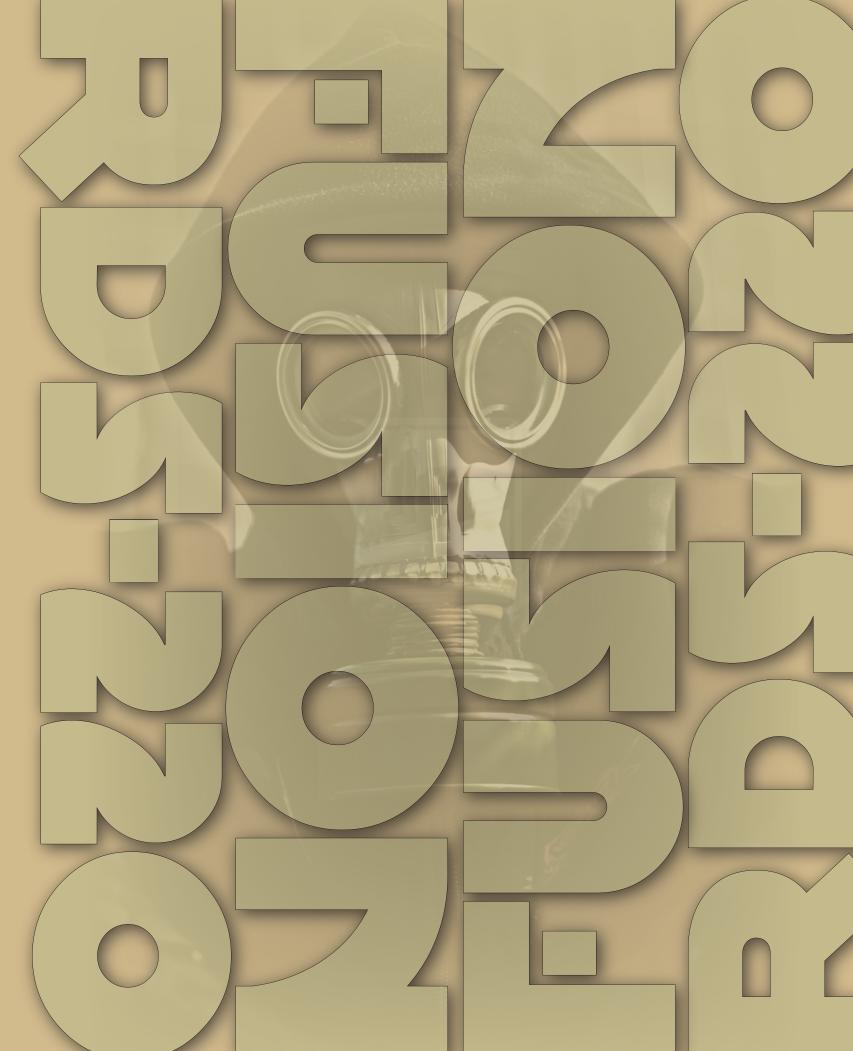
Source: "Tsar Bomba's Blast Wave Orbited Earth Three Times in 1961" http://english.pravda.ru/russia/history/17-09-2009/109339-tsar\_bomba-0. Data Last Retrieved on March 1<sup>st</sup>, 2011.

40 Years Later – September 11th, 2001

much better science - much, much, much smaller bombs



Zone of total destruction of the Tsar Bomba with Paris, above, as an example: red circle = total destruction (radius 35 kilometres (22 miles) yellow circle in center = fireball (radius 3.5 kilometres (2.2 miles)



# VIDEO LINK OF THE TSAR BOMBA

Link to recommended video - 1961 Soviet Test Tsar Bomba Hydrogen Bomb with sound:

http://www.youtube.com/watch?NR=1&v=8PbZnZy1qr8&feature=endscreen

D 514 VL 0 58 13 CO

The Soviet Union was quickly condemned in the United Nations and the Western allies jumped back into the nuclear arms race. Thankfully, this monster never made it into the production line. The device's size, weight, as well as it's frightening destructive capabilities were deemed too extreme for use in a real conflict.

I urge the reader to watch the video linked above, center. It's had 500,000+ viewers and it's the best video of the Tsar Bomba that I've found. There are many others. Imagine, if you will, this same technology reduced to the size of an apple or a grapefruit. The costs would be minimal once a low level production phase was established. With current advances in nanotechnology the smaller components of weapons such as this could and would be reduced to nano-size making a bomb with the same construction criteria as the one above simple designed at a reduced scale. Ninety-seven percent (97%) reduced radiation in 1961. Could they have reduced the radiation to almost zero by 2000, lasting just 5 or 6 days as Dr. Christopher Busby theorizes? Are there bombs like this one that leave little radioactive fallout behind and what might be left requires sophisticated equipment to detect? Bombs that are, in fact, the size of an apple or a grenade? Easily disguised? Easily hidden ... ?

This link below for the very first Soviet Hydrogen bomb test which took place in 1953 is particularly interesting:

http://www.youtube.com/watch?v=r0dUIq8gHgc&feature=related

The bomb was tested at Novaya Zemlya Island in the Russian Arctic Circle. It was airdropped and detonated at around 4,000 meters, being visible from1,000 kilometers away despite overcast weather. Even at the great height at which it exploded, the fireball reached down to the Earth and rose almost to the height at which is was deployed at 10,500 meters. The blast pressure below the burst point was 6 times greater than the Hiroshima bomb at 300 PSI. One cameraman recalled:

The clouds beneath the aircraft and in the distance were lit up by the powerful flash. The sea of light spread under the hatch and even clouds began to glow and became transparent. At that moment, our aircraft emerged from between two cloud layers and down below in the gap a huge bright orange ball was emerging. The ball was powerful and arrogant like Jupiter. Slowly and silently it crept upwards... Having broken through the thick layer of clouds it kept growing. It seemed to suck the whole earth into it. The spectacle was fantastic, unreal, supernatural.

Of course there are.

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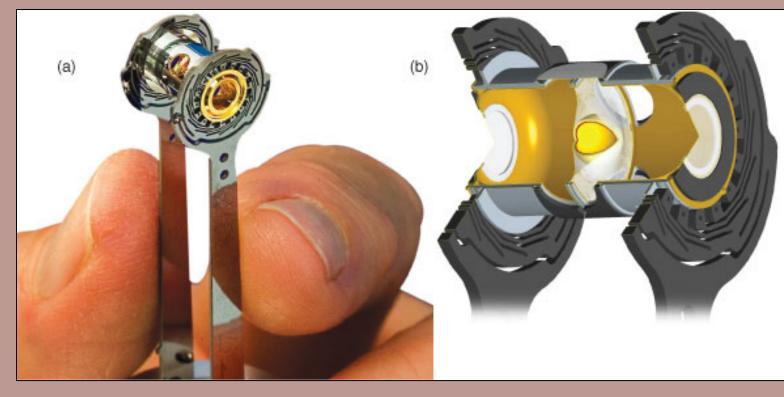
REFERENCES FOR BIG IVAN, THE TSAR BOMBA OR "KING OF BOMBS"



#### August 29th, 1949 - 7:00am

# SEMIPALATINSK TEST

Semipalatinsk Test Site (left), Kazakhstan, August 29th, 1949, 7:00am. Sixty years ago on a remote steppe in the former Soviet Republic of Kazakh SSR, a flash splits the sky. The first Soviet nuclear test, code named "First Lightning." had succeeded in detonating the communist country's first Atomic Bomb. "Joe-1" was about the same size as the American "Fat Man" bomb that had flattened Nagasaki 4 years earlier, killing 80,000 people and maiming and harming millions more. The Soviet bomb was named for Joe Stalin, General Secretary of the Communist Party and head of the country. Joe-1 wasn't the biggest bomb the Soviets or anyone else ever exploded. That distinction goes to "Tsar Bomba" or King Of Bombs that was detonated on October 30th, 1961, at the Mityushikha Bay test range above the Arctic Circle. The H-Bomb, Tsar Bomba, was 2,273 times bigger than Joe-1.

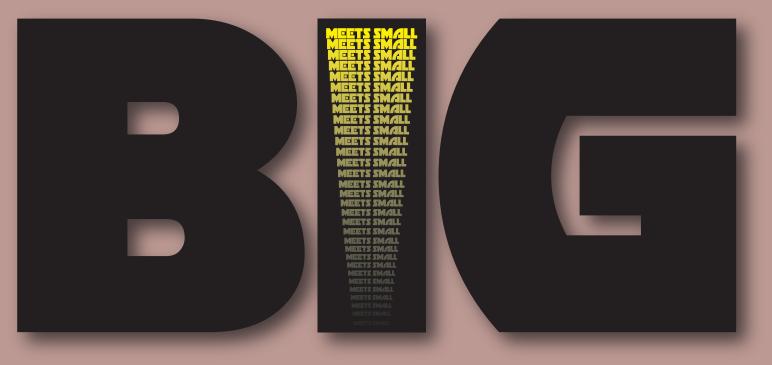


(a) The thermomechanical package (above) for the hohlraum-capsule assembly has a 2-millimeter-diameter capsule in the center. (b) A cutaway rendering of the package shows the tenting (above right) of the capsule and the silicon support arms.



employee (top center), working inside a fusion reactor chamber





NIF's fuel "target", filled with either D-T gas or D-T ice. The capsule is held in the hohlraum using thin plastic webbing. A ten micrometer filling tube is barely visible extending upwards from the top of the capsule.

# PARTICULATE SIZE

World Trade Center demolition and particulate size matter. The total thermal energy required to reduce many 1000s of tons of concrete to dust is immense. The concrete was calcined. The Ph was as high as caustic drain cleaner. Details like these, particulate size among them, are critically important. The calcined caustic concrete is a signature of nuclear demolition.

Although we can't see them, the air we breathe is full of microscopic particles. These particles are health hazardous and are thus considered a specific type of air pollution. Often this type of air pollution is called fine dust. The size of these particles is in the order of several nanometers to several micrometers. Currently regulation focuses primarily on the measurement and reduction of fine particles. Fine particles are often identified by Particle Matter (PM) ratings. PM10 rating as an example represents the weight of particles that have a diameter smaller than 10 micrometer.

However, a very large fraction of particles in urban air (less then 90%) has minute particles of around 100 nanometers (nm) and smaller. These we call very fine particles, ultra-fine particles and nano-particles. The chart inset at right clearly demonstrates the difference in dimensions of fine and ultra-fine particles. Ultra-fine particles range below the currently monitored levels. In other words, there is an important and actually invisible *unmeasured* factor in the air around us that we can't see and that impregnates everything.

Airborne particles originate from many natural and man-made sources (e.g. sand dust, fires, diesel smoke, sea salt). Ultra-fine particles are normally only generated at very high temperatures, such as combustion processes. One can think of wood fires, industry, engines, cooking fumes, or cigarette smoke. Toner (carbon black) from copiers, laser printers and welding-fumes or nano-materials are important sources as well. The heat from fusion and fission also produce these types of particles in abundance.

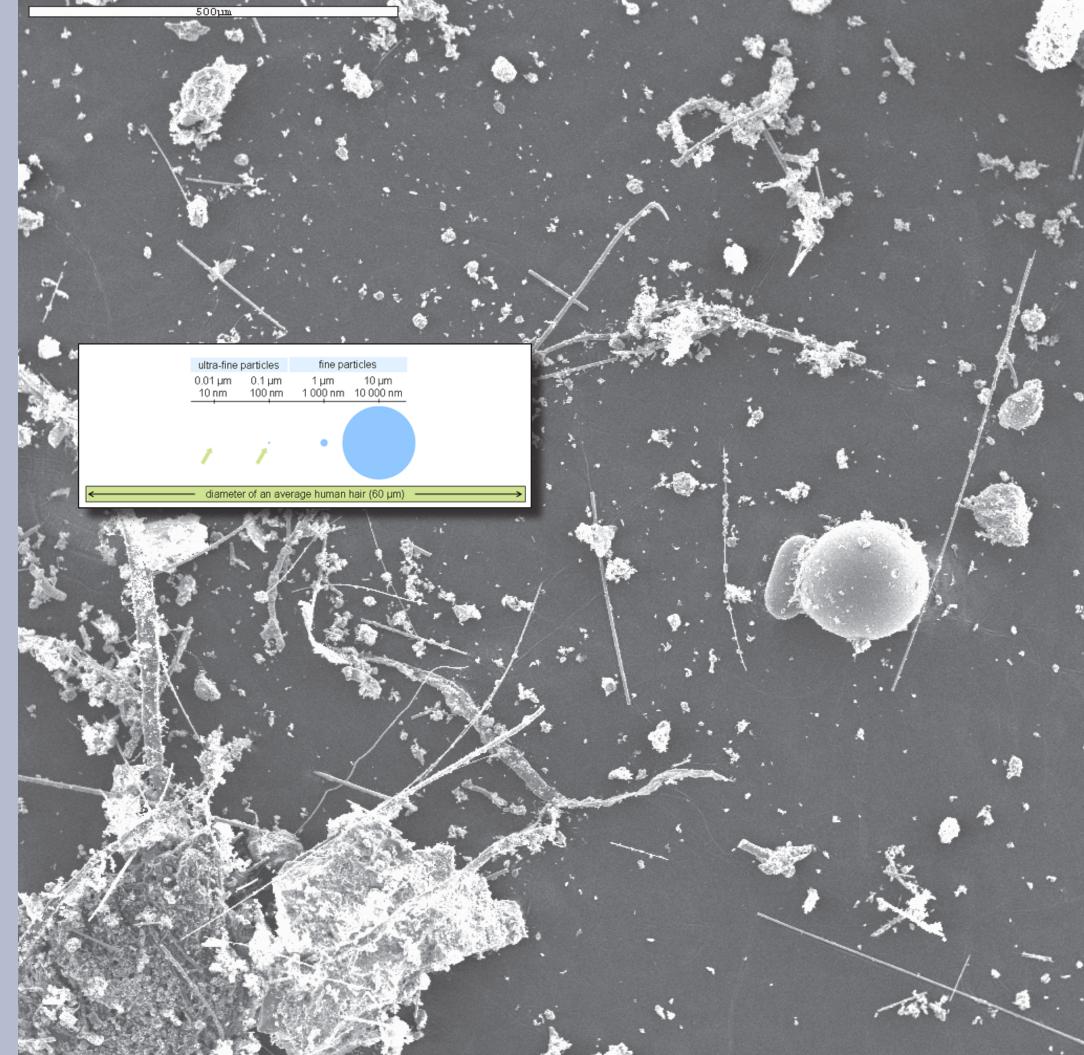
The most important source of ultra-fine particles in urban air however is car traffic. Especially diesel exhaust which consists of large amounts of ultra-fine particles. Such particles are generally formed by a basically insoluble core of carbon of 10-20 nm, often covered with chemicals like sulphates, metals and hydrocarbons. These extremely small particles tend to conglomerate in the air into particles of around 100 nm. To access some of the best information available on air and dust particulates, Scanning Electron Microscopy and elemental analysis of the 911 dust see these links:

USGS Open Source Ground Zero ground dust sampling data:

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

Delta Group Open Source Ground Zero atmospheric dust sampling data:

http://www.tandfonline.com/doi/abs/10.1080/02786820490250836



# THERMAL CAPACITY AND VERY FINE PARTICLES.

Some people may not have fully grasped the significance of heat-generating criticality sites at the WTC after 911. Some have claimed that energetic compounds could have been responsible for these high underground temperatures and molten steel for a total of 100 days before they could be extinguished.

Any attempt to have a complete theory of 911 must include the WTC demolition on 911 itself, and crucially its aftermath of the great hot-spots and molten steel, over 3 months afterwards. Any complete theory must account for each and every anomaly seen that day and discovered afterwards as relates to the demolition.

The temperatures are supported by Dr. Thomas Cahill, nuclear atmospheric physicist and his Delta Group at UC Davis, the AVIRIS images, and numerous eyewit-

ness accounts and images. Underground temperatures would have had to exceed 2500 degrees to "boil soil and glass" for days according to Cahill.

While energetic compounds or other conventional explosive may have been used in some subsidiary capacity on 911 an advancing plethora of evidence, science, chemistry and physics is highlighting clearly how only miniature nuclear devices could have accounted for all the phenomena of the 911 WTC demolitions. There are dozens of anomalies that must be accounted for and this is the only theory that covers all of them.

We have stated that only nuclear criticality sites could be the source of "generated heat" to "boil soil and glass" [Dr. Thomas Cahill, Dust, Part 1 and 2: http://www.box.net/shared/9duecajohk and http://www.box.net/shared/h81kjfkvg9] for weeks and months after 911. You can find, for example on Youtube, numerous videos of an energetic compound of some type being used to melt things including various metals - but no vaporization and a lot of melted metal (we'll discuss melted metal at length later). I've seen no vaporization of concrete. The information you're accessing is new. Are you sure you want to access new information or do you prefer to parrot the same old tune? To accept the norm and prevent a brain taxing experience please

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ing their fuel in just milliseconds. Only un-fusioned or un-fissioned materials can continue to generate heat and "boil soil and glass" for 30 days after the event [Cahill, 2007].

It is highly likely that any energetic compounds at the WTC on 911 would have cooled off within hours or less. Indeed, I have stated that even the momentary maximum temperature of a nuclear demolitions hypocenter (up to 100 million degrees), is known to cool off relatively quickly. You can ascertain this rapid cooling off in regards to the Trinity Site, or Hiroshima or Nagasaki, or even H-Bomb test sites. The temperatures returned to normal at all these sites relatively quickly.

Now some claim that oxygen starved fires could allow for vastly longer high tem-

?X

perature fires underground at the WTC. These people don't seem to realize they have just proven the case only for nuclear chain reactions. Because only nuclear chain reactions release massive heat almost indefinitely, without needing any oxygen whatsoever. This is not the case for any conventional (non-nuclear) fire. This "indefinite" massive heat source was the basis for the term "China Syndrome" in regards to a nuclear reactor mishap which, in theory (but not really), could have massive indefinite heat leading to a nuclear reactor criticality core remnant burning all the way through to China. Some have suggested certain energetic compounds release their own oxygen. Were they able to do so they would exhaust their energy supply rapidly. And the bright, blinding flash of continually burning energetic compounds would have been apparent. Energetic compounds don't burn *slowly and manufacture oxygen below* ground for months. 100 days to be precise. Nuclear reaction accounts for this.

A newer nuclear device with a 10, 20, 50 or 100 foot radius would glow for a millisecond. Many above ground nuclear explosions have two flashes

No one has calcined concrete with energetic compounds made of iron oxide rich spheres and aluminum in a silica substrate with approximately 300mps velocity (Harrit, 2010) into micron sized, highly acidic very fine particles.

Note that the energetic compound is not being used as an explosive when it is seen melting through a car or girder, e.g. But some of those videos clearly show that after just a few seconds, the molten compound residue is burned fully and cools off within 15-30 minutes. Energetic compounds, for example the one found by Jones, et al., with a velocity of 300mps (Harrit, 2010), would have burned rapidly wherever they were and in whatever quantity they may have occurred in because they're mixed at nano-scale specifically to be rapid and efficient burners exhaust-

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> and the first flash is too fast to even be seen by the human eye. Many people don't know that. Perhaps a newer device has no visible flash at all. Of course that first initial unseen flash has been recorded, but there's more than meets the eye in this nuclear game and if you study it long enough, carefully enough, thoroughly enough, you'll learn that it's the only explanation for the events that occurred at the Twin Towers on 911. More important, you'll learn everything you knew about fusion, fission, radiation and nuclear explosives was wrong in the first place and far more complex, intricate and convoluted then you might have thought. Energetic compounds alone don't have the thermal capacity to calcine 100,000 tons of concrete (that's just 25% of the estimated total concrete) and they don't have the expanding thermal capacity to do what we saw that day in less than 10 seconds.



# PARTICULATE SIZE EXCERPT - DELTA GROUP

The size distribution of major elements was anomalous with almost all mass either coarse or very fine, unlike typical ambient aerosols seen in scores of studies since 1972 (Whitby 1978). The presence of so much mass in the very fine size fraction thus leads to a very high particulate surface area and number of particles.

Very fine vanadium, nickel, and chromium versus time. Elemental data are presented for the very fine  $(0.26 > D p > 0.09 \mu m)$  mode for vanadium, nickel, and chromium, October 2–30 (see http://www.tandfonline.com/doi/abs/10.1080/02786820490250836)

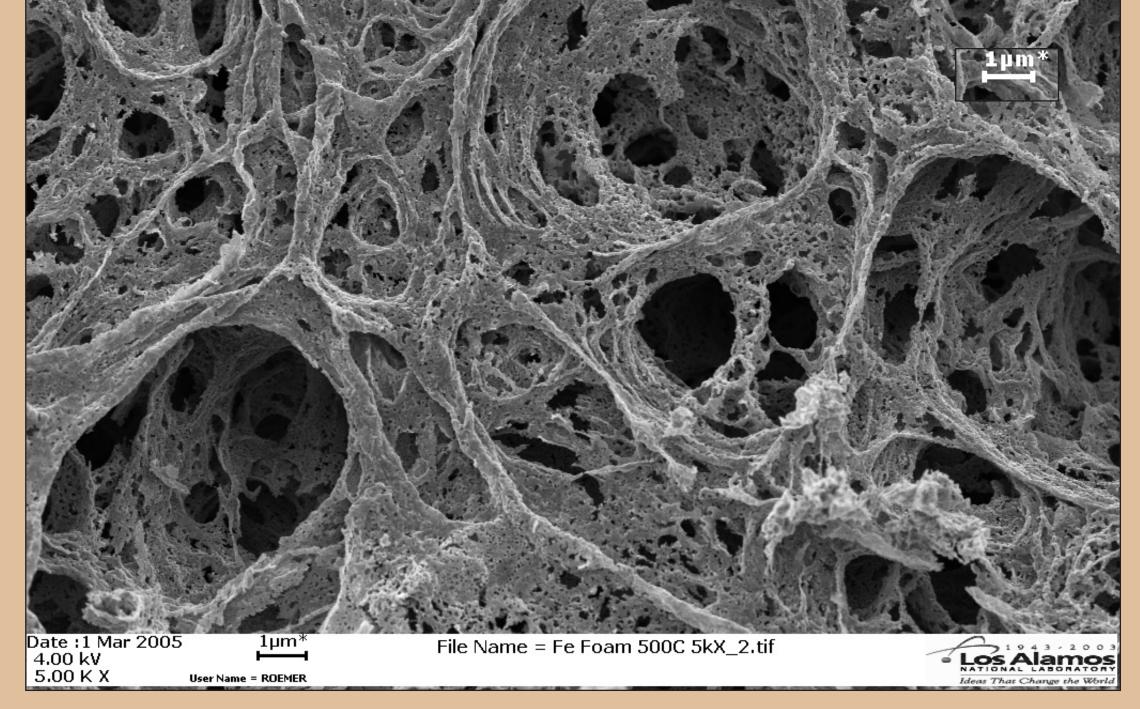
### CONCLUSIONS EXCERPT - DELTA GROUP

In this work, we have isolated and characterized the nature of the aerosol plumes coming from the WTC collapse site in the period between October 2 and October 30, 2001. The key finding is the plumes were generally both coherent and elevated, thus not generally impacting ground-based sites in New York City away from the WTC collapse pile.

However, under certain meteorological conditions, the plumes could ventilate to the ground, leading to periods of sharply elevated coarse, fine, and very fine particulate mass over periods of a few hours 1.8 km from the WTC collapse site and beyond. The WTC plume data were in semiquantitative accord with EPA 24 h PM2.5 measurements.

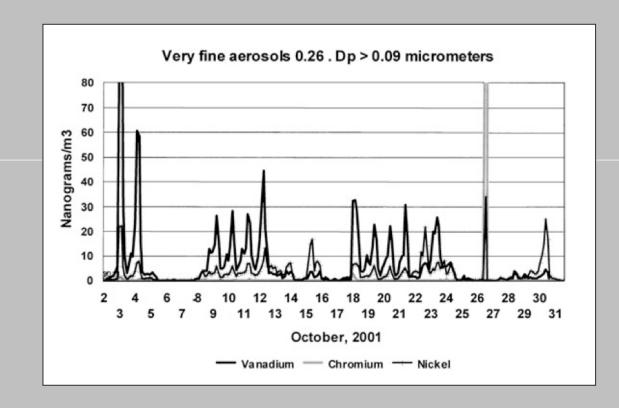
Very fine silicon particles, similar to those recently seen near coal-

fired power plants, were a major component, about 10%, and may be derived either from similar high temperature processes or the formation of volatile halosilanes such as SiCl4. Due to the combination of relatively high mass and smaller-than-usual size, the number and surface concentration are unusually high both absolutely and on a per  $\mu$ g of mass basis. Since these particles are poorly soluble in lung fluids, they will likely have long retention times in the lung and most likely be cleared through macrophage ingestion and transport through the blood stream, although the data are available only for the even smaller ultrafine particles (U.S. EPA 1996). Very fine particle silicon concentra-

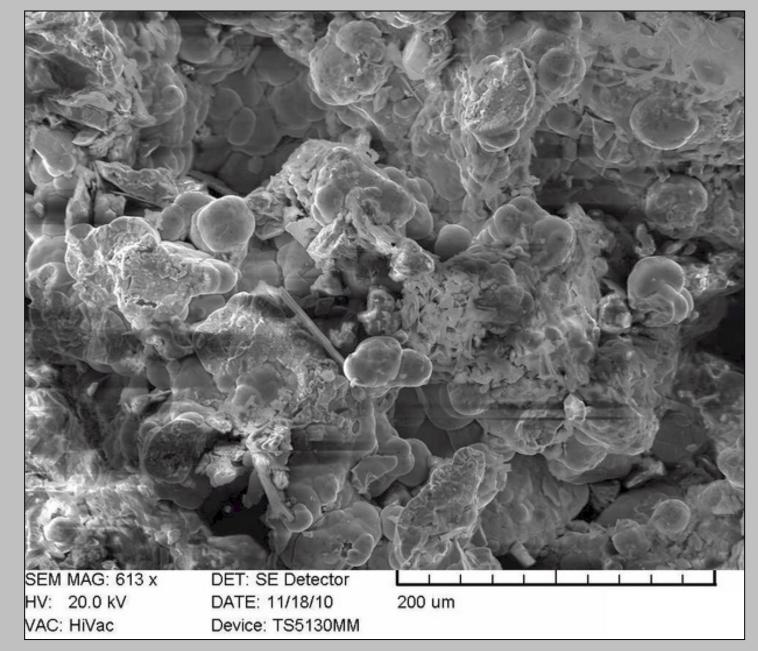


NANO TODAY • To produce a metal nanofoam (above), energetic metal bis(tetrazolato)amine (BTA) complexes are synthesized, compressed into cakes, and ignited in an inert atmosphere. The self-assembled nanoporous foam results from the action of heat released from combustion of the energetic complexes causing rapid gas-phase metal nanoparticle nucleation and agglomeration combined with the decomposition of the nitrogen-rich BTA ligands into gaseous products which, in effect, serve as a nano-blowing agent. BTA (Bis(tetrazolato)amine) ligands can be produced by the method described by Naud et al. Briefly, sodium dicyanoamide is reacted with sodium azide acidified to a pKa of less than 1 to produce sodium bis(tetrazolato)amine (Na-BTA). The Na-BTA is then rinsed thoroughly with sodium nitrite (NaNO2) to destroy any residual azides. Na-BTA is then treated with HCl to produce the free acid bis(tetrazolato)amine monohydrate (BTAw) which is then recrystallized. BTAw is subsequently treated with 3-4 equivalents of ammonium hydroxide to produce a highly-soluble diammonium salt (DA-BTA) which yields a chalky white precipitate diammonium bis(tetrazolato)amine monohydrate (DA-BTAw) upon evaporation. DA-BTAw can then be reacted with any of a number of metal chloride, nitrate, or perchlorate salts in aqueous solution to form the desired metal-BTA complex. The number of BTA ligands which attach to the metal center depends on the chemistry of the metal being used. For example, reaction of DA-BTA with iron perchlorate (a dangerous tions dropped sharply during October, far faster than the sulfates. Very fine metals were routinely seen, but while most were at low concentrations, some metals (V, Ni, Cu, As, Se, Br, and Hg) occurred at Unprecedented levels in the very fine size range (my emphasis).

Here, Dr. Cahill is telling us something. Vanadium, Nickel, Copper, Arsenic, Selenium, Bromine and Mercury were found in the atmospheric dust but they were found at nano-scale and in higher than expected levels. Smaller then small or what's commonly referred to as "very fine particles" within the scientific community. What thermal reaction caused these micron-sized particles to form in such high quantities?



This study shows the value of highly time-resolved, size-resolved, and compositionally resolved aerosol data in aerosol emission events do not match the typical ambient aerosol patterns. In such situations, it may not be appropriate to base the estimated impact on health derived from the results of epidemiological studies based on 24 hour averages. A model based on acute industrial exposures may be more appropriate if extended to susceptible populations, i.e., young, old, and sick people. A person could, in a few hours, be subject to materials in amounts and composition that they would not have had to endure in years of typical ambient conditions. While the impacts of the plumes at sites away from the WTC collapse pile were episodic, that is not true for workers at the site itself, for which our data, when scaled to on-site conditions, could be relevant to health impact investigations. Finally, while the WTC event is hopefully unique, there have been in the past 30 years many similar types of events that deviate strongly from typical ambient conditions, including industrial accidents, major fires, dust storms, and the Mt St. Helens eruption, that would have benefited from increased information on particle size and composition as a function of time.



What is the source of the increased levels of uranium found at Ground Zero?

Uranium in the environment refers to the science of the sources, environmental behaviour, and effects of uranium on humans and other animals. Uranium is weakly radioactive and remains so because of its long physical halflife (4.468 billion years for uranium-238). The biological half-life (the average time it takes for the human body to eliminate half the amount in the body) for uranium is about 15 days. Normal functioning of the kidney, brain, liver, heart, and numerous other systems can be affected by uranium exposure, because uranium is a toxic metal. The use of depleted uranium (DU) in munitions is controversial because of questions about potential long-term health effects. The use of Enriched Uranium found in Fallujah, Iraq, is criminal. The use of nuclear devices within the United States is also criminal.

Uranium (above) under scanning electron microscopy was found at 7.57 parts per million (93 Bequerels per kilogram) in the dust taken from the girder coatings bt USGS personnel. Normal uranium content on earth is between 12 and 40 Bequerels per kilogram making the girder coating uranium dust more than twice the expected level.

The only well known method of causing rapid increase in Thyroid cancer, Leukemia and Multiple Myeloma, and remember now – all three increasing rapidly together in the same cohort of people – is radiation exposure. The only known method capable of developing the thermal energy necessary to do what we see below – in the time that it took, less than 10 seconds in the still images below – is fusion and/or fission when we consider the amount of concrete calcined and the caustic measurements of the Ph of that concrete dust. There are many, many other dust anomalies.

This was not a building collapse. This was not a building implosion. This was a *massive* controlled nuclear building explosion.

Sophisticated Miniature Nuclear Bombs detonated rapidly every third, fifth or tenth floor with a total initial radii of perhaps as little as 10-50 feet each would have produced precisely what we saw. Deuterium-Tritium bombs that leave radiation requiring sophisticated equipment to register for a mere 5 or 6 days would explain the Twin Towers demolition and all of the anomalies associated with it.



# GROUND ZERO ASBESTOS, OR LACK THEREOF ...

#### Analysis of Aerosols from the World Trade Center Collapse Site -

New York, October 2 to October 30, 2001

Thomas A. Cahill,<sup>1</sup> Steven S. Cliff,<sup>1</sup> Kevin D. Perry,<sup>2</sup> Michael Jimenez-Cruz,<sup>1</sup> Graham Bench,<sup>3</sup> Patrick Grant,<sup>3</sup> Dawn Ueda,<sup>3</sup> James F. Shackelford,<sup>4</sup> Michael Dunlap,<sup>4</sup> Michael Meier,<sup>4</sup> Peter B. Kelly,<sup>5</sup> Sarah Riddle,<sup>5</sup> Jodye Selco,<sup>5,6</sup> and Robert Leifer<sup>7</sup>

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4. Department of Chemical Engineering and Materials Science, UC Davis, Davis, California

5. Department of Chemistry, UC Davis, Davis, California

6. Redlands University, Redlands, California

7. Environmental Measurement Laboratory (EML), Department of Energy, New York, New York

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Every truck, every tractor trailer, every vehicle leaving Ground Zero was required to pass through one of several large commercial truck washes before leaving Ground Zero. The trucks were washed fastidiously to remove what the public was told was asbestos. The trucks were pressure washed top to bottom including the undercarriage, wheels and axles. Removing asbestos so as not to track it across lower Manhattan was a very serious concern for those whose job it was to clean up the mess. But there wasn't any asbestos at Ground Zero. Viewing the AVARIS maps from NASA and examining the text from both the Delta Group and the USGS indicate clearly that the asbestos

was dispersed across lower Manhattan by the demolition and that Ground Zero was virtually asbestos-free. In fact, the literature mentions that the asbestos across lower Manhattan was being lofted into the atmosphere by buses, taxis and normal city traffic. The trucks leaving Ground Zero had no asbestos or toxic chemicals to wash off. Yet they were required to be washed and the reason given by the city was to remove asbestos. I believe the truck washes, numerous commercial washes set up by the city were erected to remove lingering radioactive element particles and prevent those radioactive particles from being deposited across the city of Manhattan.

scanning electron microscope picture of anthophyllite asbestos





\* Remember, this report stated earlier that, "Very fine metals were routinely seen, but while most were at low concentrations, some metals (V, Ni, Cu, As, Se, Br, and Hg) occurred at unprecedented levels in the very fine size range."

The collapse of the World Trade Center buildings #2, the South Tower, #1, the North Tower and #7 created an enormous collapse pile which emitted intense plumes of acrid smoke and dust until roughly mid-December, when the last spontaneous surface fire occurred. We collected particles by size (8 modes,  $\approx 12$  to 0.09 micrometers diameter) and time (typical resolution of 1 to 3 h) from October 2 until late December at the EML 201 Varick Street site roughly 1.8 km NNE of the collapse site and 50 m above ground level.

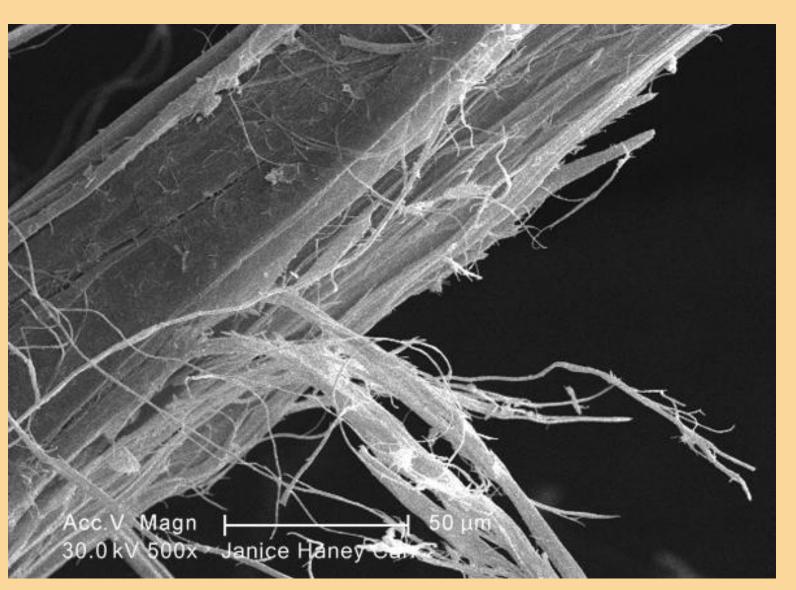
Here we show some of the 70,000 mass and elemental data from the time period October 2 through October 30. Identification of a WTC collapse pile source for aerosols seen at the receptor site were based upon the simultaneous presence of finely powdered concrete, gypsum, and glass with intense very fine combustion-mode mass episodes concurrent with winds from the southwest analytical techniques, showed that while PM10 and PM2.5 24 h values rarely, if ever, violated federal air quality standards, WTC-derived plumes swept over lower Manhattan Island, resulting in intense aerosol impacts of durations of a few hours at any one site. The WTC plume resembled in many ways those seen from municipal waste incinerators and high temperatures processes in coal-fired power plants. The size fractions above 1 micrometer contained finely powdered concrete, gypsum, and glass, with soot-like coatings and anthropogenic metals, but little asbestos\*.

#### Abstract

#### \*USGS and AVARIS data confirm this finding on the ground

Composition in the very fine size range  $(0.26 > Dp > 0.09 \mu m)$  was dominated by sulfuric acid and organic matter, including polycyclic aromatic hydrocarbons (PAHs) and their derivatives, and glass-like silicon-containing aerosols. Many metals were seen in this mode, most, but not all, \*at low concentrations. The concentrations of very fine silicon, sulfur, and many metals, as well as coarse anthropogenic metals, decreased markedly during October, probably in association with the cooling of the collapse piles. Values of very fine elements seen in May, 2002 at the WTC site were only a few percent of October values.

# ABOUT ASBESTOS



## WHITE ASBESTOS

Under a moderate magnification of 500X, this scanning electron micrograph (SEM) revealed some of the microcrystalline ultrastructure exhibited by a piece of raw chrysotile, or white asbestos, which had been excavated from the Lowell Asbestos Mine on Belvidere Mountain, Vermont. Note the elongated crystalline structure, and how the fibrils are arranged in both bundles, and as singular serpentine units. Though chrysotile asbestos is the predominant commercial form of asbestos, asbestos is the name given to a group of six different fibrous minerals including chrysotile, amosite, crocidolite, and the fibrous varieties of tremolite, actinolite, and anthophyllite, with all occurring naturally in the environment. Note that the fibers are configured in both lamellated and teased patterns, which illustrates the long, flexible nature of this mineral's fibers. Workers who repeatedly breathe in asbestos fibers with lengths greater than or equal to  $5\mu m$  (this equals 5 millionths of a metre of 1 x 10<sup>-6</sup> m - the symbol ' $\mu m$ ' means micrometer) may develop a slow buildup of scar-like tissue in the lung, and in the membrane that surrounds the lungs. This scar-like tissue does not expand and contract like normal lung tissue and so breathing becomes difficult. Blood flow to the lung may also be decreased, and this causes the heart to enlarge. This disease is called asbestosis. People with asbestosis have shortness of breath, often accompanied by a cough. This is a serious disease and eventually leads to certain disability and in people exposed to high amounts of asbestos over a long period of time it means death. However, asbestosis is not usually of concern to people exposed to low levels of asbestos. Changes in the membrane surrounding the lung, called pleural plaques, are quite common in people occupationally exposed to asbestos, and are sometimes found in people living in areas with high environmental levels of asbestos.

New York City was covered with asbestos and the AVARIS satellite images display asbestos across the city. Yet almost no asbestos was found at Ground Zero. Asbestos is not the cause of a wide range of rare cancers. We have dozens of years of science with clear indications of the pattern of disease seen in asbestos compromised workers. The regular breathing of asbestos particles by asbestos workers in the early 1900s led to serious health complications with severely compromised blood oxygenation but exposure to asbestos never led to rapidly developing rare cancers.

Even exposure to the toxic soup of chemicals in the Ground Zero dust has never caused rapid development of numerous rare cancers; these are only seen in individuals exposed to nuclear radiation.

IF THE ASBESTOS WAS DISPERSED ACROSS THE CITY WITH VERY LITTLE FOUND AT GROUND ZERO, WHY WAS THERE SO MUCH TRITIUM AT GROUND ZERO? IF THE ASBESTOS WAS DISPERSED ACROSS THE CITY WITH VERY LITTLE FOUND AT GROUND ZERO, WHY WAS THERE SO MUCH URANIUM AT GROUND ZERO?

# NO ASBESTOS AT CROULD



Why the fastidious clean-up when we know there was little asbestos at Ground Zero? Asbestos was specifically used as the reasoning behind the clean-up of workers and the wash-down of trucks leaving Ground Zero, yet the FDA claimed that "the air is safe to breathe." More importantly, the USGS data, the AVARIS data and the UC Davis Delta Group data indicate with clarity virtually no asbestos was found at Ground Zero. It was dispersed north, north-east across the city.

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The fires were and are never adequately discussed in the mainstream or in the alternative media 911 truth movement. In fact very little of the truly critical components of the event are ever discussed whether in the mainstream media (*of course*) or even in the alternative 911 truth media groups. Some have hypothesized that energetic compounds produce their own oxygen so underground fires burning at 2500 degrees and more aren't to be unexpected. However what is entirely unexpected and virtually impossible is for energetic compound residuals to produce enough oxygen for 3 months of uncontrollable underground fires. Energetic compounds burning for 3 months at a necessarily slow enough rate to maintain fires for over 90 days is impossible. These nano compounds are specifically designed to be rapid burners; to burn so fast that they reach their maximum 4500 degree (approx.) temperature as fast as possible – in just milliseconds – and then cool within 15 to 30 minutes. It is absolutely impossible for energetic compounds to fuel an underground fire for 100 days. Only a nuclear reaction is capable of producing that level of heat for that length of time.

## The collapse of the World Trade Center buildings number 2, the South Tower, number 1, the North Tower, and number 7 on September 11, 2001 is an unprecedented event in numerous ways. Yet the prompt and massive emissions of smoke and dust in the first days after the collapse were in accord with common understanding of such phenomena. However, the continuing emission of these plumes, especially after the heavy rains of September 14 and the increasingly effective efforts of fire suppression in mid- and late September, are not fully understood. Factors which are essential for an in-depth analysis are the chemical composition of the materials that could be aerosolized and the energy sources available in the collapse piles. In this regard, the kinetic energy of the two aircraft is negligible (<1%) compared to the chemical energy in the roughly 25,000 liters of fuel

in each plane (some of which was burned outside the buildings). The gravitational potential energy of the collapse was capable of raising the entire mass of debris only a few degrees K. The largest energy sources available are the combustible materials present in the buildings and furnishings and a significant body of fuel, especially under World Trade Center #7, in the form of diesel fuel for emergency electrical generators and large quantities of oil in various forms in the Consolidated Edison substation, also under World Trade Center #7. Very high temperatures occurred in the burning floors of the buildings prior to collapse and during the first few days of active surface fires, as shown by the melting of metals. Later, infrared surveys showed surface temperatures in the collapse pile were as high as 30 K above ambient in October, and much higher subsurface temperatures were

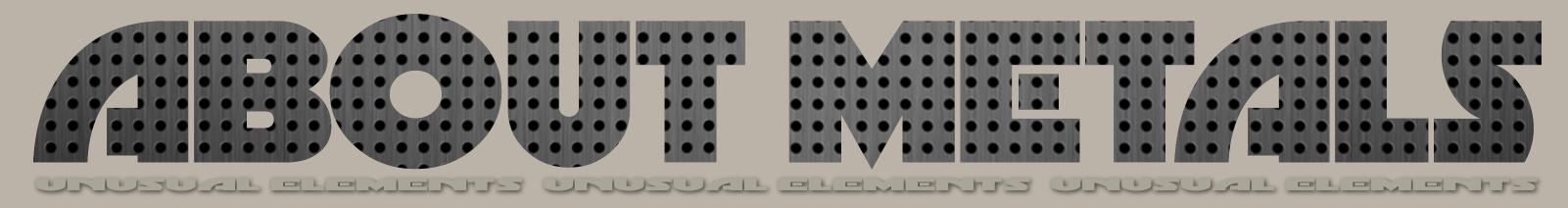
## Non-Extinguishable Fires Burned Between 2355C or 4270F+ For Over 3 Months – the boiling point of glass

inferred from the lower portions of removed steel beams glowing red. The subsurface of the collapse piles remained hot for months despite use of massive amounts of water to cool them, with the last spontaneous surface fire occurring in mid-December.

Satellite and photographic observations of the aerosol plumes are extremely useful in characterizing plume transport, especially in the early days when few other measurements were performed or were available. On the evening of September 11, the area of lower Manhattan Island was blanketed with a dark gray smoke. On September 12 at 11:30 AM, the Enhanced Thematic Mapper Plus (ETM +) aboard the Landsat 7 satellite showed a dispersed plume moving WNW to SSW in a broad plume over roughly 120 degrees angular dispersion, while later that same day IKONOS



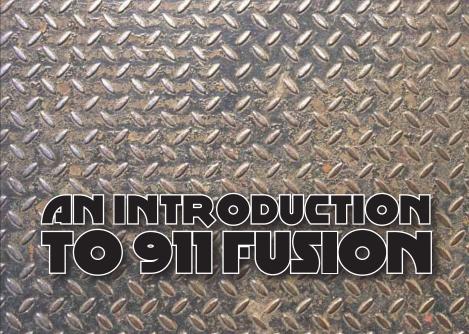
showed a whitish coherent plume no more than about 0.3 km wide lofting above the buildings as it moved south towards open water (IKONOS 2001). Heavy rains occurred on September 14, which helped the Fire Department of New York (FDNY) extinguish surface fires while wetting the massive dust deposits. The plume detected by IKONOS on September 16 was much less intense and much darker than the plume of September 12, and the lofting is not as evident. All of these were consistent with the improved conditions on the collapse pile observed during rescue operations. In late September, World Trade Center rescue operations gradually ceased and recovery operations began and with them greatly increased fire suppression efforts, including wetting agents and use of heavy equipment to begin unpeeling the collapse pile. The fires raged for 100 days anyway.



