

File cabinet, courtesy of the [Smithsonian Institution](http://www.si.edu)

"I've pretty much given up trying to find some sort of intact file cabinet. But while I was at the compound for the Port Authority Police, this ball of metal about the size of a basketball was delivered to them."
- David Shayt, September 11 Collecting Curator and Museum Specialist, Division of Cultural History, National Museum of American History, Smithsonian Institution in "Relics from the Rubble," A&E TV, 2002 (see also <http://americanhistory.si.edu/september11/collection/transcript.asp?ID=49>)

"I never saw a file cabinet, never saw a desk, a chair, never saw a telephone, never saw any type of office furniture. There is no glass. It just disappeared and has become part of this fluffy white or gray dust."
- Assistant Chief of Department, FDNY, Harry Meyers in Dennis Smith's Report from Ground Zero: The Story of the Rescue Efforts at the World Trade Center, Viking/Penguin, New York, 2002, p. 163.

"In an office building you have chairs, tables, electrical equipment, bathrooms, all sorts of fittings and there there was nothing. It was all pulverized into dust."
- Eddie Bowles, "Everything Was Pulverised": A New York Firefighter Reflects Ten Years On," thejournal.ie, Sept. 11, 2011.

>>[Skip to video](#) of the same title here above, many similar quotes collected and arranged by this author, with timed text and source info here in [Appendix 1](#). If the video is gone from Youtube, try archive.org.

"[T]hose heading the cleanup and those removing the rubble at ground zero are trumpeting nothing short of a construction miracle.... The cleanup, it turns out, will take no more than nine months and cost no more than \$750 million."
- Charlie LeDuff and Steven Greenhouse, "Far From Business as Usual: A Quick Job at Ground Zero," *New York Times*, Jan. 21, 2002.

9/11 Debris: An Investigation of Ground Zero

by Matt Nelson

2014

First Edition

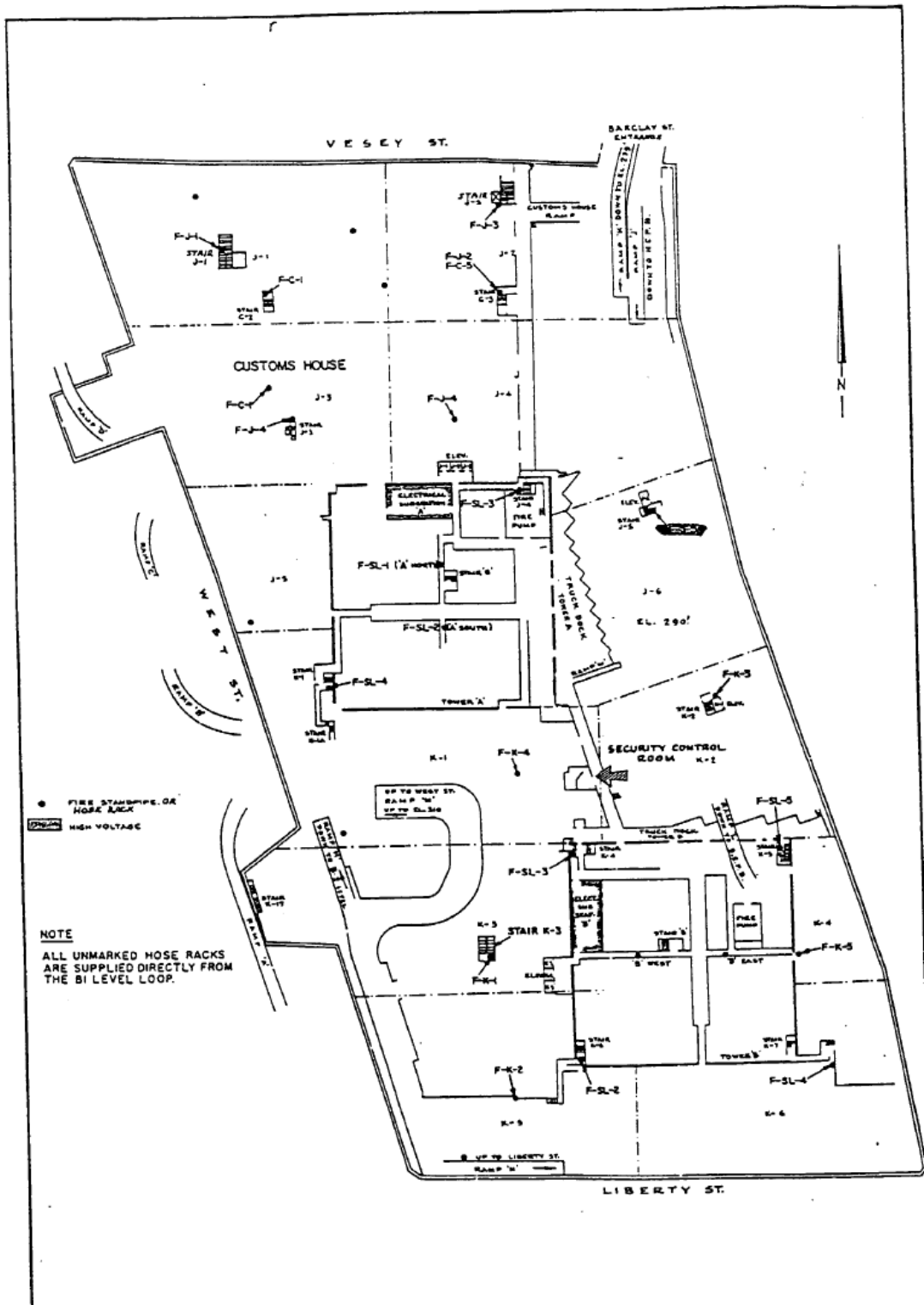
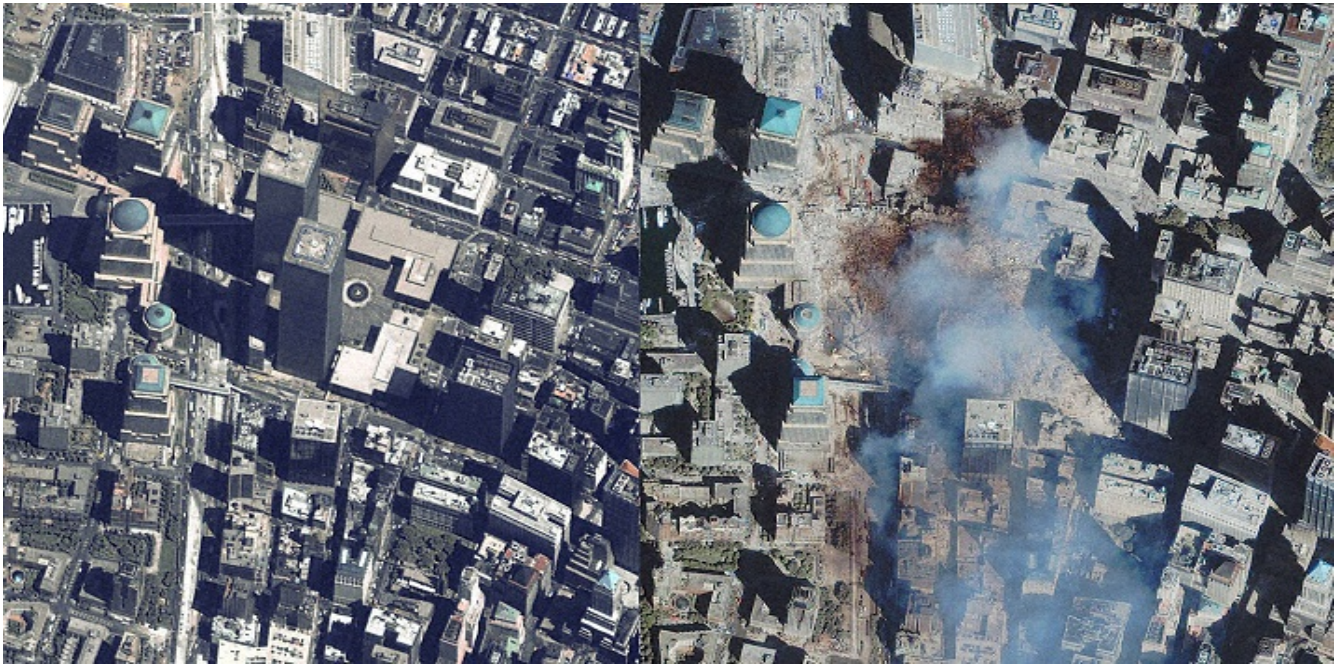


Figure 10.20 Plan

-Level BI

Merritt & Harris, "Property Condition Assessment of World Trade Center Portfolio" [Subgrade], 2000



World Trade Center [June 2000](#) and Ground Zero shot by IKONOS satellite 9/15/01 (Credit: [Space Imaging](#))

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Dear Reader,

This is the culmination of 5 years' research. It has grown into a new breed of book, one containing thousands of links to sources, both obscure and official. More images, videos and stories are linked below than ever before in a work of nonfiction. I challenge you to read it all.