# HYDROGEN

While hydrogen isn't a metal we're starting with hydrogen because it's a component of most nuclear reactions. The Hydrogen Fuel cell is a developing technology that will allow great amounts of electrical power to be obtained using a source of hydrogen gas.

Consideration is being given to an entire economy based on solarand nuclear-generated hydrogen. Public acceptance, high capital investment, and the high cost of hydrogen with respect to today's fuels are but a few of the problems facing such an economy. Located in remote regions, power plants would electrolyze seawater; the hydrogen produced would travel to distant cities by pipelines. Pollution-free hydrogen could replace natural gas, gasoline, etc., and could serve as a reducing agent in metallurgy, chemical processing, refining, etc. It could also be used to convert trash into methane and ethylene. At some depth in the planet's interior the pressure is so great that solid molecular hydrogen is converted to solid metallic hydrogen.



The ordinary isotope of hydrogen, H, is known as Protium, the other two isotopes are Deuterium (a proton and a neutron) and Tritium (a protron and two neutrons). Hydrogen is the only element whose isotopes have been given different names. Deuterium and Tritium are both used as fuel in nuclear fusion reactors. One atom of Deuterium is found in about 6000 ordinary hydrogen atoms.

Deuterium is used as a moderator to slow down neutrons. Tritium atoms are also present but in much smaller proportions. Tritium is readily produced in nuclear reactors and is used in the production of the hydrogen (fusion) bomb. It is also used as a radioactive agent in making luminous paints, and as a tracer. Sources: Los Alamos National Laboratory; CRC Handbook of Chemistry and Physics; American Chemical Society

# URANIUM

Uranium is of great importance as a nuclear fuel. Uranium-238 can be converted into fissionable plutonium by the following reactions: 238U(n, gamma) --> 239U --(beta)--> 239Np --(beta)--> 239Pu. This nuclear conversion can be brought about in breeder reactors where it is possible to produce more new fissionable material than the fissionable material used in maintaining the chain reaction.

Uranium is used in inertial guidance devices, in gyro compasses, as counterweights for aircraft control surfaces, as ballast for missile reentry vehicles, and as a shielding material. Uranium metal is used for X-ray targets for production of high-energy X-rays; the nitrate has been used as a photographic toner, and the acetate is used in analytical chemistry.

Crystals of uranium nitrate are triboluminescent. Uranium salts have also been used for producing yellow "vaseline" glass and glazes. Uranium and its compounds are highly toxic, both from a chemical and radiological standpoint. Sources: Los Alamos National Laboratory; CRC Handbook of Chemistry and Physics; American Chemical Society

# TRITIUM

Tritium; symbol T or <sup>3</sup>H also known as hydrogen-3 is one of the 16 radioactive isotope of hydrogen. The nucleus of tritium (sometimes called a triton) contains one proton and two neutrons, whereas the nucleus of protium (by far the most abundant hydrogen isotope) contains one proton and no neutrons. Naturally occurring tritium is extremely rare on Earth.

Beta particles from tritium can penetrate only about 6.0 mm of air, and they are incapable of passing through the dead outermost layer of human skin. The unusually low energy released in the tritium beta decay makes the

of coal.

The uses of nuclear fuels to generate electrical power, to make isotopes for peaceful purposes, and to make explosives are well known. The estimated world-wide capacity of the 429 nuclear power reactors in operation in January 1990 amounted to about 311,000 megawatts. The total has not increased significantly since then.

Uranium in the U.S.A. is controlled by the U.S. Nuclear Regulatory Commission. New uses are being found for depleted uranium, ie., uranium with the percentage of 235U lowered to about 0.2%.

Natural uranium, slightly enriched with 235U by a small percentage, is used to fuel nuclear power reactors to generate electricity. Natural thorium can be irradiated with neutrons as follows to produce the important isotope 233U: 232Th(n, gamma)--> 233Th --(beta)--> 233Pa --(beta)--> 233U. While thorium itself is not fissionable, 233U is, and in this way may be used as a nuclear fuel. One pound of completely fissioned uranium has the fuel value of over 1500 tons (*along with that of rhenium-187*) element an appropriate laboratory for absolute neutrino mass measurements (*the most recent experiment being KATRIN which you should Google*).

Tritium is also produced in heavy water-moderated reactors whenever a deuterium nucleus captures a neutron. This reaction has a quite small absorption cross section, making heavy water a good neutron moderator, and relatively little tritium is produced. Even so, cleaning tritium from the moderator may be desirable after several years to reduce the risk of its escaping to the environment. The Ontario Power Generation's "Tritium Removal Facility" processes up to 2,500 long tons (2,500,000 kg) of heavy water a year, and it separates out about 2.5 kg (5.5 lb) of tritium, making it available for other uses.

Sources: Los Alamos National Laboratory; CRC Handbook of Chemistry and Physics; American Chemical Society

# PRODUCTION HISTORY

According to the Institute for Energy and Environmental Research report in 1996 about the U.S. Department of Energy, only 225 kg (500 lb) of tritium has been produced in the United States since 1955. Since it continually decays into helium-3, the total amount remaining was about 75 kg (170 lb) at the time of the report.

Tritium for American nuclear weapons was produced in special heavy water reactors at the Savannah River Site until their close-downs in 1988. With the Strategic Arms Reduction Treaty (START) after the end of the Cold War, the existing supplies were sufficient for the new, smaller number of nuclear weapons for some time.

The production of tritium was resumed with irradiation of rods containing lithium (replacing the usual control rods containing boron, cadmium, or hafnium), at the reactors of the commercial Watts Bar Nuclear Generating Station in 2003–2005 followed by extraction of tritium from the rods at the new Tritium Extraction Facility at the Savannah River Site beginning in November 2006. Tritium leakage from the TPBARs during reactor operations limits the number that can be used in any reactor without exceeding the maximum allowed tritium levels in the coolant.

Tritium's radioactivity is 9650 curies per gram.

Tritium figures prominently in studies of nuclear fusion because of its favorable reaction cross section and the large amount of energy (17.6 MeV) produced through its reaction with deuterium.

# HEALTH RISKS

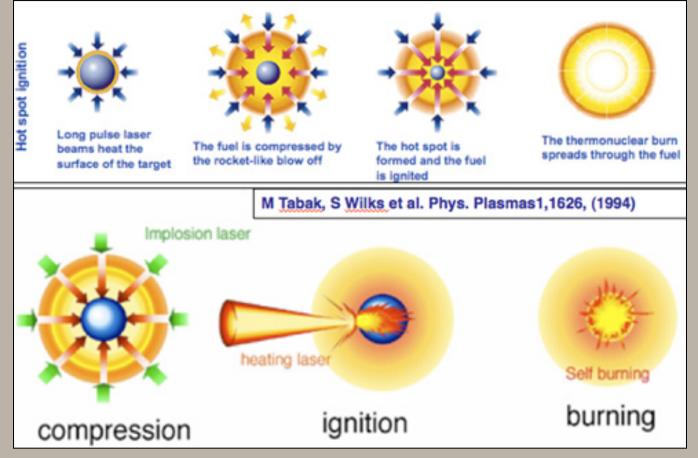
the total effects of single-incident ingestion and precludes long-term bioaccumulation of HTO from the environment.

Tritium has leaked from 48 of 65 nuclear sites in the United States, detected in groundwater at levels exceeding the United States Environmental Protection Agency (EPA) drinking water standards by up to 375 times.

The US Nuclear Regulatory Commission states that in normal operation in 2003, 56 pressurized water reactors released 40,600 curies of tritium (maximum: 2,080; minimum: 0.1; average: 725) and 24 boiling water reactors released 665 curies (maximum: 174; minimum: 0; average: 27.7), in liquid effluents.

# SELF-POWERED LIGHTING

The emitted electrons from the radioactive decay of small amounts of tritium cause phosphors to glow so as to make self-powered lighting devices called betalights, which are now used in firearm night sights, watches, exit signs, map lights, and a variety of other devices. This takes the place of radium, which can cause bone cancer and has been banned in most countries for decades. Commercial demand for tritium is 400 grams per year and the cost is approximately US \$30,000 per gram.



fast ignition is another approach to inertial confinement fusion - see next page

# BOOSTED FISSION WEAPON

Before detonation, a few grams of tritium-deuterium gas are injected into the hollow "pit" of fissile plutonium or uranium. The early stages of the fission chain reaction supply enough heat and compression to start deuterium-tritium fusion, then both fission and fusion proceed in parallel, the fission assisting the fusion by continuing heating

Tritium is an isotope of hydrogen, which allows it to readily bind to hydroxyl radicals, forming tritiated water (HTO), and to carbon atoms. Since tritium is a low energy beta emitter, it is not dangerous externally (*its beta particles are unable to penetrate the skin*), but it is a radiation hazard when inhaled, ingested via food or water, or absorbed through the skin has a short biological half-life in the human body of 7 to 14 days, which both reduces

# NUCLEAR WEAPONS

Tritium is an important component in nuclear weapons. It is used to enhance the efficiency and yield of fission bombs and the fission stages of hydrogen bombs in a process known as "boosting" as well as in external neutron initiators for such weapons.

# NEUTRON INITIATOR

Actuated by an ultrafast switch like a krytron, a small particle accelerator drives ions of tritium and deuterium to energies above the 15 kilo-electron-volts or so needed for deuteriumtritium fusion and directs them into a metal target where the tritium and deuterium are adsorbed as hydrides. High-energy fusion neutrons from the resulting fusion radiate in all directions. Some of these strike plutonium or uranium nuclei in the primary's pit, initiating nuclear chain reaction. The quantity of neutrons produced is large in absolute numbers, allowing the pit to quickly achieve neutron levels that would otherwise need many more generations of chain reaction, though still small compared to the total number of nuclei in the pit. highly energetic (14.1 MeV) neutrons. As the fission fuel depletes and also explodes outward, it falls below the density needed to stay critical by itself, but the fusion neutrons make the fission process progress faster and continue longer than it would without boosting. Increased yield comes overwhelmingly from the increase in fission. The energy released by the fusion itself is much smaller because the amount of fusion fuel is so much smaller. The effects of boosting include:

• increased yield (for the same amount of fission fuel, compared to detonation without boosting)

• the possibility of variable yield by varying the amount of fusion fuel

• allowing the bomb to require a smaller amount of the very expensive fissile material – and also eliminating the risk of predetonation by nearby nuclear explosions

• not so stringent requirements on the implosion setup, allowing for a smaller and lighter amount of high-explosives to be used

The tritium in a warhead is continually undergoing radioactive decay, hence becoming unavailable for fusion. Furthermore its decay product, helium-3, absorbs neutrons if exposed to the ones emitted by nuclear fission. This potentially offsets or reverses the intended effect of the tritium, which was to generate many free neutrons, if too much helium-3 has accumulated from the decay of tritium. Therefore, it is necessary to replenish tritium in boosted bombs periodically. The estimated quantity needed is 4 grams per warhead.[3] To maintain constant levels of tritium, about 0.20 grams per warhead per year must be supplied to the bomb.

One mole of deuterium-tritium gas would contain about 3.0 grams of tritium and 2.0 grams of deuterium. In comparison, the 4.5 kilograms of plutonium-239 in a nuclear bomb consists of about 20 moles of plutonium.

# TRITIUM IN HYDROGEN BOMB SECONDARIES

Since tritium undergoes radioactive decay, and it is also difficult to confine physically, the much-larger secondary charge of heavy hydrogen isotopes needed in a true hydrogen bomb uses solid lithium deuteride as its source of deuterium and tritium, where the lithium is all in the form of the lithium-6 isotope.

During the detonation of the primary fission bomb stage, excess neutrons released by the chain reaction split lithium-6 into tritium plus helium-4. In the extreme heat and pressure of the explosion, some of the tritium is then forced into fusion with deuterium, and that reaction releases even more neutrons.

Since this fusion process requires an extremely higher temperature for ignition, and it produces fewer and less energetic neutrons (only fission, deuterium-tritium fusion, and 73Li splitting are net neutron producers), lithium deuteride is not used in boosted bombs, but rather, for multistage hydrogen bombs

# CONTROLLED NUCLEAR FUSION

Tritium is an important fuel for controlled nuclear fusion in both magnetic confinement and inertial confinement fusion reactor designs. The experimental fusion reactor ITER and the National Ignition Facility (NIF) will use deuterium-tritium fuel. The deuterium-tritium reaction is favorable since it has the largest fusion cross-section (about 5.0 barns) and it reaches this maximum cross-section at the lowest energy (about 65 keV center-of-mass) of any potential fusion fuel.

The Tritium Systems Test Assembly (TSTA) was a facility at the Los Alamos National Laboratory dedicated to the development and demonstration of technologies required for fusion-relevant deuterium-tritium processing. nuclear weapons testing, primarily in the high-latitude regions of the Northern Hemisphere, throughout the late

1950s and early 1960s introduced large amounts of tritium into the atmosphere, especially the stratosphere. Before these nuclear tests, there were only about 3 to 4 kilograms of tritium on the Earth's surface; but these amounts rose by 2 or 3 orders of magnitude during the post-test period.

# FAST IGNITION INERTIAL CONFINEMENT FUSION

The Ohio State University Department of Physics High Energy Density Physics Group • Physics Research Building



Controlled Fusion for the generation of pollution-free energy has been a goal of physicists since the mid 1950's. Fusion of isotopes of the hydrogen ion (proton, deuteron, triton) is the mechanism that powers all stars: It can occur only in extraordinary conditions not naturally found on earth. Although scientists have learned how to exploit this fundamental power source for weapons (thermal nuclear "hydrogen" bombs), we have had 6 decades of expensive frustration trying to harness this power for a source of useful energy. Currently the US officially supports only one form of research on controlled fusion, that is magnetically confined fusion as expressed in ITER (Latin for "the way"), the international project located in southern France designed to demonstrate fusion energy based on the "tokamak" concept. Not so officially, there is also a large and robust research effort to demonstrate Inertial Confinement Fusion (ICF) as expressed in NIF (National Ignition Facility), located on the campus of the Lawrence Livermore National Laboratory in California. This process compresses an exquisitely finely crafted pellet of deuterium-tritium ice to a density exceeding 300 times that of water. The NIF has 192 laser beams focused on a pellet whose dimensions are measured in mm's; each of the beams has approximately 5kJ of energy in a pulse of several nanoseconds. If everything goes as planned, the center of the pellet will rise to temperatures on the order of 50 million degrees and a self-sustaining nuclear reaction will occur where the deuterium and tritium ions fuse together, creating a helium nucleus and releasing an energetic neutron. Predictions for the NIF suggest that the energy output of this "ignition" event will be as much as 20 times that of the laser energy input: that is, over 20 million Joules.

As significant as this eagerly anticipated result will be, it is still an enormous step to actually design a power plant based on ICF. This is where the Fast Fusion concept comes in: in Fast Fusion the "trigger" for the fusion within the compressed pellet is the arrival of an ultra-intense laser pulse of nominally 50kJ energy, with a pulse length of 20 picoseconds. There are many notional advantages in the fast fusion concept: The pellet no longer has to be so precisely manufactured, the energy of the compression lasers can be reduced up to an order of magnitude, and the concept lends itself to the relatively rapid sequencing required for an energy source.

Not surprisingly, there are also many new physics issues associated with this concept as well, e.g., how exactly does a super intense laser interact with matter, how does matter react to currents and fields whose magnitudes occur only within stars, is it possible to design targets and laser pulses that give us control over how the energy flows in such a target? These are but a sampling of the difficult yet fascinating fundamental physics questions that drive our interest in what is now referred to as "High Energy Density Physics" (HEDP). Our group participates in a national consortium that conducts experiments on the largest laser systems in the world to try to understand these issues; simultaneously within the HEDP laboratory here at The Ohio State University we not only conduct experiments on our own laser, capable of exceeding 1021 W/cm2, we also model the myriad of complex many body interactions using massive parallel computing.

# OHIO STATE DEPARTMENT OF PHYSICS

# PART TWO CONCLUSIONS

1. Big Ivan left little radiation (reducing radioactive output by 97%) in 1961). Forty years of technological advances could have easily produced a bomb with very, very little and very, very short-lived radioactive elements.

2. Big Ivan produced not alpha, not beta and not gamma radiation but neutron radiation which is measured differently and requires sophisticated measuring equipment to detect. A Geiger Counter will not produce results with a Deuterium-Tritium detonation.

3. Using 'Big Ivan' technology including advances made during 40 years of diligent study it's not hard to imagine a micronuclear device the size of an apple. The demolition effect would then be scaled down to what we actually saw on 911. Two 1000+ foot structural steel towers destroyed with the majority of the elements turned to dust; micron sized "very small particles" that can only be formed by a fusion device, a fission device or a fusion/fission device.

4. The dust PH was as high as caustic drain cleaner which, with concrete, would require incredible heat. It was reported over 12 on the Ph scale. In fact it requires more thermal energy to calcine concrete then to turn structural steel to dust. This is the signature of a nuclear event.

5. Very fine metals were routinely seen, but while most were at low concentrations, some metals (V, Ni, Cu, As, Se, Br, and Hg) occurred at unprecedented levels in the very fine size range. A person could, in a few hours, be subject to materials in amounts and composition that they would not have had to endure in years of typical ambient conditions. Ground Zero diseases are imminent and 1,003 First Responders were dead by March of 2011.

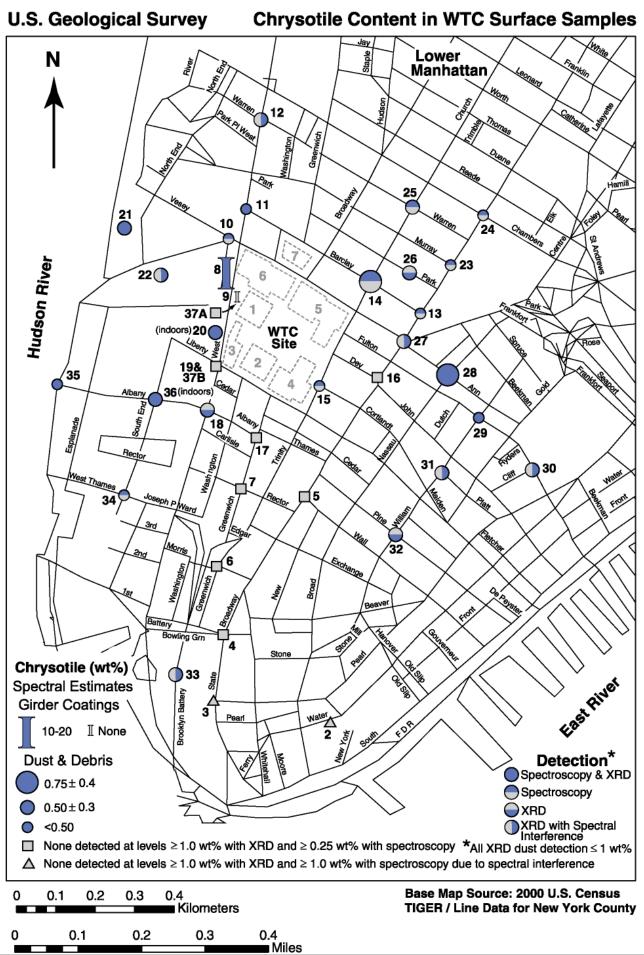
6. According to the Delta Group, "The size fractions above 1 micrometer contained finely powdered concrete, gypsum, and glass, with soot-like coatings and anthropogenic metals, but little asbestos." The USGS data produces the same result. AVARIS satellite images confirm. There was virtually NO asbestos at Ground Zero. This presents a serious problem. If there was very little asbestos at Ground Zero and almost none to be more accurate (and we know the buildings were filled with asbestos) and the asbestos was dispersed across lower Manhattan by the demolition then what was the source of the elevated tritium levels at Ground Zero and why wasn't the tritium also dispersed across the city like the asbestos?

7. If the tritium, uranium, zinc and asbestos were equally dispersed across the city then why was the tritium, uranium and zinc content at Ground Zero so high and the asbestos content so absurdly low? See the map at right for asbestos (*chrysotile*) distribution throughout lower Manhattan.

7. The fires raged for 100 days at underground temperatures exceeding 2500 degrees and even Pyrocool<sup>®</sup> could not extinguish the fires (see Pvrocool® data in this eMagazine). Energetic compounds, especially at nano-scale, will not accomplish this feat because they are designed at nano-scale to be rapid burners exhausting their fuel in milliseconds. This is precisely how they reach such high temperatures (4500F approx.). However, they could not have reached the temperatures necessary for the time period necessary to calcine tons of concrete and demolish the towers. Only several milliseconds of 10 million degree heat is capable of demolishing the towers as they were and calcining 50,000 tons (25%) of the concrete.

8. Energetic compounds can not increase the dust content of uranium, thorium, tritium, nickel, lead, barium, strontium, potassium, sodium and other elements; all found at anomalous or high levels and all indicative of a nuclear event of some type.

9. Particle size matters. The energy necessary to create the massive quantity of very fine and micron-sized particles is far, far greater than the energy output of an energetic compound with a velocity of 300 meters per second (Jones, Harrit). "Boiling soil and glass" as stated by Dr. Cahill and "regeneration" (Dr. *Cahill*) of aerosols; creating particles smaller than small, is a magic feat that energetic compounds can't perform.



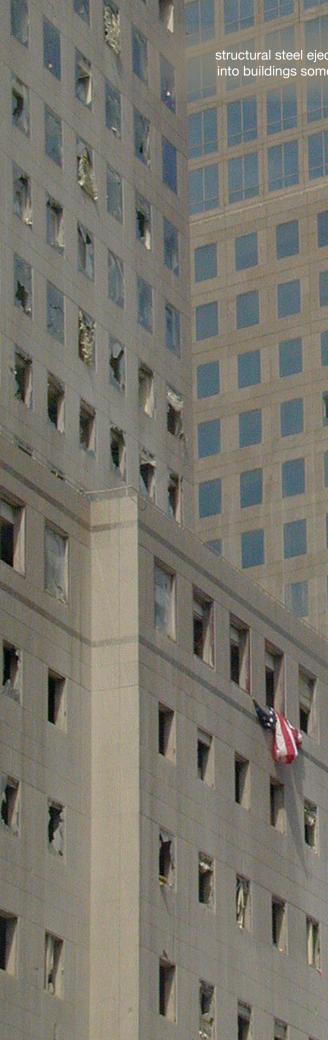


Before we examine the data or dust specific to the events that took place on 911 I'd like to first examine the science behind various types of nuclear explosives since there are many. There are plutonium bombs like that used at Nagasaki and there are uranium bombs like that used at Hiroshima. Yes, the two bombs dropped in Japan during WWII were completely different. There are fission reactions and fusion reactions also; both capable of severe destruction as compared to conventional explosives or (MIC) Metastable Intermolecular Compounds (*energetic compounds*) at both nano-scale and not at nano-scale. This gets a little complex. There are numerous various types of nuclear fusion and fission reactions using several different natural elements and that's the key to understanding what happened on 911. All nuclear explosions are not the same and not all nuclear explosions produce measurable radiation. There are some that produce radiation that requires more sophisticated equipment than a simple Geiger Counter and then some that produce a different type of radiation altogether that might last for just a few days. And there are some nuclear explosive devices that are very, very small and all we have to do is imagine 40 years of research to understand this. Water severely dilutes tritium. Rainwater, sewers and firehoses, too.

# THINK DAVY CROCKETT - BUT 40 YEARS SMALLER

This was an 11" x 11" x 17" nuclear device. The M-28 or M-29 Davy Crockett Weapon System's were a tactical nuclear recoilless gun for firing the M388 nuclear projectile that was deployed by the United States during the Cold War. Named after American soldier, congressman, and folk hero Davy Crockett, it was one of the smallest nuclear weapon systems ever built. It had a variable yield that could be dialed up on the spot, from .01 kilotons (10 tons) to 10 kilotons.

The M-388 round used a version of the W54 warhead, a very small sub-kiloton fission device. The Mk-54 weighed about 51 lb (23 kg), with a yield equivalent to somewhere between 10 or 20 tons of TNT (*very close to the minimum practical size and yield for a fission warhead back in the late 1950s*). The only selectable feature with either versions of the Davy Crockett M28 & M29 was the height of burst dial on the warhead (post-Davy Crockett versions of the W54 nuclear device apparently had a selectable yield feature). The complete round weighed 76 lb (34.5 kg). It was 31 in. (78.7 cm) long with a diameter of 11 in. (28 cm) at its widest point; a subcaliber piston at the back of the shell was inserted into the launcher's barrel for firing. The "piston" was considered a spigot prior to the discharge of the propellant cartridge in the recoilless gun chamber of the Davy Crockett. The M388 atomic projectile was mounted on the barrel-inserted spigot via bayonet slots. Once the propellant was discharged the spigot became the launching piston for the M388 atomic projectile. The nuclear yield is hinted at in FM 9-11: Operation and Employment of the Davy Crockett Battlefield Missile, XM-28/29 (*June 1963*).



structural steel ejected at an estimated 50-60mph into buildings sometimes blocks from the towers.

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Home > About Us > Our Programs > Nuclear Security > Protective Ford

#### Protective Forces

NNSA has some of the best trained and best equipped forces protecting its nuclear weapons and material. Since the events of September 11, 2001, NNSA has hired additional armed security police officers. It has also shifted towards a paramilitary, "tactical response force" that utilizes a robust mix of offensive and defensive qualified officers who are well-trained in small team and weapons tactics. It has improved its training capabilities by expanding training ranges and support facilities, developing additional tactical training courses, and hiring additional instructors. NNSA has also increased the survivability and lethality of officers by providing armored vehicles, heavier caliber weapons with greater firepower and armor-penetrating ammunition, and outlining ballistically protected fighting positions.

Some examples of these improvement are below

#### Training



#### Press Releases

Headlines Mar 8, 2012

NNSA Initiates International Nuclear Forensics Training with the IAEA

Mar 6, 2012 NNSA Administrator Highlight President's Nuclear Security Objectives in FY 2013 Budget Request during House Hearing

Mar 6, 2012 Statement on the FY 2013 President's Budget Request before the House Appropriations Commi Subcommittee on Energy and Water Development

Mar 1, 2012 NNSA Provides Training to

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## 🚺 Timeline

Curious about NNSA history? Check out our interactive timeline to learn about our historic accomplishments

View NNSA Timeline

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# NNSA - THE NUCLEAR GRENADE LAUNCHER

Through research, development and

off site link, which assembles and disassembles nuclear weapons, also researched, purchased,

The Oak Ridge Central Training Facility (CTF), located at NNSA's Y-12 National Security Complex <sup>27</sup>, has an indoor firing range facility, the largest within the Department of Energy. The range broadens indoor weapons training capabilities and enables security police officers to train under a variety of scenarios. The range permits training 24 hours a day and enables night qualifications to be completed during daylight hours, reducing training downtime and overtime costs.

A Pre-Event Discovery Program (PEDP) was also developed at Y-12. This program trains local law enforcement agencies to recognize and report potential terrorist activities. This training is specifically designed to improve liaison and coordination with local law enforcement and airfield managers as a defensive resource in the overall protection of Y-12. The major objective of PEDP is to increase the probability that terrorist and criminal threats to Y-12 will be identified so that interruption by law enforcement can occur before an attack is initiated against NNSA resources.

The Nevada Test Site (NTS) completed major facility improvements at its Central Training Academy, including:

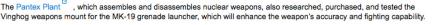
- The new Carlos N. Saenz Memorial Live Fire Shoot House;
- A new six-story live fire training tower that replicates the Device Assembly Facility environment;
- Moving target system upgrade on its outdoor range facility;
- Additional instructional classrooms and staff work space:
- Expanded ammunition storage site; and Upgraded weapons storage and repair armory

#### Capabilitie

Los Alamos National Laboratory and Y-12 joined Lawrence Livermore National Laboratory in fielding the Dillon M-134 7.62 mm Mini-Gun, Livermore developed an innovative qualification course for the Dillon Dillon M-134 7.62 mm Mini-Gunwhich not only facilitates evaluation of weapon manipulation skills and accuracy on target, but enables significant cost savings by reducing massive expenditures or ammunition and travel costs to other agencies' range facilities.

Y-12 introduced fragmentation grenades and the M203 grenade launcher to its defense posture, while continuing efforts to reduce its target footprint. Y-12 also deployed three second-generation Advanced Concept Armored Vehicles (ACAV) II and has five LENCO BearCats. These tactical, up-armored. four-wheel drive vehicles will be equipped with a Dillon 134D Mini-Gun.

The NTS successfully established two full-time Special Response Teams (SRT). Defense of the DAF will include: ACAV II with .50 caliber remotely-operated weapons, LENCO BearCats, the SR-25-7.62 mm rifle with optics, HK-69 grenade launchers, and Polaris 500 all terrain vehicles.



Printer-friendly version

NNSA Policies Site Map

Site Feedback Department of Energy

Source: http://nnsa.energy.gov/aboutus/ourprograms/nuclearsecurity/protectiveforces

# THE WTC AND CDI

The images on the following nine 'black background' pages after these three CDI pages have rarely been seen in the US mainstream media. They're rarely seen in US alternative media and the three images on the following first 2 of 9 pages were never printed in a US major media publication or shown on US television. The images are visual proof of an extraordinary event unlike any seen before in the annals of human history. While the 'pit' was described in foreign press reports as "proof of an *Ice Age*" the truth is that the 'pit' is melted rock. This is where the continuing nuclear reaction that could not be extinguished with Pyrocool® or millions of gallons of water over the course of 100 days emitted the aerosols Dr. Cahill's report discusses in great detail. Aerosols generated by the pile with "soil and glass boiling" is what Dr. Cahill stated. The remaining images are individual images of the pyroclastic cloud, something the media also fails to address adequately, if at all, and sequenced images of the actual demolition. The angle used is one also rarely seen and provides a wide angle view of the entire event. If you've only seen video then these images are going to be somewhat surprising.

### CDI Controlled Demolition Videos:

http://www.controlled-demolition.com/sites/default/files/villa\_pa-namericanas.mpg

http://www.youtube.com/watch?v=JP1HJoG-1Pg

http://www.controlled-demolition.com/sites/default/files/beirut\_hilton.mpg

## 10 Separate CDI Demolition Videos:

http://www.youtube.com/user/TheLoizeauxGroupLLC?feature=mh um&v=-TARNVwF7Yg&Ir=1



This is just one floor of a properly rigged building (by Controlled Demolition, Inc.) prior to demolition. A similar process would have been necessary to properly wire and demolish the Twin Towers. It's patently absurd to think that dozens of technicians, or more, were involved in any normal demolition process. The Twin Towers were not destroyed by standard demolition practices. This was a nuclear event and the dust and elements within the dust prove this beyond any doubt.

CDI Corporate Brochure PDF: http://www.controlled-demolition.com/sites/default/files/CDI%20Corporate%20Brochure.pdf

# CONTROLLO Controlled Demolition, Inc. DEMOLITION, INC.

Below (left) are experienced building demolition technicians rigging a building for controlled explosive demolition. How many men, for how many days, with how much nano-thermite or conventional explosives would it have taken to destroy the Twin Towers? Yet with micronuclear devices the job could be completed, ostensibly, with 2 to 4 people in just 2 to 4 days. On the preceding page is a concrete and rebar column prepared for demolition. Below (*bottom, right*) is that same concrete column as on the previous page after demolition. This particular demolition was performed with conventional explosives (*top, right*). As their web site states:

# THE ART OF DEMOLITION

For over sixty years, three generations of Loizeaux family innovation, expertise and leadership have created a commercial explosives demolition industry which has saved property owners and contractors hundreds of millions of dollars worldwide.

That leadership and unparalleled experience gives CDI clients access to a full range of services and capabilities through a global network of offices and agents, all dedicated to the precision application of our technology. And behind each successful project stands the CDI team - a talented group of professionals with decades of experience dedicated to absolute perfection on each new project.







# HOW BUILDINGS ARE DEMOLISHED

# THE LARGE PHASE ARRAY RADAR (LPAR) FACILITY

"The Silver Castle Award is presented to Controlled Demolition, Inc. for exceptional sensitivity and professional in completing the politically sensitive demolition and removal of the former Soviet military's Large Phased Array Radar Facility in Skrunda, Latvia. The project was completed ahead of schedule, within budget and to the customer's satisfaction. Your skill in expediting this important Partnership for Peace project in a new and challenging environment reflects great credit on the dedication and professional of all who contributed to its success."

– John Gates, Colonel, Engineering Commanding, U.S. Army Corps of Engineers

The second tallest building in Latvia and twenty-four other structures were carefully demolished at a large phase array radar (LPAR) facility in the middle of an active Russian military base in Skrunda, Latvia. When finished, the nearly-completed, overthe-horizon system was to become the mainstay of Russia's central European early warning system for nuclear attack. The complex was demolished as a result of President Clinton's commitment to help the Latvian government comply with a treaty involving the withdrawal of Russian troops.

Controlled Demolition, Inc. (CDI) of Phoenix, MD, used both conventional and implosion methods to demolish the facility. The contract included the implosion of a 19-story receiver building. Conventional demolition methods were then used to destroy an 800,000 square foot, 8-story transmitter building, a transmitter utility structure, a receiver utility building, a guard house, two warehouses, an ancillary installation building, two transformer substations, a fire station, a neutralizer facility foundation and 25 large, underground tanks. Recyclable materials were processed for scrap, including 22,000 pounds of steel, 250 tons of aluminum, and 75 tons of copper. In addition, 5.5 miles of underground cable trench were removed, collapsing the maze of underground tunnels which had connected the buildings.

# THE HACIENDA HOTEL

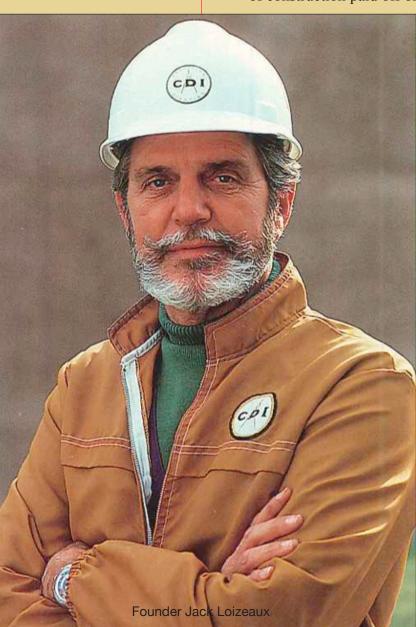
Controlled Demolition Incorporated's (CDI's) Magic Of Implosion. At precisely midnight, Eastern Time on New Year's Eve, 1996, a second Las Vegas hotel fell in less than 35 days. The 11-story, 900 room Hacienda Hotel was the fifth hotel felled by Controlled Demolition Incorporated (CDI) in the last three (3) years to make way for theme park developments by the Las Vegas Entertainment magnates. Previous structures imploded were the 24-story Dunes North Tower and 17-story Dunes South Tower for Mirage to clear the site for Steve Wynn's new entry to the race, the 35-story Landmark Hotel went next for the Las Vegas Convention Center to create new parking for the convention complex, and, most recently, the 18-story Sands Hotel Tower fell to CDI's design on November 26th for Las Vegas Sands Incorporated Venetian Theme Park.

Demolition of the Hacienda presented special problems for CDI due to the hotels

unique construction. According to Mark Loizeaux, CDI's President, the hotel's 3 wings were built at 2 different times, under different building codes. The north wing was built in 1980 using concrete block laced with reinforcing rods and filled with grout. The use of pre-cast floor panels provided a structure which was stable so long as

it remained static. The center tower and south wing were completed in 1989 under more stringent building code requirements which considered greater seismic loading. Loizeaux said that there was three times more reinforcing in the newer central and south towers than was found in the original, north tower. Every demising wall in the structure acted as shear walls that CDI had to cope with in order to create a progressive collapse. Loizeaux said that he was unaware of any structure of this configuration having been felled previously by explosives. He added that it was not surprising considering the relatively young age of the structure. Concern for workers led CDI to rely on extensive preparations on the ground floor alone, alternating the explosives in their delay program to give the pre-cast panels an opportunity to fail sequentially, disrupting the reinforced block shear walls at every floor to promote instability in the structure. CDI avoided work on upper floors out of concern for the problems a "softstory" might have created under extreme wind or even unlikely seismic activity.

CDI's experience in and the application of its' knowledge of progressive collapse patterns in dozens of other types of construction paid off on the Hacienda project. It took 1,125 lb. of explosives and 30,600-ft of detonating cord initiating charges in 4,128 different locations to bring the three



towers down.

In Oklahoma City, precisely placed explosive charges dropped a 28-story building almost in its tracks. When it fell, the 245-ft-high structure became the tallest steel-frame building to be demolished with explosives. CDI placed 991 separate charges, about 800 lbs. of explosives in all, on seven floors from the basement to the 14th floor and detonated them over a five-second interval.

After two (2) months of preparation, CDI's 13 person crew needed seven (7) days to place 1,590 linear shaped charges totaling 595 lb. of explosives on steel columns on 11 levels of the 27-story structure. CDI's implosion of the structure yielded vibration levels of only 0.58 inches per second (far less than even 1mps) Peak Particle Velocity as measured at adjacent structures less than 70 feet from the base of the building. Other than a few broken windows, there were no damages to adjacent utilities or properties. Debris was so well fragmented by CDI's implosion design that the IWSS contractor's project manager said he was considering demobilizing the steel shear on a CAT 245B excavator he had originally brought on site to handle the debris. He feels the shear will be "unnecessary" during the fast track, round-the-clock removal of the 37,000 tons of debris over the next four weeks.

Controlled Demolition, Inc., CDI, has numerous government and military clients as well as foreign clients across the globe. The US Department Of Defense (DoD), the US Department Of Energy (DoE), the Department Of Housing And Urban Development (HUD), the Department Of Justice and the Department Of State are all CDI clients. Phillips Petroleum, US Steel, Fermco, Pemex, Kennecott Copper, the US Air Force Texas Tower in Boston, Massachusetts, the Alfred P. Murrah Federal Building and many other corporate, government and military clients make up the CDI data base. CDI has done removal work at the Princeton Accelerator Ring in Princeton, New Jersey, Seismic Mat Removal for Virginia Electric Power Company (VEPCO) in Saltville, Virginia, the Harry Diamond Labs Reactor in Washington, DC., the Guri Dam on the Rio Caronni Basin, Venezuela and the Abkantun 91 Drilling Platform Removal in the Gulf Of Mexico.

## BILTMORE HOTEL

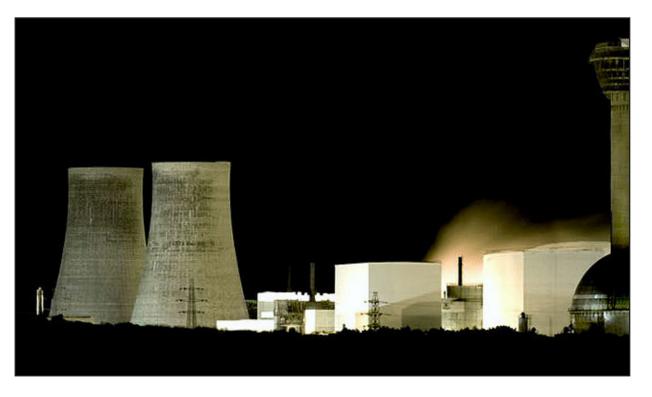
# 500 WOOD STREET BUILDING

## CLIENTS

**Calder Hall Cooling Towers** - (*top right*) Controlled Demolition Inc. taps their expertise in building implosions to take down four cooling towers at the Sellafield nuclear facility in England without disturbing the active nuclear plant. Parallax Film Productions follows this daring explosive demolition feat. The four Calder Hall cooling towers, located at the world's first industrial-scale nuclear power plant, are 88 metres tall and will generate more than 20,000 tons of debris. It will take 192 kilograms of explosives and shrewd demolition engineering to make this Blowdown a success. Mark Loizeaux and his team hustle to load the towers, major symbols of the United Kingdom's industrial heritage. The first reactor at the Calder Hall plant was opened by Queen Elizabeth II in 1956. The plant's four 50 MWe Magnox reactors not only generated electricity, they also produced weapons-grade plutonium. The generators produced for 47 years before ceasing operations in March 2003.

**NASA Mobile Service Tower 40** - (*below*) The Controlled Demolition Inc. team, experts in building implosions, faces a serious test as they load military grade, high-speed explosives to implode a NASA rocket launch tower, Mobile Service Tower 40, in Cape Canaveral, Florida. Parallax Film Productions profiles this explosive demolition journey. The Atlas and Titan rocket programs have come to an end. MST 40, once considered the largest moving structure in the world, must be demolished. Mark Loizeaux and his team will need more than 200 pounds of high explosives – shaped charges containing RDX – for this Blowdown. They'll also need an unprecedented demolition engineering plan to take this 80-metre-tall tower down. Complex 40 was built for the Titan IIIC program. It operated from the program's first launch in 1965 until the last TITAN IV launch in 2005. It facilitated 55 historic missions over the years including the Mars Observer interplanetary mission, the Cassini mission to Saturn, six MILSTAR communications satellites, and numerous defense support endeavours.







**Hacienda Hotel** - (*above*) At precisely midnight, Eastern Time on New Year's Eve, 1996, a second Las Vegas hotel fell in less than 35 days. The 11-story, 900 room Hacienda Hotel was the fifth hotel felled by Controlled Demolition Incorporated (CDI) in the last three (3) years to make way for theme park developments by the Las Vegas Entertainment magnates. Previous structures imploded were the 24-story Dunes North Tower and 17-story Dunes South Tower for Mirage to clear the site for Steve Wynn's new entry to the race, the 35-story Landmark Hotel went next for the Las Vegas Convention Center to create new parking for the convention complex, and, most recently, the 18-story Sands Hotel Tower fell to CDI's design on November 26th for Las Vegas Sands Incorporated Venetian Theme Park.



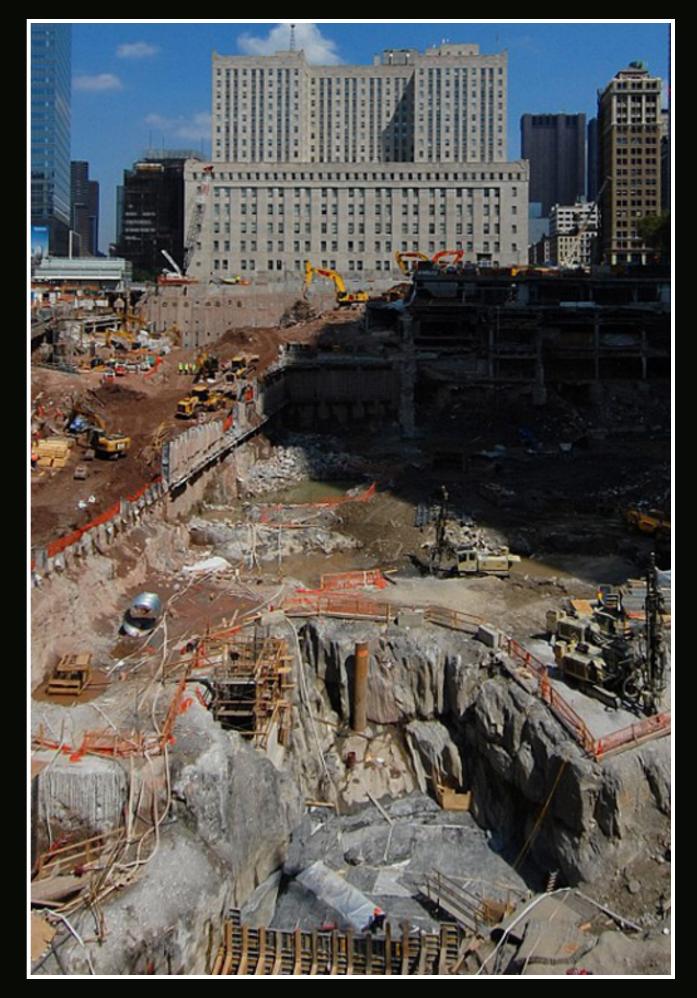
GROUND ZERO GEOGRAPHY

The image above and the two images on the next page have never been published or shown in the United States

# GROUND ZERO GEOGRAPHY THE PIT



Multicolored glass-like smooth bedrock - the signature of a fusion-fission reaction















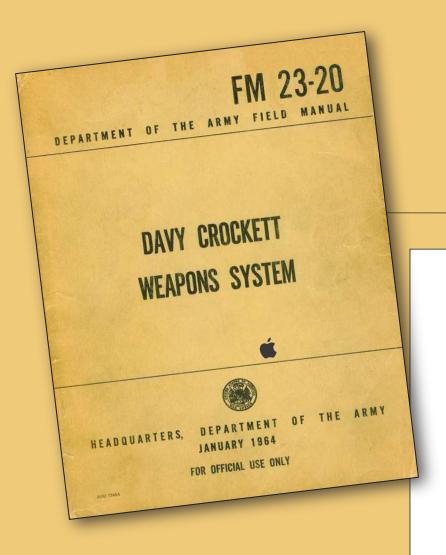


Never, ever has a conventional building demolition using nano-energetics or conventional explosives formed a massive pyroclastic cloud that sizzled as it blew by as though it were crammed with an enormous quantity of rapidly releasing static electricity. (*eyewitness account*). Think. 1076 actor 2 m Baller





In this sequence the image on the right reveals a horizontal line at the base of the center cloud structure with a vertical line on the left of that extending rear-wards as though this were a structural element of the tower, perhaps a floor, collapsing. Think apples ...