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About the author: Matt Nelson got a B.A. in English (Magna Cum Laude) with a concentration in creative writing – and created the non-profit website <http://www.911conspiracy.tv>, home of the 9/11 video and TV archive, trying to name every camera. No advertisements or sales on the website.

About the method of notation: Sources for information will be listed as the info is presented, without numbers for referencing footnotes or end notes. Press Ctrl and click links at your own risk. (Apologies for no traditional bibliography.) This method will encourage readers' own immediate confirmation of facts and figures. You'll have to trust me when I quote a book not found online. Also, the image and video links are an integral part of understanding. Due to the temporary nature of information on the Internet, supplemental material and sources are often backed up with mirror links and downloads. Some links are just YouTube searches using appropriate words. In the event a hyperlink dies, or an article is removed, try using the Internet Archive [Wayback Machine](http://www.archive.org), which has helped numerous times in the pages below. If a video has disappeared, contact matt at 911conspiracy.tv because I have 4TB of 9/11 stuff.

Acknowledgments: I would like to thank the dedicated 9/11 researchers around the world who have often been branded "conspiracy theorists." Many are anonymous. You know who you are. Big thanks also to the so-called debunkers who have helped collect info to destroy seriously wacky theories that may have in fact been encouraged by the perpetrators.

Dedication: For the victims of the September 11, 2001 World Trade Center attacks, their numbers always growing, I repeat the words of the 9/11 anthem: "We will never forget." We will never forget.

Introduction

This book began as a mathematical effort to reconcile the total weight of the seven WTC buildings – the entire World Trade Center complex including basements – with the total weight of debris reportedly removed from Ground Zero. The basic premise was that if I could get accurate numbers for both the buildings *and* their post-9/11 debris, I could simply subtract debris weight from structure weight to learn how much building material was pulverized into the dust and ash clouds that turned day into night. How much was incinerated?

Were those dust clouds not more dense than they would have been in gravity-driven collapses? *Were* the debris piles consistent with fires and structural failures? Or did the answers to these questions suggest planned demolition and therefore “inside job?”

While researching, I discovered [the math had already been done](#). (Gregory Urich, “Analysis of the Mass and Potential Energy of World Trade Center Tower 1,” *Journal of 9/11 Studies*, 2007.) The WTC wasn’t quite as massive as the reports boasted, I learned. As far as the before and after comparison went, everything seemed to add up on paper there. But the stark images and disturbing witness testimony of extreme ruin compelled me to find more sources. So I uncovered, collected, and compared as many of these various numbers as possible. To put it simply, the numbers by themselves didn’t begin to sum things up.

The respected construction trade magazine *Engineering News-Record* said the WTC “site concrete was largely pulverized into fine dust...” (Nadine M. Post and Debra K. Rubin, “[Debris Mountain Starts to Shrink](#),” enr.com [cached], 10/1/2001.) The dust in some places measured “several inches thick on the ground.” (Joe Dunne, First Deputy Police Commissioner in Dennis Smith’s [Report from Ground Zero: The Story of the Rescue Efforts at the World Trade Center](#), Viking/Penguin, New York, 2002, p. 63.) Watch the WTC Tower 1 cloud form in [this collapse video](#). *Although* “the 9-11 skeptics are apparently unable to offer any quantitative evidence that the observed pulverization of concrete in the collapse of the Twin Towers required pre-planted explosives,” the contents of the WTC dust alone have provided compelling evidence. (quoting Dr. Frank R. Greening, “[The Pulverization of Concrete in WTC 1 During the Collapse Events of 9-11](#),” Nov. 2006.) See the chapter “[Dust](#)” below.

I should point out that the final official report on the collapse of the towers did not generate enough “quantitative evidence” to produce a working model demonstrating either WTC tower’s total destruction ([see NIST FAQ 10](#)). Moreover, critical arguments strongly refute what little modeling was done for the supposed collapse initiations. See the section below titled “[Investigations](#).” Some said WTC 1 suffered [core](#) failure; some said perimeter column failure. Since it didn’t make sense that the core would fail, NIST chose perimeter.

Elements of the dust and other “conspiracy theorists” evidence refuting the official theories have always struggled against the easy, logical assumption that the hijacked jets – seen repeatedly on television colliding with the towers – made them fall (only in concert with the jet fuel-fed fire and dislodged fireproofing, officials said). The apparent structural failures seemed to initiate at the points of airplane impact, no less. Obvious, right?

“...now you see the images and it all seems so cut-and-dried, it all seems so utterly clear. Plane hits, plane hits, building falls down, building falls down, but it wasn’t that way at all on the day. We were immersed in confusion... almost suffocated by chaos.”
- ABC News anchor on 9/11, Peter Jennings, when interviewed later [by the Smithsonian Institution](#)

Now more than ten years later, that confusion can be confronted with hindsight (not 20/20). Researching the events of that day has tended to dig up loads of garbage, as if one had dug too deep at the landfill where the WTC debris now rests. No doubt, the information has been sifted more patiently for evidence.

Thesis: More important than guaranteeing complete “collapse” of both aging, iconic buildings – and WTC Building 7 – was the requirement of pulverization and incineration. Virtually unidentifiable rubble (and bodies) enabled an amazingly fast “cleanup” of the site.

The destruction of evidence and investigative failures at the World Trade Center ruins are just as critical a subject as are the quantities and qualities of the physical evidence often referred to as “debris.” By looking at “Ground Zero” from a few different angles (after opening our eyes) it should be easy to see there was some destructive force in addition to gravity – that the World Trade Center was demolished as the world watched. If you disagree, read yet.

I invite you to watch [“9/11 Debris: An Investigation of Ground Zero,”](#) parts one and two, to see and hear about Ground Zero. Part one makes this investigation valid with compiled reports, images and testimony showing the extreme destruction. Not only were expert witnesses and seasoned workers shocked by what they saw, they were struck by what they did not see. The many professionals’ astonishment at the pulverization implied a question.

“When you look at where the towers used to stand, there is surprisingly so little rubble. Where did all the rubble go?” (ABC News anchor Peter Jennings to on-scene reporter George Stephanopoulos 9/12/2001 at 12:44 p.m. [Watch TV archive clip \[mirror\]](#).) So begins part two of my video “9/11 Debris.” Mainstream media reports attempted to explain the missing debris. Was it the “120 dump trucks” that removed debris overnight, as Mayor Rudolph Giuliani mentioned on NBC at 9:52 a.m. on 9/12? (see [TV archive clip](#)) Was it the vast 70-foot deep basement that UK Channel 4 wrongly described as “hundreds of feet deep?” (“9/11: Ground Zero Underworld” 2007 – [See “9/11 Debris” part 2 at 9:00.](#)) Or was the answer hidden in the inches-deep dust that blanketed a city of people unconscious of the reality of the nightmare?

The paragraphs below are largely composed of impersonal details, behind which a thousand stories of grief and hope seem to be forgotten. Ground Zero for the first weeks was a “city within a city,” as a [Nov. 4, 2001 CBS segment](#) described it (video source: “What We Saw,” DVD with book by CBS News, 2001 [[mirror](#)]). Donations poured into New York from all over the continent, as did volunteer rescue workers. See [“The Heart of Steel”](#) (2006) for this side of the story. [Watch now.](#)

The awesome compassion dedicated to searching the rubble for survivors and victims’ remains quickly converted into efficient manpower for debris removal – that “indefatigably focused activity that began with the simple goal of rescue but evolved into a therapeutic tool for resolution and acceptance.” ([Jeannette Catsoulis, in a 2005 review](#) of Lou Angeli’s [“Answering the Call: Ground Zero’s Volunteers”](#)). Even after hope of finding survivors faded, the shock and sadness were alleviated by the will to help, however that was possible.

The businesspeople who helped raze the World Trade Center seized upon that opportunity and took advantage. What for many seemed like an exemplary act of American solidarity and cooperation in turn opened a way for the down side of patriotism – an unquestioning following of leaders and popular opinion. (Unfortunately, our leaders *did not want an investigation* into the events of September 11th, for supposed fear of stealing resources from the new “War on Terror.” V. P. Cheney. See the acclaimed documentary [“9/11 Press for Truth,”](#) [[watch](#)] specifically 14:00 – 26:00. [More here.](#)) “[United we stand](#)” became the national theme, as seen on bumper stickers with American flags – [millions of flags](#). Never mind the fact that most Americans were so united in the act of [watching television](#).



Photo by [NYPD Aviation](#), Det. Greg Semendinger

Available Images

Despite the restrictions on photography, a significant amount of photographic documentation did happen at Ground Zero. The ban on cameras wasn't announced publicly by Mayor Rudolph Giuliani until Tuesday September 25th. (Elisabetta Coletti, "[City: No More Photographs of World Trade Center Site](#)," Associated Press, Sept. 26, 2001.) View [a photo of one of the posted signs](#) on the site, date unknown, credit [Kurt Sonnenfeld](#) of the Federal Emergency Management Agency, FEMA. ([mirror](#)) "WARNING! NO cameras or video equipment permitted...."



Photo by Steve McCurry ([source](#) NIST FOIA 09-42 911 datasets.org/Int'l Center for 9/11 Studies Release 16\42A0049[dead link] also [here](#))

"As we were preparing to leave the Ground Zero area and our team was walking toward the Manhattan Community College staging area, I was still taking pictures. A number showed how the dust was continuing to stick to windows even after the Friday rain. Then [we] turned a corner, and in front of us were members of the military. An officer came up to me and bluntly said, 'No pictures,' with the warning that I could be detained for twenty-four hours if I did not stop. I did not argue or ask questions; I just put the camera away."

- Paul J. Lioy, *Dust: The Inside Story of Its Role in the September 11th Aftermath*, Rowman & Littlefield Publishers, Inc., Lanham, MD, 2010, p. 32. [This encounter occurred on **Sept. 17** despite the fact Lioy and team had been invited onto the site.]

On October 3rd an anonymous photographer got the photos deleted from his camera's memory. Fortunately he was able to restore the photos using special software. See <http://cf.parrhesia.com/wtc-photos.htm>. At first, New York City Police (NYPD) merely escorted him from the site and verbally warned him against taking more pictures, because it was "a crime scene." Nearby New York State Police performed the confiscation and deleting, only after being alerted by city officers, reportedly.

FEMA's Sonnenfeld confirmed the "crime scene" excuse (dead source link). He was keen to point out, though, that from day one the scene was trampled, its evidence thrown into dump trucks and hauled away ([Vimeo, arg911truth](#) at 4:30). There were no forensic photographers. Sonnenfeld explained that his work as official photographer was "sanitized," since he was told by superiors not to record bodies or body parts, firefighters or rescue workers crying or having a "personal moment," personal effects of victims whose family members may have been watching TV [if any were intact and recognizable], or closeups of the documents that were everywhere (A24 TV, 2011 seen 2012 – dead source link).

Although the site was a crime scene including the ruins of several government agencies (U.S. Customs, CIA, Secret Service, SEC, OEM), and despite the presence of the U.S. Military for what President Bush at 9:31 a.m. on 9/11 called a "national tragedy," Ground

Zero was not under the legal jurisdiction of the FBI or FEMA. The scene was technically a giant emergency rescue and recovery operation. This meant “FDNY had sole control of the site until the end of October, and after that date they constituted half of the Joint Task Force (The other half was the DDC [New York City Department of Design and Construction].)” ([WTC Living History Project website](#), number 2.) “While the New York City Fire Department was 'in charge' of the WTC Disaster site, . . . the Incident Commander was, as a practical matter, the Mayor through the New York City Mayor's Emergency Management structure.” (John Moran and Donald Elisburg, National Institute of Environmental Health Sciences quoted in Juan González's *Fallout: The Environmental Consequences of the World Trade Center Collapse*, The New Press, New York, 2002, pp. 118-19.) “In other words, by continuing to classify the Ground Zero operation as an emergency rescue effort, Mayor Giuliani kept complete operational control of the site in his hands. And because of that, the city was then able to ignore federal and state laws regulating proper health and safety procedures.” (González, *Ibid.*, p. 125.) [Interestingly, FBI Inspector in Charge of the 9/11 investigation, Pasquale J. D'Amuro, would become Chairman and CEO of Giuliani Security & Safety LLC ([Giuliani Partners website](#)). [Another source](#) says "Inspector in Place" at FBI HQ in D.C.]

If the City of New York was in charge, then who gave the military orders to prohibit photography before Mayor Giuliani's announcement on the 25th, as we saw with WTC dust investigator Paul Lioy on the 17th?



FEMA News Photo, Sept. 13

Importantly, people did manage to make photographs and videotapes during the first hours and days. Images captured by government employees included those of FEMA photographers Andrea Booher – whose earliest [photographs are dated 9/13](#) [NOTE: In a personal communication by email, Andrea wrote, “I arrived on 9/12. I do believe this image {seen above} was shot on 9/13.”] – and Michael Rieger, whose [photos are dated 9/18](#) and afterward (despite [metadata suggesting actual date of 9/17](#). Andrea's intriguing image [has no](#)

[such metadata.](#)) See a collection of the [FEMA photos with captioned thumbs here](#).

The FEMA videographers [slash photographers] were [Kurt Sonnenfeld](#) and [Jim Chestnutt](#), whose tapes have been seen in [news bits](#) as “FEMA video.” See [some FEMA images acquired by FOIA in 2010](#) [source, [911datasets.org](#)] or some from [wtcdata.nist.gov](#), [170-WTCI-91-FEMA.mp4](#). See some of Kurt's [still photos on Facebook](#). Watch a [2009 video](#) to hear his allegations of government foreknowledge [[mirror](#)], or a similar [2011 video](#) [[mirror](#)].

Other “government” images included some [aerial video by the U.S. Coast Guard on 9/16](#) (AP archive X01895); one spectacular aerial [image from the U.S. National Oceanic and Atmospheric Administration or NOAA](#) (9,372 × 9,372 pixels), although taken on 9/23 ([source: Wikipedia](#) [below]); also some [shots credited to the New York City Office of Emergency Management](#) (OEM) starting 9/15....



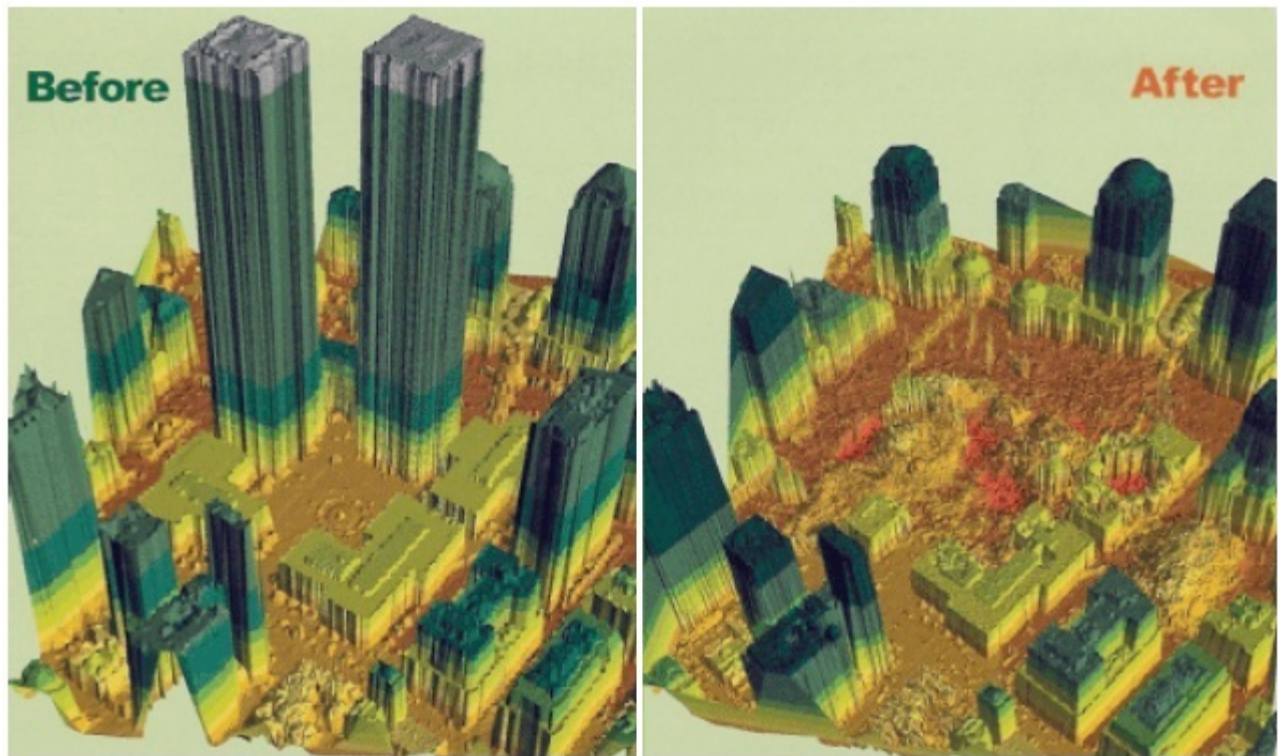
The [9/11 TV archive](#) [[recently updated](#) {and [mirrored](#)}] is an indispensable resource, despite the fact that the news media were [mostly] kept off the site. Equally important are [some of] the [mainstream documentaries](#), though they are often cut and pasted together with unidentified, mixed audio and video tracks. In late 2010, an abundance of raw television network and amateur video was acquired by the [International Center for 9/11 Studies](#) (thanks to James Gourley and Justin Keogh) through a Freedom of Information Act (FOIA) request of the National Institute of Standards and Technology (NIST), who amassed hundreds of hours of video for their 16-million dollar investigation (“[Feds To Begin Skyscraper Autopsy](#),” Associated Press, [cbsnews.com](#), Aug. 21, 2002.). See my [NIST FOIA list](#) for details, or visit the incomplete [NIST data site](#) or the [NIST archive.org WTC repository](#).