It was late in the year 2001 and 200 or 300 operatives weren't wiring the Twin Towers with 29,000 tons of nano thermite as Dr. Neils Harrit would like us to believe. They weren't using C4, RDX, TNT or any other types of military grade advanced explosives.

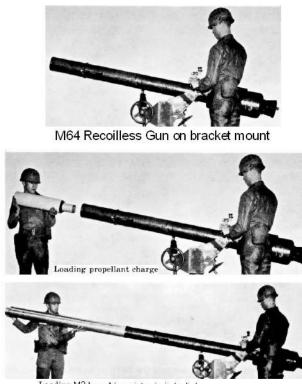
They were using small, powerful nuclear devices that could have been disguised inside of a computer.

Two or three men, less than a handful, were quietly placing easily disguised nuclear devices in the buildings. Large plant pots, computers, even some office telephones could have held a device the size of an apple designed a full 40 years after the Davy Crockett pictured at right.

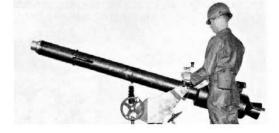
Maybe some type of thermite or energetic compound was used but it was secondary to the forces that actually turned the buildings and their contents to dust.

# THE US AMERICAN MILITARY TRIPOD-FIRED NUCLEAR M29 DAVY CROCKETT WEAPON SYSTEM

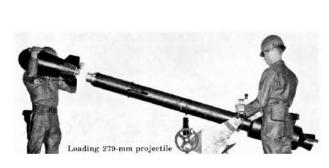
# **M29 DAVY CROCKETT WEAPON SYSTEM**



ing M2 launching piston/spigot

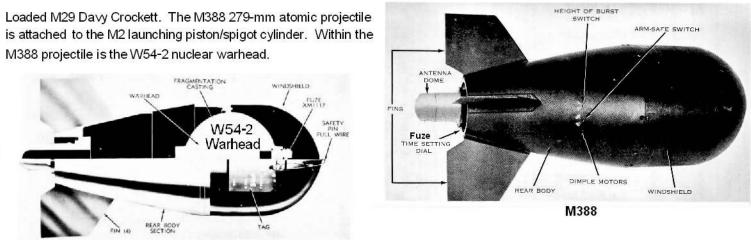


Unloaded M29 Davy Crockett {includes the M64 recoilless gun on a bracket mount, plus (1) the gun barrel seated M2 launching piston/spigot cylinder and (2) either of two fixed propellant charges/cartridges, M76 (or M94) "Zone I" or M77 "Zone II", seated in the M64's chamber}.



rifles.

Loaded M29 Davy Crockett. The M388 279-mm atomic projectile M388 projectile is the W54-2 nuclear warhead.





Unlike other recoilless weapons, the M29 has a firing mechanism that is integral with the propellant cartridge instead of being a component of the weapon.

## M 29 Davy Crockett

The M29 Davy Crockett is an open-breech, recoilless, smooth bore, single shot, low-angle fire, muzzle-loaded weapon with a 155-mm barrel.

The M29 Davy Crockett weapon system utilizes projectile, atomic, supercaliber, 279-mm, M388.

Atomic projectile M388 is a 51 pound, fin-stabilized, low-drag projectile which uses a W54-2 nuclear warhead.



# The Recoiless Nuclear



Video Link: http://www.youtube.com/watch?v=khyZl3RK2lE



In addition to being the smallest nuclear device ever developed by the United States, the Davy Crockett also has the distinction of being the last atomic device tested by the US in the open atmosphere. The 1962 test shot at the Nevada Proving Grounds confirmed the effectiveness of the design, and the device's tiny size made it a real crowd-pleaser – or a crowd killer, depending on one's point of view. With the destructive power of twenty tons of TNT squeezed into a watermelon-sized package, it's hard to outperform the Davy Crockett in terms of convenient annihilation per cubic inch. Though its use could have triggered a chain reaction that would have ultimately led to the destruction of humanity, it's hard not to have a strange kind of fondness for this thing.

nches from end to end the bomb itself was 17 inches long and less than 11 inches in circumference

the Davy Crockett Weapon System did improve on the concept in one important way: it paired this dead-simple launch device with a tiny fission bomb, making it the most convenient nuclear bomb delivery system ever developed

## Video Link: http://www.youtube.com/watch?v=nv\_q8q6Z9\_l&feature=player\_embedded#!

VIDEO LINK Θ talkingsticktv Subscribe

THE DAVY CROCKETT LAUNCHES THE W-54 NUCLEAR WARHEAD

The Davy Crockett, a recoilless launcher, was the third artillery piece deployed, those earlier being a 155 mm piece designed to fire a nuclear round and a 288 mm mobile piece, commonly called an "atomic cannon." Nuclear-capable ground artillery pieces were gradually replaced by increasingly accurate, nuclear carrying missiles and aircraft.

The Ivy Flats video shows an Army exercise that was observed by visiting dignitaries, including U.S. Attorney General Robert Kennedy and General Maxwell Taylor, a Presidential military adviser. Participating in the exercise were members of the 4th Mechanized Infantry Division from Ft. Lewis, Washington.

Ivy Flats was a "battle" between a large simulated enemy armored force and a smaller U.S. force consisting of conventional artillery pieces, which could not stop the pending onslaught. U.S. Army squads then arrive in armored personnel carriers and set up the heavy (155 mm) and light (120 mm) versions of recoilless launchers. The Davy Crockett fired a nuclear round that decimated the mock opposing force.

The Davy Crockett was deployed from 1961 to 1971. The heavy version was transported by either an armored personnel carrier or a large truck. The light version was generally carried on and fired from an Army jeep, but could be carried for a short distance and fired by a 3-man team.

The W-54 nuclear warhead in a projectile was launched by the Davy Crockett and had a subkiloton yield. The projectile was 30 inches long, 11 inches in diameter, and weighed 76 pounds. The 155 mm launcher had a maximum range of 13,000 feet, and the 120 mm could reach a distance of 6,561 feet. For those of you that believe a mushroom cloud is a part of a nuclear explosion the video link at right is attached for your viewing pleasure and education.





# THE SIZE OF AN APPLE

The M-388 could be launched from either of two launchers known as the Davy Crockett Weapon System(s): the 4-inch (120 mm) M28, with a range of about 1.25 mi (2 km), or the 6.1-in (155 mm) M29, with a range of 2.5 mi (4 km). Both weapons used the same projectile, and were either mounted on a tripod launcher transported by an armored personnel carrier, or they were carried by a Jeep M-38 and later the M-151. The Jeep was equipped with an attached launcher for the M28 or the M29, as required, whereas the Davy Crockett carried by an armored personnel carrier was set up in the field on a tripod away from the carrier. The Davy Crocketts were operated by a three-man crew. In the 3rd Armored Division in Germany in the 1960s many Davy Crockett Sections (all of which were in the Heavy Mortar Platoons, in Headquarters Companies of Infantry or Armor Maneuver Battalions) received what became a mix of M28 & M29 launchers [e.g., one of each per D/C section]. Eventually, the M28's were replaced by M29's, so that both the armored personnel carriers and the Jeeps carried the M29.

Both recoilless guns proved to have poor accuracy in testing, so the shell's greatest effect would have been its extreme radiation hazard. The M-388 would produce an almost instantly lethal radiation dosage (in excess of 10,000 rem) within 500 feet (150 m), and a probably fatal dose (around 600 rem) within a quarter mile (400 m).

When we discuss nuclear weapons today we fail to account for the complexity of the devices and the technology that we've all seen in the 40 years that preceded the Davy Crockett. I was 5 when the Davy Crockett was a popular military sensation and all the mass murderers wanted one, or a dozen or two, and we had black and white television just like the black and white image of the Davy Crockett at right.

We didn't have computers in our homes until the 1980s when many of us had Atari, Commodore and other similar systems that today are less than inadequate and virtually neanderthal by our current standards. Look around at the advances in modern technology and science and it doesn't take great imagination to understand nuclear weapons the size of an apple in 2001 and now a ping-pong ball today. But heavier ...



U.S. officials examine the M-388 Davy Crockett nuclear weapon. It used the smallest nuclear warhead ever developed by the United States at that time, 1961.

# THERMONUCLEAR EXPLOSIONS.

Because of the high temperatures required to initiate a nuclear fusion reaction, such devices are often called thermonuclear devices. A thermonuclear explosion can be created only by producing the required temperature, about a hundred-million Kelvins, and by forcing the material together so quickly that it will fuse rapidly. This is typically done with the isotopes of hydrogen, deuterium and tritium. This led to the term "hydrogen bomb" to describe the deuterium-tritium fusion bomb.

To obtain the two parts of the fuel, pellets were made from lithium hydride, LiD, made with the deuterium isotope. The only way which was found to produce the ignition temperature was to set off a fission bomb such that it would heat and compress the lithium hydride. In the process, the

lithium was bombarded with neutrons, breeding tritium. Then the deuterium-tritium fusion reaction could take place. So we have a bomb that breeds tritium.

## HYDROGEN BOMB

Because the thermonuclear explosive devices used hydrogen isotopes, (deuterium-tritium fusion), the resulting bombs were often called "hydrogen bombs". The first hydrogen bomb was detonated on November 1, 1952 at the small island Eniwetok in the Marshall Islands. It's yield was several megatons of TNT. The Soviet Union detonated a fusion bomb in the megaton range in August of 1953. The U.S. exploded a 15 megaton fusion bomb on March 1, 1954. It had a fireball 4.8 km in diameter and created a huge characteristic mushroom-shaped cloud. Analysis of the radioactive fallout from this bomb revealed it to be a fissionfusion-fission weapon, a "hydrogen bomb" with an outer sheath of natural uranium to increase the yield.

# URANIUM BOMB

Using the energy release from the nuclear fission of uranium-235, an explosive device can be made by simply positioning two

masses of U-235 so that they can be forced together quickly enough to form a critical mass and a rapid, uncontrolled fission chain reaction. That is not to say that this is an easy task to accomplish. First you must obtain enough uranium which is highly enriched to over 90% U-235, whereas natural uranium is only 0.7% U-235. This enrichment is an exceptionally difficult task, a fact that has helped control the proliferation of nuclear weapons. Once the required mass is obtained, it must be kept in two or more pieces until the moment of detonation. Then the pieces must be forced together quickly and in such a geometry that the generation time for fission is extremely short. This leads to an almost instantaneous buildup of the chain reaction, creating a powerful explosion before the pieces can fly apart. Two hemispheres which are explosively forced into contact can produce a bomb such as the one detonated at Hiroshima.

# PLUTONIUM BOMB

Plutonium-239 is a fissionable isotope and can be used to make a nuclear fission bomb similar to that produced with uranium-235. The bomb which was dropped at Nagasaki was a plutonium bomb. Not enough Pu-239 ex-

ists in nature to make a major weapons supply, but it is easily produced in breeder reactors. In the U.S., there are reactors at Savannah River Plant, S.C., and at Hanford, Washington which are classified as plutonium production reactors. They breed plutonium by surrounding a fission reactor with a uranium-238 "blanket" to make use of the breeding reaction between neutrons and U-238. Once the plutonium is produced, it is easily separated from the other fission products by chemical means, so that less technology is needed to produce a nuclear weapon if you have a breeder reactor. This makes plutonium a greater source of concern for weapons proliferation, because reactors which appear to be just electric power generators can be breeding plutonium for weapons along with the power production.

The type of bomb which was dropped on Nagasaki on August 9, 1945 had been tested at Alamagordo, New Mexico on July 16. It developed from the Manhattan Project after Fermi demonstrated in 1942 that a sustained nuclear chain reaction was possible.

On August 6, 1945, a uranium fission bombwas detonated over the Japanese city of Hiroshima. The bomb, called "Little Boy" was a "gun-type" device which used an explosive charge to force two sub-critical masses of U-235 together. It was 28 inches in diameter and 120 inches long, a relatively small package to deliver an explosive force of some 20,000 tons of TNT by converting about 1 gram of matter into energy. This could be accomplished with a sphere of U-235 about the size of a baseball. This kind of device had never been tested, in contrast to the plutonium bomb which was dropped on Nagasaki three days later. No device like this has been used since, making the estimates of radiation exposure at Hiroshima very difficult. Casualties included both direct blast victims plus those who died from radiation-induced cancer in subsequent years. The bomb was triggered to explode at a height of 550 meters (1800 ft), a height calculated to cause the widest area of damage. In the detonation of the uranium fis-The W-48 artillery shell is 6.1 inches (155 mm) by 33.3 inches. Manufactured 10/63 to 3/68; retirement sion bomb over Hiroshima, about 130,000 people were reported (135 Mod 0s) 1/65 - 1969, all 925 Mod 1s retired 1992; 1060 total produced (all mods). killed, injured, or missing. Another 177,000 were made home-Small diameter linear implosion plutonium weapon.

less.

# NAGASAKI

On August 9, 1945 a plutonium fission bomb was detonated over the Japanese city of Nagasaki, three days after a uranium fission bomb was dropped on Hiroshima. The bomb, called "Fat Man", was 128 inches long and had a diameter of 60.5 inches. It used implosion to compress the sub-critical assembly of plutonium. This kind of device had been tested less than a month before the drop, and was the subject of several other weapons tests after World War II. The explosive yield was about 20,000 tons of TNT, generated in about a microsecond. The bomb was triggered to explode at a height of 550 meters (1800 ft), a height calculated to cause the widest area of damage.

# NUCLEAR FUSION

If light nuclei are forced together, they will fuse with a yield of energy because the mass of the combination will be less than the sum of the masses of the individual nuclei. If the combined nuclear mass is less than that of iron



# HIROSHIMA

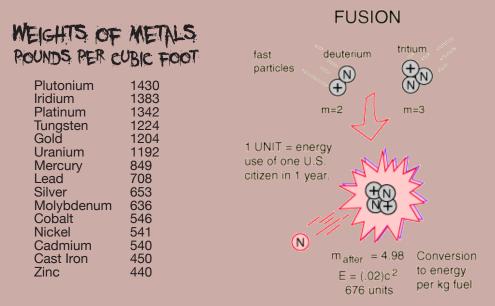
at the peak of the binding energy curve, then the nuclear particles will be more tightly bound than they were in the lighter nuclei, and that decrease in mass comes off in the form of energy according to the Einstein relationship. For elements heavier than iron, fission will yield energy.

For potential nuclear energy sources for the Earth, the deuterium-tritium fusion reaction contained by some kind of magnetic confinement seems the most likely path. However, for the fueling of the stars, other fusion reactions will dominate.

# DEUTERIUM-TRITIUM FUSION

The most promising of the hydrogen fusion reactions which make up the deuterium cycle is the fusion of deuterium and tritium. The reaction yields 17.6 MeV of energy but requires a temperature of approximately 40 million Kelvins to overcome the coulomb barrier and ignite it. The deuterium fuel is abundant, but tritium must be either bred from lithium or gotten in the operation of the deuterium cycle.

It's important to remember that a deuterium tritium explosive device at a microscale with the expected technological advances since 1961 would likely leave little radiation for no more than 5 or 6 days yet would have a destructive force exactly as we saw on 911. This wouldn't be what most everyone considers in their minds eye as a nuclear explosion. That's 1960s technology and we've advanced exponentially since then. The nuclear device used in NYC on 911 was of a slightly new type but more then being new it was a very old design of a highly refined and miniaturized new device such that it could be disguised as almost anything. Being no bigger then an apple or a grapefruit. Estimated weight ranges from 40 to 60 pounds or slightly more.



It should be relatively easy to see how a nuclear device the size of an apple or grapefruit could reach a weight of 50 pounds and much more. A 3 inch square of uranium weighs 37.25 pounds. Add in numerous other metal elements and 50 pounds or much more is easy to reach with a 6 to 8 inch round device.



It's important to remember, this was a tubular structured steel building. When people see the "dustification" they immediately think "concrete" and forget that what they're also seeing is the pulverization of 1000s of tons of steel. How much steel? 79,000 tons PER TOWER MINIMUM but closer to 100,00 tons total and more than 200,000 tons of concrete per building. Some portion of each was turned to dust and the estimates I've heard vary and I'm not sure we'll ever know how much. But it was a lot of both.

# THIS AIN'T NAGASAKI BABY!

Nuclear reactions are a complex series of answers based on a variety of inputs. They encompass both fusion and fission reactions and they can encompass both, or, just one or the other. Because the two bombs dropped on Hiroshima and Nagasaki were of entirely different types we saw completely different conditions. The radioactive decay paths were different, the type of radioactivity was different and the illnesses experienced by survivors differed immensely as a result. One nuclear device is not, by any means, the same as another of a differing type. What's more, the strides in nuclear technology advancement have been beyond our wildest dreams and the technology behind the newest nuclear devices is infinitely smaller then it was on August 6th in 1945 when we reigned Plutonium and Uranium horror on the Japanese people. This ain't Nagasaki, baby.

## FUSION

Nuclear fusion is the process by which two or more atomic nuclei join together, or "fuse", to form a single heavier nucleus. This is usually accompanied by the release or absorption of large quantities of energy. Fusion is the process that powers active stars, the hydrogen bomb and some experimental devices examining fusion power for electrical generation.



The fusion of two nuclei with lower masses than iron (which, along with nickel, has the largest binding energy per nucleon) generally releases energy, while the fusion of nuclei heavier than iron absorbs energy. The opposite is true for the reverse process, nuclear fission. This means that fusion generally occurs for lighter elements only, and likewise, that fission normally occurs only for heavier elements. There are extreme astrophysical events that

in 1932. During the remainder of that decade the steps of the main cycle of nuclear fusion in stars were worked out by Hans Bethe. Research into fusion for military purposes began in the early 1940s as part of the Manhattan Project, but this was not accomplished until 1951 (see the Greenhouse Item nuclear test), and nuclear fusion on a large scale in an explosion was first carried out on November 1, 1952, in the Ivy Mike hydrogen bomb test.

can lead to short periods of fusion with heavier nuclei. This is the process that gives rise to nucleosynthesis, the creation of the heavy elements during events such as supernovas.

Creating the required conditions for fusion on Earth is very difficult, to the point that it has not been accomplished at any scale for protium, the common light isotope of hydrogen that undergoes natural fusion in stars. In nuclear weapons, some of the energy released by an atomic bomb (fission bomb) is used for compressing and heating a fusion fuel containing heavier isotopes of hydrogen, and also sometimes lithium, to the point of "ignition". At this point, the energy released in the fusion reactions is enough to briefly maintain the reaction. Fusion-based nuclear power experiments attempt to create similar conditions using far lesser means, although to date these experiments have failed to maintain conditions needed for ignition long enough for fusion to be a viable commercial power source. Yet fusion is still a component of an awesome destructive force.

Building upon the nuclear transmutation experiments by Ernest Rutherford, carried out several years earlier, the laboratory fusion of heavy hydrogen isotopes was first accomplished by Mark Oliphant Research into developing controlled thermonuclear fusion for civil purposes also began in earnest in the 1950s, and it continues to this day. Two projects, the National Ignition Facility and ITER are in the process of reaching break-even after 60 years of design improvements developed from previous experiments.

# PRODUCTION METHODS

A variety of methods are known to effect nuclear fusion. Some are "cold" in the strict sense that no part of the

level of tritium *and* a high level of uranium along with dozens of other anomalous elements and examining *all* of the dust in its totality is the beginning of a long, winding scientific path of discovery. *We simply can't ignore the sodium, the potassium, the zinc, the lanthanum, the cerium, the yttrium and the thorium or any of the other elements found in the dust.* The science of these numerous elements and how they interact in the environment, whose varying correlations often increase and decrease predictably across numerous locations in lock-step; when one element, strontium for example, increases, we see a corresponding increase in barium at the same location. Examining the elements and analyzing their correlations reveals various certainty's. Perhaps the reason is far too horrific for civilians to

A variety of methods are known to ene material is hot (except for the reaction products), some are "cold" in the limited sense that the bulk of the material is at a relatively low temperature and pressure but the reactants are not, and some are "hot" fusion methods that create macroscopic regions of very high temperature and pressure.

MUON-CATALYZED FUSION

Muon-catalyzed fusion is a well-established and reproducible fusion process that occurs at ordinary temperatures. It was studied in detail by Dr. Steven Jones in the early 1980s. It has not been reported to produce net energy. Net energy production from this reaction cannot occur because of the energy required to create muons, their 2.2  $\mu$ s half-life, and the chance that a muon will bind to the new alpha particle and thus stop catalyzing fusion.

Don't confuse producing energy for peaceful purposes with producing energy to create weapons. Just because it can't be used to generate energy at a profit doesn't mean it can't be used to make things blow up.



Hiroshima in ruins following the atomic bomb blast taken by Bernard Hoffman at Hiroshima, Japan, in September of 1945.

Please also remember, Dr. Stephen

Jones, the man who discovered a metastable intermolecular compound (MIC) or sol gel (nanothermite) in the Ground Zero dust also worked for the US Department of Energy on Muon-catalyzed fusion and authored a paper on why the Twin Towers were not and could not have been destroyed by fusion or fission devices using what we'll call here, "The Tritium Defense". Not once in the "Tritium Defense" paper are the anomalous parts per million of sodium mentioned; not zinc or thorium, also found in the dust. Mapped with locations that can be correlated. Finding a high

greatly increased, to the point where a significant number of fusion events can happen at room temperature.

Unfortunately, current techniques for creating large numbers of muons require large amounts of energy, larger than the amounts produced by the catalyzed nuclear fusion reactions. This prevents it from becoming a practical power source. Moreover, each muon has about a 1% chance of "sticking" to the alpha particle produced by the nuclear fusion of a deuterium with a tritium, removing the "stuck" muon from the catalytic cycle, meaning

even imagine, let alone speak out about. A bomb that's the size of an apple, produces little to no measurable fallout but a high degree of destruction with just enough initial fallout to be deadly for anyone during the first week is a horror. It's on the dust samples taken from the girders. 93 Becquerels per Kilogram of uranium. Lot's of tritium. And then there are all the other elements. Sodium, Potassium, Zinc and Vanadium. And others. All working together creating a path.

Muon-catalyzed fusion ( $\mu$ CF) is a process allowing nuclear fusion to take place at temperatures significantly lower than the temperatures required for thermonuclear fusion, even at room temperature or lower. It is one of the few known ways of catalyzing nuclear fusion reactions.

Muons are unstable subatomic particles. They are similar to electrons, but are about 207 times more massive. If a muon replaces one of the electrons in a hydrogen molecule, the nuclei are consequently drawn 207 times closer together than in a normal molecule. When the nuclei are this close together, the probability of nuclear fusion is

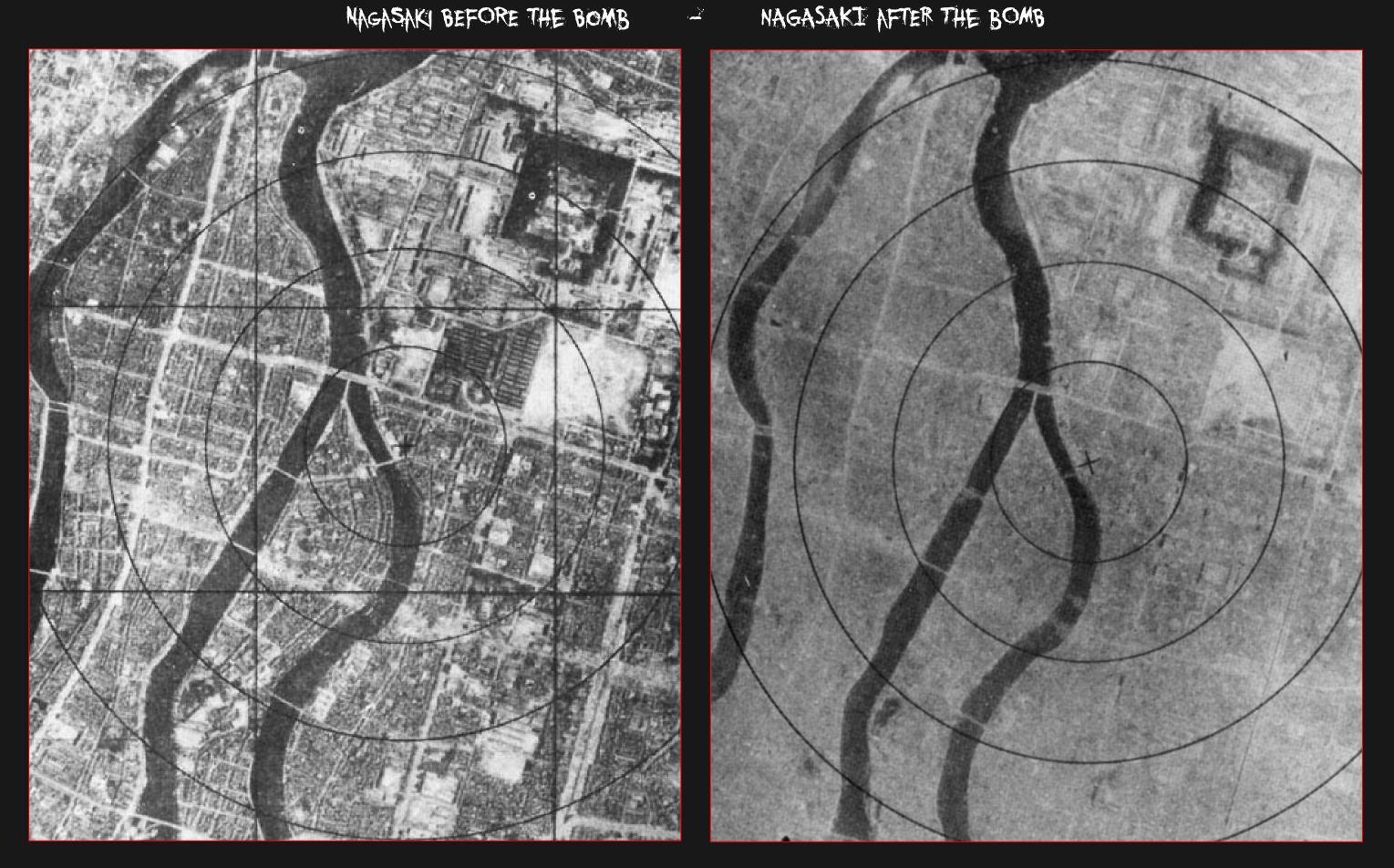
that each muon can only catalyze at most a few hundred deuterium tritium nuclear fusion reactions before it decays away, which only takes a couple of microseconds. If there were no "alpha-sticking" of muons, each muon could, in principle, catalyze more than about ten thousand deuterium tritium nuclear fusion reactions during its brief 2 microsecond lifetime, which would allow it to be a feasible power source. So, these two factors, of muons being too expensive to make and then sticking too easily to alpha particles, limit muon-catalyzed fusion to a laboratory curiosity. To create useful room-temperature muon-catalyzed fusion reactors we would need to discover a cheaper, more efficient muon source and/or encourage each individual muon to catalyze myriads of fusion reactions.

Andrei Sakharov and F.C. Frank predicted the phenomenon of muon-catalyzed fusion on theoretical grounds before 1950. Yakov Borisovich Zel'dovich also wrote about the phenomenon of muon-catalyzed fusion in 1954. Luis W. Alvarez et al., when analyzing the outcome of some experiments with muons incident on a hydrogen bubble chamber at Berkeley in 1956, observed muon-catalysis of exothermic p-d, proton and deuteron, nuclear fusion, which results in a helion, a gamma ray, and a release of about 5.5 MeV of energy. The Alvarez experimental results, in particular, spurred John David Jackson to publish one of the first comprehensive theoretical studies of muon-catalyzed fusion in his ground-breaking 1957 paper. This paper contained the first serious speculations on useful energy release from muon-catalyzed fusion. Jackson concluded that it would be impractical as an energy source, unless the "alphasticking problem" could be solved, leading potentially to an energetically cheaper and more efficient way of utilizing the catalyzing muons. This assessment has, so far, stood the test of time. It also allows for massive nuclear explosions on a miniature scale.



An aerial overview of Hiroshima in autumn of 1945 from the U.S. National Archives. The hypocenter and Atom Bomb Dome are visible at top center.

The Atomic Bombings of Hiroshima and Nagasaki, August 6th - 9th, 1945. Of 320,000 people in Hiroshima that morning, 80,000 died immediately or were badly wounded by the Atomic bomb, nicknamed "Little Boy". The site of the explosion reached a temperature of 5,400°F for milliseconds. Three days after Hiroshima, Nagasaki was bombed, with up to 40,000 killed.



the people that design, create and explode these weapons of mass human murder and destruction are psychopaths without empathy or value for humanity, you and me

# WILL THE REAL DR. STEPHEN JONES PLEASE STAND UP?

Steven Earl Jones is an American physicist. For most of his career, Jones was known mainly for his work on muon-catalyzed fusion (think). In the fall of 2006, amid controversy surrounding his work on the collapse of the World Trade Center (Jones produced alleged evidence showing the buildings were destroyed by an energetic compound in a controlled demolition during the September 11 at-

tacks), he was relieved of his teaching duties and placed on paid leave from Brigham Young University. He retired on October 20, 2006 with the status of Professor Emeritus.

Jones earned his bachelor's degree in physics, magna cum laude, from Brigham Young University in 1973, and his Ph.D. in physics from Vanderbilt University in 1978. Jones conducted his Ph.D. research at the Stanford Linear Accelerator Center from 1974 to 1977 and post-doctoral research at Cornell University and the Los Alamos Meson Physics Facility.

In the mid-1980s, Jones and other BYU scientists worked on what he then referred to as Cold Nuclear Fu-



sion in a Scientific American article, but is today known as muon-catalyzed fusion to avoid confusion with the cold fusion concept of Pons and Fleischman. Muon-catalyzed fusion was a field of some interest in the 1980s, but its low energy output appears to be unavoidable (*due to alpha-muon* sticking losses). Jones led a research team that in 1986 achieved 150 fusions per muon (average), releasing over 2,600 MeV of fusion energy per muon, a record which still stands.

This record is based on a functional portion of a muon catalyzed fusion reaction that can be applied to and used in nuclear explosive devices.

Around 1985 Jones then became interested in the anomalous concentration of helium-3 found in the gases escaping from volcanoes. He hypothesized that the high pressures in the Earth's interior might make fusion more likely, and began a series of experiments on what he referred to as piezofusion, or high-pressure fusion. In order to characterize the reactions, Jones designed and built a neutron counter able to accurately measure the tiny numbers of neutrons being produced in his experiments. The counter suggested a small amount of fusion was going on. Jones said the result suggested at least the possibility of fusion, though the process was unlikely to be useful as an energy source. Useless as an energy source in a capitalist system of profit above all else but not useless as a component of a nuclear bomb.

Stanley Pons and Martin Fleischmann (Pons and Fleischmann or P&F) started their work around the same time. Their work was brought to Jones' attention when they applied for research funding from the Department of Energy, after which the DOE passed their proposal along to Jones for peer review. Realizing their work was very similar, Jones and P&F agreed to release their papers to Nature on the same day, March 24, 1989. However, P&F announced their results at a press event the day before. Jones faxed his paper to Nature.

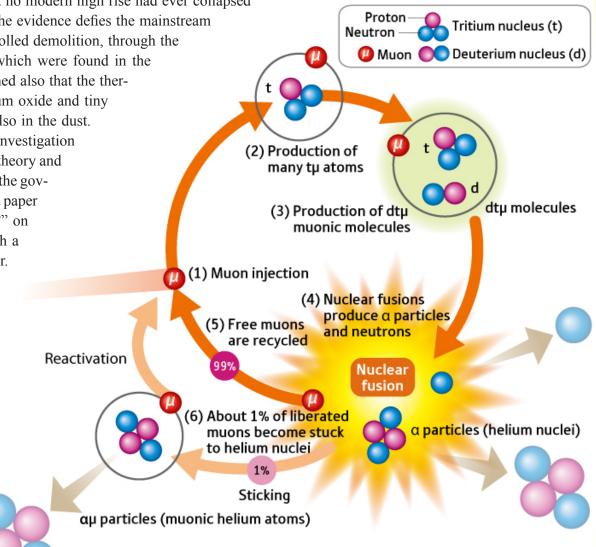
A New York Times article says that while peer reviewers were quite critical of Pons and Fleishchmann's research they did not apply such criticism to Jones' much more modest, theoretically supported findings. Although critics insisted that his results likely stemmed from experimental error, most of the reviewing physicists indicated that he was a careful scientist. Later research and experiments supported the metallic cold fusion reports by Jones.

> On September 22, 2005 Jones presented his views on the collapse of the World Trade Center towers and World Trade Center 7 at a BYU seminar attended by about 60 people. Pointing to the speed and symmetry of the collapses, the characteristics of dust jets, eyewitness reports of explosions down low in the buildings, partially corroded beams, molten metal in the basements which was still red hot weeks after the event, and the notion that no modern high rise had ever collapsed from fire, Jones suggested that the evidence defies the mainstream collapse theory and favors controlled demolition, through the use of nanothermite, traces of which were found in the dust as grey/red flakes. He claimed also that the thermite reaction products, aluminium oxide and tiny iron spheres (*iron oxide*) were also in the dust. He called for further scientific investigation to test the controlled demolition theory and the release of all relevant data by the gov-

ernment. Shortly after the seminar, Jones placed a paper "Why Indeed Did the WTC Buildings Collapse?" on his page in the Physics department website, with a note that BYU had no responsibility for the paper.

He subsequently defended the research at Idaho State University, Utah Valley State College, University of Colorado at Boulder and University of Denver, the Utah Academy of Science, Sonoma State University, University of California at Berkeley, and the University of Texas at Austin.

On September 7, 2006, Jones removed his paper from BYU's website at the request of administrators and was placed on paid leave. The university cited its concern about the "increasingly speculative and accusatory nature"



# professor jones is an expert in MUON catalyzed fusion

In April 2008, Jones, along with four other authors, published a letter in The Bentham Open Civil Engineering Journal, titled, 'Fourteen Points of Agreement with Official Government Reports on the World Trade Center Destruction'.

of Jones' work and the concern that perhaps it had "*not been published in appropriate scientific venues*" as reasons for putting him under review. The review was to have been conducted at three levels: BYU administration, the College of Physical and Mathematical Sciences, and the Physics Department. Jones' colleagues also defended Jones' 911 work to varying degrees, and Project Censored lists his 911 research among the top mainstream media censored stories of 2007.

Jones' placement on paid leave drew criticism from the American Association of University Professors and the Foundation for Individual Rights in Education. Both organizations are long time critics of BYU's record on academic freedom. Jones welcomed the review because he hoped it would "*encourage people to read his paper for themselves*," however the review was abandoned (*contrary to Jones' request*) when Jones elected to fully retire from the university effective January 1, 2007.

Jones has been interviewed by mainstream news sources and has made a number of public appearances. While Jones has urged caution in drawing conclusions, some believe that his public comments have suggested a considerable degree of certainty about both the controlled demolition of the World Trade Center and the culpability of elements within the U.S. government. In one interview, he asserted that the attacks were "an 'inside job', puppeteered by the neoconservatives in the White House to justify the occupation of oil-rich Arab countries, inflate military spending, and expand Israel." His name is often mentioned in reporting about 911 conspiracy theories. But he's hiding the nuclear component.

Jones has published several papers suggesting that the World Trade Center was demolished with explosives, but his 2005 paper, "*Why Indeed Did the WTC Buildings Collapse?*" was his first paper on the topic and was considered controversial both for its content and its claims to scientific rigor. Jones' early critics included members of BYU's engineering faculty; shortly after he made his views public, the BYU College of Physical and Mathematical Sciences and the faculty of structural engineering issued statements in which they distanced themselves from Jones' work. They noted that Jones' "*hypotheses and interpretations of evidence were being questioned by scholars and practitioners,*" and expressed doubts about whether they had been "*submitted to relevant scientific venues that would ensure rigorous technical peer review.*" Jones maintained that the paper was peer-reviewed prior to publication within a book "9/11 and American Empire: Intellectuals Speak Out" by D.R. Griffin The paper was published in the online "Journal of 9/11 Studies", a journal cofounded and co-edited by Jones for the purpose of "covering the whole of research related to 9/11/2001." The paper also appeared in a volume of essays edited by David Ray Griffin and Peter Dale Scott.

In April 2008, Jones, along with four other authors, published a letter in The Bentham Open Civil Engineering Journal

tham Open Civil Engineering Journal, titled, 'Fourteen Points of Agreement with Official Government Reports on the World Trade Center Destruction'. In August 2008, Jones, along with Kevin Ryan and James Gourley, published a peer-reviewed article in The Environmentalist, titled, 'Environmental anomalies at the World Trade Center: Evidence for energetic materials'. In April 2009, Jones, along with Niels H. Harrit and 7 other authors published a paper in The Open Chemical Physics Journal, titled, 'Active Thermitic Material Discovered in Dust from the 9/11 World Trade Center Catastrophe'. The editor of the journal, Professor Marie-Paule Pileni, an expert in explosives and nano-technology, resigned. She received an e-mail from the Danish science journal Videnskab asking for her professional assessment of the article's content.

Jones had been co-chair of Scholars for 911 Truth up until December 5, 2006. Following a dispute with co-chair James Fetzer over the direction the organization was taking, Jones resigned his membership and joined Scholars for 911 Truth & Justice. Dr. Jones is a member of The Church of Jesus Christ of Latter-day Saints and has been described as "*a devout Mormon*" and is co-editor of Journal of 911 Studies. Jones refuses to address the USGS and Delta Group data in their totality because the dust samples, when followed closely, prove 911 was nuclear. Very simply, I can't help but wonder why Dr. Jones has abused science by suggesting that his 300mps velocity energetic compound is even in the same ballpark as TNT, RDX and HDX with velocities of close to 9,000mps. I don't understand why Dr. Jones, who studied muon catalyzed fusion extensively hasn't discussed that a deuterium tritium bomb leaves elevated levels of tritium and uranium both of which we see at Ground Zero. It also leaves very little radiation, for just a few days at most, yet Dr. Jones used a lack of radiation to explain away the nuclear aspect of 911. Think.



Muon-Catalyzed fusion detonations were studied extensively in underground demolition experiments after 1955

## THE GOOD DOCTOR JONES

When Steven Earl Jones, then physics professor at Brigham Young University, burst on the 911 research scene in September 2005 to wide adulation, a few things didn't add up but I reassured myself that all would be well, eventually. After all, he was sincere, appealing demeanor, 'great uncle' giggle and all, and he was educated, right?

Jones announced his narrow thermite hypothesis, initially calling for "*a serious*" investigation of the hypothesis that WTC 7 and the Twin Towers were brought down not by impact damage and fires but through the use of pre-positioned cutter-charges." This statement appeared in a volume edited by David Ray Griffin and Peter Dale Scott, 911 and the American Empire: Intellectuals Speak Out

(2006, p. 33). Controlled demolition was *already established* as a popular explanation for destruction of the WTC, so Jones was only adding thermite as the key ingredient. Sometime later Jones altered the sentence quoted above in his online version (*PDF link below*), adding the word "*just*" thereby changing the original phrase to read "not just by impact damage and fires," now set off by commas. This subtly preserves the fiction that airliners contributed to destruction of the twin towers. The government and media, of course, insist that airliner crashes were the sole cause of destruction.

Most in the 9/11 half-truth movement cling to Jones, his thermite science and alleged evidence in "refereed journals." Truthlings labeled anyone else who dared criticize Jones as crackpots out to discredit the 9/11 truth movement via "ridiculous claims."

Kevin Ryan, luminaries like Neils Harrit, Richard Gage, and a host of lesser names joined Jones in propping up the thermite legend. Few noticed that this version of events fails to depart significantly from the official Arab hijacker hoax and does not implicate the U.S. military-industrial-intelligence-media-complex because thermite is readily available. If Jones' version of 911 gained dominance (hijacked airliners and thermite), the real perpetrators would hardly be bothered. They would only ratchet up their lie another notch and claim the Islamists' bag of dirty tricks must have included thermite plus explosives planted a la the 1993 WTC bombing.



Can a Ph.D. physicist be that retarded? Contrary to the consternation expressed over such a question, of course we never believed the answer was 'yes.' The answer is no, Jones is not stupid. But how then do we account for his pied piper act leading the 911 movement astray for years with a false theory? If not honest error and stupidity, the only possibility left is that Jones is dishonest, disinfo, shucking and jiving, stalling and playing out the clock for the perpetrators. Now that professor Jones' act is on the wane, I raise a toast to our improved prospects for truth to triumph. For the fact that 911 was nuclear to rise to the surface.

Jones eventually announced he had been "forced out" of his job yet it became known that Jones had moved to a new residence, then a few months later retired and was promoted to Professor Emeritus, the highest level of achievement for a professor. Someone fired from his job is never promoted. Jones did not go without an income. So, if Jones was not fired but promoted, why is he playing the 'fired' martyr? The timing and focus strongly suggest it was a useful diversion. But no matter the motive, the conclusion remains that Jones is dishonest.

And the same can be said of Jones' thermite myth. Thermite is also a diversion, stalling and playing out the clock for the perpetrators. Thermite is used in welding. It does not turn a building to powder in mid air.

## Source:

Thermite World Trade Center.pdf

Finally, two irrefutable facts by themselves falsify conventional explosives or cutter-charges as explanations for how the towers were destroyed: 1) small seismic signals during each tower's destruction, and 2) an intact bathtub prevented the Hudson river from flooding the WTC site and lower Manhattan, thereby proving that each 500,000 ton tower never actually crashed to the ground but was, in fact, turned to dust. Otherwise, there would have been at least a Richter equivalent signal of 3.8+ instead of the recorded 2.1-2.3 plus a smashed bathtub, causing massive flooding. The twin towers were largely converted into extremely fine powder, "dustified," floating.

Recent work by chemical engineer Mark Hightower based on his review of the conventional science and engineering literature proves beyond doubt that thermite, nano thermite, thermate and sooper-dooper thermite have low or no explosive power, and hence are non-starters as candidates to cause anything like what happened at the WTC. This is not new information but Hightower's work has ignited enough attention to trigger initiation of collapse of Jonesian thermite doctrine. Unfortunately, Jones et. al. bought half-a-dozen years for the evil doers.

# GOING UNDERGROUND

## **Underground Nuclear Power Plants**

Several Underground Nuclear Power Plants (UNPPs) have been operated since the early 1960s in Europe and the Soviet Union. Russia is studying plans to build more underground NPPs using small "mini" naval reactors....

## Chernobyl on the Hudson - 2009

In September 2004 the Union of Concerned Scientists published a report into the Indian Point nuclear power station, located on the Hudson River 35 miles north of New York... titled Secret Fallout.

"Directly out of the business of nuclear weapons came the business of nuclear power, heralded in our country with the slogan, Atoms for Peace. Even that innocent-sounding slogan is part of the endless pattern of public deception that surrounds..."

## Source:

http://nomoregames.net/index.php?page=911&subpage1=trouble\_with\_jones

This is an article by Morgan Reynolds on Professor Steven Jones and his well known "*thermite*" theory for the destruction of the Twin Towers.

There are some very interesting photographs, of the streets being washed down afterwards. Cars were burned in a peculiar way, warped, with one half burned and the other half untouched. Plastic upholstery in the cars unburned. There are reports of paper being untouched, while metal burned and people were vaporized. Washing is standard practice to remove radioactive contamination. Everything at Ground Zero was washed daily.

The burning of metal but not paper or plastic is very interesting. As I go into in the report, there are aspects of the fallout which lead one to conclude that the "device" produced extremely intense neutron radiation.

It was not just an explosive device - it was also a Neutron Bomb.

Metal objects would block and absorb the neutrons and so heat up instantly, whereas paper and plastic would offer no resistance and the neutrons would just pass through. Hence metal burns while paper is untouched. The Human Body is 70% water. Water is one of the best neutron absorbers, used as a radiation shield. In an intense neutron flux, people would probably turn to plasma and evaporate. This was always one of the *"horrors"* of the Neutron Bomb scare in the 1970s, when it was proposed to stop the Russian tanks from rolling across the North European Plain. A Neutron Bomb could kill people but leave certain infrastructure intact.

Why the WTC "*device*" may have produced directed neutron beams from a central explosive source is intriguing. In the report we touch on the technological appearance of Koenig's Sphere, a sculpture which took pride of place in WTC Plaza and somehow managed to survive, largely intact. I doubt it was just "*modern art*". It looks like an eyeball - i.e. a wave collection and amplifying device. Mystery surrounds it. lump. How crude. One would use a Laser approach to amplify the neutron emissions from a relatively small amount of material, by resonance, to build up the amplitude and energy into a concentrated and coherent neutron beam. A NASER - Neutron Amplification by Stimulated Emission of Radiation. Neutron pulses would then be fired at the fissile material to initiate nuclear fission.