While watching the TV broadcasts from 9/11, you may have noticed that amateur and personal cameras provided some of the closest, early looks (listed below). ABC News anchor on 9/11, [Peter Jennings stated this simple fact](#), pointing out the nature of the technological world we lived in, not so much the reality of blockades. For that, [hear ABC reporter George Stephanopoulos mention the armed guards](#) (in the early afternoon of 9/12), part of the military presence there for people's safety and security, mostly. See [NBC News on Sept. 13 at 8:49 a.m.](#) for a rare televised glimpse of the debris field, albeit surreptitiously garnered with a disposable camera and non-professional grade video camera.

Among the videographers with the closest images were unnamed members of the Fire Department ([FDNY](#)), [as archived by NIST \[mirror\]](#) ([YouTube ex. 1](#), [ex. 2](#), [ex. 3](#), [ex. 4](#)). See also fire photographer [Lou Angeli](#) (more on [YouTube](#) and the [NIST website](#)), [William Cirone](#) (playlist [here](#)), [Tim Cothren](#) ([ABC, 9/12, 23:59](#)), [Lenny Mulhern](#) (9/11 – see [more](#) from NIST, or much more in 911datasets.org FOIA [release 25, 42A0113 - G25D23](#)), [Etienne Sauret](#) (“WTC: The First 24 Hours”) [[mirror](#) at WTCL-329-I-6 {[mirror 2](#)}], [Greg Siberman \[mirror part 1, 2, 3\]](#), [Matt Siegel](#) (“[Three Nights At Ground Zero](#)”), [Steve Spak](#) (“WTC 9-11-01 Day Of Disaster” [also watch [starting at 22:19](#)]), [Kevin Sutavee](#) ([ABC, 9/11, 16:10](#): “That’s the part that’s crazy. That’s all that’s left.”)....

Photographers included the [FDNY](#) – both independent individuals and the [Photo Unit](#) (as seen in the International Center for 9/11 Studies NIST FOIA, 911datasets.org [release 33](#)), [NYPD Aviation](#) including [Det. Greg Semendinger](#) and others (9/11: [example 1](#), [ex. 2](#), [ex. 3](#), [ex. 4](#), [ex. 5](#), [ex. 6](#), and [another](#) which clarified [a misleading photo used by NIST](#) from the same roll of film [Source: 911datasets.org release 8]. NYPD Aviation 9/13: [ex. 1](#), [ex. 2](#), [ex. 3](#), & [ex. 4](#)), other NYPD photographers, ([as named](#) in the photo book [Above Hallowed Ground: A Photographic Record of September 11, 2001](#), Christopher Sweet, Ed., Viking Studio, 2002, p. 6.); [George Miller](#) of the NYC Transit Authority, [Jim Green](#), Steve McCurry (on 9/11), [Mike Davis](#) (on 9/11), [Max Lais](#) (9/12), [David Hammond](#) (9/15), [Deborah Hardt](#), [Louis Brendel](#), [Eric Feferberg](#) (among a few others named in the Int’l Center for 9/11 Studies 2010 NIST FOIA, specifically [911datasets.org](#) release 29 [NYPD source is rel. 4 and 8]), and more famous photos from [Tom Franklin](#) (“[Raising the Flag at Ground Zero](#)”), [Gary Marlon Suson](#) (see also [YouTube](#) and the [Ground Zero Museum](#)), [James Nachtwey](#), [Aris Economopoulos](#), [Doug Kanter](#), [Michael J. Leddy](#), and [Frank Silecchia](#). New York City cop and photographer [John Botte](#) was granted access by commissioner (now [convicted felon](#)) Bernard Kerik. Botte’s monochrome photos ([example](#)) were published in [Aftermath: Unseen 9/11 Photos by a New York City Cop](#) (2006)... not to be confused with [Aftermath: WTC Archive](#) by Joel Meyerowitz.

There were many photos of Ground Zero, it would seem, but only certain images were put to use. [Aerial photography](#) (see also [earthdata.com](#)) wasn’t able to see through the persistent smoke until Sept. 15, with LIDAR – Light Detection and Ranging. [See a video clip](#) from “[World Trade Center: Rise and Fall of an American Icon](#)” at 47:40 (History, 2002) or read some at <http://www.loc.gov/loc/lcib/0209/maps.html>. With LIDAR a laser fired from a small airplane was able to map topography accurate to 6 inches in height. See [this high res photograph from Sept. 15](#) to compare. (911datasets.org [OEM-EMDC FOIA](#)) That [first LIDAR image](#) ([source](#), credit EarthData) wasn’t seen by authorities until Sept. 17. This delay for access to the images at the Emergency Mapping and Data Center (EMDC) thereafter was next-day/morning (Charles K. Huyck and Beverley J. Adams, “[Engineering and Organizational Issues Related to The \[WTC\] Terrorist Attack Volume 3, Emergency Response in the Wake of the \[WTC\] Attack: The Remote Sensing Perspective](#),” ImageCat, Inc., for The Multidisciplinary Center for Earthquake Engineering Research [MCEER], June, 2002, p. 20).



Source: *GeoNews*, Volume 15, number 3, February 2002, p. 3.

Depending on equipment, altitude, and speed of the aircraft, the resolution [or distance between points measured by the laser] varied between 6 and 15 feet for EarthData, and a bit more for NOAA (Charles K. Huyck and Beverley J. Adams, *Ibid.*, p. 18). Flyovers were done regularly (daily in September, with only a few exceptions – [see the imaging timeline](#) [together with more details in the MCEER document]).

The main purpose for this and other high tech imaging was to create maps to help search & rescue experts, firefighters, police, ironworkers and others climbing in the pile/pit. With the help of Dr. Sean Ahearn, director of the Center for the Analysis and Research of Spatial Information (CARSI), it was also possible to chart areas of possible collapse (Maddalena Romano, "[Charting Ground Zero exhibit opens in Soho](#)," *GeoNews*, Volume 15, number 3, February 2002 [[more on the exhibit here](#)]). Finally, the images provided more general information, like changes in the volume of debris. (More on that shortly.)

The Sunday Sept. 23 *New York Times* ran an article titled "[From 5,000 Feet Up, Mapping Terrain for Ground Zero Workers](#)," which featured a [large LIDAR image taken Sept. 19](#) [[in color here](#)]. Compare to [another taken Sept. 23](#) ([source](#), credit NOAA/U.S. Army JPSPD) and another, [high resolution LIDAR image](#) dated 9/17 (credit EarthData, source: [911datasets.org OEM-EMDC FOIA](#)). Much more on mapping Ground Zero can be found at [The George Washington University website](#). The U.S. Army Corps of Engineers (USACE) attested to the importance of LIDAR. "GIS [[Geographic Information Systems](#)] maps are created from aerial photos taken daily at the World Trade Center site. A light detection and ranging system takes photos that scan the area to pinpoint exact elevations." (Justine Barati, "[Corps Assists FEMA and New York City with Mapping Capabilities](#)," *Yankee Engineer World Trade Center Edition*, U.S. Army Corps of Engineers, New England District. Dec., 2001. p. 9.)

Of course more conventional photography was used. “The New York Fire Department’s Phoenix Photography and Imagery Group, led by Captain Justin Werner, began taking aerial photographs on the first day – even when it meant holding cameras while hanging out of police helicopters.” (Bruce Cahan and Matt Ball, “[GIS At Ground Zero: Spatial Technology Bolsters World Trade Center Response and Recovery](#),” *GEOWorld*, Jan. 2002, p. 27.) The Phoenix Unit photos may be listed above under NYPD [[see video](#)]. Otherwise they are unavailable. Compare aerial images for these days: [9/13](#), [9/15](#), [9/17](#), [9/19](#), [9/22](#), [9/26](#), [9/30](#), and [10/3](#) (Source: 911datasets.org [OEM-EMDC FOIA](#), credit EarthData). It’s a shame black and white was used by EarthData (See [the MCEER document](#), Section 3.1.3. “Problems”).

Additionally, aerial thermal imagery helped keep rescue workers safe from hot or even molten metal and underground fire (see [GeoNews](#), Vol. 15, Number 1, Oct. 2001). Images and data from the Airborne Visible/Infrared Imaging Spectrometer ([AVIRIS](#)) recorded Sept. 16 and later can be found at the [USGS website](#) (see also [this USGS page](#)). Underground fires burned for more than 3 months – until Dec. 19 according to [Scientific American](#) and “[Metal of Honor: The Ironworkers of 9/11](#)” (Rachel Maguire, Naja Productions, 2006 [[mirror](#)]). That was despite the [USGS data suggesting hotspots were nearly eliminated](#) by Sept. 23 ([USGS PDF](#)). AVIRIS provided the most detailed thermal data (including temperature), but other instruments were also used. For instance, [see an image](#) from the “tripod mounted Raytheon Nightsight Palm IR 250 thermal camera, carried aboard a Navajo Chieftain aircraft.” (Charles K. Huyck and Beverley J. Adams, *Ibid.*, p. 21.) These images could be [combined with 3-D LIDAR](#) (*Ibid.*, p. 32.), but not in the detail provided by AVIRIS.