By producing High Energy Neutrons, another vista opens up - nuclear fission using Uranium 238 rather than Uranium 235. In fact, that is the whole motivation to create High Energy Neutrons at all, so that nuclear reactors can be powered by the abundant U238 rather than scarce U235.

> Over 99% of natural Uranium is in the form of the U238 isotope and 0.7% is in the form of the U235 isotope. In a conventional nuclear reactor only U235 can be used to generate power. U235 will fission when hit by the "*slow*" or low energy neutrons emitted by other U235 atoms when they decay. Therefore a "*critical mass*" of U235 must be accumulated, so that the neutrons emitted by the entire mass of U235 will sustain a fission chain reaction. This is why natural Uranium is "*enriched*" to about 5% U235 and 95% U238 for nuclear fuel. The chain reaction in the reactor is then controlled by the moderator rods, the cooling system, etc.

Uranium 238 is useless in this system because it will only fission when struck by High Energy Neutrons. Proposals have existed for decades to build reactors using the principle called Accelerator Driven Fission. High energy neutrons are produced in



The power output could be turned up and down at will by turning a dial

In an advanced form of nuclear reactor, one would not simply create an *"atomic pile"* to create sufficient neutron density to initiate the fission chain reaction, by amassing enough *"critical mass"* of uranium together in a big

The reactor would look something like this. A central sphere containing the fissile material - U238, surrounded by say 32 Neutron Laser Guns. The rate of power production from the reactor would then be controlled by the Pulse Repetition Rate of the NASERS. The power output could be turned up and down at will by turning a dial. Just turning a dial ...

- tor Driven Fission. High energy neutrons are produced in a particle accelerator and used to bombard U238, creating fission and power. One advantage of this is that it is much safer. There is no self sustaining chain reaction - if the accelerator is switched off, the reactor shuts down and there is no chance of a runaway core meltdown or Chernobyl Syndrome. Abundant U238 and existing nuclear waste stockpiles can be used as fuel, transmuting them into safe disposable by-products.
- I do not believe that 60 years after the original Manhattan Project, that the US Military have not made this obvious next technological step.

Indeed, the next obvious step is not just to use a brute force *"particle accelerator"* to produce the neutrons but to develop a Neutron Laser as postulated above.

Some have suggested a nuclear reactor under the Twin Towers went critical. Let's discuss this. This brings us to how the whole reactor could be destroyed at once in a massive fission event. The NASERS would all be turned up to maximum. The U<sup>238</sup> would all fission in a massive "power excursion" leaving a molten pool of material. As the whole system was destroyed, neutron pulses from the NASERS would escape, not to mention the intense secondary neutron emission from the entire mass of  $U^{238}$  and its daughter products fissioning in a confined space (neutron leakage). There would indeed be an enormous explosion, an atomic blast, but unlike a U<sup>235</sup> blast there would be no self sustained chain reaction. Because High Energy Neutrons are required to fission the  $U^{238}$ , a relatively small explosion was produced in comparison to the quantity of  $U^{238}$  which must have fissioned.

# "Cold Fusion Is Hot Again" CBS 60 Minutes, April 19, 2009



1989 image of Martin Fleischman and Stanley Ponds, who are NOT the scientists who misrepresented data on CBS in

Image 1 - left

Image from CBS 60 Minutes website about their story hyping cold fusion.

This is of course now moving firmly into the domain of hypothesis. It is the purpose of hypothesis to try and explain or postulate explanations which best account for known facts, based on our state of knowledge.

We know that over 700ppm of Strontium and over 500pm of Barium was present in the dust. We therefore know that at least 500 tons of Uranium were fissioned per tower. One possibility would be a nuclear device, some sort of reactor, and perhaps not an atomic bomb. We have evidence of intense radiation beams, consistent with neutron emission and we know that if 500 tons of Uranium from a conventional reactor had fissioned in a chain reaction all at once that the Atlantic Ocean would now be filling the crater where New York City used to be. Therefore, we postulate that the reactor was instead some form of High Energy Neutron reactor, using much more stable and abundant U<sup>238</sup>, which produced much less explosive energy when hundreds of tons of it underwent instantaneous fission.

Koenig's Sphere may be a model of part of the device just as Stephen Jones may be the model designed to do everything possible to refute a nuclear component to the demolition of the Twin Towers – hidden in plain sight for all to see.

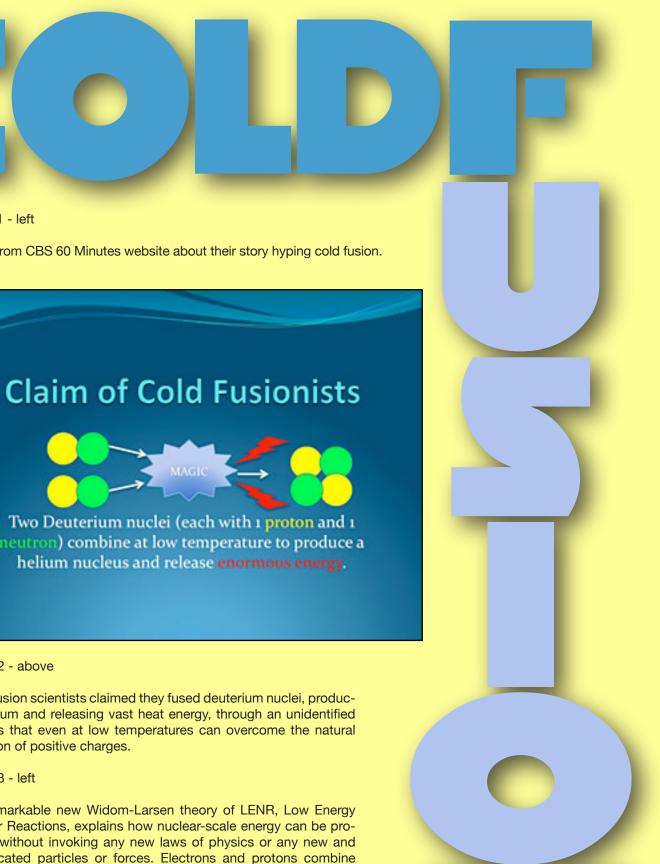
# THE DARKER SIDE OF PROFESSOR JONES

The essay above is a detailed critique by Gerard Holmgren of Professor Jones' hypotheses. As I like to say, the controlled demolition of the World Trade Center is not a hypothesis - it is a fact proven by prima facie evidence. While I don't agree with all of the assertions in the essay it's important to me to address all possibilities. The essay can be found at the following link:

http://members.iinet.net.au/%7Eholmgren/darkside.html



A proton and an electron combine to produce a (and a neutrino) that is absorbed by another nucleus. Repeated neutron absorptions produce new nuclei and release enormous energy at low temperature.



## Image 2 - above

Cold Fusion scientists claimed they fused deuterium nuclei, producing helium and releasing vast heat energy, through an unidentified process that even at low temperatures can overcome the natural repulsion of positive charges.

#### Image 3 - left

The remarkable new Widom-Larsen theory of LENR, Low Energy Nuclear Reactions, explains how nuclear-scale energy can be produced without invoking any new laws of physics or any new and undedicated particles or forces. Electrons and protons combine through collective electromagnetic effects making low energy neutrons that easily initiate nuclear reactions; being neutral they are not repelled by nuclei.

# WHO BENEFITS FROM THE FUSION CONSPIRACY?

Ludwik Kowalski • December 30, 2002 **Department of Mathematical Sciences** Montclair State University, NJ

About a week ago a teacher from an Internet discussion list wrote that a conspiracy against "cold fusion," if its claims are correct, can not possibly be effective, in a long run. This made me think about the institutional conspiracy against the religious reputation of Galileo. Two days ago I got a private message on the topic of institutional conspiracy from Dr. Edmund Storms. He is the one whose letter to the editors of Scientific American was posted as item #9 on my web site:

> http://pages.csam.montclair.edu/~kowalski/cf/index.html http://csam.montclair.edu/~kowalski/cf/

The reply was a reaction to what I wrote in items # 26 and #21. Thinking that those who read my "cold fusion" items might be interested in the episode described by Dr. Storms I asked for (and received) permission to share it. What follows is his story, and additional comments. In reading the story keep in mind that DOE stands for the (US Department of Energy), ERAB stands for the highly negative 1989 report of the Energy Research Advisory Board and BYU stands for Brigham Young University where Dr. Stephen Jones was conducting research. Dr. Storms wrote:

"You might like to know that in 1995, Steve Jones and I submitted a proposal to the DOE to test the claims of Pons and Fleischmann. I, as a believer, would show Professor Stephen Jones and Hansen at BYU, as skeptics, how to make the effect work and they would measure the resulting energy."

"We did this believing the DOE would abide by the statement in the ERAB report that "The Panel is, therefore, sympathetic toward modest support for carefully focused and cooperative experiments within the present funding system". This proposal was turned down. *As far as I know, every proposal having anything to do with* cold fusion was also turned down. For all practical purposes, the ERAB report killed the field in the US no matter what they said to the contrary."

The message with the permission to post had a comment which, I suppose, can be added as an elaboration on the above. I wrote in reply:

"The fact that DOE took a very hard stand in 1995 does not mean one should give up. Let us hope that 2003 will the year of the beginning of a reconciliation..."

## Dr. Storms then responded:

"Like you, I hope for sooner rather than later. However, government bureaucrats and academics have invested so much in rejecting this idea that it is not possible for them to change. I expect the US will change only after Japan solves the problem and threatens to create a commercial product based on the process. Meanwhile the old will die off and administrations will change, allowing new people to take control of science. It is a very slow process to make such profound changes. Being retired, I look upon this as an interesting process with very little likelihood of an end any time soon." So, with more than 1000 scientific papers supporting the reality of highly unusual phenomena are available but the leaders of our scientific establishments refuse to have another look. Something is not right. What should a confused science teacher do? Avoid the topic because authorities declared it to be non scientific 13 years ago? Risk his or her reputation and try to discuss the issue objectively? Play it safe and support official pronouncements? Those invited to look into Galileo's telescope were in a similar situation.

The more I think about it the more I am convinced that something similar to what was suggested in item #21 (on my web site linked above) is urgently needed. Read again what Dr. Storms wrote in the letter to the editors of Scientific American (*item #9 on my web site*) and think about it critically. Is he right or is he wrong that the issue is important in the context of support for science in our society?

By the way, a TV program last night was devoted to illnesses. They produced an example of institutional conspiracy against a researcher. The man had data proving that children's exposure to lead (mainly from gasoline emission) affected mental functioning. But the powerful lead industry launched an attack against him, and tried to discredit him. It took three years to show that his claims were not pseudo-science. Lead was removed from gasoline and its concentration in air has been reduced significantly. The motive of conspiracy, in this case, was obvious. But what motivates the DOE? Why was "every proposal having anything to do with cold fusion ... turned down" by our own government? Why do they ignore hundreds of serious papers authored, mostly by highly trained Ph.D. scientists?

Is the scientific establishment trying to protect us from some dangers? Why do they oppose a fair examination of the AE claims, in view of new evidence? Despite its criticism, which has been mostly justified, the ERAB report was "sympathetic toward modest support for carefully focused and cooperative experiments within the present funding system."

Is it true that such support has not been available to reputable US scientists?

And why not? What are they hiding? Muon catalyzed fusion? Deuterium-Tritium explosives?

China's Angry Student

# FUSION

## EXPLAINING DEUTERIUM TRITIUM EXPLOSIVES

In the muon-catalyzed fusion of most interest, a positively charged deuteron (d), a positively charged triton (t), and a muon essentially form a positively charged muonic molecular heavy hydrogen ion (d- $\mu$ -t)+. The muon, with a rest mass about 207 times greater than the rest mass of an electron, is able to drag the more massive triton and deuteron about 207 times closer together to each other in the muonic (d- $\mu$ -t)+ molecular ion than can an electron in the corresponding electronic (d-e-t)+ molecular ion.

The average separation between the triton and the deuteron in the electronic molecular ion is about one angstrom (100 pm), so the average separation between the triton and the deuteron in the muonic molecular ion is about 207 times smaller than that

Due to the strong nuclear force, whenever the triton and the deuteron in the muonic molecular ion happen to get even closer to each other during their periodic vibrational motions, the probability is very greatly enhanced that the positively charged triton and the positively charged deuteron would undergo quantum tunnelling through the repulsive Coulomb barrier that acts to keep them apart. Indeed, the quantum mechanical tunnelling probability depends roughly exponentially on the average separation between the triton and the deuteron, allowing a single muon to catalyze the d-t nuclear fusion in less than about half a picosecond, once the muonic molecular ion is formed.

The formation time of the muonic molecular ion is one of the "rate-limiting steps" in muon-catalyzed fusion that can easily take up to ten thousand or more picoseconds in a liquid molecular deuterium and tritium mixture (D2, DT, T2), for example.

Each catalyzing muon thus spends most of its ephemeral existence of about 2.2 microseconds, as measured in its rest frame wandering around looking for suitable deuterons and tritons with which to bind.

## GROUND ZERO URANIUM

The Uranium found on the girder coatings at Ground Zero was 7.57 parts per million (ppm) or 93 Becquerels per Kilogram (Bq/Kg). What's even more important is the amounts, parts per million or Becquerels per Kilogram, of Uranium and Thorium in the girder coatings as they correlate together. Both are only found in radioactive states. Uranium exists in the earth and is found in soil samples at levels between 12 and 40 Becquerels per Kilogram. 93 Becquerels per kilogram found in the girder coatings is high.

The Tritium found across Ground Zero is also high. When the Tritium and Uranium levels are considered together we have reason to believe a certain type of nuclear reaction occurred. Very good reason to believe so. Dust isn't deceptive. People are. There are dozens of elements in the dust that need to be explored by the 911 community from the anomalous levels of Sodium and Potassium to the extremely high levels we see of Zinc and other elements. Many of these elements form correlations of unity.

# GENERALLY COLD LOCALLY HOT FUSION

Accelerator-based light-ion fusion is a technique using particle accelerators to achieve particle kinetic energies sufficient to induce light-ion fusion reactions. Accelerating light ions is relatively easy, and can be done in an efficient manner—all it takes is a vacuum tube, a pair of electrodes, and a highvoltage transformer; fusion can be observed with as little as 10 kV between electrodes. The key problem with accelerator-based fusion (and with cold targets in general) is that fusion cross sections are many orders of magnitude lower than Coulomb interaction cross sections. Therefore the vast majority of ions end up expending their energy on bremsstrahlung and ionization of atoms of the target. Devices referred to as sealed-tube neutron generators are particularly relevant to this discussion. These small devices are miniature particle accelerators filled with deuterium

and tritium gas in an arrangement that allows ions of these nuclei to be accelerated against hydride targets, also containing deuterium and tritium, where fusion takes place.

Hundreds of neutron generators are produced annually for use in the petroleum industry where they are used in measurement equipment for locating and mapping oil reserves. Despite periodic reports in the popular press by scientists claiming to have invented "table-top" fusion machines, neutron generators have



been around for half a century. The sizes of these devices vary but the smallest instruments are often packaged in sizes smaller than a loaf of bread. These devices do not produce a net power output.

## FUSION"S", WITH AN "S"

Sonofusion or bubble fusion, is a controversial variation on the sonoluminescence theme, suggests that acoustic shock waves, creating temporary bubbles (cavitation) that expand and collapse shortly after creation, can produce temperatures and pressures sufficient for nuclear fusion.

**Pyroelectric fusion** was reported in April 2005 by a team at UCLA. The scientists used a pyroelectric crystal heated from -34 to 7 °C (-29 to 45 °F), combined with a tungsten needle to produce an electric field of about 25 gigavolts per meter to ionize and accelerate deuterium nuclei into an erbium deuteride target. Though the energy of the deuterium ions generated by the crystal has not been directly measured, the authors used 100 keV (a temperature of about 109 K) as an estimate in

*The Farnsworth–Hirsch fusor* is a tabletop device in which fusion occurs. This fusion comes from high effective temperatures produced by electrostatic acceleration of ions. The device can be built inexpensively, but it too is unable to produce a net power output. It is capable of leading to a nuclear fusion explosive device whether it produces a net power output or not.

The Polywell is a non-thermodynamic equilibrium machine that uses electrostatic confinement to accelerate ions into a center where they fuse together. Can this be used in a nuclear explosive device?

Antimatter-initialized fusion uses small amounts of antimatter to trigger a tiny fusion explosion. This has been studied primarily in the context of making nuclear pulse propulsion, and pure fusion bombs feasible. This is not near becoming a practical power source, due to the cost of manufacturing antimatter alone. Can this be the science behind miniature nuclear explosive devices?

their modeling. At these energy levels, two deuterium nuclei can fuse together to produce a helium-3 nucleus, a 2.45 MeV neutron and bremsstrahlung. Although it makes a useful neutron generator, the apparatus is not intended for power generation since it requires far more energy than it produces. Again, power generation in any nuclear explosion sequence might last just milliseconds so any particular source that fits in with the science becomes viable. And there's much more.

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by Fritz G. Will, Krystyna Cedzynska, and Denton C. Linton, Journal of Electroanalytical Chem., 360, 1993, pp. 161-176

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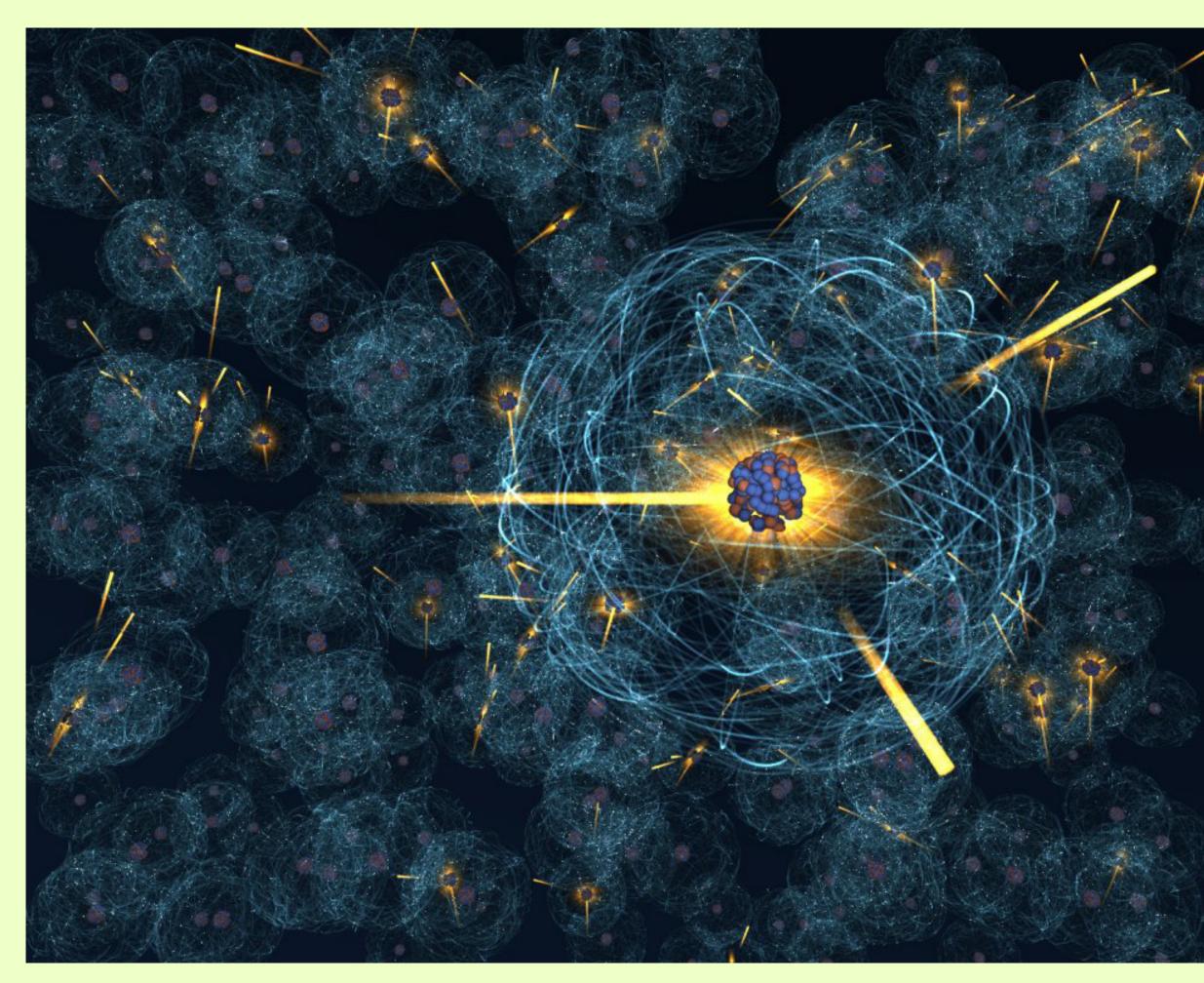
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## DR. CHRISOPHER BUSBY

Battling Invisible Snake Bites That Can Eventually Kill Us All

"It's all invisible. The trees are still trees, people are shopping, the birds are singing and dogs are walking in the street," said Chris Busby, a visiting professor at the University of Ulster's school of biomedical sciences, who visited Fukushima prefecture last week to provide information on health risks. "When you bring out the (Geiger) machines, you can see everything is sparkling and everybody is being bitten by invisible snakes that will eventually kill them."

Prof. Chris Busby quoted in "Fukushima Teacher Muzzled on Radiation Risks for School Children" by Takahiko Hyuga - Jul 28, 2011, also on YouTube video Fukushima "A Disaster beyond imagining" - Prof. Chris Busby, uploaded 2 Aug 2011 - video link below.

Chris Busby, with his Green Audit Staff (*right, at left*) is director of the independent environmental consultancy, Green Audit. He has a first-class Honours degree in Chemistry from London University and a PhD in chemical physics from the University of Kent. He is Scientific Secretary of the European Committee on Radiation Risk and a member of the UK Department of Health Committee Examining Radiation Risk for Internal Emitters (CERRIE).

Chris also sits on the UK Ministry of Defence Depleted Uranium Oversight Board and is National Speaker on Science and Technology for the Green Party of England and Wales. Chris is a fellow of the University of Liverpool in the Faculty of Medicine. He is also scientific advisor of the Low Level Radiation Campaign which he helped to set up in 1995.

Dr. Christopher Busby is one of the preeminent experts on nuclear fallout and radiation. He was the scientific secretary for the European Committee on Radiation Risks and has held numerous influential positions in this field. In the aftermath of Fukushima, his expertise has been very much in demand, with Dr. Busby appearing on BBC and numerous other radio and TV shows.

> Video Link: http://www.youtube.com/watch?v=lcnwgfJfjFw



## THE INTERVIEW

On Friday, 28 October 2011, it was my honor to host Leuren Moret and Christopher Busby as my guests on "The Real Deal", an internet radio program broadcast on M/W/ F from 5-7 PM/CT over revereradio.net. Leuren Moret is an independent geoscientist who has done expert studies on the Fukushima disaster, radiation problems around the world including depleted uranium. Dr. Christopher Busby is a visiting biomedical studies professor at the University of Ulster and is the co-author of reports about the effects of depleted uranium in Iraq especially in relation to Fallujah. What Busby found much to his surprise was not DU but *enriched uranium instead*.

The interview was extraordinary on many counts. During the first hour, Leuren reported on the latest research about Fukushima and laid out a background for understanding the issues that she and Busby and I would discuss during the second hour. It has become apparent from Busby's research that a new kind of bomb–which seems to be a neutron bomb–has been used in Fallujah, but also in other areas, including Lebanon. As though that discovery were not astonishing enough, listening to him, it struck me that this same weapon may have been used to destroy the Twin Towers, an explanation for which has remained elusive and where alternative theories about the possible use of mini-nukes, directed energy weaponry, and other causal mechanisms have been widely discussed–or, in some cases, actually suppressed.

So there are linkages of evidence and causation that tie together the commission of war crimes in Iraq with mechanisms of destruction that may have brought about the neartotal conversion of two massive, 500,000 ton buildings into millions of cubic yards of very fine dust. We know that nanoenergetic compounds do not have the capacity to bring about these effects we've seen, even though there are many staunch advocates. So what we have to learn from Dr. Christopher Busby may not only expose the existence of a new weapon of mass destruction but also provide a key to understanding what happened on 911. The transcription of the second hour of the program (*published on the following pages*) was done by Jeannon Kralj, to whom we are indebted for the excellence of her work.

~James Fetzer, Ph. D.

## FIRST, A FEW QUOTES

"If you think Cancer is a problem now, wait until more depleted uranium is released into the world" Contacts: The Radiation and Public Health Project (RPHP), L. Moret, M. S. and J.D. Sherman, M. D., The European Committee on Radiation Risk (ECRR), A. Yablakov Ph.D. and C. Busby, Ph.D. This document reports known links between exposure to low-level nuclear radiation and cancer concerning the impending US war against Iraq.

"If Dai Williams' analysis is correct the Shock and Awe missile and bomb inventory (which I can send anyone interested) is accurate. We are talking about 1900 tons of DU (or perhaps U) which is equivalent to 60TBq of alpha and beta particulate activity equivalent to the amount of alpha emitting radioactive material Sellafield put into the Irish Sea each year at the peak of its releases and about 50 times the present amount released annually to the Irish Sea. This DU will become widely dispersed and re: Israel I would not want to be living within 1000 miles of Baghdad. As a crime against humanity and a weapon of mass destruction this will be in a class of its own."

### The European Committee on Radiation Risk (ECRR) concludes:

"The present cancer epidemic is a consequence of exposure to global atmospheric weapons fallout in the periods 1959-1963 and that more recent releases of radioisotopes to the environment from the operation of nuclear fuel cycle will result in significant increases in cancer and other types of ill health." (ISBN# 1-897761-24-4 - C. Busby)

The ECRR is based upon studies of chronic, internal exposure to low-level nuclear isotopes in diverse populations: leukemia in children on the Irish Sea Cost (Sellafield); Chernobyl children; and civilians and military exposed to Depleted Uranium (DU) armaments resulting in systemic harm and genetic damage.

"Using both the ECRR's new model and that of the International Committee for Radiation Protection (ICRP), the committee calculates the total number of deaths resulting from the nuclear project since 1945. The ICRP calculation, based on figures for doses to populations up to 1989 given by the United Nations, results in 1,174,600 deaths from cancer. The ECRR model predicts 61,600,000 deaths from cancer, 1,600,000 infant deaths and 1,900,000 fetal deaths. In addition the ECRR predicts a 10% loss of life quality integrated over all diseases and conditions in those who were exposed over the period of global weapons fallout."

(San Francisco) – Dr. Chris Busby, world famous physicist, said, "tests run at the respected Harwell Radiation Laboratory in England demonstrate the airborne radiation in Japan is 1,000 times higher than radioactive fallout at the peak in 1963 of H-Bomb detonations by the nuclear powers. The calculations were on radioactive Cesium 137."

"The latest week 30 mortality statistics (through July 30) issued by the Centers for Disease Control and Prevention now indicate that the number of excess deaths in the U.S. since the Fukushima nuclear power plant disaster now stands at 27,752."

"...You may think a professor at a university must actually know something about their subject. But this is not so. Nearly all of these experts who appear and pontificate have not actually done any research on the issue of radiation and health. Or if they have, they seem to have missed all the key studies and references..."

### Radioactive Jet Streams by Dr. Mark Sircus

The bottom line is that 10,000 terabequerels, that's ten with fifteen zeros, (10,000,000,000,000,000), of radioactive substances will be released into the atmosphere from the plant during the coming three months, according to simple calculations based on the estimated emission rate as of April 5. It is now safe to assume that there will be a lot of radiation circling at high altitudes and all that stuff is going to come down everywhere eventually, especially when it rains or snows. Where is all this radiation coming from?..

...Dr. Chris Busby said that three spent-fuel pools

have burned, which he calculates puts the radiation levels at 24,000 Hiroshimas x 3 spent-fuel pools, or 72,000 times the radiation of Hiroshima now in the atmosphere. This amount represents only that from the spent-fuel pools. Radiation will continue to escape from the reactors until entombed. Perhaps it would have been better if we had fought a limited nuclear war instead!

Everything you ever wanted to know about Dr. Christopher Busby; almost every paper he's ever written, every study he's ever undertaken or participated in and every video interview including all of his sources used in this eMagazine:

Source: http://tinyurl.com/3k4zsty



Fukushima

produced

72,000 times

the radiation

of Hiroshima

## HEAVY FIRE POWER WAS USED IN FALLUJAH IN 2004 THE NEUTRON BOMB

U.S. Marines fire November 11th, 2004 (*image*), on Fallujah with a 155 mm Howitzer. One of the weapons originally designed for this artillery piece was a tactical nuclear weapon (*that could include a neutron warhead*) designed by Samuel Cohen, to be fired in eastern Europe on Soviet troops during President Ronald Reagan's term in office.

On Friday, 28 October 2011, it was my honor to host Leuren Moret and Christopher Busby as my guests on "The Real Deal", an internet radio program broadcast on M/W/F from 5-7 PM/CT over revereradio. net. Leuren Moret is an independent geoscientist who has done expert studies on the Fukushima disas-

ter, radiation problems around the world including depleted uranium. Dr. Christopher Busby is a visiting biomedical studies professor at the University of Ulster and is the co-author of reports about the effects of depleteed uranium in Iraq especially in relation to Fallujah. What Busby found much to his surprise was not DU but *enriched uranium* instead.

The interview was extraordinary on many counts. During the first hour, Leuren reported on the lastest research about Fukushima and laid out a background for understanding the issues that she and Busby and I would discuss during the second hour. It has become apparent from Busby's research that a new kind of bomb-which seems to be a neutron bomb-has been used in Fallujah, but also in other areas, including Lebanon. As though that discovery were not astonishing enough, listening to him, it struck me that this same weapon may have been used to destroy the Twin Towers, an explanation for which has remained elusive and where alternative theories about the possible use of mini-nukes, directed energy weaponry, and other causal mechanisms have been widely discussed-or, in some cases, actually suppressed.

So there are linkages of evidence and causation that tie together the commission of war crimes in Iraq with mechanisms of destruction that may have brought about the near-total conversion of two massive, 500,000 ton buildings into millions of cubic yards of very fine dust. We know that nanothermite does not have the capacity to bring about these effects, even though it has many staunch advocates. So what we have to learn from Christopher Busby may not only expose the existence of a new weapon of mass destruction but also provide a key to understanding what happened on 911.

### The Real Deal Radio Show

• October 28th, 2011 •

Hosted by James Fetzer Ph.D. with Guests:

Dr. Christopher Busby, Ph.D. Leuren Moret B.S., M.A., PhD (ABD)

Hour Two of Two Hours: (transcribed by Jeannon Kralj)

*Jim Fetzer*: This is Jim Fetzer, your host on "The Real Deal", continuing my conversation with Leuren Moret and now we have been joined by Professor Christopher Busby who is a visiting biomedical studies professor at the University of Ulster and is the co-author of reports about the effects of depleteed uranium in Iraq especially in relation to Fallujah. Now he's found enriched uranium in Iraq which

puts a human hand to the processing,

Chris, welcome to "The Real Deal".

Dr. Busby: Yes, hello.

*Jim Fetzer*: Please do tell us about the results of your studies and the effects of the depleted uranium.

*Dr. Busby*: Okay, well, I've done two studies with colleagues in Iraq of the town of Fallujah, which I am sure everybody knows was attacked by US-led forces in 2004, and there was an enormous amount of fire-power used then. And following that there's been a lot of talk about increases in cancer and congenital malformations and various other conditions, but nobody had ever done any proper epidemiology or scientific study. So it was all anecdotal, although it had been reported in a lot of media.

So a colleague of mine, Malak Hamden, decided to get involved and she contacted me and together we devel-

oped an idea to conduct an epidemiological study. This was in 2010 and we organized a team of people in Fallujah to visit various houses and set up a randomized group of people in houses to tell us how many people there were, sexes, ages and so forth, and how many cancers they had and what the population was and so forth. And that study was published in the International Journal of Environmental





# Christopher



# Discusses



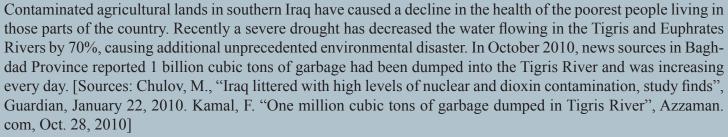




Public Health, a Swiss journal, in 2010. And what it showed was that there was an enormous increase – there was – everybody had been right – all the anecdotal evidence was actually borne out. There was a very big increase in cancer in that population, highly statistically significant, and also there was a big increase in infant mortality and mostly driven by congenital disease, and there was a change in sex ratio, that is to the number of boys born to the number of girls, which is very indicative of a genomic or genetic effect on the sperm [in men] or the eggs of the women.

## TOXIC ZONES IN IRAQ

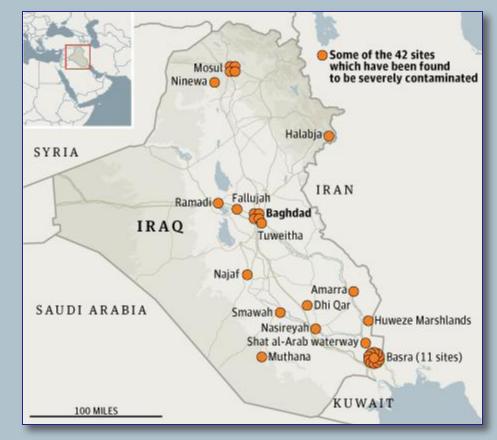
High risk areas contaminated with depleted uranium and other toxins from 30 years of war have left large areas of environmental ruin. The largest towns and cities account for 25% of the contaminated areas. Higher rates of cancer and birth defects have been reported at these sites.



And so there was evidently some other cause in order to answer to the fact that the levels of cancer were higher than had been reported following Hiroshima. So we're talking about some sort of agent which causes massive genetic damage in a population. And of course everyone said 'well it must be depleted uranium.' But of course this was an epidemiological study so we didn't we couldn't say anything about depleted uranium or what it was.

But in order to investigate it, we then decided to go ahead and have a look at a group of parents of children with congenital malformations. And so one of the team who was a pediatrician at Fallujah General Hospital organized 25 fathers and 25 mothers of children with serious congenital malformations, many of these died of course, and took hair samples from these people and we analyzed those hair samples using quite sophisticated technique, or Inductively Coupled Plasma Mass Spectrometry (ICPMS).

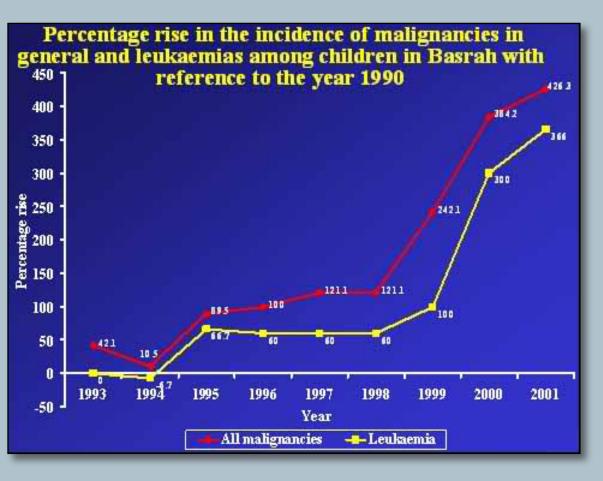
And we looked at 52 elements in the hair samples of these people and we found quite large increases in a whole range of elements but most of them were innocuous, things like calcium and aluminum and magnesium, which are not likely to cause congenital malformations. In fact, the only thing that we found apart from uranium that might have been implicated was mercury. But the source and levels of congenital malformations that we had found, and in fact there is another paper which hasn't been published yet which does show these levels at very high levels of congenital malformation. The only thing that could explain it was uranium.



The interesting thing about the uranium was that we were able to measure the isotopic ratio because we were interested to see whether it was, you know, natural uranium or was it DU, which is what we thought it would be. But in fact it turned out to be slightly enriched uranium [with U-235], so, that is to say, it was man-made enriched uranium. Now enriched uranium is a material that should only be found in a nuclear power station or inside an atomic bomb. So to find it in the hair of the parents of these children with congenital malformations was really astonishing. So we then went to look to see how this could be, and to cut a long story short, we concluded from various patents from the US patent office that we received from physicists, that it was quite entirely likely that there was a new secret weapon being used, an anti-personnel weapon of some sort which contained enriched uranium or else generated enriched uranium.

... we were able to measure the isotopic ratio because we were interested to see whether it was, you know, natural uranium or was it DU, which is what we thought it would be. But in fact it turned out to be slightly enriched uranium with U-235, so, that is to say, it was man-made enriched uranium used in Fallujah.

And so there are basically two possibilities. One is that they are using this enriched uranium. It's only mildly enriched uranium, to cover their tracks, so that afterwards nobody can come to them, you know, with a whole trail of people with cancer and congenital disease and say '*Hey look, we're going to sue you*' because then they can say



*Well, you know, there's no depleted uranium there.* 

And the alternative – which is sort of science fictional and which is entirely possible – I have to say, which is that they have developed a sort of neutron device which uses enriched uranium as part of its components to generate neutrons. And the way it does this is to dissolve tritium in uranium powder. Like deuterium, heavy hydrogen is very soluble in uranium, and when it is compressed, when the saturated solution is compressed, you can get a cold fusion reaction which produced helium-4 and neutrons, and so that too is a possibility. But of course we don't know what the answer is at this time. Or do we?

And interestingly enough, and also connected to this, is the fact that we know from various papers that have been published that the Gulf War veterans, the US Gulf War veterans, have also had a very high and statistically significant increase in congenital malformations in their children. But the uranium source of this has been excluded on the basis of urine tests which show that there is no depleted uranium. But of course, what we have discovered is that there wouldn't be depleted uranium because it is enriched uranium.

## CANCER RATE INCREASES IN BASRA, IRAQ 1993-2001

Dr. Jawad Al-Ali, an oncologist in Basra, Iraq, reported large increases in cancer and leukemia in Basra following the 1990 Gulf War, and the introduction of depleted uranium weapons to the battlefield by the US govt. Cancer rates in Fallujah from the 2004 attack are even higher than Basra, and many times higher than after Hiroshima and Nagasaki (blue chart, previous page) [Source: Dr. Jawad Al-Ali, Basra, Iraq].

Jim Fetzer: Well Chris, this is fairly astonishing news. I must say, I am taken aback in that the belief that it has been depleted uranium that has caused these problems, so widespread,

so ubiquitous, that your findings are truly astonishing, I think even revolutionary, in altering the paradigm with which we view these matters where the American government, once again, is complicit. Whereas the attack on Fallujah obviously involved war crimes on a massive scale in the use of chemical and other weapons that were banned under the Geneva Conventions, now we're talking about a whole new family of weapons that have devastating effects and that alter the genetics of the civilian and military population, which can have incalculable consequences from an evolutionary point of view. I am stunned.

Dr. Busby: Yes, well so were we. But I have to say that we weren't absolutely astonished as we might have been because we had already turned up enriched uranium in a bomb crater in Lebanon in 2006, and there are certainly no differences about that in two separate laboratories using two entirely different techniques. So in one laboratory they used ICPMS, which is this method we just used.

But in another one, they used the old fashioned but much more certain method which is called alpha spectroscopy. And so in that laboratory, they also found enriched uranium. So there is no doubt that enriched uranium is being used as some component of some modern weapons system.

And the other thing about it is that people are so "Oh well you know they use..., why do you find depleted uranium because there are no tanks." And of course the answer is that it is an anti-personnel method of attack. It is not a tank buster at all. It is a new system and I think that this is the message to the planet, that there is a secret new system and it is extremely dangerous.

## LARGE INCREASE IN FALLUJAH BIRTH DEFECTS WERE REPORTED AFTER 2004 US ATTACKS

Defects in newborns were 11 times higher than normal, "war contaminants" from new exotic weapons including nuclear weapons, are the probable cause. [Source: Chulov, M., "Research links rise in Falluja birth defects and cancers to US assault", The Guardian (UK), Dec. 30, 2010]

Jim Fetzer: Yes, extremely dangerous, and you are observing it was found in Lebanon, where to the best of my knowledge, there was not an American incursion but rather an Israeli, and that the Israelis may even have developed this weapon or been provided with it by the American government.

Leuren Moret: Actually what happened is that during the attack, in the middle of the Israeli attack on Lebanon, the US sent 800, rushed, 800 special bombs, and I have photos of them on planes in England and landing and taking off in Scotland and also Ireland. And they expedited delivery of these special bombs to the Israelis to use on Lebanon in the second half of that attack, and I believe that those may have been the source of this exotic weapons signature that Dr. Busby has just mentioned.

Jim Fetzer: Chris, had you heard those reports before possibly ...?

**Dr. Busby**: Well I know that the Americans did supply bombs to the Israeli because there was a lot of fuss when they were landing in Scotland. The Scottish people wanted to prevent them using the airports there as a staging place for refueling in order to supply the Israelis because there was a lot of opposition to that particular war, which was another illegal war [unintelligible] I think it was in this report.

the crater that we found in Khiam, Lebanon was in fact radioactive, so not only did we find depleted uranium

but we found enriched uranium in it also

The crater that we found in Khiam (Lebanon) that my colleague, that actually I sent my colleague out there to look at, was in fact radioactive. So not only did we find DU but we found enriched uranium in it. The reason that we went there in the first place was that one of the local physicists who had been looking at the various effects of these weapons in Lebanon detected the radiation signature of this particular crater was alarmingly high, so that's why we went to see why it was high. Now the radiation levels fell rapidly over about six weeks and went back to normal. Now that would be a signature for a neutron device because what happens is that the neutrons from the device cause an increased level of gamma radioactivity due to neutron activation of substances in the soil, but these are fairly short-lived, and so they do drop off over a short period of about three to six weeks, so that would fit in with that possibility.

## TURBOCHARGED "SUPERBOMBS"

Reactive Materials can be used to replace inert metals in munitions, all different kinds of weapons. Even Explosively Formed Penetrators, or EFPs, the "superbombs" used to such deadly effect in Iraq and Afghanistan, are candidates for the reactive materials revolution. [Source: Hambling, D., "Reactive Revolution: Turbocharged 'Superbombs'", WIRED, May 9, 2008]

*Jim Fetzer*: Now Chris, perhaps you can confirm my impression that one of the benefits of these neutron weapons is that they kill people but don't damage property.

Dr. Busby: Well that's why they were developed, of course. Yes, that's correct, that is why they were developed.

I want to be very cautious about all of this. I have talked to a number of physicists who say that this is possible, who say that the model seems reasonable, but we have no real evidence apart from the existence of enriched uranium [I-235] in this crater in Lebanon, deuterium, anomalously high levels of radioactivity caused by neutron activation, and the rest is surmisable.

Jim Fetzer: Well, on the other hand, if you apply the principle of inference to the best explanation, if you con-

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sider alternative hypotheses about the possible cause and calculate the probability of the effects if those causes were indeed what had brought about those effects, the causes with the highest probability have the highest degree of evidential support ...

Now it doesn't have to be a neutron weapon. The patents that we've found include a weapon where the uranium is part of an explosive, and then this explosive is used in a shaped charge, a sort of shaped appliance so that it shapes and directs the actual explosion power.



Fallujah, Iraq, 2004

Now there are various missiles and tank styles that are called TOW and these are directedcharge weapons. And I've seen pictures of these taken at tanks. They fly over the top of the tanks and they suddenly go "bang" and this enormous directed charge goes downward on to the top of the tank and atomizes it. And these are quite small missiles. So there is an alternative explanation so it doesn't have to be something nuclear.

*Jim Fetzer*: Goes down on the top of the tank and atomizes it?

**Dr. Busby**: Yes, yes, it does. It's the most extraordinary thing, that the missile doesn't hit the tank – it flies over the top of it and a sort of [shaped] charge shoots out from the bottom of the missile and blows the tank apart from the top.

*Jim Fetzer*: Could such a weapon then be used on steel structure high-rise buildings.

**Dr. Busby:** Yes, of course. But the thing about this is that it is entirely possible also that what they are doing is just disposing of a load of old nuclear warheads. As you know, they have to have a lot of decommissioning of nuclear weapons and there are significant amounts, very large amounts of enriched uranium in those nuclear weapons, and so the point is that that stuff would have to normally be disposed of as nuclear waste. Now that would be a simple matter for them to just mix it in with depleted uranium until you got a mix which just took you on the correct side of the dose limits to the soldiers. That's the way these people think. I can tell you. They would mix it in so that the soldiers under some risk model approach would have less than one millisievert in a year or whatever the risk level is, and that would be a very neat

way of getting rid of all their warheads without having to find somewhere to put them which would cost them money. At the same time, of course, they could use them in this new weapon. *Dr. Busby:* Well you could make a directed charge weapon that could do anything, and some of these weapons, of course... I think the point is... This has been described in various books about the battle of Fallujah. It's not me saying this. But they do have these missiles that can blow down walls, and the problem was that these guys, what they call "the insurgents," were inside buildings and were shooting out through windows and the easiest way to get them would be to just completely demolish the wall. So these directed-charge weapons are capable of doing that, which is to blow the wall away, presumably then the wall comes down with them. So there are lots and lots of modern weapons. Another thing about this is that a lot of very strange wounds have been found. You know there is actually a group of doctors who are trying to figure out how these wounds have been created. They are not the sort of wounds you get in combats in historic wars. They're entirely new. So there is some sort of new weapon out there, and I think probably it contains uranium – would be my guess.