Sadly, “[a]lthough AVIRIS temperature readings were released to the FDNY, this key information was not received by any of the mapping centers.” (*Ibid.*, p. 39. [See image](#), particularly the caption.) Note there was a mapping center for Urban Search and Rescue at the Jacob K. Javits Convention Center in midtown, which focused on Ground Zero alone. The EMDC at Pier 92 [after being moved from the NY Police Academy Sept. 14, after 2 days] worked on the entire area. Third, there was FEMA working at Pier 90. (*Ibid.*, p. 6.)

AVIRIS also had the ability to measure and help track elements of airborne pollutants, primarily the carcinogen asbestos. See the PDF document “[USGS Environmental Studies of the World Trade Center Area, New York City, after September 11, 2001](#).” Unfortunately, there were “considerable time delays” in getting resulting info. “These compositional results were not released until the 27th September, by which time the risk posed to response crews by airborne contaminants had abated.” (Charles K. Huyck and Beverley J. Adams, *Ibid.*, p. 26.) This important issue is discussed below in the chapter “Dust.”

Similar high tech gear was employed by the U.S. Army Communications Electronics Command (CECOM) Research, Development and Engineering Center (RDEC): “the Night Vision and Electronic Sensors Directorate’s (NVESD) Night Vision Imaging Spectrometer (NVIS) sensor suite, which includes a high resolution imager.” Aerial shots were able to get thermal readings and more. Like AVIRIS, NVIS could identify elements. “The NYC health dept. was looking for ways to identify and create maps of materials in the entire debris field. . . Unfortunately, **the complete pulverization of materials in the rubble** made it unfeasible to attempt to unmix and identify specific materials using a spectral signature library of construction materials.” (“[Airborne remote spectrometry support to rescue personnel at 'Ground Zero' after the World Trade Center attack on September 11, 2001](#),” Chris Simi, Anthony Hill, Henry Kling, US Army CECOM RDEC Night Vision and Electronic Sensors Directorate, et. al. [emphasis added])

Let’s move on to the usefulness of high tech imaging as it relates to the original

purposes of this paper – measuring the debris mass and volume. The number of tons of debris removed was often mentioned in reports about the Ground Zero recovery – so often that the rate of removal could be calculated.

“The volume of debris was calculated through GIS analysis. This helped the city determine how much debris was removed. Images were compared daily to determine changes in the site.” (Vince Elias, et. al., “[New York District in the Red Zone](#)” *The New York District Times*, U.S. Army Corps of Engineers, NY District. Vol. 26, No. 5, Fall, 2001. p. 8.) Again, G.I.S. stands for Geographic Information Systems (see for example “[Mapping the Hazards to Keep Rescuers Safe](#),” *New York Times*, Oct. 4, 2001). The “systems” constituted software, hardware, and people. Visit New York City's makeshift OEM headquarters (that replaced the WTC Building 7's 23rd floor “bunker,” destroyed on 9/11) in a [Sept. 19 NBC News report](#) (911datasets.org release 28, folder 42A0295 - G27D25). See “Tonnage.”

Authorities at [FEMA](#) (and the [NYC OEM](#), who on 9/11 was [already working at Pier 92 on the Hudson River in preparation for a bioterrorism exercise planned for 9/12/2001](#)) wanted to know how long the recovery operation would take, and about how much it would cost. Since the NYC OEM headquarters at [WTC Building 7 had “collapsed” 9/11 afternoon](#) (see videos), Pier 92 somewhat conveniently became the new headquarters. A FEMA Disaster Field Office was established at the adjacent Pier 90 ([www.fema.gov/.](http://www.fema.gov/)). [Note Pier 91 is not in between, but is on the East River.] Debris management experts from the [U.S. Army Corps of Engineers](#) arrived (Allen Morse and others) and coordinated with both FEMA and city officials. (Wayne Stroupe, U.S. Army Corps of Engineers, New England District, “[Corps of Engineers Tackle Debris Management Mission at World Trade Center](#),” *Yankee Engineer*, World Trade Center Edition, Dec. 2001, p. 7.)

Unfortunately their process of translating LIDAR data into weight/mass measurement has not been fully explained. Some mathematical formula not unlike cargo freight being [weighed dimensionally](#)? The resulting numbers have never been independently verified (or clarified for that matter), and so have become the subject of much speculation. Leading geographer Sean Ahearn of [CARSI](#) has not provided input on this detail; nor has FEMA or the U.S. Army Corps of Engineers. “On Sept. 23rd, 12 debris specialists started debris monitoring. USACE completed its part of the Debris Operations Plan on Sept. 23rd and turned the operations over to FEMA at the DFO [Disaster Field Office at Pier 90]. The official joint estimate of the total debris amount was released at 1.2 million tons.” (“[Role of USACE at the WTC Response Operations](#)” [gwu.edu]) But what did that estimate include?

Later in this book the physical measuring devices such as scales, barges, and dump trucks will be scrutinized for input, but only after gaining an understanding of the behavior of those driving the drivers.

Cheap and Fast

“Early estimates were that it would take up to 2 years to clean up Ground Zero. But in fact the process went much more quickly, and was significantly under budget.”

- PBS “Newshour” May 30, 2002 ([source](#))

MIRACLE

The New York Times said “those heading the cleanup and those removing the rubble at ground zero are trumpeting nothing short of a construction miracle.... The cleanup, it turns out, will take no more than nine months and cost no more than \$750 million.” That was all, after “the authorities. . . [had] estimated the cleanup would take a year and cost \$1 billion to \$2.5 billion, and they gave contractors blank checks to get the job done.” (Charlie LeDuff and Steven Greenhouse, [“Far From Business as Usual: A Quick Job at Ground Zero,”](#) *New York Times*, Jan. 21, 2002.) One high-end estimate in Oct. 2001 had imagined it would cost “\$5 billion to remove the debris.” (Jennifer Steinhauer, [“City’s Budget Is Battered In the Aftermath of Attack,”](#) *New York Times*, Oct. 3, 2001.) This astronomical figure is quoted as an official estimate in the Wikipedia article [“Rescue and recovery effort after the September 11 attacks.”](#) One [time.com page](#) said, “Early estimates of the cleanup cost were that it would take a year and \$7 billion.” These higher estimates may have included more than the 16-17 acre site, such as dust decontamination of local buildings. Another quote came from the Dept. of Labor in their 2003 documentary [“Up from Zero.”](#) At 6:50 into the video: “Original estimates were that the cleanup of the World Trade Center could take 18 months, cost a billion and a half dollars, and claim the lives of more than 100 construction workers. Instead, it took 9 months, cost half of what was estimated, and no one was killed....”

Some additional financial aid in years to come has not been included. For example: “The South Ferry [subway] station, built with \$545 million in post-9/11 recovery funds, opened in 2009 as a state-of-the-art marvel. It could handle 24 trains an hour on two parallel tracks – a vast improvement over the old station.” This still adds up to way less than \$5 - 7 billion. (<http://www.mta.info/nyct/service/RestoringSouthFerryStation.htm>)

The low cost was remarkable and commendable, a “miracle” explained somewhat by “a sense of pride and Americanism, and setting an example for the rest of the country,” since it was the most high-profile construction/demolition job at the time. More influentially, on Oct. 4 Mayor Giuliani tasked an investigative team to provide “vigorous oversight” to minimize the fraud for which the industry was apparently notorious (LeDuff and Greenhouse/*New York Times* and Stanley Lupkin and Edgar Lewandowski, [“Independent Private Sector Inspectors General: Privately Funded Overseers of the Public Integrity,”](#) *NY Litigator Journal*, Summer 2005, Vol. 10, No. 1, p. 10.). Specifically, “NYC Department of Investigations (DOI) hired outside auditors to track labor and equipment costs and hauling costs for each of the four CM [Construction Managers]. In addition DDC [Dept. of Design and Construction, NYC] hired a fifth auditor, KPMG, to track all CM costs in preparation for billing FEMA for all costs.” (Roger K. Fulmer, U.S. Army Corps of Engineers, Sacramento District, [“New York City World Trade Center Disaster Deployment,”](#) *The Prospector*, Jan. 2002.) The DOI auditors were four Independent Private Sector Inspectors General, or IPSIGs, for “background checks of all contractors and subcontractors, the tracking of personnel and equipment, surveilling and charting of all debris pick-ups and drop-offs, forensic audits of all billing requisitions submitted

to New York City, surveilling worker sign-ins and sign-outs, manning a 24-hour confidential hot line to receive complaints, tips and investigative leads, etc.” (Press Release #042-2001, “Department of Investigation, DOI Announces Compliance Monitors & 'Integrity Hot Line' To Help Assure Construction Integrity and WTC Recovery Site,” [Oct. 4, 2001], quoted in the *NY Litigator Journal*, [ibid.](#))