## FALLUJAH BURNS

During the 2004 US attack on Fallujah, strange wounds and burns were reported by Doctors treating Iraqi war casualties. These types of wounds had never been seen before.

**Jim Fetzer**: Could you sketch some of these wounds so that we would have a better idea of what you are talking about?

*Dr. Busby*: There are people who have been found that for no apparent reason their bodies are slightly swollen and they cut the bodies open to look inside and found nothing at all which could produce pain–explain why they are dead.

Now this could be the consequence of a thermobaric weapon. Now uranium explosives have been associated with the development thermobaric weapons because what these weapons do, instead of their "bang" very sharply with a kind of sharp shock wave, they produce a very slow shock wave, so the shock wave goes out and then it sucks back into a vacuum. It just destroys people by its sudden change in pressure. It sucks their lungs out, if you like. So that could be one of them.

Now I took photographs of a boy who was hit by one of these weapons and there's a stripe across his chest which is like a black

stripe. The rest of him is perfectly all right. There is no problem with him, but where the stripe crosses his arm, the arm has been completely charred and its like you can just see two sticks where the bones are still there but they're carbonized. So this guy who has obviously standing by a window and some enormous heat has come through the window and has just totally wiped out parts of him and other parts are completely unharmed. There are a number of these pictures around which really don't make sense unless you have some kind of new weapon that we don't fully understand [yet] . . .

*Jim Fetzer:* Chris, this is nauseating, I mean, man's inhumanity to man, you know, seems to be on blatant display here.

**Dr. Busby**: It's an interesting philosophical point really, how these people can do it. But you see they put themselves in a different universe. They just sit there with their pencils and paper and they kind of just see it as a . . . I don't know, like an abstract plan on how to kill somebody. They don't see them as real people.

*Leuren Moret:* It's nothing personal, Chris. It's nothing personal. It's just another industry like making shoes to them.

**Dr. Busby**: I saw a very interesting video about three women who were walking along, Palestinians as well, and they were looking at a drone, one of these Israeli drones, and then two of the young daughters turned to the mother and smiled at her and sort of laughed and then pointed to it, and then the drone wiped them out. It sort of sent a missile down and blew them to pieces, these two children. And then later on in this same program, I

saw a picture of the Israelis, young men sitting at computer screens with joy sticks, and they were controlling these drones and they were looking through the eyes of the drone, if you like, and seeing people walking about, and then they could press a button on the joy stick just like a computer game. And I had this vision of two of these guys sitting there and they saw these two beautiful young women turn round and laugh at them, you know, thought they were laughing at the drone, but who knows, they

One on the one of the

burn wounds never seen before ... instead of their "bang" very sharply with a kind of sharp shock wave, they produce a very slow shock wave

may have been laughing at some joke that they had made. You know, these guys saw them laughing at the drone and they just pressed the button and wiped them out. It is like that – this distance between people – that these modern weapons enable people to use.

*Jim Fetzer*: I've actually published a piece entitled, "On the Ethical Conduct of Warfare: Predator Drones", that was published by Global Research, and studies have shown that from these drone attacks they are killing on the average of 140 innocent civilians for every targeted insurgent.

And of course, as we well know, since the United States is the aiding and occupying force from the point of view of the Iraqis and the Afghans, these are "freedom fighters" as Ronald Reagan described the Contras in Nicaragua.

instead of their "bang" very sharply with a kind of sharp shock wave, they produce a very slow shock wave The incapacity of Americans to see another point of view, Chris, is simply staggering, I must tell you, it's just staggering.

*Dr. Busby:* Well I agree with you, absolutely. I kind of know that. I know that. I don't know what you can do about it.

Jim Fetzer: The fact that you've been dealing with these exotic weapons, or at least their effects, leads me to ask the following question. One of the most puzzling aspects of research on 9/11 is how the Twin Towers were destroyed because their being converted into millions of yards of very fine dust from the top down, while all the floors were remaining stationary. The mass of the lower parts of the buildings is overwhelmingly greater than the mass of the top of the building – in relation to the North Tower, for example, the top 14 floors, because the steel is tapered from the base. Whereas in the sub-basement it is 6 inches thick, and then 5 and so forth up to a quarter inch thick at the top, represents that only 1.4 percent of the mass of the steel and the idea that that could overcome the lower 98.6 is simply a physical impossibility. And yet we have these buildings clearly being blown apart in every direction, not any effect of a unidirectional gravitational attraction downward. And the question becomes "what could possibly have brought this about?" And I just wonder if any of these extraordinary weapons you are talking about could have such effects.

**Dr. Busby:** Well, that is an interesting question there and it has to do with this story of tritium in the water in the basement of the Twin Towers. Now if you look at tritium in the Twin Towers, there is a proper, peer reviewed scientific paper by a number of quite eminent chemical analysts who measured the concentration of the element tritium, which is a form of radioactive hydrogen [used in nuclear weapons and produced in some nuclear reactions] in the basement waters of the Twin Towers, and they concluded that the amount of tritium there was absolutely impossible – it could not have got there except as a consequence of some "unusual happening".

Now the point about this weapon that I'm talking to you about, this weapon of deuterium and uranium, is that it does actually produce tritium. That's one of its major products. It produces helium-4 and tritium. So what you would need to look for if you were looking for, I suppose, this particular explosive's sort of footprint, you would look for tritium, and they did find tritium in the Twin Towers, so it is entirely possible that they were brought down with this same weapon.

Jim Fetzer: And it's a weapon that produces a neutron bomb effect ...

Dr. Busby: Yes, by producing gamma rays

*Jim Fetzer:* ...by combining depleted uranium with enriched uranium. And could be blended so you could create any mixture you like to achieve the type of effect, the range of blast and so forth desired.

## They were bragging they had this weapon about the size of a

baseball



it was a neutron bomb, high density it weighed about 20 kilograms (44lbs.) *Leuren Moret:* Chris, explain to Jim and the audience what you discovered about the structure of super-thermite or thermite that was developed at the Livermore Nuclear Weapons Lab and the similar structure in the layers, like a sandwich, of these fourth-generation nuclear weapons, and they were also developed at the Livermore Nuclear Weapons Lab.

*Dr. Busby*: Well I think that you'll have to do that. I don't know anything about super-thermite. People have talked to me about it, but I don't really know anything about it.

*Leuren Moret:* You were talking about the structure of the fourth-generation nuclear weapons where it is a layer of deuterium, a layer of U235 ...

Dr. Busby: No no, it's a solution of deuterium in the uranium...

Leuren Moret: Oh, in the uranium.

**Dr. Busby:** Yes. The fact is that we know from work that was done by a colleague of mine called Martin Fleischmann, who first discovered what is called "cold fusion" at the University of South Hampton, and I was actually working with that a while ago. It was in the late 70s, beginning of the 80s. He discovered that if you dissolve deuterium and palladium and then electrolyze... use it for electrolysis, you get more energy out than you put in, and then that was called cold fusion. And everyone was running around trying to make free energy using cold fusion. And the Harwell Laboratory, at that time, the atomic energy research laboratory in the UK denied that and said "Oh, it doesn't work". He just kind of gave up on that, or at least it didn't go anywhere. But more recently, he has told my colleague in Italy that in fact a much better electrode to use, or a much better material to use, is uranium, but in fact not palladium. But uranium dissolves much more hydrogen or deuterium because it goes into the interstices between these enormous uranium atoms because you know it has an atomic number of 92. So it's a very very big atom and in the metallic matrix, there's lots of spaces between the atoms where hydrogen can pack in, so enormous amounts of deuterium will actually just dissolve in solution into the uranium matrix. Now if you then compress it, it causes a cold fusion reaction, according to this guy, Emilio Della Guidice, whom I met in London. He told me about this. If you then compress a supersaturated solution of deuterium in uranium, there is nowhere for the deuterium to go so it compresses to the extent that it turns itself into helium-4 and produces tritium and a great gamma ray pulse with neutrons. It's a twostage reaction. So it is a cold fusion reaction.

So in principle what you have to do is take a shell and fill it up with uranium powder and then dissolve deuterium, heavy hydrogen, in that and then fire it at something. So there is that something it squashes. It gets compressed and then you get this gigantic pulse of energy as a result of this fusion reaction – cold fusion. That is what he suggested is what this cold fusion weapon is. In fact, the Russians did talk about a similar weapon which they called "Red Mercury". And they referred to it in the late part of Ronald Reagan's presidency, sometime when there was a discussion between Reagan and some General in the Soviet system. They were bragging about the fact that they had this weapon that was about the size of a baseball that was a neutron bomb, and it had a density such that it weighed about 20 kilograms or so many kilograms. Anyway I have worked out that in order to be the size of a baseball and weigh whatever they said it weighed, it had to be uranium because that was the only thing that had sufficient density to weigh that much. So I think this weapon has been around for some time actually. So that's all I know, but I don't know anything about the super-thermite. But if a weapon exists, that's how it works.

*Jim Fetzer:* The research that has been done about the superthermite or nanothermite actually had shown that it does not have the explosive properties that would be required to perform these feats. I have worked in collaboration with a chemical engineer from NASA by the name of T. Mark Hightower. We have now published several articles demonstrating that the detonation velocity of nano-thermite is only 895 meters per second, whereas as you know from materials science the principle that you must have a detonation velocity equal at least to the speed of sound and the material wherein concrete is 3200 meters per second and in steel 6100 meters per second, so that nano-thermite doesn't even have the potential to have brought about the effects that were observed, for example in the Twin Towers on 9-11.

Dr. Busby: ... the tritium, that's the point.

*Jim Fetzer:* The tritium, yes yes, elevated levels of tritium and I also understand that of barium, of strontium and of deuterium.

*Dr. Busby*: Well... if true... I didn't know you got deuterium as well as tritium. If you've got deuterium as well as tritium, that pretty much nails it, doesn't it?

*Jim Fetzer:* Well I would like for you to elaborate on that because this is a very important point. I have longed believed that it was the chemical residue that was going to tell us what was going on here.

**Dr. Busby**: Right. Well, from what I just said, from what Emilio Della Guidice told me, this weapon is deuterium dissolved in uranium. OK. Now if that's the case, you're not going to get a hundred percent fusion. I mean I'd be surprised if you got more than five percent fusion. And it could well be that you could regulate the level of fusion by regulating the gamma radioactivity of the uranium. So if you put more U235 into the mix, you might be able to increase the electron density and therefore, because of the ionization of the U235 is much more radioactive than U238, and then you might be able to regulate the percentage of the material that went to cold fusion. But I would be

extremely surprised if the percentage of fusion was very high at all.

Because, if it were for me [to say], there would be all sorts of parts of this weapon that didn't reach super-saturation. So some part of it would get this fusion reaction and it would blow the rest of it away. Just like the atom bombs. That's why they had to put these big uranium casings on the atom bomb because the initial fission explosion would blow everything away and then the neutron density would fall down, so you would lose a lot of efficiency. And even the way in which they did it with atom bombs, they still only got about five percent fission. So there was an awful lot of wastage.

And the same here. So the wastage, of course, would lead to all that deuterium being released in the explosion as deuterium, not having been turned into anything else... like tritium and so forth and would be able to be there in the ground, see, and hence the deuterium.

*Jim Fetzer*: Let me pose the plausibility of the following scenario. We have firefighters who were reporting hearing 'boom boom boom'. It was 110 stories and it took approximately 11 seconds to be completely destroyed, I believe we were listening to a series of explosions that were blowing out 10 floors at a time. Would that sound plausible using these types of weapons?

**Dr. Busby:** I really don't know. I'm not a weapons expert. All I can say... I mean... all of this is the sort of back walk, I mean we walked away from what I know, which is that we discovered enriched uranium in Fallujah.

### Jim Fetzer: Yes.

**Dr. Busby:** And walking back from that we then think well why is there enriched uranium in Fallujah and then we say 'well look here, one of the possibilities is that they developed this weapon.' And then you add all of the other stuff in and it means that maybe this weapon exists.

#### Jim Fetzer: Yes.

**Dr. Busby:** I have no idea how powerful it is, but I would suggest that it is very very powerful in terms of its size. So if you want something that's small that somebody can walk and just stick it in the corner somewhere that has enough power to blow this building down, you know, then it's a good bet. In other words, otherwise you'd have to take a suitcase of TNT, or maybe like, you know, suitcases that would make it more difficult...

Jim Fetzer: Oh it would be massive quantities of TNT,

## why is there enriched uranium in Fallujah?



# and it means that **maybe this weapon** exists.



## look here,

one of the possibilities is that they developed

# Neapon.

of the other stuff in

massive quantities... Just to mention in response to Leuren's interest in the nanothermite, it has less than 13 percent the explosive power of TNT.

*Leuren Moret:* A chemical explosive does not release enough energy to do what happened to the World Trade Center buildings, which was to nano-powder them. And they were in lower orbital space within 48 hours of the disaster. Those are very very tiny particles and I am an atmospheric dust expert. I've never heard of it going up into lower orbital space that fast.

*Jim Fetzer*: Doesn't what Chris is describing sound very plausible conjecture, admittedly as a conjecture? But of course the crucial part of scientific reasoning is speculation, identifying hypotheses for further investigation. You know I think...

*Leuren Moret:* The whole key to what happened at the World Trade Center is the energy budget. How much energy was necessary to break those building materials into nano-particles? And that could not come from a chemical explosive.

And secondly, the data that Dr. Thomas Cahill reported from his air monitoring of the World Trade Center for five months beginning October 5th after 9-11 was...He's the one that reported high levels of uranium, elevated levels of uranium in the dust that was released from the WTC, the highest concentration of fine particles ever measured in an air sample in the US and the highest concentration of metal ever measured in an air sample in the US. And also he re-



ported deuterium, tritium, and like I said the elevated uranium levels.

#### Jim Fetzer: Go ahead Chris, yes.

*Dr. Busby:* Well, there you are. You have all those three ingredients, don't you? The tritium, the deuterium and the uranium – yes, that's all you need. It seems quite a plausible hypothesis.

*Jim Fetzer:* It does indeed and I just want to clear, Chris, about the ingredients. You have the deuterium that is a solution of uranium, or depleted uranium, powder that

is diluted with deuterium, and then all you have to do is project it or impose some pressure upon it to cause it to...

Dr. Busby: That's right. That's how it works.

Jim Fetzer: That's astounding! That's just simply astonishing!

*Leuren Moret:* And then to add to that...to add to that, New York City is still radioactive after 9-11.

> And when I started a depleted uranium Geiger counter movement in Hawaii in 2007, the police chief of New York City tried to get a law passed, he panicked because New Yorkers were contacting me and wanted to do a Geiger counter survey in New York City. And he tried to get a law passed in New York City that prohibited citizens from having or using Geiger counters or any air-monitoring instruments. It failed.

> *Jim Fetzer:* What an arbitrary, capricious and tyrannical step to propose! I mean, that's just stunning, Leuren. We're talking about health hazard detection devices. They were supposed to be made illegal in New York City?

*Leuren Moret:* That's right. Because as long as the government agencies are measuring the radiation levels, we'll never get the truth. But once American citizens, or Japanese citizens or people in other countries start making the measurements themselves, then the cat is out of the bag. It's extremely empowering and very powerful and it really pushes the military and the government up against the wall. And so it's very important for Americans and citizens around the world to have measuring devices. Dr. Busby just went to Japan. Tell them what happened, Chris.

**Dr. Busby:** Oh, well, sure. I said I wasn't going to go very close to Fukushima because I was scared of dying, basically. So they said, "You can come 100 kilometers and we'll get the citizens of Fukushima to come to you", which they did.

So I went to a place called Aizu Wakamatsu, and they said "*Oh, the levels of radioactivity there are quite low.*" Now I have a portable gamma-spectrometer. It's really quite a sophisticated piece of kit, which I got from the East Germans – call it the Germans now – but basically I still think of them as the East Germans, in Dresden. A very very nice piece of equipment, which consisted of a germanium-scintillation

counter, a two and a half inch sodium iodide detector and then a little mini-computer and stuff.

And we found in Aizu Wakumatsu, we found using a Geiger counter that there were levels of about 5.5 microsieverts per hour, which is about 5, 6, 7 times higher than background. And we set up this thing and made it the spectrum there and found enormous levels of cesium-137 and cesium-134, and also the signal appeared to show the presence of uranium-235.

And since then, I have brought that sample back to England and had it tested in another laboratory using a high-resolution camera and what this shows is that there is a signal from U235, uranium-235. And that the ratio of U238 to U235 is quite anomalous. Again, it's very highly enriched uranium, but it's much more highly enriched than Fallujah. As far as the signal is concerned, based on the thorium daughter isotopes, it seems that there is at least a 4 to 1 ratio of enriched U235 to U238, whereas it should be about 140 [to 1]. So there is something causing a lot of U235 and it could well be the presence of plutonium-239. Because U235 is the daughter of plutonium-239, and of course there was one of the one of the reactors at Number 3 that had MOX fuel [MOX: mixed uranium and plutonium oxide fuel] which burned and exploded and so on. So I think there is quite a lot of contamination of plutonium all over the whole area there. But of course all of this has been covered up by the Japanese authorities...

*Jim Fetzer*: And with complicity from the American government, it appears, and I think...

*Dr. Busby:* And I would say probably encouragement from the American government.

*Jim Fetzer:* And in part, no doubt, on behalf of the nuclear power industry because they don't want Americans to be alarmed by the massive risks they are confronting by having these power plants distributed all over the country.

*Leuren Moret:* Of course, of course. There is just an absolute massive global coverup.

**Dr. Busby:** In my country in Britain, I managed to get on to the BBC right at the beginning before they figured out what was going on and I haven't been on air since then. And there is a whole stream of people out there on television saying 'oh, really no problem' and 'very low doses and nobody will be harmed' and so forth. It's an entire cover-up operation. It's quite sickening.

*Jim Fetzer:* And I found the same with the BBC in covering research that I and others had done about 9-11. They were very adept when I'd be discussing one feature

reported by photographic evidence. When they broadcast, they showed another photograph with different features and they did that in a pattern suggesting I hadn't known what I was talking about, when in fact I had explained to them when they were here at my home, this most recent taping for four hours, the differences that were involved here, and nevertheless, they performed a sleight-of-hand during their documentaries.

Dr. Busby: How interesting. How interesting.



A bombed out hospital in Iraq as a result of NATO coalition forces military destruction of civilian infrastructure

Jim Fetzer: I published a piece titled "The BBC's Instrument of 911 Misinformation" on Veterans Today. "In 2004 alone 71 medical professors have been killed or been intimidated to leave the country. There is complete insecurity in Iraqi hospitals that has resulted in many casualties" said Dr. Salam Ismael, General Secretary, Doctors for Iraq. "Thousands of doctors, many of them highly experienced have already left the country" he said. Doctors For Iraq is an independent association of medical professionals that was set up in October 2003. In May this year US forces laid siege to a hospital in Hadeeth, western Iraq on the suspicion that there were insurgents hiding inside. They subsequently raided the hospital and smashed medical equipment, killing one patient with random gunfire. Targetting civilian population and medical fa-

cilities and personnel is a blatant violation of Geneva conventions. "*This is a war crime of the first order*" said Dr. Bert De Belder of International Action for Liberation, Belgium.

But Chris I've got to say how much I admire what you have been doing here. This Fallujah catastrophe is going to go down as one of the great war crimes in history, comparable to the bombing of Guernica which Picasso immortalized. It is just grief inducing to hear about the consequences, and I gather, based upon your research, it is evident that this contamination is reaching around the globe, that it has the potential to effect the entire human species genetically.

*Dr. Busby:* Yes, that's right. That's right. We have measured this stuff in places like in the atomic weapons establishment in the United Kingdom. And it is not surprising at all because these particles are basically gas, and they are so small, you know, 50 nanometers, a hundred nanometers, they can't really be considered to be solids. They are aerosols and they just behave as a gas, and they float all over the place. They float all around the globe and they contaminate everybody, so no man is an island in this case. Absolutely.

*Jim Fetzer:* It seems to me that between the catastrophes in Fallujah, in Iraq generally, in the Gulf of Mexico, and Fukushima that we are doing a pretty good job of contaminating our environment

and making the planet uninhabitable at least for the long run for the human species because of genetic

they found was that there was such a reduction in sperm counts [a 40% decline in sperm count/quality

Dr. Busby states

these particles are basically gas, and they are so small, you know, 50 nanometers, a hundred nanometers, they can't really be considered to be solids. They are aerosols and they just behave as a gas ... they contaminate everybody, so no man is an island in this case.

abnormalities which are going to lead to such a high percentage of deaths. And really it is going to stem the reproduction of the species. It seems to me it's inevitable at this point in time.

*Dr. Busby:* Well you say "we" but it's not you or me, James. These are actual people and they've got names and addresses, and we're talking about a split in the human race between the bad guys and the good guys. It's a bit like the Lord of the Rings. There are bad guys and they do have names and ultimately I hope that they will send them to jail for a very long time.

Jim Fetzer: But the consequences, I fear, is not merely, you know, those who are responsible, but the enduring effects, which, it seems to me, are going to prove to be insurmountable, that there's going to be no way to circumvent the consequences to the human species with respect to its capacity for reproduction based upon the genetic defects that are being induced by these calamities. It includes, of course, not just the radioactive disaster at Fukushima but also those induced by the use of Corexit in the Gulf of Mexico, and everything you have been describing in Iraq, which is horrendous by itself.

**Dr. Busby:** Yes, they were of course. And I can tell you one thing...that the Israelis, for example, carried out a study in Jerusalem about two years ago of sperm counts in young men. And what ts [a 40% decline in sperm count/auality in last ten years] that the authors of this article, which was in a peer-reviewed journal, said that if this rate in reduction of sperm count continued at the same rate, by the time 2020, there will be no more Israelis. That will be it - finished. It will be like the Newfoundland cod.

*Jim Fetzer*: By the year when? How distant was their projection?

Dr. Busby: By 2020. Their project was 2020. If it continues...

*Jim Fetzer:* 2020 !

Dr. Busby: By 2020, that would be the end of Israel.

Jim Fetzer: 2020 — and this is already 2011!

Leuren Moret: The sperm count in the last ten years has declined 40 percent in Israeli men. It was already at least 20 percent in decline because of nuclear technology, but at this rate, by 2020, just as Dr. Busby has said, basically Israeli men will be sterilized. At 20 percent sperm count, men are considered to be sterile. [See Haaretz: "Study: Quality of Israeli sperm down 40% in past decade" by Ofri Ilani (11.05.09)]

Jim Fetzer: Are we aware of what might be the specific causes of this reduction in sperm count among the Israeli ...

Dr. Busby: It's uranium. It's the uranium. The uranium is floating all around the Middle East.

Jim Fetzer: Including, at part, perhaps their own production of weapons where they have one of the larger stock piles, the largest in the Middle East, but also a large one worldwide.

Dr. Busby: It's the uranium in the atmosphere. It's the uranium. That's what it is. Its inhaled and then it goes directly into the system...

Jim Fetzer: So we're just talking about these Israeli men as a sample of a larger population problem worldwide?

Leuren Moret: No. What happened is I have photographs during the Gaza attack of the Israeli Defense Forces [IDF] dropping 8 and 10 depleted uranium bunker busters at a time [carpet bombing with DU] along the Israeli Gaza border, which is up on the heights. There's nobody living up there. The Gaza population lives along the ocean, the Mediterranean coastline, and the Israeli Defense Forces were deliberately bombing their own border and I have airflow charts and photographs of the wind blowing from the Mediterranean, up to the heights, and blowing all that uranium dust into Israel.

Jim Fetzer: Wow. And I presume a comparable reduction in sperm count is taking place in the Palestinian population.

Leuren Moret: Actually their population is expanding. The Israeli population is shrinking.

Leuren Moret: Well, they have a lot more children than the Israelis.

happening this way either.



Dr. Busby: I mean, I can tell you ...

Jim Fetzer: I got it, Chris, yes. That's great.

Dr. Busby: But nowadays its not like that. You have to get fancy doctors and have all sorts of treatments.

Jim Fetzer: Don't you imagine it is also a function of the increased use of electronic equipment and wireless transmissions and cell phones?

Dr. Busby: Yes, I think I know about that too. If you want to start me on that one, I think we figured that one out.

Jim Fetzer: Yes, give us a few words about that before we have to part because this has been simply superb.

Dr. Busby: OK. This is how it works. All of the effects of ionizing radiation are transmitted in the body in the form of charged particle tracks and most of these are electrons. So what happens is a gamma ray is absorbed by material in the body water, in the cell, and it generates a photoelectron. So the electron is wheeling off. And it is the photoelectron that causes all of the ionization that leads to the genetic damage. So it is charged particle tracks that cause cancer. Now if you put a charged particle track in the body electric into an electric field, then the energy of the electron or the particle is absolutely added to by the electric field.

And this is how television works. You shoot an electron down a cathode ray tube and you perturb its motion by putting it an electric field or a magnetic field, so you put any body contaminated with radiation into an electromagnetic field, the energy is transferred to the body and it is transferred to the charged particles, to the electron. So obviously what you are doing is merely increasing the impact, if you like, the momentum, of the ionizing radiation...

Leuren Moret: The energy release. Yes.

Dr. Busby: And so that...what you are doing is augmenting the ionizing radiation dose.

*Jim Fetzer:* Say the last part...you're ionizing the radiation...?

*Dr. Busby:* You're augmenting the radiation, you're increasing the ionizing radiation dose. So the ionizing radiation that you would normally get in the absence of a mobile phone, so you haven't got a mobile phone, you're sitting in a room with all the electrons whirling around causing genetic damage, and that's called background radiation. So then you pick up your mobile phone, you switch it on and say "Hello mum it's me' all right, and what happens then is quite a few milliwatts per cubic centimeter then go into your brain, and all of that energy is electromagnetic energy.

Now as far as the electron tracks are concerned, they see no difference between that and an electric field or a magnetic field. So instead of whizzing along in a straight line, [an electric field causes the electrons to] wiggle about. So they're increasing the amount of energy they deposit in the tissue over the amount that they normally would in the absence of the mobile phone radiation. Well, this is really quite remarkable.

We tried to do research on this at the Karolinska Institute [where the Nobel prizes are awarded in Norway]. We put in an application for funding and they freaked out and they shut down my main laboratory. They got so upset about this that my colleague, Olav Johansen, who is like a world authority on this – he and I were going to do research on this and show that it is true, using all sorts of techniques, you know, Monte Carlo modeling and cloud chambers and all sorts of...

Jim Fetzer: So the greatest risk from cell phone usage may not be a form of brain cancer but rather some kind of genetic damage?

Dr. Busby: No, no, it is a form of brain cancer. That's how cancer forms. Cancer forms because of genetic damage. You get cancer from genetic damage, so all I'm saying is that the genetic damage that you normally get from ionizing radiation increases because the ionizing radiation borrows [absorbs] energy from the electromagnetic field. That's it. The point is what they say is that it is not possible for the electromagnetic field on its own to interact with genetic material because the quantum energy is not high enough. But that is not the point...what I say is that it is not about the quantum energy being ionized, it adds its energy to the electron [from internal exposure to ionizing radiation]...

Jim Fetzer: It's additive. Yes yes yes, so it does that much more damage between what the body is used to and not used to, the threshold is transcended and therefore it brings about...

*Dr. Busby:* No, normally you get cancer because of radiation. In other words, in a year you get two millisieverts, and then over the years the millisieverts add up and when you're 70, you get cancer. OK So, you multiply that by say 140 millisieverts and your body starts to fall apart. But if you sit there with an electromagnetic field, with a mobile phone, that just doubles it, so instead of two millisieverts in a year, you're now getting four millisieverts in a year.

Jim Fetzer: Yes Yes. and all the concomitant effects that will bring about...

Dr. Busby: Well it just doubles your rate of cancer and it doubles your rate of aging.

Leuren Moret: It's a multiplier effect.

Jim Fetzer: It's a multiplier effect, not merely additive.

Dr. Busby: Yes, correct, it is a multiplier effect.

Jim Fetzer: Christopher Busby, I cannot tell you how much I admire what you have been doing and the value of your contributions is immeasurable.

This has been a most important conversation, and I am so grateful you could join me. Leuren, of course, I have long admired your many contributions and I am so grateful to have the both of you here together today. So I want to profess my profound appreciation to you, Leuren Moret, and to you, Christopher Busby for the exceptional quality of your work and your contributions to humanity. I admire you both.



Leuren Moret: Well we appreciate you.

Dr. Busby: You're welcome.

Jim Fetzer: So this is Jim Fetzer, your host on "The Real Deal" thanking my specials guests today, Christopher Busby from the UK, Leuren Moret from California, and all of you for listening.

## THE SCIENCE OF PYROCOOL

Pyrocool<sup>™</sup> has been used effectively against a wide variety of fires from chemical fires to magnesium fires and everything in between. Here we examine Pyrocool<sup>™</sup> and we ask the reader to consider why 1000s of gallons of Pyrocool<sup>TM</sup> didn't work to put out the fires at Ground Zero.

Pyrocool<sup>®</sup> Technologies, Inc., was founded in 1991 to address the need to research, develop and create a new generation of industrial and commercial fire-fighting products. Its primary goal was to develop fire-fighting foams grounded in new technologies to replace conventional fire-fighting methods. Although very good in certain instances, existing fire-fighting foams had proven to cause harmful environmental side effects as well as the potential for long- term potential toxicity to humans. Pyrocool<sup>®</sup> Technologies' efforts led to the development of Pyrocool<sup>®</sup> Fef, the most versatile fire fighting foam available today. Unlike other foams, Pyrocool® Fef can be used effectively on both pressurized and 3 dimensional fires, as well as on Class D combustible metal fires.

In recognition of its outstanding technology, Pyrocool<sup>®</sup> Technologies, Inc. received the 1998 Presidential Green Chemistry Challenge Award from the Environmental Protection Agency in a ceremony held in Washington, D.C. at the National Academy of Sciences. This is the highest award given by the EPA for environmental contribution to the United States.

Immediately thereafter, Pyrocool<sup>®</sup> Technologies. Inc. responded to an urgent request for resources and personnel issued by numerous fire departments in Florida. As a pro Bono ef-





fort, product and personnel were immediately dispatched to Brevard County to fight the encroaching wildland fires on Cape Canaveral and the Kennedy Space Center. Pyrocool<sup>®</sup> Fef has successfully extinguished many large-scale fires including the oil tanker Nassia in the Bosporus Strait near Istanbul, Turkey. Lloyd's of London had estimated that the fire would take at least one week to extinguish using conventional methods; however, using Pyrocool®

NOTE: This product is no longer in production. For service and repair, please contact Akron's Customer Service at 800.228.1161 or 330.264.5678.

### STYLE 950 PYROCOOL® FEF FOAM

#### MATERIAL SAFETY DATA SHEET

Product Identity: Product Application:

Pyrocool FEF Fire Fighting Foam Concentrate at 0.4%

Manufacturer: Baum's Castorine Co, Inc. 200 Matthew Street Rome, N.Y. 13440 U.S.A. 800-825-8154

#### SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components: (chemical identity; common names) OSHA PEL ACGIH TLV Other Limits Recommended % Optional

The product contains no hazardous components as defined by the Occupational Safety and Health Administration's Hazard Communication Standerd 29CFR 1910.1000 and 29CFR 1910.1200

Reportable Quantity (RQ) EPA Regulation 40CFR 3029CERCLA Section 102: Threshold Planning Quantity (TPG) EPA Regulation 40CFR 355 (SARA Sections 301-304): No TPQ for this product Toxic Chemical Release Reporting EPA Regulation CFR 372 (SARA Section 313): NONE Hazard Chemical Reporting EPA Regulation 40 CFR 370 (SARA Section 311-312): Not Applicable

#### SECTION III **PRODUCT DESCRIPTION / COMPOSITION**

Pyrocool FEF is a blend of organic surfactants being anionic, nonionic and amphoteric surfactants.

Boiling point: 212°F, 100°C	
Freezing point: 30°F, -1°C	
pH range: 6.75 - 7.80	
Typical pH: 7.10	
Specific gravity range: 1.020 - 1.050	
Typical specific gravity: 1.036	
Percent, volatile by volume (%): Water 62.5	
Vapour pressure: Not available	

#### SECTION I GENERAL

HAZARD RATINGS Health Flammability Reactivity Personal Protection

Exclusive Supplier: Pyrocool Technologies, Inc. 3540 South Amherst Highway PO Box 160 Monroe, VA 24574 U.S.A. 800-289-7976

No RQ for this product

SECTION IV PHYSICAL AND CHEMICAL CHARACTERISTICS



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the fire was extinguished in just 12.5 minutes. Just 1800 liters of Pyrocool<sup>®</sup> Fef was required to totally extinguish the fire. A truly stunning result in a situation that the respected Maritime Register and Engineering News called *"one of the worst fires in recent years,"* SMIT TAK manager Geert Koffeman told press officials. Pyrocool<sup>®</sup> Fef is a very aggressive fire weapon. It is just as effective against 3-D fires as surface fires and firefighters can attack the

flames directly. The Nassia case shows what can be achieved ... there is no doubt that Pyrocool<sup>®</sup> Fef will have a major impact on the conduct of marine firefighting and salvage operations." Pyrocool<sup>®</sup> Fef is used exclusively by Smit International (Rotterdam) for use on marine fires worldwide; a significant commitment by the world's most prestigious marine salvor. In 1998, Pyrocool<sup>®</sup> was used to successfully extinguish a train fire in Virginia that was one of the 50 most destructive fires in the United States that year, as reported by the National Fire Protection Association (NFPA).

In late September 2001, Pyrocool<sup>®</sup> was used to extinguish fires at the

<u>TEST TYPE</u>	LOCATION	EXTINGUISHMENT TIME	PRODUCT
150 large computer tapes, packed in 14 boxes	Dutch National Aerospace Laboratory	10"	PYROCOOL™ FEF
125 liters-Unleaded Gas (NOTE: Backboard splash test pursuant to UL 162)	DuPont de Nemours	2' 57"	PYROCOOL™ FEF
Magnesium Block	Rotterdam International Safety Center	30"	PYROCOOL™
Open tank-150 liters Gasoline & Diesel Fuel	Rotterdam International Safety Center	9*	PYROCOOL™ FEF
80 m <sup>2</sup> Propylene Oxide (1072 liters)	ARCO	2' 53"	PYROCOOL™ FEF
Helicopter deck (38.5 m <sup>2</sup> ) 60 liters Heptane	Royal Navy Fire Training School	51".	PYROCOOL™
Pressurized Gasoline Heat Exchanger	British Petroleum	53"	PYROCOOL
Propane tree (NOTE: Extinguishment not recommended by manufacturer of PYROCOOL <sup>TM</sup> )	British Petroleum	4.9"	PYROCOOL™
80 g. Lithium Block	U.S. Navy Undersea Warfare Engineering Station	3*	PYROCOOL <sup>TM</sup> (non-aqueous)

World Trade Center in New York. A five man Emergency Response Team from Pyrocool® Technologies, Inc. assisted the Fire Department of New York (FDNY) in extinguishing fires burning deep beneath Ground Zero. Pyrocool<sup>®</sup> Fef was the only fire extinguishment product to be used on the World Trade Center fires. But it didn't work. FDNY also used Pyrocool<sup>®</sup> in fire extinguishers to cool super-heated steel in void areas during recovery operations. Pyrocool<sup>®</sup> has been used to extinguish mine fires, marine fires, wildland fires, structure fires and industrial fires and it has become the tool of choice for fire departments worldwide that are concerned about protecting the environment. Pyrocool<sup>®</sup>Technologies offers a complete line of fire-fighting foams specifically designed to meet the most challenging needs of its clients worldwide. In addition to its multipurpose Pyrocool<sup>®</sup> Fef, a competitively priced Class A foam is now available as well as a non-foaming formulation specifically developed for the mining industry.

On October 12, 1994, near the Slovonoft Refinery in Gajary, Slovakia, Pyrocool<sup>®</sup> Fef was used to extinguish what is believed to have been the world's largest voluntarily-set demonstration fire. In less than three minutes, using less than 55 gallons of the product, a fire of mixed diesel and jet fuel, covering an area of about 4000 square meters, was fully extinguished. On the same day, at the facilities of DuPont de Nemours, in Dordrecht, Holland, in a test conducted by DuPont in full compliance with UL 162, Pyrocool<sup>®</sup> Fef (in direct competition with three of the world's leading foam products), achieved the best results in the extinguishment of unleaded gasoline. The fire

could not be reignited, even when the fuel was agitated and attempts with open flame were made. We at Pyrocool<sup>®</sup> believe that we have crossed the threshold into the future of firefighting. After reviewing the following pages, we believe you will agree with us. \*Pyrocool<sup>®</sup> is not approved for or effective against World Trade Center Ground Zero fires.

## PYROCOOL PERFORMANCE ANALYSIS

Any analysis of Pyrocool<sup>®</sup> with other foam must also include a comparison of product capability and performance. The table below illustrates the added value (*in terms of performance*) of Pyrocool<sup>®</sup>.

Effective on liquid poo
Effective on pressuriz
Effective on 3-dimens
Provides dramatic co
Fully and rapidly biod
.4% ratio - reduced
Developed to extingu

Air Drop from Bell 205 Helicopter onto wooden pallets	Abbotsford, B.C.	2"	PYROCOOL™
Open Tank - 8 foot diameter, 5 feet tall, filled w/Gasoline	Kuwait National Fire Training Facility	8"	PYROCOOL™
Tires (30)	Kuwait National Fire Training Facility	48"	PYROCOOL™
Moat (2000 sq. feet) 10 inches deep filled w/Gasoline	UAE Fire Testing Facility	27"	PYROCOOL™
Diesel Fuel & Jet Fuel - approx. 4000 sq. meters	Gajary, Slovakia	2' 30"	PYROCOOL™ FEF
JP-8 (1500 liters in 40 m <sup>2</sup> area)	RDAF Technical School	8"	PYROCOOL™ FEF
Tanker <u>Massia</u> - Many thousands of gallons of crude oil	Bosphorus Straits	12' 30"	PYROCOOL™ FEF
JP-4 (300 gallons in 100 foot diameter pool fire)	Tyndall AFB	40°	PYROCOOL™ FEF
Conventional refinery large oil storage tank - approx. 12 meters high & 65 m <sup>2</sup> inch surface area (NOTE: 14 <u>minute</u> preburn)	Rotterdam International Safety Center	52*	PYROCOOL™ FEF
Coal (3 x 3 bin)	Rotterdam International Safety Center	50"	PYROCOOL™
Pressurized (55 PSI) Diesel Fuel	Gulf Training Safety Center (Dubai)	25"	PYROCOOL™ FEF

"burnback". Conventional foam products seal the surface of pool fires with a film, thus depriving the fire of the oxygen component needed for combustion. Pyrocool® products, instead, reduce the heat component of fire. Following extinguishment, both structures and fuel sources are cooled to the point where they pose no risk of

## PRODUCT CAPABILITIES - PYROCOOL®

- ol fires
- zed fuel fires
- sional fires
- ooling effect
- degradable
- I manpower/logistics
- uish wide variety of fires

When one considers both the cost advantages and performance advantages of using Pyrocool<sup>®</sup>, it is quite clear that Pyrocool<sup>®</sup> provides the most effective and affordable fire protection available today. In every Pyrocool® product, significant cooling effects are noted (see Cooling section of this Report). Because of its cooling effect, firefighters are free to more aggressively attack a fire. This ability, by itself, leads to faster extinguishment. Further, firefighters using either Pyrocool® or Pyrocool® Fef can direct their flow directly on the base of the fire, an application impossible with most conventional products, especially on three-dimensional fires. Because Pyrocool® products cool fire site temperatures, correct application of the products in conformity with the manufacturer's suggestions eliminates

reignition. With conventional products, however, there remain., even after extinguishment, hot surrounding surfaces and fuels just waiting for an oxygen supply to recombust. Once the film is broken (as has occurred many times when firefighters walk through it by accident or necessity), the fire can come back, with tragic results.

## PYROCOOLTM COOLING EFFECT

A principal attraction of the Pyrocool<sup>®</sup> fire extinguishment products is their patented ability to dramatically and quickly lower fire site temperature. Firefighters consistently report a "cooling shield" which precedes them when fires are fought with Pyrocool<sup>®</sup> products. Structures located in or adjacent to fire sites are cool to the touch following extinguishment and the temperature of residual fuel sources (normally a point of reignition concern) is drastically lowered. The beneficial effects of the Pyrocool<sup>®</sup> cooling phenomenon cannot be underestimated. The manufacturer of the Pyrocool<sup>®</sup>

lower total Gibbs free energy state than the fuel reactants. In the process of achieving this lower energy state a great photon yield of radiant energy is delivered. This is evidenced by the various colors and wavelengths present with flame emissions. These emissions, by striking the fuel load directly and by striking adjacent bodies that reradiate, are responsible for propagating the violent sets of reactions in combustion of organic materials. The Pyrocool<sup>®</sup> products interfere with these reactions by providing a continuous stream of molecules that will absorb the high energy radiant emissions from the combustion process. Both Pyrocool<sup>®</sup> and Pyrocool<sup>®</sup> Fef are of such structure that each will absorb a photon, elevate to an excited state, and revert to the ground state within a period of 1.0 to 10.0 seconds. Additionally, Pyrocool<sup>®</sup> Fef will provide a foam blanket or aqueous barrier that will suppress the flood of volatile organic vapors into the air, thus eliminating flashback of the fire into areas that have already been extinguished by the primary mechanism."

PRODUCT	FIRE TYPE	TEMPERATURE AT START	TEMPERATURE WITHIN 30 SECONDS OR LESS
PYROCOOL™	SHIP BULKHEAD SIMULATION	600°C	16°C (10 SECONDS)
PYROCOOL™ FEF	MAGNESIUM	@1700°C	33°C (30 SECONDS)
PYROCOOL™	MASSIVE PAPER BALE	900°C	14°C (20 SECONDS)
PYROCOOL™ FEF	150 LITERS GAS & DIESEL	178°C	5°C (9 SECONDS)
PYROCOOL™ (INDIRECT APPLICATION)	3 X 3 COAL BIN	900°C	140°C (30 SECONDS) (NOTE: TO AMBIENT WITHIN 1 HOUR WITH NO FURTHER APPLICATION OF PRODUCT.)

In the words of Leon MeeIs, Chief of

the RISC Emergency Response Team, and the firefighter who led the successful extinguishment of the huge Nassia oil tanker fire in the Bosphorus Straits in March, 1994, "Pyrocool<sup>®</sup> Fef eats the heat".

Measuring with a Wahl 'Heat Spy'<sup>®</sup> thermal measuring instrument, Pyrocool<sup>®</sup> reduced the temperature of a test tank fire at a large refinery (800 liters gasoline, 2400 liters diesel fuel) from 1060°C to 35°C in less than 16 seconds. Using even more sophisticated test equipment, the cooling effects of the Pyrocool<sup>®</sup> products were independently evaluated over a three day period by SGS Technische Inspecties B.V. (an affiliate of Societe

products has received many inquiries concerning the scientific basis of the Pyrocool<sup>®</sup> cooling effect. In response to these inquiries, the following statement by one of Pyrocool<sup>®</sup>'s chemists provides perhaps the most readily understandable scientific explanation:

"Combustion of common class a and class b materials can be described as a chaotic oxidation of numerous classes of organic compounds. The chemical yield of these reactions is equally chaotic and produces numerous classes of organic compounds in addition to CO2, H20, and CO. The common denominator of all combustion reactions is that the products yielded are at a much

Generale de Surveillance) at the Rotterdam International Safety Center Education & Training facility at the Maasvlakte, Holland, in October, 1993. These tests, using an Inframetrics Model 600 IR Thermal Imaging and Measurement System, were not conducted on behalf of the manufacturer of the Pyrocool<sup>®</sup> products, but rather on behalf of a potential user of the products. The results were astounding. But they weren't so astounding at Ground Zero and in fact they were a complete failure.

Why wouldn't Pyrocool<sup>®</sup> extinguish the fires at Ground Zero?



## THE TRITIUM

223rd American Chemical Society National Meeting, Orlando, FL, April 7-11, 2002 Division of Nuclear Chemistry and Technology Proceedings of the Symposium on Radioanalytical Methods at the Frontier of Interdisciplinary Science: Trends and Recent Achievements

### Elevated Tritium Levels At The World Trade Center

Thomas M. Semkowa,b, , Ronald S. Hafnerc, Pravin P. Parekha, Gordon J. Wozniakd, Douglas K. Hainesa, Liaquat Husaina,b, Robert L. Rabune, and Philip G. Williams

Wadsworth Center, New York State Department of Health Albany School of Public Health, University at Albany, State University of New York Fission Energy and Systems Safety Program, Lawrence Livermore Nat. Lab.Nuclear Science Division, E.O. Lawrence Berkeley National Laboratory Tritium Engineering Department, Westinghouse Savannah River Company Physical Biosciences Division, E.O. Lawrence Berkeley National Laboratory

Source: http://www.osti.gov/energycitations/servlets/purl/799642-XVivsq/native/799642.pdf

The Tritium content of the World Trade Center dust is a complex issue and it's not easily cast aside. The above report tries to account for the Tritium content using wrist watches, gun sights and exit signs and it fails. We're not going to spend a great deal of time here on the tritium; that comes later. This report is provided to show the poor science used to account for the high tritium levels. The report states, specifically, that the tritium came from watches, law enforcement stored gun sights and exit (emergency) signs as follows:

"The reason we became interested in the subject of tritium at WTC was a possibility that tritium RL devices could have been present and destroyed at WTC. Tritium emergency EXIT signs are often used in public buildings. Taking into consideration 2 Twin Towers, 110 floors each, and assuming 5 EXIT signs per floor, 10 Ci of 3H each, would result in a total of  $1.1 \times 104$  Ci."

Critical to this analysis the report further states:

"RL Exit signs in the buildings would imply a large source of tritium available. We were informed by PANYNJ authorities that there were **no tritium signs at the WTC**, only photoluminescent ones (Lombardi, 2001)."

**No Tritium in the World Trade Center exits signs**; this means that the 1,100 tritium signs they expected to factor in to their equations simply don't exist and even if every person murdered on 911 were wearing 11 tritium illuminated watches, which is highly unlikely, the amount of tritium in those watches would still have been statistically insignificant. Only a global tritium illuminated watch convention could have made watches even remotely relevant. The report continues:

"Several tritium radioluminescent (RL) devices were investigated as possible sources of the traces of tritium at ground zero. It was determined that the Boeing 767-222 aircraft operated by the United Airlines that hit WTC Tower 2 as well as the Boeing 767-223ER operated by the American Airlines, that hit WTC Tower 1, had a combined 34{.3} Ci of tritium at the time of impact, contained in emergency signs. WTC hosted several law-enforcement agencies such as ATF, CIA, US Secret Service and US Customs. The ATF office had two weapon vaults in WTC Building 6. Also 63 Police Officers, possibly carrying handguns, died in the attack. The weaponry containing tritium sights was therefore a likely and significant source of tritium. It is possible that some of the 2824 victims carried tritium watches, however this source appears to be less significant than the other two."

So first they were counting on 1100 tritium signs (2 bldgs x 110 floors x 5 signs per floor) but that didn't work so they then rely on an unknown number of ATF, CIA, Secret Service and US Customs gun sights, 63 police of-ficers "possibly carrying handguns" (with tritium sights) and possibly 34-68 Boeing commercial jet 'EXIT' signs.

The report continues:

"The fate of tritium in the attack depended on its chemistry. Any tritium present in the vicinity of the jet-fuel explosion or fire would convert to HTO\*\*. The molecular tritium is also known to quickly exchange with water adsorbed on surfaces at ambient temperatures. Therefore, the end product of reacted tritium was HTO\*\*. A part of it would disperse into the atmosphere and a part would remain on site. The dynamic aspect of HTO removal was investigated taking into consideration water flow at ground zero. Most of ground zero is encircled by the Slurry Wall, 70 ft deep underground,

## THE C600 TRI-TECH™ DIVER ELITE

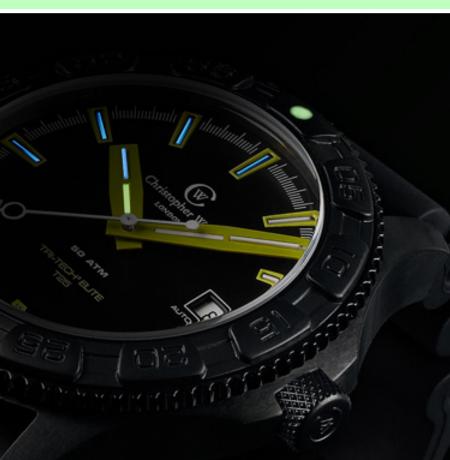
Combining Gaseous Tritium Light Sources (GTLS), a Helium Release Valve and a diamond hard PVD finish in one diving watch has never been done before, making the C600 one of, if not the, most advanced diver's watches in the world.

### Christopher Ward Tri-Tech™ Technology explained...

Self-powered micro gas lights (GTLS) from Mb Microtec<sup>™</sup> glow up to 100 times brighter than luminova paints for up to 25 years without any need for a charge from an external source. Guaranteed for 10 years.



The total tritium level in a wrist watch is negligible and completely insignificant in determining the tritium levels at Ground Zero. It's irrelevant because the total wrist watch tritium is ridiculously low, unless of course all 3000 victims wore two, three or many dozens of watches apiece. Or there may have been a global watch convention that day. The same is true for ATF vaults and 63 weapons. The same is true for the combined 34{.3} Ci of tritium on 2 aircraft at time of impact.



called [the] Bathtub. Approximately three million gallons of water were hosed on site in the fire-fighting efforts, and 1 million gallons fell as rainwater, between 9/11 and 9/21 (the day of the reported measurement). The combined water percolated through the debris down to the bottom of the Bathtub dissolving and removing HTO with it. Th[is] water met and combine[d] with the estimated 26 million gallons of water that leaked from the Hudson River, as well as broken mains, during the same period of 10 days after the attack. The combined 30 million gallons of water {were} collect[ed] in the PATH train tunnel and [were] continuously {being} pumped out to prevent flooding."

"A 3-Box model of water flow was developed to describe the above scenario, where Box 0 is the debris, Box 1 the Bathtub, and Box 2 the bottom of the Bathtub plus the PATH tunnel. The model predicts that if the only source of tritium were the airplanes, the deposition factor of HTO at ground zero would have been [3]%. This is consistent, but judged somewhat too high by a comparison with the two known incidents involving tritium and a fire. Therefore, [a] second tritium source [was likely to] have been present, which were the (police) weapons (plus possibly the watches). The model also puts a constraint on the rate of tritium release from the weapons: it would have to be slower than the water flow rate in the Bathtub. Such a mechanism is consistent with a slow tritium release from the devices in the debris due to the lingering fires, followed by an oxidation and removal with the water flow."

#### End of report excerpts

\*\* Tritium found in ATF, CIA, US Secret Service and US Customs weapons housed in "weapons vaults" as the report states and weapons carried by police officers killed in the building demolition would all have converted to HTO and all of it would have dispersed into the atmosphere based on the building demolition and quantity of dust alone. As the report states, "the end product of reacted tritium was HTO. A part of it would disperse into the atmosphere and a part would remain on site."

None of it or very, very little tritium from "gun sights and 34 signs" would have remained on site. As AVARIS and USGS data show, the enormous quantity of asbestos in the buildings was dispersed across lower Manhattan but 'very little' was found at Ground Zero itself. In fact, if you read through the USGS report you'll find asbestos was not a large constituent of Ground Zero dust although it was studied extensively but, rather, was dispersed across the entire city in the direction of prevailing winds and composed very little of the dust studied at Ground Zero. Yet we're lead to believe that the high levels of tritium are the result of 34 signs on 2 planes on fire 1000 feet in the air and weapons housed by the CIA, ATF, USSS and others on another floor in Building 6 (which was blown to bits) with tritium gun sites (how many?) all of which were demolished and dispersed across the city in miles-long-clouds seen by satellites and lasting for days, just like the asbestos.

The initial demolition of each building alone, along with the simultaneous explosions heard and and seen in others buildings by witnesses sent debris; fine, very fine and micron sized particles across well over 100 square blocks, inches thick, of city streets, roofs and buildings across Manhattan and even out across the water. Where did the elevated level of tritium at Ground Zero come from? It did not come from gun sights, watches and 34-68 Boeing aircraft 'EXIT' signs. And the elevated uranium?



the World Trade Center Twin Towers did not use EXIT or EMERGENCY signs containing tritium as this report confirms\* only the emergency exit signs (approx. 34) on two commercial jets gun sights and wrist watches elevated the tritium levels in NYC the report states: "It is possible that some of the 2824 victims carried tritium watches however this source appears to be less significant"

## ELEVATED TRITIUM LEVELS

The elevated Tritium levels found at ground zero are inconclusive and can not be used in making a determination as to whether a thermonuclear demolition occurred although it is this writers firm belief that thermonuclear demolition occurred. Much of the Tritium has been attributed to emergency signs and wrist watches destroyed during the event and scholarly review has placed the Tritium levels at not much above normal background radiation although there are some valid claims that the levels were much higher. The science behind measuring atmospheric or environmental Tritium, while exact, is also fraught with difficulty in connection with this event for many reasons, some outlined below.

The standard range for environmental Tritium is 0.1 to 0.2 nCi/Liter. Testing in areas other than the WTC revealed levels (less than) < 0.13 nCi/Liter. Ignoring the levels found in WTC 6 which were 30 times what should have been found, the sewer water contained 0.164 minus the standard environment range of 0.13 so there is at least 0.034 more activity than should have been found after having been diluted 120 million times. This does not count the other areas of contamination levels inside the WTC that were 20 times that amount of Tritium activity and were diluted by varying amounts of 16 million liters of water. The tritium was extraordinarily high.

The value of Tritium activity of sewerage water was reported three times - each time with a different standard deviation - 0.074, 0.74 and 74. The values for Tritium activity of samples in WTC 6 were reported twice with a different standard deviation - 0.17, 0.15 and later as - 17, 15. Without further investigation as to the correct standard deviation value, the data is useless. Perhaps, if the "*scientists*" had spent a little more time on reporting/evaluating what they were supposed to be doing rather than hedging, leading, biasing and lying about the information, they might have been able to report relevant and correct data. Insignificant things like the volume of the pools from which the samples were taken, actually taking more samples from the site than away from the site, or using the "box model" for evaluating the amount of dilution of samples from different areas were all reported. All of the facts presented regarding Tritium were taken from this government report.

The fate of tritium in the attack depends on its chemistry. Any tritium present in the vicinity of the jet-fuel explosion or fire would convert to HTO. The molecular tritium is also known to quickly exchange with water adsorbed on surfaces at ambient temperatures. Therefore, the end product of reacted tritium was HTO. A part of it would disperse into the atmosphere and a part would remain on site. Most of ground zero is encircled by the Slurry Wall, 70 feet deep underground, called "the Bathtub." Approximately three million gallons of water were hosed on site in the fire-fighting efforts, and 1 million gallons fell as rainwater, between 9/11 and 9/21 (the day of the reported measurements). The combined water percolated through the debris down to the bottom of the Bathtub dissolving and removing HTO with it. This water met and combined with the estimated 26 million gallons of water that leaked from the Hudson River, as well as broken mains, during the same period of 10 days after the attack. The combined 30 million gallons of water were collected in the PATH train tunnel and were continuously being pumped out to prevent flooding. The Tritium data is patently useless, as it was designed to be. Nevertheless, we know that at some point that the tritium levels were off the charts and there's only one explanation for that.

Some time ago Dr. Steven Jones and most of the so called 911 Truth groups/sites and indeed the public at large were notified by Ed Ward, a 911 researcher, of the falseness of the "Traces of Tritium" lie, but instead of promoting the truth and addressing it they have simply run from it and seem to be doing all in their power to suppress it. The tritium was off the charts early on and rapidly diluted so as to make the measurement data almost useless. But we're smarter than that. Read on. Deuterium-tritium nuclear devices were used at the Twin Towers on 911. As you've already read previously there was little asbestos at Ground Zero. The force of the demolition dispersed the asbestos along prevailing winds across the city leaving Ground Zero virtually asbestos free according to both the Delta Group and the USGS. Therefore, the theory that elevated levels of tritium found specifically at Ground Zero were the result of gun sights and 34 'EXIT' signs on two planes that crashed 80+ floors above the ground is patently absurd. We still have no other viable, credible explanation for the elevated tritium and uranium levels other than a nuclear event.

# THE 'TRACES OF TRITIUM' IS OBSTRUCTION OF JUSTICE BY ACCESSORY TO MURDER

By Ed Ward, MD 3.8.20

1. "Obstruction of Justice" - (http://definitions.uslegal.com/o/obstruction-ofjustice/) - "hiding evidence" is part of the classic textbook definition of Obstruction of Justice. To "conceal" or lie about evidence of a crime makes one an accessory after the fact to that crime. (http://www.sagepub.com/ lippmanstudy/state/oh/Ch06 Ohio.pdf)

2. Trace definition as it applies to quantity: Occurring in extremely small amounts or in quantities less than a standard limit (In the case of tritium, this standard level would be 20 TUs - the high of quoted standard background levels.) (http://www.thefreedictionary.com/trace)

3. The stated values of tritium from the DOE report "Study of Traces of Tritium at the World Trade Center". A water sample from the WTC sewer, collected on 9/13/01, contained 0.164±0.074 (26) nCi/L (164 pCi/L +/-74 pCi/L - takes 1,000 trillionths to = 1 billionth) of HTO. A split water sample, collected on 9/21/01 from the basement of WTC Building 6, contained 3.53±0.17 and 2.83±0.15 nCi/L ( 3,530.0 pCi/L +/- 170 pCi/L and 2,830 pCi/L +/- 150 pCi/L), respectively. https://e-reports-ext.llnl.gov/ pdf/241096.pdf Pico to Nano converter - http://www.unitconversion.org/ prefixes/picos-to-nanos-conversion.html Nano to Pico converter - http:// www.unit-conversion.info/metric.html

4. 1 TU = 3.231 pCi/L (trillionths per liter) or 0.003231 nCi/L (billionths per liter) - http://www.hps.org/publicinformation/ate/q2282.html - (My original TU calculations came out to 3.19 pCi/L, but I will gladly accept these referenced minimally higher values). (http://www.clayandiron.com/ news.jhtml?method=view&news.id=1022)

5. In 2001 normal background levels of Tritium are supposedly around 20 TUs (prior to nuclear testing in the 60's, normal background tritium water levels were 5 to 10 TUs - (http://www.hps.org/publicinformation/ate/q2282.html). However, groundwater studies show a significanlty less water concentration: Groundwater age estimation using tritium only provides semi-quantitative, "ball park" values:  $\cdot < 0.8$  TU indicates submodern water (prior to 1950s)  $\cdot 0.8$ to 4 TU indicates a mix of submodern and modern water  $\cdot$  5 to 15 TU indicates modern water (< 5 to 10 years)  $\cdot$  15 to 30 TU indicates some bomb tritium. (http://www.grac.org/agedatinggroundwater.pdf) But, instead of "5 to 15 TU"

11. Energetic compounds (thermate), C4 and Micro Nukes Prove 911 Was an Inside/Outside Job. (http://www.rense.com/general80/dprah.htm)

> The above are my opinions based on the proven referenced facts. Ed Ward, MD edward19@cox.net

3.231 pCi/L(1 TU) = 1,092.54 TUs

9. Over one year ago, Steven Jones, Alex Jones, the "BYU crew", most of the so called "911 Truth" groups/sites and indeed the public at large have been notified by me of the falseness of the "Traces" lie, but instead of promoting the truth and addressing it, have simply run from it and seem to be doing all in their power to suppress it. (http://www.rense.com/general80/ prov.htm>http://www.rense.com/general80/prov.htm)

10. It is also important to note that the tritium present was diluted by at least some portion of 1 million liters of water accounting for billions of TUs. (http://groups.yahoo.com/group/EdWard-MD/message/136)



(which would make the increase in background levels even higher), I will use 20 TUs as the 2001 environmental level to give all possible credibility to the lie of "Traces".

6. Let's calculate the proven referenced facts. Tritium level confirmed in the DOE report of traces of tritium = 3,530pCi/L (+/- 170 pCi/L, but we will use the mean of 3,530 pCi/L). 3,530 pCi/L (the referenced lab value) divided by the backgroud level of 20TUs (20 X 3.231 p (1 TU = 3.21 pCi/L) = 64.62 pCi/L as the high normal background/standard level. 3,530 divided by 64.62 pCi/L = 54.63 TIMES the NORMAL background level or 3,530 pCi/L divided by

7. This is my 'fave' because liars tend to eat their young. Muon physicist Steven Jones calls 1,000 TUs "The graphs below show that hydrogen-bomb testing boosted tritium levels in rain by several orders of magnitude." (Ref.: http://www.science.uottawa.ca/~eih/ ch7/7tritium.htm - http://www.journalof911studies.com/letters/a/Hard-Evidence-Rebudiates-the-Hypoth\thesis-that-Mini-Nukes-were-used-onthe-wtc-towers-by-steven-jones.pdf) Yet, he calls the EXACT same levels quoted in nCi/L as "Traces" and "These results are well below the levels of concern to human exposure". (http://www.journalof911studies.com/letters/ a/Hard-Evidence-Rebudiates-the-Hypothesis-that-Mini-Nukes-were-used*on-the-wtc-towers-by-steven-jones.pdf*) Interesting isn't it?

> 8. Thomas M. Semkowa, Ronald S. Hafnerc, Pravin P. Parekha, Gordon J. Wozniakd, Douglas K. Hainesa, Liaquat Husaina, Robert L. Rabune. Philip G. Williams and Steven Jones have all called over 1,000 TUs of Tritium, "Traces". Even at the height of nuclear bomb testing 98% - after thousands of Megatons of nuclear testing - of the rainwater tests were 2,000 TUs or less." (https://e-reports-ext.llnl.gov/pdf/241096.pdf>https://e-reports-ext. llnl.gov/pdf/241096.pdf)



## THE DOE REPORT STUDY OF TRACES OF TRITIUM AT GROUND ZERO

Traces = 55 Times the Quantified Background Level of 20 TUs or 0.0638 nCi of Tritium at the World Trade Center http://www.llnl.gov/tid/lof/documents/pdf/241096.pdf

1. "No Tritium Signs at the WTC", On page 7. Sources and Fate of Tritium at the WTC, paragraph 2, "We were informed by PANYNJ authorities that there were NO TRITIUM SIGNS AT THE WTC, only photluminescent ones (Lombardi, F.J. Port Authority of New York and New Jersey, personal communication, 12/10/2001). "This is entirely consistent with our observations."

2. No Tritium Present in the Firefighter Equipment, On page 9, last paragraph, "*It was concluded that fire and emer*gency equipment could not have been a source of tritium...".

3. A One Hour Dry Fire with 3000 Ci of Tritium Leaves 0.0000065% (6.5 Millionths of 1%) Tritium residue with 99.9999935% of the Tritium escaping, page 8, Last paragraph, Jensen, G.A.; Martin, J.B. Investigation of fire at Council, Alaska: A release of approximately 3000 curies of tritium. Pacific Northwest National Laboratory Report PNL-6523, Richland, WA, 1988. This is a very similar scenario to the plane fires in the WTC burning for 1 hour without water intervention.

0.00000065 X 3000 Ci original = 0.000195 Ci residual, = 195 millionths of 1 Ci, = Started with 3,000 Ci and ended with 195 millionths of 1 Ci (Curie - As long as the same unit value is used, it does not matter what that unit is called. Think of a Curie as just another unit of measurement like pounds, tons, kilograms, grams, ounces, etc. As long as the same units are used throughout the calculation one need not know the unit name nor be concerned with it. Started with 3,000 pounds and ended with a residual of 195 millionths of a pound. Similar to leaving your car and when you come back to the parking space, you would need an electron microscope to find what is left.

(0.000000065 X 3 Quadrillion nCi = 195,000 nCi residual, 195,000 residual/3,000,000,000,000,000 (*3 Quadrillion* - *original*) = 1.95 nCi residual/30,000,000 (*30 Billion*) = 1 nCi residual for every 15.385 Billion nCi escaping. (195,000 = 1.95 X 10 to 5th. 3,000,000,000,000 = 3 X 10 to the 15th))

The DOE report continues, "It was a free-burning fire, which consumed the building in 1 hr. Tritium assessment was done 11 days after the accident. The remaining GTLS tubes were mostly undamaged but disfigured, indicating that all tritium had escaped. No air-borne tritium was detected. All tubes were carefully wiped on surfaces, and the HTO activity from the wipes amounted to  $6.5 \times 10$  of that originally present. No HTO was found in bioassay or environmental samples. The release scenario at the WTC from the airplanes is, consistent with this accident. However, the Twin Towers collapsed before their complete burning, so the fraction of tritium deposited at the WTC might be larger."

"This oxide immediately vaporized due to the intense heat. Most of the HTO would be transported in the vapor phase with the wind, since the weather was dry on 9/11/01." Page 8, 3rd paragraph, DOE report.

This intense heat lasted for hours before water was brought to the WTC. It is doubtful that anything other than residual Tritium was subjected to collection by water with 99.9999% of the Tritium escaping into the air.

Note the disinformation provided after "*However*,... ". Whether or not the building collapses is irrelevant. Just as a quantitative value can not be defined under the scientific method as "*well below the levels of concern to human exposure*", and reports the actual value of 55 times background levels. The determining factors would be heat, time and exposure. If anything all of those factors would have been at least as large or larger. The burn times were almost exact at 1 hour of burning for both fires. The heat, since it was supposed to be hot enough to weaken steel according to the official government theory, while the 3,000 Ci fire still had unmolten 'mostly undamaged' glass tubes. Thin Glass tubes will melt long before massive steel girder heat sinks will significantly weaken. The supposed Tritium level only significant source is the 34 Ci in the 'commerical airliners'. I'm not going to quibble about a couple of Curies.



expected Tritium residue. How much water was sprayed on WTC 6? Approximately 1 Million Liters. Since we only have 2 real specimens of all of the WTC and they are from WTC 6, this sample's pool of water should have less total volume (*less dilution than the lower value second sample*), so it is fairly safe to assign a value of less than 50% and since the ratio of the differences are 3/2, the assigned percentage of the total volume of 1 Million Liters is at 1/3 of the total. Bear in mind this is a very crude calculation/approximation and is mainly being used to show the massive amounts of Tritium present in the WTC waters.

3.53 nCi/Liter of water X 333,333 Liters = 1,176,000 nCi for 1/3 of the total volume of the rain and firefighters efforts. This is 6 times the amount of residual Tritium (*only found on the tubes themselves - every where else = none found*) found in the 3,000 Ci fire.

The DOE is scrounging to find a Curie here and a Curie there. I'll spot them their 2 Curies and give them an extra lagniape Curie for a gimmie of 37 Curies. 34 of these Curies were slammed into a building at 500 mph, consumed in a massive fireball and fire that burned for an hour, certainly they were exposed to tremendously more than the 3,000 Ci fire (*undamaged glass tubes*). 0.000000065 X 37 Ci original = 0.000002405 Ci = 2,405 nCi residual.

Started with 37 Ci, according to the laboratory data proven by DOE lab testing, leaves 2.4 millionths of 1 Currie residue.

There was 3.53 nCi/Liter of water at the WTC in one sample of the '*flowing*' water pool. 2,405 nCi/3.53 nCi/ Liter of Water = 681.3 Liters (170 Gallons - Three 55 Gallon Drums) of WTC water accounts for All of the Approximate amount of original Tritium required to leave that amount of residue = 18,000 Ci original. Again, this is only for 1/3 of the total amount of water dispersed fairly evenly over WTC 6. The second sample contains 2.83 nCi/ Liter of water from a 'flowing' water pool in WTC 6. Again, since it is the more diluted value it has been assigned a percentage of the total volume that is larger than the first pool of 'flowing' water.

2.83 nCi/Liter of water X 666,666 Liters of water = 1,885,000 nCi present in 2/3 of the total volume of water present in WTC 6. This is right at 10 times the residual Tritium of the 3,000 Ci fire. For more on the water dispersal and similar information on TUs at the WTC, see an earlier response to Prof Jones (http://groups.yahoo.com/group/Ed-Ward-MD/message/8) and the breakdown of 4 million gallons of WTC dilution.

Approximate amount of original Tritium required to leave this amount of residue (3 Million nCi)? 30,000 Ci. The third sample from the NY sewers which must have a massive total volume contained 0.164 nCi/Liter of Water. 0.164 nCi/Liter X 120,000,000 Liters = 19,680,000 nCi present in a total dilution of the WTC waters. If one subtracts the amounts of Tritium residue found in WTC 6 (3 Million nCi) that leaves us with 16.7 Million nCi for the 250 feet wide by 35 deep craters surrounding WTC 1 & WTC 2 for the DOE's 37 Ci, and the standard 20 TUs from environment anywhere in the world that there is not man made nuclear contamination.

The DOE report gives a breakdown of the 30 Million gallons (120 Million Liters), the total volume of the Tritium diluting water on Page 9. Total original Tritium needed to leave the residues from the only 2 WTC samples with a dilution by the rain and fire fighters efforts = 48,000 Ci. To leave this amount of residual Tritium requires a huge source of Tritium.

4. "Tens of Thousands Ci of Tritium" (*original amount*) did leave traces of Tritium in the second
DOE reported fires with Tritium. - Page 9, first paragraph. What is it with Tritium? Tritium is only made
in our atmosphere through nuclear interactions with the sun's radiation. It is very evenly dispersed throughout
the world at 20 TUs/0.0638 nCi of Tritium (*up from 10 pre nuclear testing, reactors, waste, etc*). Any value above 20
TUs must come from man made nuclear events. Man made nuclear contamination is the only way to make the Tritium
level rise above 20 TUs. It takes a lot to keep Tritium from dispersing and even then 1/2 will be gone in 12.5 years.

## WHY IS THE USAGE OF MICRO NUKES SO IMPORTANT?

Until it is shown the government is using them, the tyrants will continue using them. The corporate media has already laid the groundwork for blaming a nuclear explosion in a city on terrorists. The usage Micro Nukes shows that the

tyranny exists in more depth than the original 'usual suspect' government departments, agencies and both political parties. The usage of Micro Nukes points to possible other national neo-fascist assistance with a most likely scenerio of Israel ans Saudi Arabia. Thermate, explosives and thermonuclear devices are the only thing that explain all of the WTC debris.

## WHY ARE MICRO NUKES IN THE WTC BEING CENSORED, HIDDEN AND SCAMMED?

For the very reasons it is so important. In order to be good disinformation, the disinformation must contain some truths. One must not concern themselves with the "interpreted" disinformation (*the non Tritium information on the terrorist attacks has no bearing in the scientific method*) - , but dig for the true information/data that is hidden and included to give the accuracy/acceptance of the disinformation. Some disinformation can be an excellent weapon for truthers - multi-facet - that shows what was hidden, the source is unimpeachable since it comes from the disinformers, and completely refutes the "*interpretations*".

Disinformation can sometimes contain '*nuggets of gold*' as my friend Captain May, (*Ghost-Troop*) would say. The DOE report, "Study of Traces (*traces* = 55 *times the quantified back-ground level of 20 TUs or 0.0638 nCi*) of Tritium at the World Trade Center, (http://www.llnl.gov/tid/lof/documents/pdf/241096.pdf) had a trail of gold nuggets. Read it after you've read this book.

## HOW DOES A TRUTH FINDING SCIENTIFIC COMMUNITY QUANTIFY AT LEAST 55 TIMES ENVIRONMENTAL DATA CONSTANTS OF TRITIUM?

(20 TUs or 0.0638 nCi Tritium) Quantity as: "well below the levels of concern for human exposure" while ignoring massive dilution of the sample. A scientist looking for the truth would never and can not use "well below the levels of concern for human exposure' because it is not a value ...well below the values of human concern" is rather just a false reassuring feel good statement and is completely useless. The statement does not even lead to a value since the levels of concern are not given a value. It appears that the scientists are using the EPA value of 8,000 TUs for the 'level of human concern' or 399 times the environmental amount. 399 times the environmental level does not get reported as a level of concern? It only takes one particle of radiation to kill a person. No amount of radioactivity exposure is safe. Some radiation exposure is merely acceptable by this government and some scientists based on a loss of life vs monetary expenditures to prevent excess radiation. It's a simple cost/benefit scenario, not a safety scenario.



"But, what I really want to know is..." why is Prof Jones not taking all of the evidence into consideration. 55 Times Background Levels in only 1 Liter of the Million of Liters present at the WTC. Three massive craters: WTC 6 Crater 40 feet deep and 120 feet wide, WTC 1 Crater - 30 feet deep and 250 feet wide, WTC 2 Crater - 30 feet deep and 250 feet wide. Three Billion pounds of buildings and 2 Billion pounds of Dust. Steel cores wilt away after surviving the crash of 3/4 of a Billion pounds. 6" thick I horseshoe girders. 100's of tons steel girder structures thrown hundreds of feet. 5 acres of land lighting up thermal evidence with instant fires when oxygen was supplied to the heat. Significant increase in responder cancers with full spectrum of almost all types of cancer and it's only been 5 years. More than 1,000 people without even a strand of DNA left to find (but there is a briefcase, calculator and umbrella). Micro Nukes in the WTC will do all of the above.

How many supposed hypotheses will it take to attempt refute this proven evidence that fits all of the above evidence and much more that are extremely consistent with the only theory that fits every single instance of the evidence - Thermate, High Pressure Explosives and Thermonuclear devices.

The facts stand on their own and have nothing to do with a favored or disfavored messenger. Credentials don't mean didley to basic physics. The same basic physics that leads one to the proof of Micro Nukes leads one to how to test for their usage on debris that can be years old.

DOE Report on Tritium Data - 48,000 Curies of Tritium Would Need to Be Burned to Leave the Amount of WTC Tritium Fire Residue http://groups.yahoo.com/group/EdWard-MD/message/141

PS: For a true sampling of the effects of nuclear reactors, the sampling survey should be based on exposure point and wind direction with a preference to humidity since moisture is the Tritium key. Humidity is an excellent aerial binder of Tritium.

Preliminary Lab Testing Results http://groups.yahoo.com/group/EdWard-MD/message/140

Micro-Nukes at the WTC http://www.thepriceofliberty.org/06/09/25/ward.htm

Update: Micro-Nukes at the WTC http://www.thepriceofliberty.org/07/03/05/ward.htm

Update: Proves Micro Nukes in the WTC http://www.thepriceofliberty.org/07/04/16/ward.htm

Verifying the Source of WTC Tritium Levels that Are 55 Times "Background Levels" http://www.rense.com/general76/wtc.htm

Prof. Jones Denies, Ignores, Misrepresents Proven Tritium Levels 55 Times Background Levels http://www.rense.com/general77/levels.htm

Steven Jones Replies To Dr. Ed Ward http://www.rense.com/general77/ward.htm

Prof Jones Gladly Assists Testing Unaffected WTC Items http://www.rense.com/general77/profjh.htm

Vancouver Conference: Drs Deagle and Jones debate Micro Nukes in the WTC http://www.911blogger.com/node/9590

9/11 Sicknesses consistent with environmental radiation contamination http://www.agoracosmopolitan.com/home/Frontpage/2007/06/22/01625.html







## CARS

At right you'll see a red circle that outlines the over 100 cars that were burned blocks from Ground Zero. The picture above shows dozens of these burned cars and the image at top right is a close up view. There were many other burned cars across the city. Normal demolitions don't cause this effect or anything even close to it. The pyroclastic cloud that enveloped the city needed to be a raging inferno of super heated dust for all of these cars to burn to rusted hulks (the rapid rusting [these images were taken immediately after the event] was caused because the concrete was calcined and caustic, 12.0pH). This is an anomaly that energetic compounds can't explain because the totality of the thermal energy seen on 911 far exceeded the 300mps (Harrit 2011) to 895mps maximum (2010 peer reviewed iron oxide aluminum rich nano-scale energetic compound velocity) that the compound Dr. Stephen Jones claims to have. Calcining concrete as quickly (less then ten seconds and the first clouds appeared in less than 6 seconds) and in the quantities the images in this magazine show is not something Dr. Jones' energetic compound can do. Dr. Jones' compound can't do what we've seen on 911. It doesn't have the thermal capability and it also can't increase tritium, zinc, potassium, sodium, vanadium and uranium, etc., etc., all at the same time, together, in anomalous amounts when examined together in dust, even if you believe the 29,000 minimum metric ton tall tale..







The Fountain, at left, needs no explanation. The forceful upwards explosions are quite apparent. The signature clouds of a nuclear demolition are obvious. The steel above, on the other hand, requires a lengthy explanation that won't be provided here. What we will say is that this type of structural steel failure is highly unusual and requires tremendous heat. Again, we're only working with a total of less then ten seconds to create all of the various anomalies seen. The steel above shows total failure in every imaginable category and the failure is obviously related to extraordinary heat for just milliseconds, perhaps just nano-seconds. Energetic compounds such as those found by Dr. Jones are industry standard incendiaries, they were not new in 2001 except to the general public, they are not classified as explosives but as incendiaries (300mps is well within the incendiary classification range) and they are designed to cut through steel in a rather straight pat-



Massive Heat For Less Then Ten Seconds Enough To Burn For 100 Days Uncontrolled Enough To Calcine Concrete To A Caustic Mix Enough To Raise The Levels Of Tritium & Uranium Enough To Create U-Shaped Steel Girders 5 Inches Thick Enough To Raise The Levels Of Sodium, Potassium and Zinc



The structural steel column at right is bent into a horseshoe shape. With 2.5 inch thick walls a total of 5 inches of steel was bent in less then ten seconds without rips or tears on any of the radii. To accomplish this feat in that ten second time frame would have required heating the entire bent portion of the boxbeam to well over 4-5,000 degrees, or more. Had this been the result of an energetic compound there would have been volumes of melted metal. There is none. 911 was a sophisticated nuclear event.



The Crater In Building Six this page and next page

PRAT







If the EPA and Whitman had found massive radiation and/or radionuclides (radioactive/decaying elements) at the WTC after 9/11, does anyone believe they would ever release this data to the people? Relatedly, it later became known that they found high levels of uranium, beryllium, zinc, lead, barium, strontium, mercury and other toxins shortly after 911, and yet told the world, and the responders, that "the air was safe to breathe" They lied, for quite some time, about what they had found in this sense. Now if the EPA tested for, and found significant radiation and/or radionuclides, what makes anyone think this wouldn't become immediately highly classified?

Based on the historical record of public and private nuclear electric energy utility mishaps and atmospheric and environmental releases why would anyone reveal that the global financial center of the world had been irradiated? And why would the perpetrators care if they knew the totality of the effects? Only 1,000+ people have died so far (First Responders) and just another 10,000 (more or less) are currently sick. Millions die in wars. The actuarial formula dictates a manageable consequence.

In a similar vein, is anyone foolish enough to trust a certain physicist's alleged data on his tests of a single steel beam and some dust from a friend's apartment? Maybe he did find some energetic compound but why would he use faulty science to rule out the nuclear facts? This is the same physicist whose alleged data shot down the whole field of cold fusion which might have, by now, decreased some of our need for oil if this field wasn't abandoned by the mainstream. Or was it? Could his "data" on cold fusion have been accurate if many scientists around the world continue to publish data showing that cold fusion works? What about ITER? (described in this eMagazine).

## RADIOLOGICALLY

"this particular type of micronuclear device is mostly radiologically clean"

Of course if anyone, regardless of position, failed to tell the responders this and this resulted in the responders not wearing radiation-shielding, protective clothing and breathing apparatus this would then certainly lead to cancer and other illnesses. We've noted that there has been a rapid and dramatic increase in rare cancers in 911 responders. Could these cancers be the result of radiation? Cancer can be caused by even the very lowest levels of radiation. The father of the field of health physics, Dr. Karl Ziegler Morgan, has so stated. The EPA officials and Whitman would be liable for charges of mass murder and treason just for this cover-up. Also if the government perpetrated 911 (and no one else could have), would they allow another section of the government to give it all away? Don't the people know how the government lies, in perpetuity, about the Pearl Harbor set-up, the Kennedy assassination, the USS Liberty and many more nefarious deeds it's perpetrated?

When this same physicist tries to shoot down the fact that micro-nuclear devices were used to demolish the Twin Towers he rightly knows that he has to address the issue of the evidence of EMPs (*Electromagnetic Pulses*), increased tritium and uranium, increased potassium and sodium, increased strontium and barium, increased zinc and vanadium, increased thorium and other elements and he has to address these elements together as they correlate because they function together intimately. But he doesn't mention these elements in this manor or detail and simply says that other factors could have caused the anomalies. See Ms. Ondrovic's statements discussed herein. She was

knocked down by the car door that was next to her overheating from the EMP and exploding off the car and hitting her. Note that nothing heated her up directly. That physicist knows well that there is no other explanation for these events, except EMP and neutrons, so he does not include this evidence of the toasted cars or Ondrovic' eyewitness (heavily redacted) testimony. No one knows better than that nuclear physicist that nuclear devices were indeed used to kill nearly 3,000 people on 911. That is why his statements are replete with omissions, and other falsifications not worthy of a complete rebuttal. Except to say that when he mentions the high temperatures and molten steel at the World Trade Center he falsely writes about this as if this occurred only during the demolition or just shortly thereafter. He ignores (as he must) the fact that flowing molten steel, and extremely high temperatures were found days, weeks and months after 911. Does anyone believe this beloved, incapable thermite was still generating massive heat days, weeks and months later? Any heat generated by thermite would have been gone in minutes or hours at the very most after the event. Indeed, the heat from the micro-nuclear devices themselves would also have dissipated within microseconds. There are no reports of molten, flowing metal or high temperatures days, weeks or months after the events of Hiroshima or Nagasaki. This is why I had to propose another cause for this in my nuclear demolition reports, other than the nuclear bombs themselves.

I included a very small portion of Tahil's report (charts pages 159-160) because his is the only other explanation released about a possible source that could have generated high heat days, weeks and months afterwards and covers all anomalies seen including those less known described herein. And I think my hypothesis of undetonated "unfissioned" nuclear device material impacted during the explosion itself and by the other exploding nuclear devices and going somewhat critical for a millisecond is far more likely than his theory of two underground nuclear reactors. But his reference was included by me, as it is not impossible. Tahil's mathematics, chemistry and physics have minor errors, very minor, that don't in any way affect his overall assertion of ternary and quaternary fission in the NYC 911 dust. And someone interested in the truth includes other credible and scientifically sound theories, discussions and other facts, and does not try to cleverly suppress them.

Also regarding the radiation issue, in this abstract of an article, a scientist in 1969 published the following,

"Nuclear device characteristics and the factors affecting radionuclide production and distribution are described along with some recent nuclear experiments conducted by the U.S. Atomic Energy Commission for the purpose of providing technical data on cratering mechanisms and special emplacement techniques which could minimize the release of radioactivity to the atmosphere." This shows that even back in 1969 that the government experimented with minimizing radioactivity using nuclear devices to construct canals. It shows that they worked on having nuclear devices with blast effect, and little or no radioactive elements created.

The article's abstract hints at two methods for obviating atmospheric release of radioactivity.

1. Steering the device towards low radionuclide production and

2. "special emplacement techniques" which means place it where you won't get much or any radiation released into

the air. As this was back in 1969 and research began in the 1940s they likely have perfected very low or no radiation nuclear devices by 2000. There sure is plenty of information across the internet on nuclear bombs with highly limited radiation fallout.



was shipped to China, it was "first sent to be washed down"— a standard method of decreasing radiation levels. "The particular type of construction type micronuclear device is mostly radiologically clean," is a statement made recently by a military demolition expert. As I've indicated in my World Trade Center nuclear demolition reports, recent nuclear devices can be designed to be "steered" towards blast capability, and away from any significant radiation release. Any radiation released would last no more then 5 or 6 days. Still, if you breather it you die.

The bottom line is that the government is known to have created construction/destruction micro nuclear devices that likely produce little radiation or radionuclides. The government's own World Trade Center study admitted to finding tritium (with a laughable explanation of its possible source) and other elements that could have been from a fusion (or even a fission device according to Tahil). This government has repeatedly proven that it would never release any data that would be complete proof that could lead to the prosecution—for mass murder and high treason here—of its officials all the way to the top ... whoever that really is.

### Regarding 911, never forget that whatever radionuclides may have been created were sent to China. Before the steel

## THE BOY WHO PLAYED WITH FUSION

Taylor Wilson Always Dreamed Of Creating A Star February 14th, 2012

Standout Taylor Wilson moved to suburban Reno with his parents, Kenneth and Tiffany, and his brother Joey to attend Davidson Academy, a school for gifted stu-

dents.

"Propulsion," the nine-year-old says as he leads his dad through the gates of the U.S. Space and Rocket Center in Huntsville, Alabama. "I just want to see the propulsion stuff."

A young woman guides their group toward a fullscale replica of the massive Saturn V rocket that brought America to the moon. As they duck under the exhaust nozzles, Kenneth Wilson glances at his awestruck boy and feels his burden beginning to lighten. For a few minutes, at least, someone else will feed his son's boundless appetite for knowledge.

Then Taylor raises his hand, not with a question but an answer. He knows what makes this thing, the biggest rocket ever launched, go up. And he wants—no, he obviously needs—to tell everyone about it, about how speed relates to exhaust velocity and dynamic mass, about payload ratios, about the pros and cons of liquid versus solid fuel. The tour guide takes a step back, yielding the floor to this slender kid with a deep-Arkansas drawl, pouring out a torrent of Ph.D.level concepts as if there might not be enough seconds in the day to blurt it all out. The other adults take a step back too, perhaps jolted off balance by the incongruities of age and audacity, intelligence and exuberance.

As the guide runs off to fetch the center's director— You gotta see this kid!—Kenneth feels the weight coming down on him again. What he doesn't understand just yet is that he will come to look back on these days as the uncomplicated ones, when his scary-smart son was into simple things, like rocket science.

This is before Taylor would transform the family's garage into a mysterious, glow-in-the-dark cache of rocks and metals and liquids with unimaginable powers. Before he would conceive, in a series of un-

likely epiphanies, new ways to use neutrons to confront some of the biggest challenges of our time: cancer and nuclear terrorism. Before he would build a reactor that could hurl atoms together in a 500-million-degree plasma core—becoming, at 14, the youngest individual on Earth to achieve nuclear fusion.

When I meet Taylor Wilson, he is 16 and busy—far too busy, he says, to pursue a driver's license. And so he rides shotgun as his father zigzags the family's Land Rover up a steep trail in the Virginia Mountains north of Reno, Nevada, where they've come to prospect for uranium.



From the backseat, I can see Taylor's gull-like profile, his forehead plunging from under his sandy blond bangs and continuing, in an almost unwavering line, along his prominent nose. His thinness gives him a wraithlike appearance, but when he's lit up about something (*as he is most waking moments*), he does not seem frail. He has spent the past hour—the past few days, really—talking, analyzing, and breathlessly evangelizing about nuclear energy. We've gone back to the big bang and forward to mutually assured destruction and nuclear winter. In between are fission and fusion, Einstein and Oppenheimer, Chernobyl and Fukushima, matter and antimatter.

"Where does it come from?" Kenneth and his wife, Tiffany, have asked themselves many times. Kenneth is a Coca-Cola bottler, a skier, an ex-football player. Tiffany is a yoga instructor. "Neither of us knows a dang thing about science," Kenneth says.

"Looking up, the neighbors watched as a small mushroom cloud rose, unsettlingly, over the Wilsons' yard." Almost from the beginning, it was clear that the older of the Wilsons' two sons would be a difficult child to keep on the ground. It started with his first, and most pedestrian, interest: construction. As a toddler in Texarkana, the family's hometown, Taylor wanted nothing to do with toys. He played with real traffic cones, real barricades. At age four, he donned a fluorescent orange vest and hard hat and stood in front of the house, directing traffic. For his fifth birthday, he said, he wanted a crane. But when his parents brought him to a toy store, the boy saw it as an act of provocation. "No," he yelled, stomping his foot. "I want a real one."

This is about the time any other father might have put his own foot down. But Kenneth called a friend who owns a construction company, and on Taylor's birthday a six-ton crane pulled up to the party. The kids sat on the operator's lap and took turns at the controls, guiding the boom as it swung above the rooftops on Northern Hills Drive. To the assembled parents, dressed in hard hats, the Wilsons' parenting style must have appeared curiously indulgent. In a few years, as Taylor began to get into some supremely dangerous stuff, it would seem perilously laissez-faire. But their approach to child rearing is, in fact, uncommonly intentional. "We want to help our children figure out who they are," Kenneth says, "and then do everything we can to help them nurture that."

At 10, Taylor hung a periodic table of the elements in his room. Within a week he memorized all the atomic numbers, masses and melting points. At the family's Thanksgiving gathering, the boy appeared wearing a monogrammed lab coat and armed with a handful of medical lancets. He announced that he'd be drawing blood from everyone, for "comparative genetic experiments" in the laboratory he had set up in his maternal grandmother's garage. Each member of the extended family duly offered a finger to be pricked.

The next summer, Taylor invited everyone out to the backyard, where he dramatically held up a pill bottle packed with a mixture of sugar and stump remover (*potassium nitrate*) that he'd discovered in the garage. He set the bottle down and, with a showman's flourish, ignited the fuse that poked out of the top. What happened next was not the firecracker's bang everyone expected, but a thunderous blast that brought panicked neighbors running from their houses. Looking up, they watched as a small mushroom cloud rose, unsettlingly, over the Wilsons' yard.