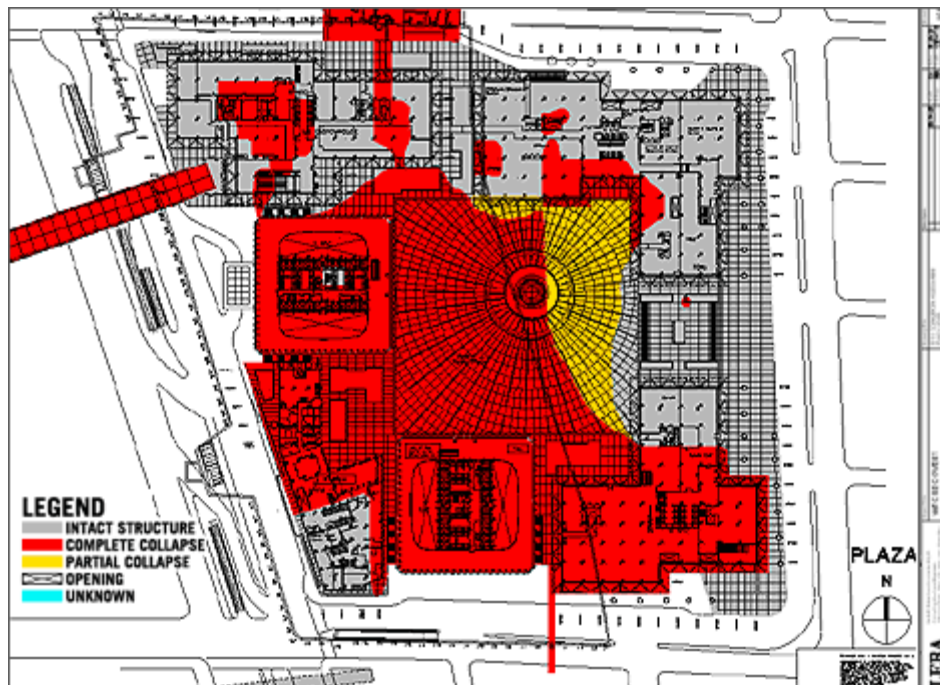
“Mr. Morse, the Army Corps of Engineers official, said the contracts contained provisions that were generally discouraged under FEMA guidelines.

The four contracts, he said, pay for debris removal based on 'time and material.' In other words, the haulers are paid by the hour or day, which means they have little financial incentive to work quickly. Past FEMA audits have revealed any number of abuses with such contracts. One favored ruse is to use under-size trucks, forcing more trips to the landfill.

- David Barstow, [“Officials Are on the Lookout for Relief Effort's Dark Side,”](#) *New York Times*, Sept. 22, 2001, p. B11.

Author William Langewiesche, one of few journalists allowed full access to the site, noted that “though some of the truckers cheated, and certain contractors grossly inflated their costs, on the whole, workers never got the idea to slow down and take advantage of the federal largesse.” (William Langewiesche, [American Ground: Unbuilding the World Trade Center](#), North Point Press, New York, 2002, p. 181.) So what was the incentive to work fast? Aside from taking one’s mind off the horror? It was, after all, a 24/7 nonstop work site.

Last but not least, LeDuff and Greenhouse explained, there was the “good luck” that more damage wasn’t done – especially to the 3-foot thick, 70-foot deep reinforced concrete retaining wall – aka the “bathtub” – that kept the Hudson River from flooding the basement, as well as the PATH (Port Authority Trans Hudson railway) tubes, and the subway system. An



[Source](#) shows all 6 floors, credit Leslie E. Robertson Associates

early report prepared by Controlled Demolition, Inc. (not available in full) highlighted this fact. (Nadine M. Post, "[Preliminary Report Says Maintaining Integrity of World Trade Center's Slurry Wall Foundation Is Paramount](#)," *Engineering News-Record*, Sept. 25, 2001.) More than 45 wells were placed along adjacent streets, using pumps to alleviate groundwater pressure. (http://www.avantigrout.com/files/literature/Working_at_Ground_Zero.pdf) Not only was direct damage to the wall a worry, but also (more so) was leaving it unsupported. Watch the 2002 PBS documentary "[America Rebuilds: A Year At Ground Zero](#)" (at 4:19 in clip), where the matter was addressed using both animation and video ([mirror](#)). In a news article, engineering manager for the Port Authority of New York & New Jersey, Peter Rinaldi talked about this. "The only thing holding the slurry wall up was the collapsing material itself." (Caren Halbfinger, "[WTC Slurry Wall a Symbol of Survival](#)," *The Journal News*, Sept. 5, 2006.)

In some places, especially on the north and east sides, intact floors did remain to provide support structure. Seen above thanks to Leslie E. Robertson Associates (LERA, the main engineering firm who built the WTC) is one of few online maps illustrating the status of explored areas below the surface. [Another map image](#) comes from an [Engineering News-Record article](#) from Oct. 29, 2001, updated from a [similar one Oct. 8](#) that opened by saying, "Visual surveys indicate roughly 50% of the seven-level basement structure of the World Trade Center is now rubble as a result of the impact of the collapse of the twin 110-story towers." Another series of images representing the underground came from [The New York Times website](#), which unlike the LERA drawings places some damage on B6. As you can see, it is not accurate to suggest the "towers compacted into a rubble pile that filled a six-story basement...." (Dennis Cauchon and Martha T. Moore, "[Miracles Emerge from Debris](#)," *usatoday.com*, Sept. 6, 2002.)

"There really isn't much down there except for vacant space,' Hahn said [Daniel Hahn, an engineer at Mueser Rutledge Consulting Engineers, which surveyed the basements]. 'There is very little debris because the building didn't collapse through the basements.'" (Greg Gittrich, "[Seven-story Underground Space Unlikely To Hold Bodies](#)," *NYDailyNews.com*, Jan. 23, 2002.) It was inevitable that one of the [giant excavating machines would fall](#) into a void. This happened at least twice. ("America Rebuilds," PBS, 2002. [source: [clip at 3:12](#)] and George J. Tamaro, "[World Trade Center 'Bathtub': From Genesis to Armageddon](#)," *The Bridge*, Spring 2002, Vol. 32, No. 1, p. 17 ([html version](#)).

Working with LERA as seen above, Mueser Rutledge Consulting Engineers advised New York City's Department of Design and Construction on the basement conditions and compiled the survey of structural damage. (Dennis Overbye, "[Under the Towers, Ruin and Resilience](#)," *New York Times*, Oct. 9, 2001.) "Infrastructure data were assembled, sometimes in the form of nonregistered digital computer-aided design drawings. The data were integrated with the building plans to provide a 3-D view



underground; before and after views of the site helped determine existing conditions.” (Bruce Cahan and Matt Ball, [ibid.](#), GEOWorld, Jan. 2002, p. 28.) Current efforts to procure these detailed maps by Freedom of Information Act/Law (FOIA/FOIL) request have failed to get this data. (See [911datasets.org](#) materials.)

The news clipping here comes from Dennis Overbye and Thomas J. Lueck, “[Officials Report No Threat of Flooding from the Hudson](#),” *New York Times*, Sept. 22, 2001. Another shot from the actual paper, Sept. 21, found an [image](#) with the caption: “Subterranean passageways somehow survived the collapse of the twin towers.” The C.J. Chivers article title is somewhat visible: “[Looting Is Reported in Center's Tomblike Mall](#).” [See the [mall map](#) to reference the list of stores.]



Liberty Street and WTC 2. Photo taken Sept. 13. Source: NYPD Aviation [[enlarge photo](#)]

The southern side of the slurry wall was dangerously unsupported, and creeping inward. Compare the above photo by NYPD aviation 9/13 and [this ENR 10/29 diagram](#) (Source: [Engineering News-Record](#)) to better understand the damage (). The quick solution for this weak spot was simply to dump earth in front of it, or “backfill.” The long-term solution was priority number one on the site ([to paraphrase “America Rebuilds”](#)).

“[W]e very quickly came up with this idea of tying the wall back. The circumstances you had to work with were that you couldn't even find the wall initially, there was burning debris all over it.”

But before the work could begin, as engineers were assembling equipment and materials, the southern portion of the wall, near Liberty Street, began to move. A member of the construction crew brought it to [engineering manager for the Port Authority of New York & New Jersey Peter] Rinaldi's attention.

'A crack opened up on the street overnight,' Rinaldi recalled. 'I looked at it and recognized the wall was failing.'

So the Port Authority brought in 50,000 cubic yards of sand to prop the wall in place. Shortly afterward, work began to secure the wall by drilling pipes into the bedrock, anchoring steel cables through those pipes to the wall and fastening them at a 45-degree angle. 'We put in almost 1,000 of these,' Rinaldi said. They finished the job in May 2002." (Caren Halbfinger, [ibid.](#))

Not only was the bathtub wall spared significant damage. Structures surrounding the WTC complex survived, despite initial fears that One Liberty Plaza might collapse (See for example [ABC News Sept. 12 at 7:24 p.m.](#)). Economically speaking from the point of view of one having to pay for cleanup, it was fortunate that the towers were completely destroyed, and destroyed in the manner they were: falling into themselves and peeling downward in [pieces](#), as opposed to large toppling sections (like WTC 2 threatened in the first moments of collapse [image at right]). With the exceptions of the small church below the South Tower across Liberty Street ([St. Nicholas Greek Orthodox Church](#)), only those buildings carrying the WTC prefix – all 7 – were destroyed. [[Deutsche Bank Building](#) was eventually dismantled due to a combination of dust contamination and damage.]



Unknown. See [Thomas Nilsson](#) from below.