For his 11th birthday, Taylor's grandmother took him to Books-A-Million, where he picked out The Radioactive Boy Scout, by Ken Silverstein. The book told the disquieting tale of David Hahn, a Michigan teenager who, in the mid-1990s, attempted to build a breeder reactor in a backyard shed. Taylor was so excited by the book that he read much of it aloud: the boy raiding smoke detectors for radioactive americium. . . the cobbled-together reactor . . . the Superfund team in hazmat suits hauling away the family's contaminated belongings. Kenneth and Tiffany heard Hahn's story as a cautionary tale. But Taylor, who had recently taken a particular interest in the bottom two rows of the periodic table-the highly radioactive elements-read it as a challenge. "Know what?" he said. "The things that kid was trying to do, I'm pretty sure I can actually do them."

A rational society would know what to do with a kid like Taylor Wilson, especially now that America's technical leadership is slipping and scientific talent increasingly has to be imported. But by the time Taylor was 12, both he and his brother, Joey, who is three years younger and gifted in mathematics, had moved far beyond their school's and parents' ability to meaningfully teach them. Both boys were spending most of their school days on autopilot, their minds wandering away from course work they'd long outgrown.

Taylor found that there was almost no end to the information he could find on the Internet. I did too.



dangerous. But here is where the two stories begin to diverge. When Hahn's parents forbade his atomic endeavors, the angry teenager pressed on in secret. But Kenneth and Tiffany resisted their impulse to steer Taylor toward more benign pursuits. That can't be easy when a child with a demonstrated talent and fondness for blowing things up proposes to dabble in nukes.

Kenneth and Tiffany agreed to let Taylor assemble a "survey of everyday radioactive materials" for his school's science fair. Kenneth borrowed a Geiger counter from a friend at Texarkana's emergency-management agency. Over the next few weekends, he and Tiffany shuttled Taylor around to nearby antique stores, where he pointed the clicking detector at old radium-dial alarm clocks, thorium lantern mantles and uranium-glazed Fiesta plates. Taylor spent his allowance money on a radioactive dining set.

On top of tables crowded with chemicals and microscopes and germicidal black lights, an expanding array of nuclear fuel pellets, chunks of uranium and "pigs" (lead-lined containers) began to appear. When his parents pressed him about safety, Taylor responded in the convoluted jargon of inverse-square laws and distance intensities, time doses and roentgen submultiples. With his newfound command of these concepts, he assured them, he could master the furtive energy sneaking away from those rocks and metals and liquids—a strange and ever-multiplying cache that literally cast a glow into the corners of the garage.

too late.

Lead pigs and glazed plates were only the beginning. Soon Taylor was getting into more esoteric "naughties"-radium quack cures, depleted uranium, radio-luminescent materials-and collecting mysterious machines, such as the mass spectrometer given to him by a former astronaut in Houston. As visions of Chernobyl haunted his parents,

David Hahn had been bored too-and, like Taylor, smart enough to be

Drawn in by what he calls "the surprise properties" of radioactive materials, he wanted to know more. How can a speck of metal the size of a grain of salt put out such tremendous amounts of energy? Why do certain rocks expose film? Why does one isotope decay away in a millionth of a second while another has a half-life of two million years?

As Taylor began to wrap his head around the mind-blowing mysteries at the base of all matter, he could see that atoms, so small but potentially so powerful, offered a lifetime's worth of secrets to unlock. Whereas Hahn's resources had been limited, Taylor found that there was almost no end to the information he could find on the Internet, or to the oddities that he could purchase and store in the garage.

Kenneth asked a nuclear-pharmacist friend to come over to check on Taylor's safety practices. As far as he could tell, the friend said, the boy was getting it right. But he warned that radiation works in quick and complex ways. By the time Taylor learned from a mistake, it might be Taylor tried to reassure them. "*I'm the responsible radioactive boy scout*," he told them. "*I know what I'm doing*."

One afternoon, Tiffany ducked her head out of the door to the garage and spotted Taylor, in his canary yellow nuclear-technician's coveralls, watching a pool of liquid spreading across the concrete floor.

#### "Tay, it's time for supper."

"I think I'm going to have to clean this up first." "That's not the stuff you said would kill us if it broke open, is it?" "I don't think so," he said. "Not instantly."

That summer, Kenneth's daughter from a previous marriage, Ashlee, then a college student, came to live with the Wilsons. "*The explosions in the backyard were getting to be a bit much*," she told me, shortly before my own visit to the family's home. "*I could see everyone getting frustrated. They'd say something and Taylor would argue back, and his argument would be legitimate. He knows how to out-think you. I was saying, 'You guys need to be parents. He's ruling the roost.*""

"What she didn't understand," Kenneth says, "is that we didn't have a choice. Taylor doesn't understand the meaning of 'can't."

"And when he does," Tiffany adds, "he doesn't listen."

"Looking back, I can see that," Ashlee concedes. "I mean, you can tell Taylor that the world doesn't revolve around him. But he doesn't really get that. He's not being selfish, it's just that there's so much going on in his head."

Tiffany, for her part, could have done with less drama. She had just lost her sister, her only sibling. And her mother's cancer had recently come out of remission. "*Those were some tough times*," Taylor tells me one day, as he uses his mom's gardening trowel to mix up a batch of yellowcake (*the partially processed uranium that's the stuff of WMD infamy*) in a five-gallon bucket. "*But as bad as it was with Grandma dying and all, that urine sure was something.*"

Taylor looks sheepish. He knows this is weird. "*After her PET scan she let me have a sample. It was so hot I had to keep it in a lead pig.*"

"The other thing is..." He pauses, unsure whether to continue but, being Taylor, unable to stop himself. "She had lung cancer, and she'd cough up little bits of tumor for me to dissect. Some people might think that's gross, but I found it scientifically very interesting."



What no one understood, at least not at first, was that as his grandmother was withering, Taylor was growing, moving beyond mere self-centeredness. The world that he saw revolving around him, the boy was coming to believe, was one that he could actually change.

The problem, as he saw it, is that isotopes for diagnosing and treating cancer are extremely short-lived. They need to be, so they can get in and kill the targeted tumors and then decay away quickly, sparing healthy cells. Delivering them safely and on time requires expensive handling—including, often, delivery by private jet. But what if there were a way to make those medical isotopes at or near the patients? How many more people could they reach, and how much earlier could they reach them? How many more people like his grandmother could be saved?

"He told me he wanted to build the reactor in his garage, and I thought, 'Oh my lord, we can't let him do that."" As Taylor stirred the toxic urine sample, holding the clicking Geiger counter over it, inspiration took hold. He peered into the swirling yellow center, and the answer shone up at him, bright as the sun. In fact, it was the sun—or, more precisely, nuclear fusion, the process (defined by Einstein as E=mc2) that powers the sun. By harnessing fusion—the moment when atomic nuclei collide and fuse together, releasing energy in the process—Taylor could produce the high-energy neutrons he would need to irradiate materials for medical isotopes. Instead of creating those isotopes in multimillion-dollar cyclotrons and then rushing them to patients, what if he could build a fusion reactor small enough, cheap enough and safe enough to produce isotopes as needed, in every hospital in the world?

At that point, only 10 individuals had managed to build working fusion reactors. Taylor contacted one of them, Carl Willis, then a 26-year-old Ph.D. candidate living in Albuquerque, and the two hit it off. But Willis, like the other successful fusioneers, had an advanced degree and access to a high-tech lab and precision equipment. How could a middle-school kid living on the Texas/Arkansas border ever hope to make his own star?

When Taylor was 13, just after his grandmother's doctor had given her a few weeks to live, Ashlee sent Tiffany and Kenneth an article about a new school in Reno. The Davidson Academy is a subsidized public school for the nation's smartest and most motivated students, those who score in the top 99.9th percentile on standardized tests. The school, which allows students to pursue advanced research at the adjacent University of Nevada–Reno, was founded in 2006 by software entrepreneurs Janice and Robert Davidson. Since then, the Davidsons have championed the idea that the most under-served students in the

#### country are those at the top.

On the family's first trip to Reno, even before Taylor and Joey were accepted to the academy, Taylor made an appointment with Friedwardt Winterberg, a celebrated physicist at the University of Nevada who had studied under the Nobel Prize–winning quantum theorist Werner Heisenberg. When Taylor told Winterberg that he wanted to build a fusion reactor, also called a fusor, the notoriously cranky professor erupted: "You're 13 years old! And you want to play with tens of thousands of electron volts and deadly x-rays?" Such a project would be far too technically challenging and hazardous, Winterberg insisted, even for most doctoral candidates. "First you must master calculus, the language of science," he boomed. "After that," Tiffany said, "we didn't think it would go anywhere. Kenneth and I were a bit relieved."

But Taylor still hadn't learned the word "can't." In the fall, when he began at Davidson, he found the two advocates he needed, one in the office right next door to Winterberg's. "*He had a depth of understanding I'd never seen in someone that young*," says atomic physicist Ronald Phaneuf. "*But he was telling me he wanted to build the reactor in his garage, and I'm thinking,* 'Oh my lord, we can't let him do that.' But maybe we can help him try to do it here."

Phaneuf invited Taylor to sit in on his upper-division nuclear physics class and introduced him to technician Bill Brinsmead. Brinsmead, a Burning Man devotee who often rides a wheeled replica of the Little Boy bomb through the desert, was at first reluctant to get involved in this 13-year-old's project. But as he and Phaneuf showed Taylor around the department's equipment room, Brinsmead recalled his own boyhood, when he was bored and unchallenged and aching to build something really cool and difficult (*like a laser, which he eventually did build*) but dissuaded by most of the adults who might have helped.

Rummaging through storerooms crowded with a geeky abundance of electron microscopes and instrumentation modules, they came across a high-vacuum chamber made of thick-walled stainless steel, capable of withstanding extreme heat and negative pressure. "*Think I could use that for my fusor?*" Taylor asked Brinsmead. "*I can't think of a more worthy cause*," Brinsmead said.

Now it's Tiffany who drives, along a dirt road that wends across a vast, open mesa a few miles south of the runways shared by Albuquerque's airport and Kirkland Air Force Base. Taylor has convinced her to bring him to New Mexico to spend a week with Carl Willis, whom Taylor describes as "*my best nuke friend*."



Cocking my ear toward the backseat, I catch snippets of Taylor and Willis's conversation.

"The idea is to make a gamma-ray laser from stimulated decay of dipositronium."

"I'm thinking about building a portable, beam-on-target neutron source."

"Need some deuterated polyethylene?"

Willis is now 30; tall and thin and much quieter than Taylor. When he's interested in something, his face opens up with a blend of amusement and curiosity. When he's uninterested, he slips into the far-off distractedness that's common among the super-smart. Taylor and Willis like to get together a few times a year for what they call "*nuclear tourism*"—they visit research facilities, prospect for uranium, or run experiments.

Earlier in the week, we prospected for uranium in the desert and shopped for secondhand laboratory equipment in Los Alamos. The next day, we wandered through Bayo Canyon, where Manhattan Project engineers set off some of the largest dirty bombs in history in the course of perfecting Fat Man, which leveled Nagasaki.

Today we're searching for remnants of a "*broken arrow*," military lingo for a lost nuclear weapon. While researching declassified military reports, Taylor discovered that a Mark 17 "Peacemaker" hydrogen bomb, which was designed to be 700 times as powerful as the bomb detonated over Hiroshima, was accidentally dropped onto this mesa in May 1957. For the U.S. military, it was an embarrassingly Strangelovian episode; the airman in the bomb bay narrowly avoided his own Slim Pickens moment when the bomb dropped from its gantry and smashed the B-36's doors open. Although its plutonium core hadn't been inserted, the bomb's "*spark plug*" of conventional explosives and radioactive material detonated on impact, creating a fireball and a massive crater. A grazing steer was the only reported casualty.

Tiffany parks the rented SUV among the mesquite, and we unload metal detectors and Geiger counters and fan out across the field. "*This*," says Tiffany, smiling as she follows her son across the scrubland, "*is how we spend our vacations*."

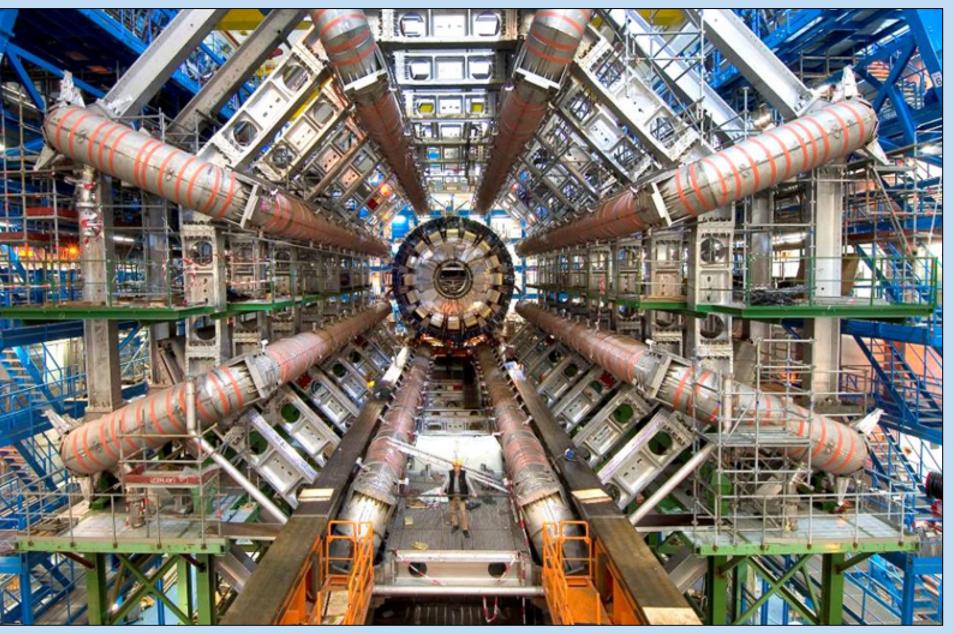
Willis says that when Taylor first contacted him, he was struck by the 12-year-old's focus and forwardness—and by the fact that he couldn't plumb the depth of Taylor's knowledge with a few difficult technical questions. After checking with Kenneth,

Willis sent Taylor some papers on fusion reactors. Then Taylor began acquiring pieces for his new machine.

Through his first year at Davidson, Taylor spent his afternoons in a corner of Phaneuf's lab that the professor had cleared out for him, designing the reactor, overcoming tricky technical issues, tracking down critical parts. Phaneuf helped him find a surplus high-voltage insulator at Lawrence Berkeley National Laboratory. Willis, then working at a company that builds particle accelerators, talked his boss into parting with an extremely expensive high-voltage power supply.

With Brinsmead and Phaneuf's help, Taylor stretched himself, applying knowledge from more than 20 technical fields, including nuclear and plasma physics, chemistry, radiation metrology and electrical engineering. Slowly he began to test-assemble the reactor, troubleshooting pesky vacuum leaks, electrical problems and an intermittent plasma field.

Shortly after his 14th birthday, Taylor and Brinsmead loaded deuterium fuel into the machine, brought up the power, and confirmed the presence of neutrons. With that, Taylor became the 32nd individual on the planet to achieve a nuclear-fusion reaction. Yet what would set Taylor apart from the others was not the machine itself but what he decided to do with it.



If we adults can build the Large Hadron Collider and our children can build fusion reactors in their basements that reach more then a million degrees what do you suppose the war-mongering psychopaths in charge, with unlimited resources, are up to?

While still developing his medical isotope application, Taylor came across a report about how the thousands of shipping containers entering the country daily had become the nation's most vulnerable "soft belly," the easiest entry point for weapons of mass destruction. Lying in bed one night, he hit on an idea: Why not use a fusion reactor to produce weapons-sniffing neutrons that could scan the contents of containers as they passed through ports? Over the next few weeks, he devised a concept for a drive-through device that would use a small reactor to bombard passing containers with neutrons. If weapons were inside, the neutrons would force the atoms into fission, emitting gamma radiation (in the case of nuclear material) or nitrogen (in the case of conventional explosives). A detector, mounted opposite, would pick up the signature and alert the operator.

He entered the reactor, and the design for his bomb-sniffing application, into the Intel International Science and Engineering Fair. The Super Bowl of pre-college science events, the fair attracts 1,500 of the world's most switched-on kids from some 50 countries. When Intel CEO Paul Otellini heard the buzz that a 14-year-old had built a working nuclear-fusion reactor, he went straight for Taylor's exhibit. After a 20-minute conversation, Otellini was seen walking away, smiling and shaking his head in what looked like disbelief. Later, I would ask him what he was thinking.

pressed on without guidance or oversight-and with nearly catastrophic results. Taylor, just as determined but socially gifted, managed to gather into his orbit people who could help him achieve his dreams: the physics professor; the older nuclear prodigy; the eccentric technician; the entrepreneur couple who, instead of retiring, founded a school to nurture genius kids. There were several more, but none so significant as Tiffany and Kenneth, the parents who overcame their reflexive—and undeniably sensible—inclinations to keep their Icarus-like son on the ground. Instead they gave him the wings he sought and encouraged him to fly up to the sun and beyond, high enough to capture a star of his own.

After about an hour of searching across the mesa, our detectors begin to beep. We find bits of charred white plastic and chunks of aluminum-one of which is slightly radioactive. They are remnants of the lost hydrogen bomb. I uncover a broken flange with screws still attached, and Taylor digs up a hunk of lead. "Got a nice shard here," Taylor yells, finding a gnarled piece of metal. He scans it with his detector. "Unfortunately, it's not radioactive." "That's the kind I like," Tiffany says.

#### "All I could think was, 'I am so glad that kid is on our side.'"

For the past three years, Taylor has dominated the international science fair, walking away with nine awards (including first place overall), overseas trips and more than \$100,000 in prizes. After the Department of Homeland Security learned of Taylor's design, he traveled to Washington for a meeting with the DHS's Domestic Nuclear Detection Office, which invited Taylor to submit a grant proposal to develop the detector. Taylor also met with then–Under Secretary of Energy Kristina Johnson, who says the encounter left her "stunned."

"I would say someone like him comes along maybe once in a generation," Johnson says. "He's not just smart; he's cool and articulate. I think he may be the most amazing kid *I've ever met.*"

And yet Taylor's story began much like David Hahn's, with a brilliant, high-flying child hatching a crazy plan to build a nuclear reactor. Why did one journey end with hazmat teams and an eventual arrest, while the other continues to produce an array of prizes, patents, television appearances, and offers from college recruiters?

The answer is, mostly, support. Hahn, determined to achieve something extraordinary but discouraged by the adults in his life, *dirty bomb.*" Willis picks up a large chunk of the bomb's outer casing, still painted dull green, and calls Taylor over. "Wow, look at that warp profile!" Taylor says, easing his scintillation detector up to it. The instrument roars its approval. Willis, seeing Taylor ogling the treasure, presents it to him. Taylor is ecstatic. "It's a field of dreams!" he yells. "This place is loaded!"

Suddenly we're finding radioactive debris under the surface every five or six feet—even though the military claimed that the site was completely cleaned up. Taylor gets down on his hands and knees, digging, laughing, call-

ing out his discoveries. Tiffany checks her watch. "Tay, we really gotta go or we'll miss our flight."

"I'm not even close to being done!" he says, still digging. "This is the best day of my life!" By the time we manage to get Taylor into the car, we're running seriously late. "Tay," Tiffany says, "what are we going to do with all this stuff?"

"For \$50, you can check it on as excess baggage," Willis says. "You don't label it, nobody knows what it is, and it won't hurt anybody." A few minutes later, we're taping an all-too-flimsy box shut and loading it into the trunk. "Let's see, we've got about 60 pounds of uranium, bomb fragments and radioactive shards," Taylor says. "This thing would make a real good dirty bomb."

In truth, the radiation levels are low enough that, without prolonged close-range exposure, the cargo poses little danger. Still, we stifle the jokes as we pull up to curbside check-in. "Think it will get through security?" Tiffany asks Taylor. "There are no radiation detectors in airports," Taylor says. "Except for one pilot project, and I can't tell you which airport that's at."

As the skycap weighs the box, I scan the "prohibited items" sign. You can't take paints, flammable materials or water on a commercial airplane. But sure enough, radioactive materials are not listed. We land in Reno and make our way toward the baggage claim. "I hope that box held up," Taylor says, as we approach the carousel. "And if it didn't, I hope they give us back the radioactive goodies scattered all over the airplane." Soon the box appears, adorned with a bright strip of tape and a note inside explaining that the package has been opened and inspected by the TSA. "They had no idea," Taylor says, smiling, "what they were looking at."

Apart from the fingerprint scanners at the door, Davidson Academy looks a lot like a typical high school. It's only when the students open their mouths that you realize that this is an exceptional place, a sort of Hogwarts for brainiacs. As these math whizzes, musical prodigies and chess masters pass in the hallway, the banter flies in witty bursts. Inside humanities classes, discussions spin into intellectual duels.

Although everyone has some kind of advanced obsession, there's no question that Taylor is a celebrity at the school, where the lobby walls are hung with framed newspaper clippings of his accomplishments. Taylor and I visit with the principal, the school's founders and a few of Taylor's friends. Then, after his calculus class, we head over to the university's physics department, where we meet Phaneuf and Brinsmead.

Taylor's reactor, adorned with yellow radiation-warning signs, dominates the far corner of Phaneuf's lab. It looks elegant—a gleaming stainless-steel and glass chamber on top of a cylindrical trunk, connected to an array of sensors and feeder tubes. Peering through the small window into the reaction chamber, I can see the golf-ball-size grid of tungsten fingers that will cradle the plasma, the state of matter in which unbound electrons, ions and photons mix freely with atoms and molecules.

"OK, y'all stand back," Taylor says. We retreat behind a wall of leaden blocks as he shakes the hair out of his eyes and flips a switch. He turns a knob to bring the voltage up and adds in some gas. "This is exactly how me and Bill did it the first time," he says. "But now we've got it running even better."

Through a video monitor, I watch the tungsten wires beginning to glow, then brightening to a vivid orange. A blue cloud of plasma appears, rising and hovering, ghostlike, in the center of the reaction chamber. "When the wires disappear," Phaneuf says, "that's when you know you have a lethal radiation field."

I watch the monitor while Taylor concentrates on the controls and gauges, especially the neutron detector they've dubbed Snoopy. "I've got it up to 25,000 volts now," Taylor says. "I'm going to out-gas it a little and push it up." Willis's power supply crackles. The reactor is entering "star mode." Rays of plasma dart between gaps in the now-invisible grid as deuterium atoms, accelerated by the tremendous voltages, begin to collide. Brinsmead keeps his eves glued to the neutron detector. "We're getting neutrons," he shouts. "It's really jamming!"

Taylor cranks it up to 40,000 volts. "Whoa, look at Snoopy now!" Phaneuf says, grinning. Taylor nudges the power up to 50,000 volts, bringing the temperature of the plasma inside the core to an incomprehensible 580 million degrees—some 40 times as hot as the core of the sun. Brinsmead lets out a whoop as the neutron gauge tops out.

"Snoopy's pegged!" he yells, doing a little dance. On the video screen, purple sparks fly away from the plasma cloud, illuminating the wonder in the faces of Phaneuf and Brinsmead, who stand in a half-orbit around Taylor. In the glow of the boy's creation, the

Sunao Tsuboi was 20 years old when he suffered terrible radiation burns in Hiroshima's atomic inferno

men suddenly look years younger. Taylor keeps his thin fingers on the dial as the atoms collide and fuse and throw off their energy, and the men take a step back, shaking their heads and wearing ear-to-ear grins.

"There it is," Taylor says, his eyes locked on the machine. "The birth of a star."

If we adults can build the Large Hadron Collider and our children can build fusion reactors in their basements that reach more then a million degrees what do you suppose the war-mongering psychopaths are up to? Do we have nuclear devices the size of apples or smaller? Of course we do. With the advances in technology and miniaturization between 1950 and 2000, a full fifty years, we have almost anything you might be able to imagine just now and if we don't have it, someone's making one or two in a quiet secluded laboratory, or maybe even a garage or basement somewhere in America.



#### MICHIGAN TEEN BUILDS NUCLEAR FUSION DEVICE

a high school senior has achieved nuclear fusion in his parents' basement

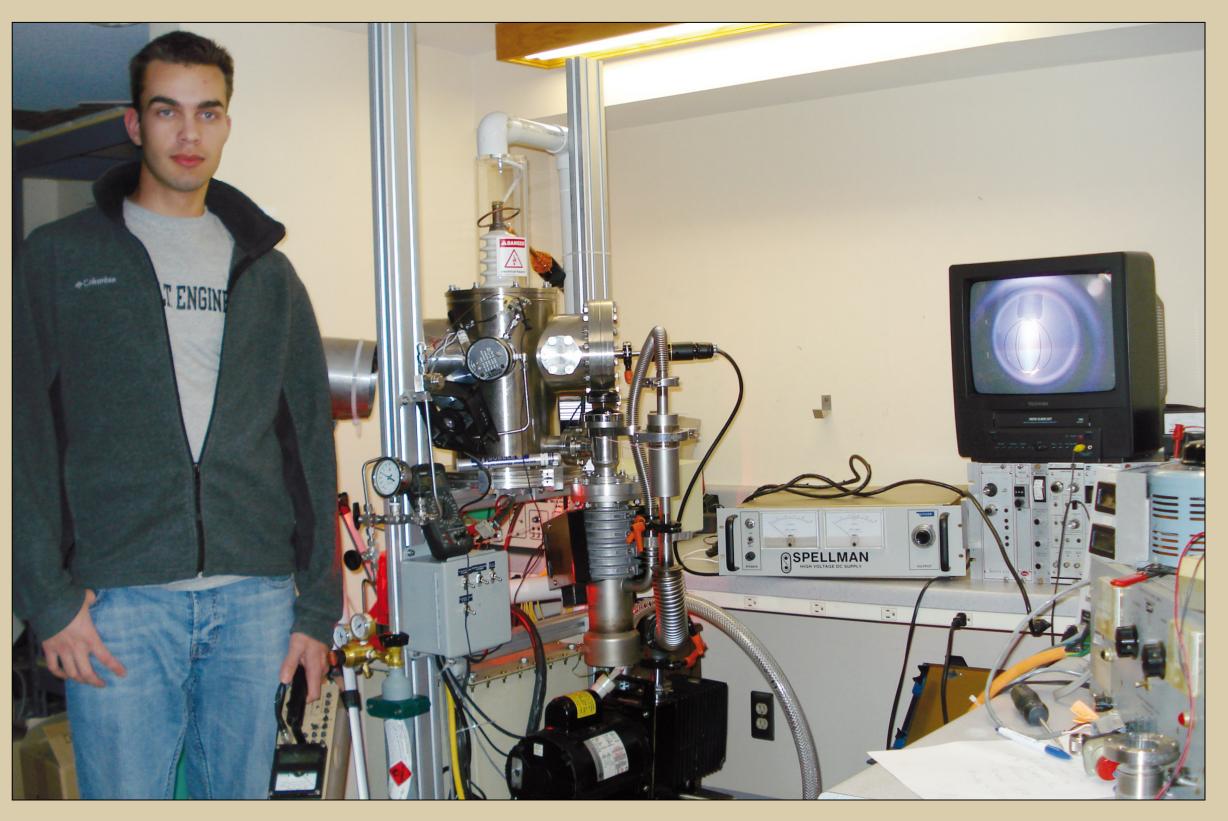
this month, Michigan Department of Health officials inspected the apparatus. "*They were impressed, and it checked out,*" Olsen said. The high school senior's goal of competing at the May 2007 International Science Fair in Albuquerque still has a flicker of a chance. Olsen was a finalist at the 50th Science & Engineering Fair of Metropolitan Detroit last week, but his entry "*Neutron Activation Using an Inertial Electrostatic Confinement Fusion Reactor*," will need to take top honors at the Michigan Science Fair in Flint on March 31 to keep his hopes alive.

When he's not running track and cross country at Stoney Creek High School, 17-year-old Thiago Olsen can be found tinkering with items such as high-voltage X-ray transformers, diffusion pumps, and neutron bubble dosimeters. Most of the devices were scrounged from eBay or built from scraps and pieces picked up at the local hardware store.

This teen's dream of fusing two hydrogen atoms by crashing them together to form a single helium nucleus has finally paid off. The proof lies in the images he has published showing a classic "*star in a jar*" pattern, indicating the presence of neutron bubbles suspended in plasma, the traditional by-product of nuclear fusion.

It's "kind of like the holy grail of physics," Olsen told reporters from the Detroit Free Press. His accomplishment was recorded by the Web site Fusor. net, where he has been officially declared the 18th member of the Neutron Club, an elite group of private individuals worldwide to have successfully "operated a neutron-producing fusor or fusion system" of their own manufacture.

Some parents might be nervous about the safety of a home-made device designed to create plasma at a temperature of around 200 million degrees -- several times hotter than the core of the sun. Earlier



#### SERGEANT MATTHEW TARTAGLIA SPEAKS OUT

Sgt. Matthew Tartaglia, a WTC responder, rescue worker, counselor, and FEMA consultant has made many remarkable statements related to the nuking of the WTC, and its China Syndrome aftermath. Seargent Tartaglia is from Perkasie Fire Company No. 1 on 5th Street in Perkasie, Pennsylvania and volunteered at Ground Zero.

Tartaglia, said he believes "tactical nukes" took down the towers, and was responsible for the high temperatures weeks and months later (but does not know of the existence of the China Syndrome.) His statements include these: "...*There were only certain parts of the site that you could not legally leave without going through decontamination....They would tackle you and take your camera away. I watched people be tackled. Most responders couldn't go down in the garages... the rescue people – when our clothes got so contaminated, we were told not to bring our clothes off that site. Don't wear anything on the site you're not prepared to leave there because it's contaminated." Note that "discarding clothing", and "going through decontamination" are standard nuclear industry methods of dealing with radiation-exposed individuals.* 

In 2005, Sgt. Tartaglia said, "My teeth are falling out." Like hanging skin resulting from a nuclear bomb, teeth falling out is a common symptom, months or years later, from nuclear radiation exposure. (Other factors can also possibly cause this, but are less likely.) Read about this Army veteran sent to Hiroshima, just days after it was nuked, to bulldoze roads. This was apparently much too soon to send Americans in to Hiroshima, but the PTB apparently cared as much about Americans as they did about the Japanese women and children who were nuked. I note that after the July 16, 1945 Trinity "A-Bomb" test, Dr. J. Robert Oppenheimer and General Leslie Groves did not return to Ground Zero until five weeks later on Sept 11, 1945. Yes, there is 911 again. So man did not walk again on the first alleged Ground Zero which resulted from the "Manhattan Project" until 9/11/45. You'll also find information about 3 veterans of atomic bomb tests in Nevada in the 1950s who had their teeth fall out within a few years of their radiation exposure. [To quickly find the 3 veterans cited, search on "teeth."] That article also indicates that the government lied to them as to the amount of radiation they had received. It is excerpted from the book, "They Never Knew: The Victims of Atomic Testing", by Glenn Alan Cheney. See also "The Plutonium Files" by Welsome, and the two books on the "Making of the A-Bomb", and the H-Bomb, "Dark Sun", both by Rhodes.

The book, "They Never Knew" includes the following remarkable quote that may be very relevant to 911 research. A whistleblower came forward decades later about the actual radiation exposure Army personnel were subjected to. In 1982, a former Army medic, Van R. Brandon, admitted that he had been ordered to keep two sets of books. "One set was to show that no one received an exposure above the approved dosimeter reading," he said. "The other set of books was to show what the actual reading was. That set of books was brought in a locked briefcase attached to [an officer]'s wrist by a set of handcuffs every morning." Army personnel were denied medical benefits and disability because the regime publicly used the "cooked" book. Do you think this same government has gotten more or less evil, corrupt, and duplicitous, in the ensuing decades – and in a matter that relates to



possibly irradiating tens of thousands of WTC workers, responders, and nearby residents.

#### MORE RARE TESTIMONY

The statements made by Mike Pecoraro, a WTC1 stationary engineer, and 911 survivor, are also remarkable. Pecoraro first knew something was wrong after observing flickering lights (EMP?), and then he ascended to the sub-basement C level, from below. He says, "There was nothing there but rubble, we're talking about a 50 ton hydraulic press gone!" Pecoraro and a co-worker "made their way to the parking garage, but found that it, too, was gone"... As they ascended to the B Level, one floor above, they "were astonished to see a steel and concrete fire door that weighed about 300 pounds, wrinkled up like a piece of aluminum foil" and lying on the floor. Now I assert that this too is a likely sign that a nuclear bomb went off. Perhaps only the multi-million degree temperature at the hypocenter, or neutron bombardment, is capable of doing that to that heavy steel door. The article continues: "They got us again," Mike told his co-worker, referring to the terrorist attack at the center in 1993. Having been through that bombing, Mike recalled seeing similar things happen to the building's structure. This last statement from Pecoraro, I assert may be corroboration of nuclear engineer/geologist Phil Schneider's statement that his inspection of the 1993 WTC explosion damage revealed to him that it was a nuclear blast, that may have gone awry, that is, was insufficient. Pecoraro states that as WTC2 collapsed, "there was a wind that came through the revolving doors that blew me [in the WTC1 lobby area] 100 feet to the far wall" Was this a nuclear pressure blast? You've probably seen the videos of A-bomb test sites, and resultant winds blowing down model houses, and heat causing fires.

More evidence of the likely nuking of the WTC, and China Syndrome aftermath, comes from no less than CNN's Larry King Show. This show aired on 10.06.2001 and was taped at the WTC and a nearby burn unit in the days prior to the air-date.



## RADIATION

## WITHOUT



## NEUTRON



## INVISIBLE



Regarding the likely China Syndrome of high heat three weeks later, Thomas Von Essen, NYC Fire Commissioner, says, at the WTC, "...it's so hot, it's a really hot fire. The steel has been hot for three weeks now. Tremendous heat below, you know. It's - the fire is not out down below." From my earlier articles, you know that this went on for exactly 100 days after 911. Exactly 100 days of raging fires before they were officially declared to be out.

At the Weill Burn Center at the Cornell Medical Hospital, Larry King interviews two women who received burns - without any fire - while trying to flee the World Trade Center 1 building running away as fast as they could.

King: "So, did you know you were on fire, in a sense?"

Yang: "No, I wasn't on fire, I think it was from the heat."

Mary Jo: "That's what we were told, it was the heat."

So like Felipe David, like the Hiroshima survivors, these two women have no clue as to why their skin was burned. And who told them "it was from the heat"? Note that King says "...fire in a sense." I assert that that sense is not fire per se, but bombardment by radiation (thermal rays, gamma rays, neutrons) that can cause heat at the skin, and damage the skin — if the flux is large enough (relevant parameters include distance, shielding, intensity and type of radiation).

King also interviews burn victim Brian Reeves, a security guard starting his rounds in the lobby of one of the towers. Reeves says: "I don't know when I got burned, but I just know when it knocked me over, there was -- there was something, the windows blew out. And when the windows blew out, I was on the ground, and like I said, there was a gust of wind. And when I opened my eyes, I seen a bright orange light." Reeves, feeling heat on his back, takes his jacket off and falls on the ground while fleeing.

I seen a bright orange light"

heard a loud noise and at the far end of the cubicles he saw a man running toward him with a fireball coming after him.

from people

from both

Dr. Roger Yurt of the Weill Burn Center says, "[Reeve's] worst burns were on his back, some burns up on his head. Burns on your arms also." My possible interpretation is the following. Likely his jacket was not on fire (note the burns on his head), and the jacket likely shielded him from receiving even more radiation! The source of which was apparently behind him, as his burns were mostly on his back, but also on his head. But if the flux of radiation is high enough, a person and/or their clothes will catch fire from the radiation. Many Hiroshima victims were immediately killed and left in a charred state. The "bright orange flash" he saw may well have been a flux of radiation onto his retina. This kind of thing is again known from Army veterans of the nuclear blasts in Nevada in the 1950's. In the worst cases, numerous Army personnel were forced to be, in ditches, only a football field away from an atomic bomb going off!



vaporized human beings ... only radiation does this ...

There is the issue of whether his jacket is on fire or not. [Months later, the media would morph the "bright orange light" into "fireball."] We must ask, did Reeves see the flash of, and receive the radiation, and air pressure blast from, a mini-nuke? Like the Hiroshima victims, he knows there had to be "something" but he/they didn't see what burned him/them

forget how FBI, or secret service agents, both on the scene in Dallas and later during depositions, threatened evewitnesses to President Kennedy's assassination, if they either said they clearly saw anything that didn't fit the official story or that there also were shots from the grassy knoll. Experts in eyewitness testimony tell us that the most accurate account is the closest in time to the event.

But when Brian tells his story months later, the reporter adds "fireball" several times in her telling the story. Even the direction of the alleged fireball is cleverly, and falsely, inserted: "... a fireball that roared down the elevator shaft." In actuality, from numerous lobby, and sub-basement witnesses, a non-fireball, a likely nuclear detonation, occurred below the lobby, and its effects traveled UP a few floors-and not down some 80-90 floors from the likely conventional explosion above. In any case, Reeves did not observe what may, or may not, have been traversing the elevator shaft. It appears that in the telling of the 911 survivors' accounts, the MSM, and the 911 pseudo-truth media are doing everything they can to add "fire" and "fireball" to the later retelling of numerous survivors' tales. And these survivors, who did not report "fire" initially, and not knowing about such things as radiation-induced burns-without any fire—may later start including this in their own accounts, after doctors, or reporters, or hidden (or not so hidden) handlers either keep repeating the "fire" and "fireball" memes to them; or perhaps in some cases financially rewarding the survivors with television interviews to start telling it the way their handlers prefer it. Never Remember how sub-basement 911 burn victim Felipe David's own accounting never mentions *"fire"* or *"fireball,"* but his alleged rescuer, William Rodriquez added fire or fireball to his accounting of Da-

vid's experiences. You will have to be the judge after reading survivors' accounts shortly after the event and then months later after the media twists the interviews. This is a crucial point in the likely tampering of witnesses to a heinous crime. It is particularly odious as this may be ongoing from deepcover intel assets in the major and internet *truth* media. But if the government/media had nothing to fear, or cover-up, why do they have to change so many burn victims' testimonies?

I believe we are only scratching the surface regarding evidence of the use of micro nuclear devices used on 911. Many fire and police witnesses fear losing their jobs, or their pensions.

Beginning a month after 911, NYC Fire Commissioner von Essen's office took depositions of 503 fire personnel, port authority police and EMT first responders. The report is 12,000 pages long and rarely read. It was deliberately excluded from the 911 Commission, and NIST, reports.

Could they be hiding evidence, not of the widely known explosions/controlled demolition, but specifically of the nuking of the towers and 3000 people? After von Essen's 503 witness interviews, former CIA director Robert Woolsey was inserted into this in 2002, as the NYC Fire Department's *"Anti-terrorism Consultant."* It's interesting that Wikipedia omits this job in his bio. He issued a gag order, under

threat of job loss and worse, down the ranks, under the guise of "*anti-terrorism*." This report is the one that includes EMT, Patricia Ondrovic' heavily redacted, but remarkable interview. Recall my analysis dem-

onstrated she witnessed Electromagnetic Pulse from a nuclear bomb causing flickering lights and making cars catch fire, for no apparent reason (*toasted cars*), right near her, and also jets shooting down other jets out who had witnessed evidence of the nuclear evidence of the World Trade Center demolition, and to then silence them with sophisticated means of social manipulation. Perhaps just too many to kill so first



in the sky over the Hudson. Was Woolsey in charge of the redacting of hers and other testimony? I make the assertion that the very purpose of interviewing these 503 911 witnesses and responders was to find try to silence them. It would be good if some real 911 researcher could read them all or search for when portions are redacted. My scanning them indicates that numerous witnesses reported "*explosions*" but

this was not reason enough for redaction. There is other eyewitness evidence of the heat and radiation wave which emanates outwards from a nuclear blast from numerous people who happened to be in the

vicinity of the towers.

This article states that "John Axisa, who was getting off a commuter train to the World Trade Center, ... [after the alleged first plane hit]... Then there was a second explosion, and he felt heat on the back of [his] neck." Note the timing of the second explosion he heard — nothing from which was seen exiting the building — and yet he felt the heat at that exact time. This again could only be from a nuclear device.

Also at a 911 internet forum, a forum administrator named Quest noted that, "I have an acquaintance who was a NYC cop on 911 when the second tower came down. He was 3 blocks away and told me there was incredible heat during the collapse."

Heat indeed is the thing that would be felt furthest out from a nuclear blast. Read this account of physicist Dr. Phillip Morrison who was 10 miles from the Trinity nuclear test site. He said, "Suddenly, not only was there a bright light, but where we were, 10 miles away, there was the heat of the sun on our faces."

This was before the Sun came up and he's describing the invisible nuclear radiation heat. Imagine a bomb 100 times or 1000 times smaller. So we see the similarity of statements, regarding heat during a nuclear blast, made by the Trinity witness, John Axisa, Quest's policeman, Felipe Da-

vid, and the three burn victims interviewed by Larry King. I have written that the nuclear devices used on 911 were 1/100th to 1/1000th (*each*) of the intensity of the Trinity blast or smaller (*with several per tower*  *used, and only one to a few for each of the smaller World Trade Center buildings*) and we also have some shielding by the building. So the distance that radiation would be able to propagate would be vastly less than the 10 miles felt by Dr. Morrison, where the test was in the open air. Those in the towers, and nearby, would indeed be bombarded by the unseen radiation from a micro-nuclear device.

test for radiation which is not mentioned? And what caused the 146 cases of burns that were not due to equipment handling? And how many people had third degree burns among the responders? Or is this classified information, related to what really was happening at the World Trade Center, even after its demolition? This study is troubling.

The proven existence of mini-nukes and micro-nukes, the massive outward

the very high heat and molten steel witnessed for 100 days after 911, and photographed, the clothing discarded, and decontamination procedures, my detailed explanation of Ondrovic' account of Electromagnetic Pulse and resultant car fire, and the door exploding into her as World Trade Center 5 and 6 were being exploded from within, the micro-or nano-fine particle size or what are referred to as aerosols, the anomalous levels of uranium, thorium, tritium, sodium, potassium, zinc and other elements and much

There has been at least one study published of World Trade Center responders' medical problems treated on scene, from 9/14/01 to 11/20/01, at the World Trade Center. This was published in May-June, 2005, of "Prehospital and Disaster Medicine," and was authored by K.R. Peritt, W.L. Boal, and the Helix Group, Inc. This third author listed is a media corporation. This study related to a 10 week period whereby a Federal government agency, "the United States Public Health Service (USPHS), deployed Disaster Medical Assistance Teams (DMATs) and the Commissioned Corps to provide on-site, primary medical care to anyone who presented." The authors conclusion admits, the "USPHS visits probably were skewed to milder complaints when compared to analyses of employer medical department reports or *hospital cases*..."

This appears to mean that the more serious cases went straight to the hospital. There were 9,349 on-site patient visits, which included some surrounding residents. There were 30 cases of nausea and vomiting. Let us look at skin conditions reported. There were two-hundred and fifty-three (253) 1<sup>st</sup> or 2<sup>nd</sup> degree burns, of which 107 or 42% were said to be related to equipment use. There is no word on what caused the other 58% of these burns. In addition, there are 132 cases of "*other*" skin problems reported. There is not a single case of third degree burns, the most serious, and no commentary on why. Were there people with more serious burns that went straight to the hospital, and thus are not counted?

There are some curious statistics: "*Other injury or illness: 696 cases*," and "*Not classifiable as an injury or illness: 920 cases*." That's quite a lot of cases that are either "*other*" or "*not classifiable*." Seventeen percent (17%). Why such a high percentage? They're not psychological because they reported 78 cases of this. Is any medical condition being covered up? Did they

explosions seen, the vaporization of a steel press, the wrinkling of a steel door into foil, spherical blast wave destruction, the nuclear meteorite (*parts of 4 storeys fused together at extreme temperatures, see page 226*) the feeling of heat without fire according to numerous witnesses, the burned or hanging skin — again without fire, the responders' teeth later falling out, the vaporized building contents, the 1157 vaporized people, the massive evidence of the China Syndrome of residual reacting fragments causing

The observed American military helicopters and planes directing the initial explosions, and the final nuclear destruction prove that this was not done by Arabs, Muslims, Iranians, Israelis, Russians, or Chinese. As with the Kennedy Assassination, this massive set of actions, and massive cover-up, could only have been perpetrated by the so-called government of the United States, and not by any small rogue elements therein. Complicit in the original act, and/or its cover-up, are all the branches of the federal government, its military, and intelligence agencies, and the Main



more, all indicate the federal regime knows numerous mini-nuclear bombs were detonated in the World Trade Center on 911. Scientific data have also been cited, including —AVIRIS, LIDAR, the USGS data, the Delta Group data, seismic readings before collapse, Tritium finding (*UCAL/Berkeley, and subsequent Tahil study*), and the now exploding number of rare cancers among responders, including thyroid, leukemia, myeloma, nonhodgkins lymphoma, pancreatic and lymph cancer—all common among radiation victims.