Hear leading Ground Zero engineer Richard Tomasetti describe periphery damage [here in "America Rebuilds."](#) Most falling debris and steel was confined to about a block's radius. See collected images at [sharpprintinginc.com](#). As Ground Zero ironworker/foreman Warren Allen observed in "[Metal of Honor](#)" (Ibid., see clip [[mirror](#)]) "You couldn't have paid a demolition company to take them down straighter."

Finally there was the luck that no considerable effort or expense was required for demolishing remaining structure where the towers were concerned. [Videos of the collapses](#) that show the building cores crumble down afterward were especially interesting ([WTC 2 \(mirror\)](#) - [WTC 1](#)). WTC 5 and 6 had to be picked apart or wrecked by giant machines (and finally pulled down using cables in 6's case. [See "America Rebuilds" here](#)). Of the Twin Towers, only those jagged, [iconic exterior shells](#) of trident columns were left standing around the 7 stories of partial [core](#) (WTC 1, at 12 feet per story). See the [9/17 LIDAR image with elevation legend](#), which reveals the unbelievably large percentage of area actually below street level. The incredible pulverization of building contents has been the subject of numerous intelligent witnesses' surprised comments, as collected in [my video](#). (As an [appendix](#), I've included the timed text closed captions with added source notes.)

The complete devastation and fast cleanup that it afforded were **not** miracles, or luck.

THE BIG FOUR

The [PBS website for the "America Rebuilds" program](#) provided the "quick facts" that the initial estimate for "clean-up" was [\\$2 billion](#) and the final actual cost was [\\$650 million](#). Who got the money? (Please see [Appendix 3](#) for Kevin Ryan's investigation of the matter.)

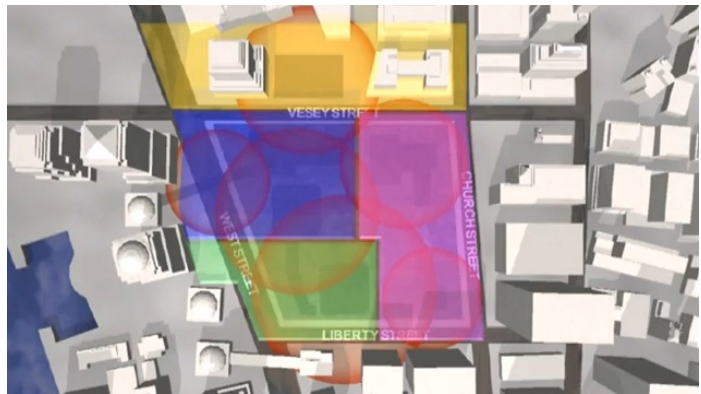
According to William Langewiesche, on the day of 9/11 the Department of Design and

Construction's Michael Burton called three big names in the construction industry with which he was familiar: AMEC, Bovis Lend Lease, and Turner Construction. Burton's boss Kenneth Holden brought [Tully Construction](#) in also. (Langewiesche, *Ibid.*, p. 89) On 9/12 it was reported by construction industry news that three companies had been hired, not including Turner for whatever reason. (David S. Chartock, "[Industry Rallies To Cleanup WTC Aftermath](#)," *New York Construction News*, Sept. 12, 2001.) The next day Turner was included, with AMEC and Bovis grouped together. ("[Industry Mobilization Continues: DDC Selects 3 Cleanup Teams](#)," *New York Construction News*, Sept. 13, 2001.)

Details were worked out while FDNY took the lead in rescue and recovery, using mostly 5-gallon "[bucket brigades](#)," working aside FBI, NYPD, FEMA, etc., delicately by hand with hope of finding survivors. On Sept. 14, *New York Construction News* published an article titled, "[Day 4: A Unified Industry Digs In So Others Can Dig Out](#)." Machines then began to take over. "The rescue operation has changed course this evening. They have abandoned an ocean of 5-gallon buckets in favor of heavier equipment." (Matt Siegel, "[Three Nights at Ground Zero](#)" ([mirror](#)) at 15:30, during the film's section titled "Day Five." Day one was 9/11.)

Four \$250 million contracts were awarded to the construction companies involved (David Barstow, *Ibid.*, *New York Times*, Sept. 22, 2001.). Ground Zero was [divided into quadrants](#), each with its own managing firm. Subcontractors were hired. Payment was only rendered for spent time and materials.

A [nydailynews.com article \(cached\)](#) only counted \$458 million "total quadrant contracts," but their primary investigative purpose was connecting THE MOB to about \$77,428,250 of that (Russ Buettner, Heidi Evans, Robert Gearty, Brian Kates, Greg B. Smith and Richard T. Pienciak, "Exposed: Map of Ground Zero Spoils. Where the Money Went To Clear Trade Center Debris.," Dec. 5, 2005). Yes, that means organized crime was involved. **Of course!** (See also the Sept. 28, 2001 UK *Telegraph* article "[250 Tons of Scrap Stolen From Ruins](#)," by David Sapsted.) In [Report from Ground Zero](#), a firefighter talked about this.



Quadrants. [Source](#): "Up From Zero" (Dept. of Labor, 2003)

"The fact," he [said], "that this dust and steel is being taken by the Mafia, somehow, it makes it so New York, you know...." (Dennis Smith, *Ibid.*, p. 268.) This news came before the auditors were employed, and despite author William Langewiesche's assertion that "[t]he mob shied away from the job." (William Langewiesche, *American Ground: Unbuilding the World Trade Center*, *Ibid.*, p. 181.) How would he have known? [Note: I quote this text often, despite the fact that the DDC's Kenneth Holden granted Langewiesche (pronounced "Lang-a-veesha") the virtually unrestricted access – perhaps a source of bias [{source}](#). To find important criticism of *American Ground*, visit the [WTC Living History Project](#).]

"Agreements between the city and the Big Four, as well as with subcontractors, were handled on a pay-as-you-go basis. Without competitive bidding, the four managers picked whomever they wanted to get the job done.

Of the \$458 million in federal 9/11 aid spent on debris removal, AMEC got \$65.8 million, Bovis \$277.2 million, Tully \$76 million and Turner \$39 million. [. . .]

When London-based AMEC Construction showed up at Ground Zero as one of the Big Four hired to run the cleanup job, the firm's U.S. subsidiary already was ensnared in government corruption probes in Missouri and California. AMEC still got the 9/11 job."

- Russ Buettner, Heidi Evans, Robert Gearty, Brian Kates, Greg B. Smith, and Richard T. Pienciak, "[Exposed: Map of Ground Zero Spoils. Where the Money Went to Clear Trade Center Debris](#)," nydailynews.com, Dec. 5, 2005.

Note that AMEC also worked at the Pentagon disaster site. See "[Contractor Guilty of Pentagon Fraud](#)," Torsten Ove, Pittsburgh Post-Gazette, Feb. 21, 2008: "... a supervisor for AMEC Construction Management, the company in charge of the \$199 million Pentagon rebuilding contract, pleaded guilty in 2006." Here's a quick description of the troubled corporation working on the New York site: "AMEC in the northwest corner of the foundation hole, often bumbling, arousing the ire of the DDC, and falling behind..." (Langewiesche, *Ibid.*, p. 68.) Mention of their Pentagon rebuilding (and renovation pre-9/11 of the exact Flight 77 impact point) comes from Kevin Robert Ryan, [Another Nineteen: Investigating Legitimate 9/11 Suspects](#), Microbloom, 2013, especially Chapter 10. Read in part on [my website](#).

On the next page of [American Ground](#), Langewiesche describes the "forces" at work as "roughly 3,000 strong." There were so many people working on the site, it often came as a surprise to industry professionals that there were no fatalities during the entire 9 months (<http://www.osha.gov/as/opa/911/>).

"The initial estimates by DDC [New York City Department of Design and Construction] and the federal government were that the recovery efforts, debris removal and site stabilization would take 2 years and cost over \$1 billion. The Contractors and others finished the work in 265 continuous days, 24 hours per day. The Labor force peaked at 2300 (including uniform services), and was stable at 1700 for much of the period, which included about 250 Bovis personnel. BLL was particularly proud that we had no fatalities and only 36 reportable accidents with over 3.2 million man-hours worked."

- Michael Feigin, Executive Vice President, Chief Administrative Officer, Bovis Lend Lease Holdings, Inc., [Subcommittee on Superfund and Waste Management Impact of Certain Government Contractor Liability Proposals on Environmental Laws](#), Nov. 8, 2005.

Note the 3.2 million man-hours is total, not Bovis only (although Bovis did have the most). See also Pete Sigmund, "[After Nine Months, WTC Site Cleanup Concludes](#)," Construction Equipment Guide, Northeast Edition, June 17, 2002.

Another of the "big four" was Peter Tully of Tully Construction, the contractor responsible for the eastern quadrant of the pile – the south tower, WTC 4 and 5, and the 425,000 square foot underground mall. Tully granted an interview that proved most interesting [however *leading* the journalist's question may have been]:

"Think of the thousands of file cabinets, computers, and telephones in those towers - I never saw one - everything was pulverized," he said. 'Everything that was above grade - above the 6th and 7th floor - disintegrated...it was like an explosion.' Tully Construction specializes in concrete. I asked Mr. Tully if he had ever seen concrete pulverized as it was at the WTC.