The preponderance of the evidence demonstrates that the federal government of the United States of America did explode nuclear bombs inside most of the World Trade Center buildings on 9.11.2001. Furthermore, there was a resultant China Syndrome of nuclear reacting fragments releasing ionizing radiation, and high heat, for 100 days after 911, causing molten steel, and radiation exposure to thousands of responders and NYC residents. This was an act of treason, conspiracy, mass murder, genocide, and a ruse for waging war on innocent peoples around the world—crimes against humanity, and a ruse for blatantly eradicating American citizens freedoms and rights. The 911 World Trade Center nuclear holocaust was not likely even the first time the American regime did this to its own citizens.

The 911 perpetrators have used and are using limited hangouts and psyops to keep the people from knowing the truth. These hangouts, ultimately from the U.S. regime's intelligence agencies include the dopiest theories imaginable with no supportive science. The War Began In 2001 with 911. It's Now 2012 And The End Game Is Nearing. The System Is Now Activating. You Are Going To Die. Or Fight To Survive.

> Educate Yourself

Stream Media, and even much of the so-called alternative or internet media which is also laden with intel agents posing as truthers while pushing the hangouts listed above. The people of the world must get together, in what may be their final hour, and act literally to save themselves from extermination from the handful of monsters that control humanity. Nature has demonstrated that individuals trained to be fearful can all come together, and overcome this fear, and act and defeat the small number who had previously seemed to be so invincible and bloodthirsty. We are indeed likewise in the jaws of these monsters, and have been for a long time; but likewise again, it is still possible to break free, and be free. We must try. Like this last video, there are so many more of us than of them.

## TERMINATOR 3 RISE MACHINES



As I revisited this whole nuke thing after all these years and was mulling over the photos of all those singed and bent vehicles, my friend Connie Smith -- a long-time 911 researcher some of you may know -- dropped me a note reminding me of something I'd completely forgotten about: the fascinating case of EMT Patricia Ondrovic.

Connie reminded me of an interview with Ondrovic, published back in October 2001 (and which I'd read circa '04). When I expressed an interest to reread it, she dug up a copy and sent it to me. Ms Ondrovic's account is truly 'bizarre', and a testament to the fact that there were forces at play on 911 that modern technology — indeed, mainstream science -- simply will not explain. Please read the statements carefully. It's one a helluva wake-up call.

As this terrified woman was running pell-mell away from the first collapsing tower -- her hair, coat and feet on fire -- Ms Ondrovic witnessed vehicles parked along the street spontaneously erupt into flames. She even witnessed an aircraft disappear while in flight: *"I saw something in the sky, it was a* 



plane, but it was way out. It looked like it was over Jersey or something, then it wasn't there anymore. I saw a small fireball, and it was gone. I saw two other planes. One came in one way, and the other came in the other way, and there was a plane in the middle that was way far off in the distance. Then the plane in the middle just disappeared into a little fire ball. It looked like the size of a golf ball from where I could see it. And the other two planes veered off into opposite directions. I just kept on running north." And she's got a lot more to say.

Then there's this other chap Connie knows (a famous author) who'd interviewed another woman who had witnessed "*people engulfed in some sort of fireball and disintegrating.*" Connie just dug up the following note from this person to her, and is checking to see if I may get in touch with him directly.

"I interviewed a Red Cross worker in Dallas whose name escapes me at the moment but I have her report in my files. She told me she was sent to NYC by the Red Cross to help survivors of the WTC. She said the thing that most stuck out in her mind after interviewing dozens of people was the number that told her of looking back and seeing people engulfed in some sort of fireball and disintegrating."

Obviously, a collapsing building cannot produce such an effect. But a micro nuclear shaped charge placed in the

going to die, saying to myself 'God, please give me strength.' When I went in, I told them it was an explosion," David, with his skin hanging in tatters may have been the person helped to safety by William Rodriguez. Skin dripping off the body was mentioned by several 911 victims. Various radiation types can cause a person to just feel heat, then pain and then the skin will be damaged. The skin may be vaporized, charred or left hanging. Shirley Hoofard was a 38-year-old Red Cross worker in the Dallas area on 911. Hoofard was ordered to New York to begin working with victims and their families. *She also was ordered not to reveal any information to the media or the public*.

"It was very difficult to deal with," she recalled. "The only way I got through it was to shut down. I didn't think or feel. I just did what I did. By the middle of January [2002] I said 'I have to go home.""

Shirley Hoofard went on to explain the most perplexing and long-lasting disturbing thoughts she was having. She just could not get out of her mind what some of the victims had told her. "Several victims told me they saw people engulfed in a fireball and disintegrating. One man said he was at work when he heard a loud noise and at the far end of the cubicles he saw a man running toward him with a fireball coming after him. The running man just exploded, flying into pieces... I heard stories like that from people from both towers... I don't know the physics but at what temperature does a human vaporize?"

basement to blow out the central core columns could. A small nuclear device could also explain the pyroplasmic cloud seen above the WTC, the disintegration and warping of heavy steel beams and the pulverization of so much concrete, not to mention the blood cell cancer now suffered by some of the first responders.

Folks, this obviously isn't Nanothermite at work here. I can't even begin to guess what it could be. DEWs, or some similar 'exotic' technology makes no sense at all. As my old Alaskan buddy from Arkansas would've exclaimed, "Wayl, ahd be go to hayl!"

Felipe David working for Aramark Corp. tending vending machines in a basement of the North Tower recalled, "That day I was in the basement in sub-level I sometime after 8:30am. Everything happened so fast, everything moved so fast. The building started shaking after I heard the explosion below; dust was flying everywhere and all of a sudden it got real hot. I threw myself onto the floor, covered my face because I felt like I was burned. I sat there for a couple of seconds on the floor and felt like I was

# THE U.S.G.S. DUST IS EVIDENCE.



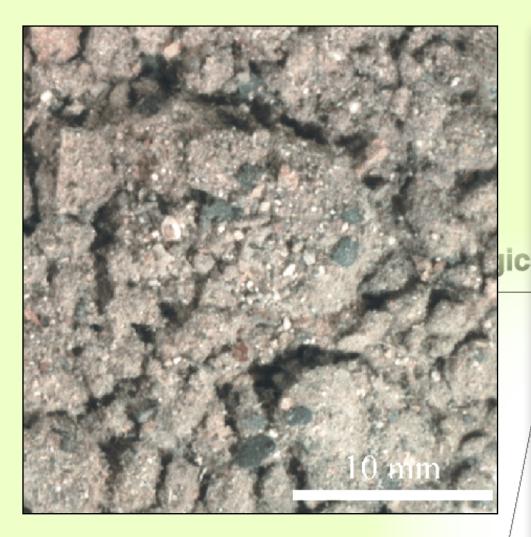


### EXAMINING THE USGS DUST

When the correlations of the elements in the dust are examined; uranium, thorium, sodium, potassium, vanadium, antimony, strontium, barium, zinc and others, we find anomalous conditions within their correlated levels across numerous locations mapped by the USGS in lower Manhattan. These correlations are complex chemical analyses of dust samples [See 'Dust' Parts 1-3 linked below] using scanning electron microscopy (SEM) for inspection and interpretation of the actual elements in the dust as seen in the chart at right.

We examine these elements to see how they interact together plotting there levels across several locations and developing the ability to predict those levels with accuracy because we see a human hand in the elements, fingerprints, if you will. We see perhaps ternary fission and we also may be seeing quaternary fission. These are advanced forms of fission not usually seen. We may also be seeing fusion. The dust provides the basis, the dust as a whole, when the elements within across varying locations are taken together examining dozens of elements across dozens of locations as they interact in that complex mixture of chemical stew, with a clever and secretly hidden human hand obviously lurking in the mix. This provides the foundation for the assertions made herein.

Chemistry Table One (right) is one of the least detailed or less intricate charts published by the USGS. There are dozens of charts and data compiled in these voluminous reports. It lists the elements in the left column and simply shows their minimums, maximums and mean or average. The minimum and maximum percentages and parts per million are important but even more pivotal is the way these elements are distributed across dozens of mapped sites and their individual actual quantities as they relate to one another in a chemical stew, but a chemical stew that reveals human choreography for the nuclear physicist willing to carefully reconstruct the chemistry. The dust tells a story and I insist that the story told reveals a nuclear component of some type; ternary and quaternary fission almost assuredly and fusion as well perhaps, but an advanced technology we haven't yet seen (or discovered and proven in the press, yet) on the battlefield let alone in the very



Optical image (above) of dust and debris collected 0.3 kilometers, much less than a mile from ground zero, is noted as Sample Number WTC01-27, the location circled at the lower right.

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

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center of the worlds financial capitol where millions of people live and work every day. But some form of enriched uranium was being used in Iraq as Dr. Christopher Busby points out. While very small parts of the analysis in 'Dust' are in error the majority of the science, physics and chemistry are accurate and the minor errors don't affect the overall assertions made on pages 19 through 42 so it's still a very good place to start.

#### Dust - The Series

Dust - Part 1: http://www.datafilehost.com/download-94750b11.html

Dust - Part 2: http://www.box.net/shared/h81kjfkvg9

Dust - Part 3: http://www.box.net/shared/td6593g25y

WTC 01-20         WTC 01-36         WTC 01-08         WTC 01-09           con %         14.2         11.7         15.0         15.5           lclum %         19.44         21.30         20.73         26.01           ggnesium %         2.59         2.88         6.94         3.23           n%         1.25         1.38         1.25         0.55           minum %         2.55         2.86         2.92         3.56           organic) %         2.68         2.32         2.48         2.45           CO3)%         1.27         1.50         1.89         1.86           dium %         1.16         0.58         0.12         0.16           diam %         0.46         0.46         0.28         0.32           anium %         0.25         0.23         0.21         0.28           %         0.10         0.11         0.14         0.19           %         0.10         0.11         0.14         0.19           %         0.22         0.02         0.01         0.01           %         0.10         5.7         16.9         15.8         13           rition Loss%         15.7         16	WTC 01-20         WTC 01-36         WTC 01-08         WTC 01-09           licon %         14.2         11.7         15.0         15.5           alcium %         19.44         21.30         20.73         26.01           agnesium %         2.59         2.88         6.94         3.23           aftur %         5.51         5.77         1.39         1.23           on %         1.25         1.38         1.25         0.55           uminum %         2.55         2.86         2.92         3.56           (organic) %         2.68         2.32         2.48         2.45           (CO3)%         1.27         1.50         1.89         1.86           odium %         1.16         0.58         0.12         0.16           otassium %         0.46         0.46         0.28         0.32           ofum %         0.10         0.11         0.14         0.19           %         0.02         0.02         0.01         0.01           nition Loss%         15.7         16.9         15.8         13           arium ppm         1330         1400         57.4         101           sad ppm         153	WTC 01-20         WTC 01-36         WTC 01-08         WTC 01-09           ilicon %         14.2         11.7         15.0         15.5           alcium %         19.44         21.30         20.73         26.01           agnesium %         2.59         2.88         6.94         3.23           ulfur %         5.51         5.77         1.39         1.23           on %         1.25         1.38         1.25         0.55           uminum %         2.55         2.86         2.92         3.56           (organic) %         2.68         2.32         2.48         2.45           (CO3)%         1.27         1.50         1.89         1.86           odium %         1.16         0.58         0.12         0.16           otassium %         0.46         0.46         0.28         0.32           tanium %         0.25         0.23         0.21         0.28           n %         0.10         0.11         0.14         0.19           %         0.02         0.02         0.01         0.01           intion Loss%         15.7         16.9         9.13         11.7           inad ppm         13.6	WTC 01-20         WTC 01-36         WTC 01-08         WTC 01-09           licon %         14.2         11.7         15.0         15.5           aldum %         19.44         21.30         20.73         26.01           agnesium %         2.59         2.88         6.94         3.23           on %         1.25         1.38         1.25         0.55           on %         1.25         1.38         1.25         0.55           (organic) %         2.68         2.32         2.48         2.45           (CO3)%         1.27         1.50         1.89         1.86           odium %         1.16         0.58         0.12         0.16           otassium %         0.46         0.46         0.28         0.32           otassium %         0.46         0.46         0.28         0.32           otassium %         0.46         0.48         317         472           %         0.02         0.02         0.01         0.01           nition Loss%         15.7         16.9         15.8         13           arium ppm         153         159         10.3         11.2           opper ppn         176		Indoor dust samples Girder coatings					
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0.25 0.23 0.21 0.28 n % 0.10 0.11 0.14 0.19 % 0.02 0.02 0.01 0.01 nition Loss% 15.7 16.9 15.8 13 arium ppm 390 438 317 472 rontium ppm 1330 1400 57.4 101 sad ppm 153 159 9.13 11.7 opper ppm 176 95 10.3 12.8 erium ppm 61.6 70.2 202 356 titum ppm 44.1 52.6 134 243 94 107 153 86.5 <b>VTC01-14</b> <b>WTC01-13</b> <b>WTC01-26</b> <b>WTC01-13</b> <b>WTC01-27</b> <b>C01-29</b> <b>GROUND</b> <b>ZERO</b> <b>GROUND</b> <b>ZERO</b> <b>WTC01-28</b> <b>WTC01-27</b> <b>C01-29</b> <b>GROUND</b> <b>ZERO</b> <b>WTC01-28</b> <b>WTC01-27</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-27</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-27</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-28</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> 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<b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01-29</b> <b>WTC01</b>	licon %	14.2	11.7	15.0	15.5		
fur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         dium %       1.16       0.58       0.28       0.32         anium %       0.25       0.23       0.21       0.28         n%       0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356     <	Iftur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         uminum %       2.55       2.86       2.92       3.56         (corganic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium %       1.16       0.58       0.12       0.16         odium %       1.16       0.58       0.21       0.28         anium %       0.25       0.23       0.21       0.28         anium %       0.25       0.23       0.21       0.28         n%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         nor ppm       1330       1400       57.4       101       10.3         ad ppm       153       159       9.13       11.7       153         opper ppm       176       95       10.3       12.8       10.4         ppm       94       107       153       86.5	Murror       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         uminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.20       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         nrium ppm       390       438       317       472         orontum ppm       153       159       9.13       11.7         ppper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         ytrue ppm       94       107       153       86.5     <	Murror       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         uminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium %       1.16       0.58       0.12       0.16         datassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         n'%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         nrium ppm       390       438       317       472         orppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppm       94       107       153       86.5	licium %	19.44	21.30	20.73	26.01		
fur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         minum %       2.55       2.86       2.92       3.56         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.10       15.7       16.9       15.8       13         rium ppm       706       823       444       378       376         c ppm       1330       1400       57.4       101       34         ad ppm       153       159	fur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         minum %       2.55       2.86       2.92       3.56         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.10       1.17       15.8       13         mium ppm       390       438       317       472         ontium ppm       706       823       444       378       243         oppen ppm       176       95       10.3       12.8       107         ppm       94       107       153       86.5       366          6       7	fur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         minum %       2.55       2.86       2.92       3.56         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.02       0.01       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       15.7       16.9       15.8       13         ontim ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8	fur %       5.51       5.77       1.39       1.23         n %       1.25       1.38       1.25       0.55         minum %       2.55       2.86       2.92       3.56         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         dium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.10       15.8       13         mirum ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       61.6       70.2       202       356         rium ppm       61.6       70.2       202       356         wTC0	gnesium %	2.59	2.88	6.94	3.23		
minum %       2.55       2.86       2.92       3.56         organic) %       2.68       2.32       2.48       2.45         CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         organic) %       0.02       0.02       0.01       0.01         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       61.6       70.2       202       356         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	uminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         anium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         0.%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppm       94       107       153       86.5	Iminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         witton Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppn       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         ytt       107       153       86.5       WTC01-26         WTC01-08       0       0       0       0 <td>Iminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         witton Loss%       15.7       16.9       15.8       13         riw ppm       390       438       317       472         ontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppn       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         ytt       107       153       86.5       WTC01-26         WTC01-08       6       WTC01-14       WTC01-27</td> <td>lfur %</td> <td>5.51</td> <td>5.77</td> <td>1.39</td> <td>1.23</td> <td></td>	Iminum %       2.55       2.86       2.92       3.56         (organic) %       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         witton Loss%       15.7       16.9       15.8       13         riw ppm       390       438       317       472         ontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppn       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         ytt       107       153       86.5       WTC01-26         WTC01-08       6       WTC01-14       WTC01-27	lfur %	5.51	5.77	1.39	1.23		
organic) %         2.68         2.32         2.48         2.45           CO3)%         1.27         1.50         1.89         1.86           dium %         1.16         0.58         0.12         0.16           tassium %         0.46         0.28         0.32           anium %         0.25         0.23         0.21         0.28           0%         0.10         0.11         0.14         0.19           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.02         0.02         0.01         0.01           %         0.03         15.7         16.9         1.3         11.7 </td <td>(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium %       1.16       0.58       0.12       0.16         otium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         n %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         arium ppm       390       438       317       472         rontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         trium ppm       94       107       153       86.5</td> <td>(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium%       1.16       0.58       0.12       0.16         otassium%       0.46       0.46       0.28       0.32         anium%       0.25       0.23       0.21       0.28       0.32         n%       0.10       0.11       0.14       0.19       Mong         %       0.02       0.02       0.01       0.01       Mong         inition Loss%       15.7       16.9       15.8       13         promotium ppm       390       438       317       472         rontium ppm       706       823       444       378         no ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         opper ppm       76       95       10.3       12.8         etrium ppm       61.6       70.2       202       356         wtrC01-08       6       WtrC01-26       WtrC01-28         WtrC01-08       6       WtrC01-14       WtrC01-27         % 37A       CO1-20</td> <td>(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium%       1.16       0.58       0.12       0.16         other       0.46       0.46       0.28       0.32         anium%       0.25       0.23       0.21       0.28         n%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         nrium ppm       390       438       317       472         rontium ppm       706       823       444       378         roppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppper ppm       61.6       70.2       202       356         strium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5</td> <td>n %</td> <td>1.25</td> <td>1.38</td> <td>1.25</td> <td>0.55</td> <td></td>	(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium %       1.16       0.58       0.12       0.16         otium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         n %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         arium ppm       390       438       317       472         rontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         trium ppm       94       107       153       86.5	(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium%       1.16       0.58       0.12       0.16         otassium%       0.46       0.46       0.28       0.32         anium%       0.25       0.23       0.21       0.28       0.32         n%       0.10       0.11       0.14       0.19       Mong         %       0.02       0.02       0.01       0.01       Mong         inition Loss%       15.7       16.9       15.8       13         promotium ppm       390       438       317       472         rontium ppm       706       823       444       378         no ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         opper ppm       76       95       10.3       12.8         etrium ppm       61.6       70.2       202       356         wtrC01-08       6       WtrC01-26       WtrC01-28         WtrC01-08       6       WtrC01-14       WtrC01-27         % 37A       CO1-20	(organic)%       2.68       2.32       2.48       2.45         (CO3)%       1.27       1.50       1.89       1.86         odium%       1.16       0.58       0.12       0.16         other       0.46       0.46       0.28       0.32         anium%       0.25       0.23       0.21       0.28         n%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         nrium ppm       390       438       317       472         rontium ppm       706       823       444       378         roppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppper ppm       61.6       70.2       202       356         strium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	n %	1.25	1.38	1.25	0.55		
CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       706       823       444       378         %       ppr       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppm       94       107       153       86.5 <td>CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5</td> <td>CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         iition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         WTC01-10       Mtrone       Mtrone         WTC01-08       GROUND       State       Mtrone         % 37A       ZERO       State       WTC01-27     &lt;</td> <td>CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         iition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         6       WTC01-14       WTC01-26         WTC01-08       GROUND       State       WTC01-13         % 37A       2       Age       WTC01-27</td> <td>uminum %</td> <td>2.55</td> <td>2.86</td> <td>2.92</td> <td>3.56</td> <td></td>	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         nition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         iition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         WTC01-10       Mtrone       Mtrone         WTC01-08       GROUND       State       Mtrone         % 37A       ZERO       State       WTC01-27     <	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         iition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         6       WTC01-14       WTC01-26         WTC01-08       GROUND       State       WTC01-13         % 37A       2       Age       WTC01-27	uminum %	2.55	2.86	2.92	3.56		
CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         i%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       16.6       70.2       202       356         rium ppm       61.6       70.2       202       356         ppm       94       107       153       86.5 <td>CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-26         WTC01-08       WTC01-14       WTC01-13         %       37A       GROUND       Stato       WTC01-27         %       37A       ZERO       Stato       WTC01-2</td> <td>CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         WTC01-10       Murcon-Mark       Murcon-Mark         WTC01-14       Murcon-Mark       WTC01-27         WTC01-20       GROUND       Subon       WTC01-27</td> <td>organic) %</td> <td>2.68</td> <td>2.32</td> <td>2.48</td> <td>2.45</td> <td>am</td>	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-26         WTC01-08       WTC01-14       WTC01-13         %       37A       GROUND       Stato       WTC01-27         %       37A       ZERO       Stato       WTC01-2	CO3)%       1.27       1.50       1.89       1.86         dium %       1.16       0.58       0.12       0.16         tassium %       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-08         WTC01-10       Murcon-Mark       Murcon-Mark         WTC01-14       Murcon-Mark       WTC01-27         WTC01-20       GROUND       Subon       WTC01-27	organic) %	2.68	2.32	2.48	2.45	am	
tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         %       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         cppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         ppm       94       107       153       86.5         WTC01-126         Mttrong         Mttrong         Mttrong         Mttrong <td>tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         16.9       15.8       13       13         nition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5</td> <td>tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         16.9       15.8       13       13         nition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         ppm       94       107       153       86.5</td> <td></td> <td>1.27</td> <td>1.50</td> <td>1.89</td> <td>1.86</td> <td></td>	tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         16.9       15.8       13       13         nition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	tassium %       0.46       0.46       0.28       0.32         anium %       0.25       0.23       0.21       0.28         1%       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         16.9       15.8       13       13         nition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         ppm       94       107       153       86.5		1.27	1.50	1.89	1.86		
anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         %       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       15.7       16.9       15.8       13         7       6       823       444       378       0.00         7       95       10.3       11.7       0.00         90       153       159       9.13       11.7         90       95       10.3       12.8       0.00         100       153       86.5       0.00       0.00         000000000000000000000000000000000000	anium % 0.25 0.23 0.21 0.28 0.10 0.11 0.14 0.19 0.02 0.02 0.02 0.01 0.0	anium %       0.25       0.23       0.21       0.28         %       0.10       0.11       0.14       0.19         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         6       0.02       0.02       0.01       0.01         15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppn       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	dium %	1.16	0.58	0.12	0.16		
1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	1%       0.10       0.11       0.14       0.19         %       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	1%       0.10       0.11       0.14       0.19         0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	1%       0.10       0.11       0.14       0.19         0.02       0.02       0.01       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         ontium ppm       390       438       317       472         ontium ppm       706       823       444       378         c ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	tassium %	0.46	0.46	0.28	0.32		
%       0.02       0.02       0.01       0.01         ition Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	%       0.02       0.02       0.01       0.01         ittion Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	6     0.02     0.02     0.01     0.01       ition Loss%     15.7     16.9     15.8     13       rium ppm     390     438     317     472       ontium ppm     706     823     444     378       ic ppm     1330     1400     57.4     101       ad ppm     153     159     9.13     11.7       pper ppm     176     95     10.3     12.8       rium ppm     61.6     70.2     202     356       rium ppm     61.6     70.2     202     356       rium ppm     94     107     153     86.5	6         0.02         0.02         0.01         0.01           ition Loss%         15.7         16.9         15.8         13           inium ppm         390         438         317         472           ontium ppm         706         823         444         378           ic ppm         1330         1400         57.4         101           ad ppm         153         159         9.13         11.7           pper ppm         176         95         10.3         12.8           rium ppm         61.6         70.2         202         356           rium ppm         44.1         52.6         134         243           ppm         94         107         153         86.5	anium %	0.25	0.23	0.21	0.28		
Intol Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	III.011 L055%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	III.01 LOSS 1       15.7       10.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5	1100 L055%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5             C01-22       WTC01-10       Murature       WTC01-26       WTC01-28         WTC01-08       6       WTC01-14       WTC01-14       WTC01-27         & 37A       70       6       Suton       WTC01-27         C01-20       GROUND       Suton       Suton       WTC01-27         & 37A       2       Ost       WTC01-27       WTC01-28	%	0.10	0.11	0.14	0.19		
Intol Loss%       15.7       16.9       15.8       13         rium ppm       390       438       317       472         ontium ppm       706       823       444       378         ic ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	III.01 L055%       15.7       16.9       15.8       13         rrium ppm       390       438       317       472         rontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         orium ppm       61.6       70.2       202       356         rrium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	III.01 L055%       15.7       10.9       13.8       13         rium ppm       390       438       317       472         rontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         npper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       94       107       153       86.5         WTC01-10         WTC01-26         WTC01-08       MTC01-14         WTC01-08       MTC01-14       WTC01-27         % 37A       GROUND       Stato       WTC01-27         % 37A       GROUND       Stato       WTC01-27	III.01 L055%       15.7       10.9       13.8       13         rium ppm       390       438       317       472         rontium ppm       706       823       444       378         nc ppm       1330       1400       57.4       101         ad ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	%	0.02	0.02	0.01	0.01	Wor	
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hc ppm       1330       1400       57.4       101         hd ppm       153       159       9.13       11.7         pper ppm       176       95       10.3       12.8         rium ppm       61.6       70.2       202       356         rium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5	nc ppm       1330       1400       57.4       101         ead ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         trium ppm       44.1       52.6       134       243         r ppm       94       107       153       86.5	nc ppm       1330       1400       57.4       101         bad ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         trium ppm       44.1       52.6       134       243         ppm       94       107       153       86.5         WTC01-10         Mtrong         WTC01-10         WtrC01-26         WTC01-26         WTC01-26         WTC01-14         WTC01-14         WTC01-13         Satt         MTC01-13         Satt         WTC01-20         GROUND         Sutton         Satt         MTC01-13         Satt         MTC01-20         GROUND         Satt         Satt         Satt         Satt         Sat	nc ppm       1330       1400       57.4       101         bad ppm       153       159       9.13       11.7         opper ppm       176       95       10.3       12.8         erium ppm       61.6       70.2       202       356         trium ppm       44.1       52.6       134       243         r ppm       94       107       153       86.5         WTC01-10         WTC01-26         WTC01-26         WTC01-26         WTC01-14         WTC01-14         WTC01-13         Sand         Automation of the second of the se						nomas	
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WTC01-10	C01-22 WTC01-08 6 WTC01-14 WTC01-14	WTC01-10         Murray           C01-22         7         Sarcia, WTC01-26         WTC01-26           WTC01-08         6         WTC01-14         Sart         WTC01-13           WTC01-09         1         5         WTC01-14         WTC01-13         Sart           C01-20         GROUND         Sutton         WTC01-27         Sart	WTC01-10       Munsu         C01-22       7       Backs, WTC01-26       WTC01-26         WTC01-08       6       WTC01-14       Backs, WTC01-14       WTC01-13         WTC01-09       1       5       WTC01-14       WTC01-13       Fat         WTC01-20       GROUND       Futton       WTC01-27       Fat         Uberty       3       2       Oet       WTC01-27		10200000	0.000			WTC	
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C01-20 C01-20 C01-19 C01-19 C01-19 C01-19 C01-19 C01-19 C01-27 C01-27 C01-27 C01-27 C01-27 C01-27 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-27 C00 C01-19 C01-27 C00 C01-19 C01-27 C00 C01-19 C01-27 C01-28 C01-36 C01-19 C01-36 C01-19 C01-36 C01-19 C01-36 C01-19 C01-10 C0	C01-19 2 2 WTC01-28 & 37B TC01-36 WTC01-16 WTC01-16 WTC01-16 WTC01-18 WTC01-17 WTC01-17	WICOI-18 Contraction of the WICOI-17	WTC01-17 %	WTC01- & 37A C01-20 C01-20 C01-19 & 37B TC01-36	-08 6 1-09 1 3 2 Cotar WTC	5 GROUND ZERO 4 WTC 01-18	WTC 01-14	1-26 WTC01- WTC01-27 WTC01-27 WT 01-16	13 C01-28	



Information presented in this comprehensive USGS study was first made available to the World Trade Center emergency response teams on September 18, 2001 (*thermal hot spot information*), and September 27, 2001 (*maps and compositional results*).

## THE USGS CHEMISRTY TABLES

The Airborne Visible / Infrared Imaging Spectrometer (AVIRIS), a hyperspectral remote sensing instrument, was flown by JPL/NASA over the World Trade Center area on September 16, 18, 22, and 23, 2001. A 2-person USGS crew collected samples of dusts and airfall debris from more than 35 localities within a 1-km radius of the World Trade Center site on the evenings of

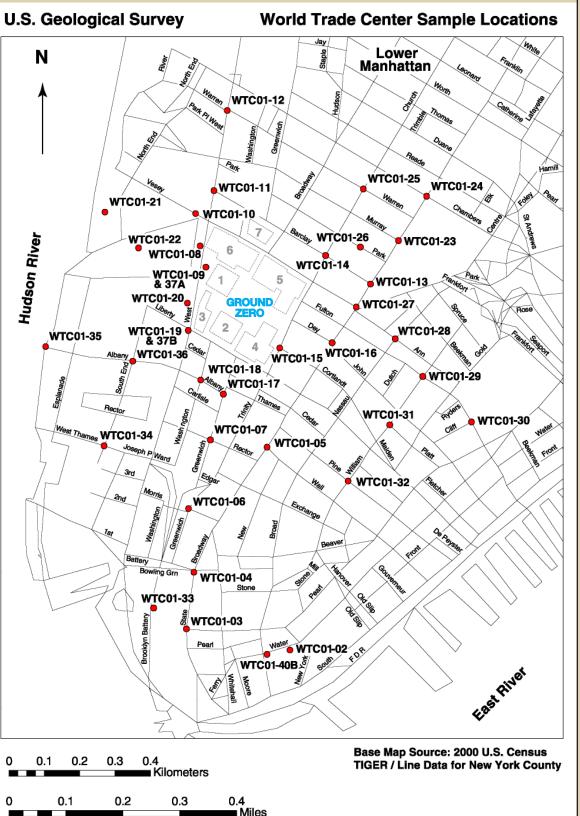
	Chemistry Table 1, continued				
	minimum	maximum	mean*		
Silicon %	11.4	26.3	14.8		
Calcium %	9.58	26.01	18.36		
Magnesium %	1.79	6.94	2.88		
Sulfur %	0.87	5.77	3.11		
Iron %	0.55	4.13	1.63		
Aluminum %	2.27	4.13	2.90		
Carbon, organic %	0.98	4.02	2.48		
Carbon, Carbonate %	1.24	1.89	1.55		
Sodium %	0.12	1.16	0.57		
Potassium %	0.28	0.69	0.50		
Titanium %	0.21	0.39	0.26		
Manganese %	0.07	0.19	0.11		
Phosphorous %	0.01	0.05	0.02		
Loss on Ignition %	7.96	22.8	16.35		
Barium ppm	317	3670	533.38		
Strontium ppm	378	3130	726.61		
Zinc ppm	57.4	2990	1004.70		
Lead ppm	9.13	756	166.75		
Copper ppm	10.3	438	136.31		
Cerium ppm	50.9	356	91.23		
Yttrium ppm	30.2	243	57.45		
Chromium ppm	86.5	240	116.61		
Nickel ppm	22.6	202	37.77		
Lanthanum ppm	25.8	175	45.96		
Antimony ppm	0.56	148	24.84		
Vanadium ppm	24.9	42.5	30.67		
Molybdenum ppm	0.85	42.0	11.34		
Lithium ppm	17.4	36.4	24.00		
Thorium ppm	5.36	30.4	9.31		
Rubidium ppm	8	25.2	19.01		
Cobalt ppm	1.7	13.9	6.36		
Niobium ppm	4.4	13.9	8.34		
Scandium ppm	4.4	9.8	6.63		
Uranium ppm	1.96	7.57	3.29		
Cadmium ppm	0.11	7.5	2.80		
	3.5	6.8	2.00		
Arsenic ppm Gallium ppm	2.8	6.8	4.15		
	1.8	4.2	2.96		
Beryllium ppm					
Silver ppm	0.96	3.8	1.66		
Cesium ppm	0.18	0.88	0.64		
Bismuth ppm	0.008	0.82	0.28		
Thallium ppm	0.02	0.13	0.08		

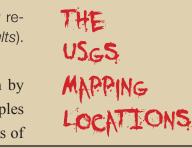
September 17 and 18, 2001. Two samples were collected of indoor locations that were presumably not affected by rainfall (there was a rainstorm on September 14). Two samples of material coating a steel beam in the WTC debris were also collected. The USGS ground crew also carried out on-the-ground reflectance spectroscopy measurements during daylight hours to field calibrate AVIRIS remote sensing data. Radiance calibration and rectification of the AVIRIS data were done at JPL/NASA. Surface reflectance calibration, spectral mapping, and interpretation were done at the USGS Imaging Spectroscopy Lab in Denver. The dust/debris and beam-insulation samples were analyzed for a variety of mineralogical and chemical parameters using Reflectance Spectroscopy (RS), Scanning Electron Microscopy (SEM), X-Ray Diffraction (XRD), chemical analysis, and chemical leach test techniques in U.S. Geological Survey laboratories in Denver, Colorado.

As you can clearly see, the data from the USGS mapped at right is perhaps one of the most comprehensive and complete reports on the dust created as the result of any disaster during the course of human history. While the chart at left shows high, low and mean, each and every location mapped at right has the specific parts per million for all of the elements shown listed at left for each of the 35 mapped locations, and much more.

#### Source:

http://pubs.usgs.gov/of/2001/ofr-01-0429/
 http://pubs.usgs.gov/fs/fs-0050-02/fs-050-02\_508.pdf
 http://speclab.cr.usgs.gov/PAPERS/wtc.asc.ch3/





## URANIUM AND THORIUM IN THE DUST

The following two pages are an excerpt from the complete dust analysis in the book by the same name, Dust. The detection of measurable quantities of Thorium and Uranium in the dust from the World Trade Center, elements which only exist in radioactive form are a critical component in the dust analysis. The graph below plots the concentration of Thorium and Uranium detected at each of the 14 sampling locations. Again, the last two locations, WTC01-08 and WTC01-09, are for the two girder coating samples. The girder coatings had a high of 7.57 parts per million uranium or 93 Bequerels per kilogram. Normal uranium dust content ranges from a low of 12 Bq/Kg to an outside high of 40 Bq/Kg. We can easily see that the uranium content in the girder coating dust is twice what it should be expected to be. Very high, indeed.

The Uranium concentration follows the same pattern as Thorium, although the very small graph scale does not show this markedly. Uranium follows the dip at WTC01-03 and WTC01-16 but the highest concentration of Uranium also matches Thorium in the second girder coating, WTC01-09, at 7.57ppm.

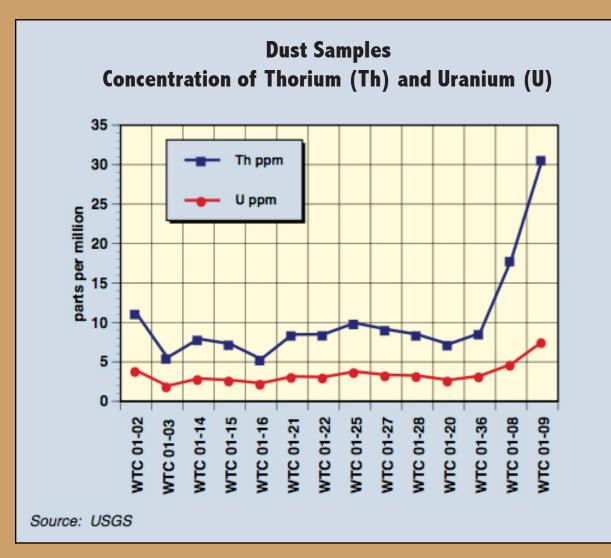
The second girder contained 30.7ppm of Thorium, 6 times as high as the lowest level of that element detected. Thorium is a radioactive element formed from Uranium by decay. It is very rare and should not be present in building rubble, ever.

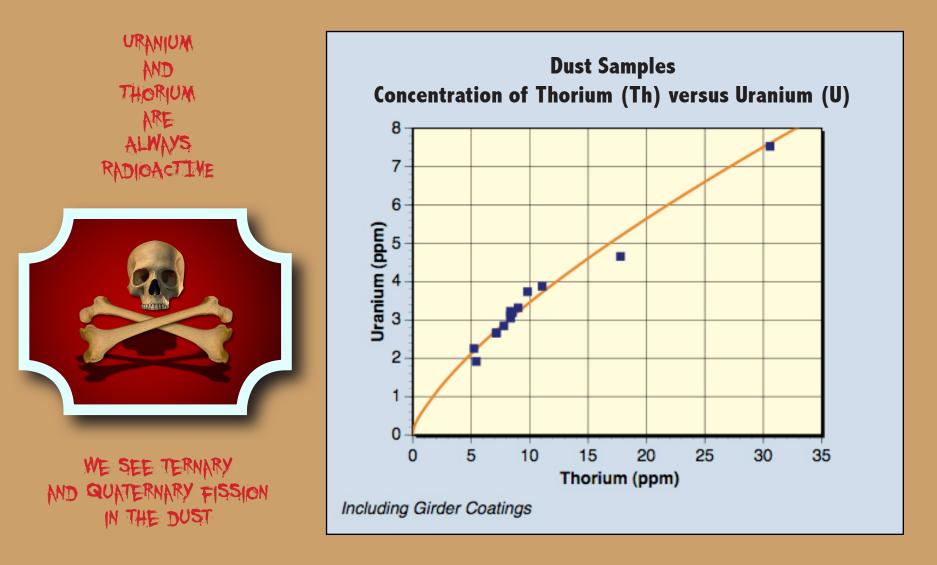
The Thorium picture also mirrors that found for Yttrium. The concentration of both elements dips at WTC01-03 and

WTC01-16 (where so many other elements peaked) but in the two girder coatings (WTC01-08 and 09) is nearly an order of magnitude higher than in the dust samples. The high correlation between Thorium and Uranium is self evident. The presence of these two elements in such high concentrations (particularly in the two girder coatings at WTC01-08 and 01-09) in such a close mathematical relationship is further incontrovertible evidence that a nuclear fission event has taken place.

As we said earlier, Thorium (*image at right*) is formed from Uranium be alpha decay. An alpha particle is the same as a Helium nucleus, so this means we have one of the favored fission pathways: Uranium fissioning into a Noble Gas and the balancing element, in this case Helium and Thorium.

If the Helium formed follows the same pattern as Krypton and Xenon (which decay by beta emission through Strontium and Barium), then we would expect to find Lithium and Beryllium, the next elements after Helium in the Periodic Table, in quantities that correlate with Thorium. The USGS did measure the Beryllium concentration in the dust but the Thorium is plotted against Lithium on the next page, both including and excluding the two girder coating samples.







## A TERNARY AND QUATERNARY NUCLEAR EVENT

The graph of Thorium versus Lithium including the Girder Coatings has exactly the same form as the graph showing Thorium versus Uranium, also including the Girder Coatings. Without the two Girder Coatings the correlation of Thorium to Lithium in the dust is completely linear.

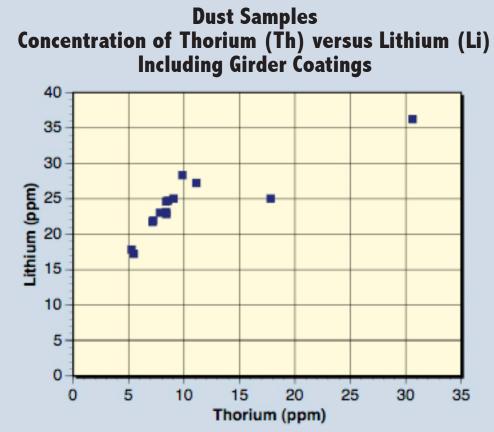
We therefore have compelling evidence that this fission pathway of Uranium to Thorium and Helium, with subsequent decay of the Helium into Lithium, has indeed taken place.

It is out of the question that all of these correlations\* which are the signature of a nuclear explosion could have occurred by chance. (\*all of the correlations on pages 19 thru 42 of part one of the free eMagazine, Dust) This is impossible.

The presence of rare Trace elements such as Cerium, Yttrium and Lanthanum is enough to raise eyebrows in themselves, let alone in quantities of 50ppm to well over 100ppm. The Sodium, Potassium and Zinc are off the charts. When the quantities then vary widely from place to place but still correlate with each other according to the relationships expected from nuclear fission, it is beyond ALL doubt that the variations in concentration are due to that same common process of nuclear fission.

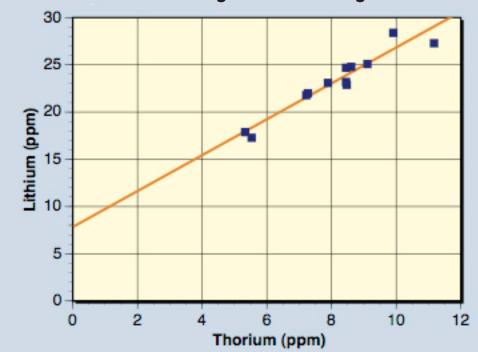
When we find Barium and Strontium present, in absolutely astronomical concentrations of over 400ppm to over 3000ppm, varying from place to place but varying in lockstep and according to known nuclear relationships – the implications are of the utmost seriousness. 911 was a nuclear event. The presence of Thorium and Uranium correlated to each other by a clear mathematical power relationship – and to other radionuclide daughter products – leaves nothing more to be said. We see ternary and possibly even quaternary fission in the dust.





#### Including Girder Coatings

#### Dust Samples Concentration of Thorium (Th) versus Lithium (Li) Excluding Girder Coatings



Not including Girder Coatings

## DESTROYING THE CRIME SCENE

(above)

This type of data has probably never been available to the public before. It is an unprecedented insight into the action of a nuclear device. Nuclear weapon scientists around the world will have seized this data (*pages 19-42, Dust*) to analyze it and try and determine exactly what type of device produced it.

September 11th, 2001, was a nuclear event within a major United States city and the largest global financial center of the world. George Bush knew and told us all to go shopping. And we did. We also ravaged the Muslim world.

For further study see the complete 'Dust': Part 1: http://www.box.net/shared/9duecajohk Part 2: http://www.box.net/shared/h81kjfkvg9

### PART THREE CONCLUSIONS

1. In 1961 the Russians exploded the largest nuclear bomb ever conceived in the 50 megaton range. It was designed such that it produced 97% less radiation than other devices.

2. In 1961 the United States exploded the smallest nuclear bomb ever conceived. This bomb was 11 inches by 11 inches by 17 inches. Not much bigger than a shoebox. It's not hard to imagine that in 40 years of strides in miniaturization and nano-technology, between 1961 and 2001 that the US military industrial complex was able to produce a deuterium tritium hybrid bomb the size of an apple, more or even less.

3. Based on professional building demolition techniques developed by CDI, the worlds premier building demolition company, it would have been impossible to properly prepare the Twin Towers, two separate buildings, for a demolition using standard explosives and energetic compounds either alone or together. It would have been humanly impossible to do.

4. The images between pages 69 and 77, rarely seen by most people, show a very clear nuclear demolition. It's virtually impossible to view these images with an open mind and believe that an energetic compound was responsible for the demolition on 911. There are NO 911 videos that show these images.

5. We discussed a variety of different types of nuclear explosive devices. They all produce different amounts and types of radiation and they all produce different disease patterns. One thing they all have in common is an increase in cancers in those exposed to the explosions.

6. Because Dr. Jones studied muon catalyzed fusion and experimented with deuterium and tritium as well as uranium and other nuclear elements he has specific knowledge as regards the device(s) being discussed here yet he avoids discussing the USGS report or the Delta Group report.

7. Dr. Jones has failed to properly address the anomalous levels of uranium, potassium, sodium, zinc, tritium, thorium and other elements of a nuclear reaction found in the dust from Ground Zero as they interact **together** and Dr. Jones is a fraud.

8. Cold fusion is a reality and while it doesn't yet produce energy sufficiently for civilian use it does produce powerful explosive devices.

9. Dr. Busby's interview was fascinating.

10. Pyrocool<sup>®</sup> should have cooled and extinguished the fires.

11. The tritium was never properly or scientifically addressed although they made the report "sound" good.

12. Building 6 is never discussed even though the damage was extensive.





I think it's important to have a basic understanding of nano technology and its history. The technology dates back to the 1950s and energetic compounds date back to the 1940s. Nuclear power and nuclear demolition also date to the early 1940s and the industries involved in the development of nuclear weapons are and always were active in experimenting with and developing new nuclear demolition technology. No less active, and in fact far more active, than those developing nano-energetic compounds. Nano-technology was started by the nuclear industry. The nuclear industry is, like the nano-tech industry, an industry involved in molecules. It only makes sense that nano-tech started in the nuclear industry and that's because it did. Yet the average person doesn't know this. Advances in nuclear technology are simply more difficult to fully understand because there is far less published material in that area of scientific development and improvements. Yet there's more than enough to be deeply concerned for out future.

UNDERSTANDING

MINIATURIZATION AND

TECHNOLOGY