'No - never,' he said.

Tully said that there were hot spots where he observed 'literally molten steel.' Asked about what could have caused such intense heat, Tully said, *"Think about the jet fuel."* (emphasis added)

- Christopher Bollyn, "[Foreign Firms Destroyed Crucial Evidence](#)," August 14, 2002.



WTC Building 7, left: Michael Chan from 911datasets.org release 36, 42A0520 - G37D7; right: Tim Tobiason from release 10/NYC-FDNY/[WTCL-28-NYC_Pt2of4.wmv](#) shot Sept. 12 or 13.

THE BIG FOUR, Continued: BUILDING 7

Contractors working for Turner/Plaza Construction made quick, “almost tidy” work of the northern quadrant, which included Building 7. (Langewiesche, *Ibid.*, p. 68.) By October 20 [the pile](#) had been “just about completely cleared away.” (Dennis Smith, *Ibid.*, p. 314.) By mid-November Turner was done at the site. (“[Turner Finishes WTC Work](#),” *New York Construction News*, Oct. 25, 2001.)

If you haven't seen it, watch the “collapse” from [all angles](#) now.

Within 5 days of the attack, workers had “begun using heavy equipment to haul away the wreckage of Building number 7, regardless of the fact that it's still burning. At the Canteen we hear some of the truck drivers complaining that some of these girders are so hot they cause the beds of the dumptrucks to crack and split open.” (Matt Siegel, “[Three Nights at Ground Zero](#)” at 13:15, during the film's section titled “Day Five.”) Why not wait, since there was nobody trapped or killed there? Well for one thing, the value of the trucks could be reimbursed with FEMA's federal aid!



WTC 7 debris pile Oct. 18. Source: NIST [[enlarge photo](#)]

World Trade Center 7 had been evacuated before the first tower collapsed (WTC 2).

The [9/11 Commission Report](#) says the time was “approximately 9:30” a.m. when even the Office of Emergency Management (OEM) personnel left their high-tech “bunker.” ([The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States](#), 2004, p. 305.) Exceptions to the full evacuation were 1. City Housing Authority worker Barry Jennings and 2. the city's corporation counsel Michael Hess, who were trapped on the eighth floor of the building. Fires started [when WTC 1 collapsed](#) at 10:28 a.m., according to NIST NCSTAR 1A, [Federal Building and Fire Safety Investigation of the World Trade Center Disaster: Final Report on the Collapse of World Trade Center Building 7](#), 2008 [see [NIST questions and answers webpage](#)]. Dr. Frank Greening's "[Valid Criticism of NIST WTC 7 Final Report](#)" has pointed out numerous problems with the official fire story. Here we consider the two men's story.

“According to Hess, when the two men get down to the eighth floor, ‘there was an explosion and we’ve been trapped on the eighth floor with smoke, thick smoke, all around us, for about an hour and a half.’ [UPN 9, 9/11/2001] Jennings will also recall hearing explosions. He will say: ‘I made it to the sixth floor and there was an explosion. The explosion was beneath me.’ [Dylan Avery, 2007] He will add, ‘[T]he staircase that I was standing on just gave way,’ and, ‘Then we made it back to the eighth floor, I heard some more explosions.’ [BBC, 7/6/2008] Jennings says to Hess: ‘This is it; we’re dead. We’re not gonna make it out of here.’ [Penn State Public Broadcasting, 3/1/2002] The National Institute of Standards and Technology (NIST) will claim the two men head down the stairs after 9:59, when the first collapse occurs, and then become trapped around the time the second tower collapses, at 10:28. [National Institute of Standards and Technology, 9/2005, pp. 109-110] But according to the London Independent, they start heading down the stairs after the second attack at 9:03, which suggests the explosions begin earlier on. [Independent, 9/13/2001] Jennings will confirm this, saying that when he hears the first explosion, ‘Both [of the Twin Towers] were still standing,’ meaning it occurs before 9:59. He says: ‘I was trapped in there when both [Twin Towers] came down. . . . All this time I’m hearing explosions.’ [Dylan Avery, 2007] The cause of the explosions is unclear.”

- Source: [historycommons.org](#), from the [Complete 911 Timeline](#)

Firefighters rescued them after the second tower collapsed. ([NIST NCSTAR 1-8, Federal Building and Fire Safety Investigation of the World Trade Center Disaster: The Emergency Response Operations](#), 2005, p. 109-110.)

The interior of the burning building was inspected by the city's OEM early in the afternoon, according to deputy director Richard Rotanz. (“[The Conspiracy Files – 9/11: The Third Tower](#),” BBC, 2008 at 39:00 [[clip](#)].) No victims were found in the building. Interesting details from Rotanz include an “elevator car” that was “blown out of its shaft ... down the hall.” *How* that could have been caused by WTC 1 debris hitting [the south facade](#) is unclear.

Nobody searched the rubble for survivors or remains, because the area had been cleared long before the [anticipated collapse](#) ([mirror](#)) which finally happened at 5:20 p.m. It was announced as anticipated on virtually all TV networks (or to have *already* collapsed by BBC and CNN): [CNN at 4:10 p.m.](#), NY1 at 4:18, ABC News at 4:50, NBC at 4:55, [BBC World News at 5:08](#), and WB11 at 5:03 p.m. See NYPD clearing the people from the vicinity while WTC 7 burned, aired on [CNN 9/12 at 12:48 p.m.](#) ([mirror](#)). People were warned to move because the building was “about to blow up.” There was also a rumor among FDNY that the

building was going to be “taken down.” ([MSNBC 5:22 p.m.](#), for example)

This background information was important to understand the DDC's chief Kenneth Holden's explanation why Turner had worked so quickly. “Building 7 is the building north of the entire complex. This building was cleared fast because it was the last building to fall, and thus evacuated. Thus, there are no human remains [to recover].” (“[Turner Finishes WTC Work](#),” *Ibid.*) That meant the hazardous rush to clear the steaming hot debris had no critical motive, except perhaps to effectively hide/dispose of crucial evidence of incendiaries (such as pieces of steel “partly evaporated in extraordinarily high temperatures.” (James Glanz paraphrasing fire science engineer Dr. Jonathan Barnett, “[Engineers Suspect Diesel Fuel in Collapse of 7 World Trade Center](#),” *New York Times*, Nov. 29, 2001.) More detail on that later.

Note quickly that diesel fuel was ruled out as the culprit: “In addition to Con Ed’s [100,105 gallons of transformer] oil, there was a maximum loss of 12,000 gallons of diesel from two underground storage tanks registered at 7WTC. To date, EPA and DEC have recovered approximately 20,000 gallons from the other two intact 11,600 gallon underground fuel oil storage tanks at 7WTC.” (Memo to Con Edison Company, “Re: 7 World Trade Center (Trade Center Substation) Investigation Plan,” New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 2, Spill Prevention and Response, Nov. 19, 2001 [[source](#): independent FOIA].)

WTC 7 had no real basement. Quoting from NIST NCSTAR 1A, p. 45:

“WTC 7 and the electrical substation were supported on caisson foundations, which were seated in the bedrock, approximately 20 m (60 ft) below the surface. Above the caissons were heavy grillages composed of built-up steel girders. The 2.5 m to 9 m (8 ft to 30 ft) distance between the caissons was braced by reinforced concrete walls with thicknesses varying from 0.3 m to 0.8 m (1 ft to 2.5 ft). Many of the WTC 7 steel columns were embedded in these walls. The areas between the concrete walls were filled with compacted gravel fill and then covered with a concrete slab to form closed cells and bring the structure up to the required elevation. In some cases, the area was left unfilled and used to house fuel tanks.”

Regarding accusations of evidence disposal, consider these numbers recorded at the debris sorting site, Fresh Kills Landfill: “...October 2nd. At that time there were about 137,000 tons of debris already stockpiled at the site that had not been inspected. That number grew to around **170,000 tons by the third week of October. By the eighth of November, under P&J’s management, the number was down to less than 1,400 tons.**” (Phillips and Jordan, “[Anatomy: World Trade Center/Staten Island Landfill Recovery Operation](#)” [[mirror](#)], [disaster.pandj.com](#) [dead link]) For more on that, skip to [Fresh Kills](#) section.

MEETING MINUTES

10/08/01@ 9:00 AM

9	FRANK WONG TO REPORT ON TONNAGE. DOS WILL BE THE LEAD LIAISON. DOS COORDINATING ALL DEBRIS MONITORING BOTH TONNAGE AND LOADS. FRANK WONG TO ASSURE LOAD NUMBERS ARE REPORTED AT PIER 6 AND 25 BY EACH PRIME. TURNER DELIVERED DEBRIS FROM BUILDING 7 TO PIER. DEBRIS FROM BUILDING 7 SHOULD GO TO FRESH KILLS.	DDC	OPEN	
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“Debris from Building 7 should go to Fresh Kills.” DDC meeting notes, Oct. 8 (Source: [DDC FOIA Sec 1](#), p. 12) Frank Wong was an engineer with the Port Authority. DOS was the Department of Sanitation. See [Map](#) for more.

It's relevant that Secret Service and FBI were involved at the site collecting materials since “WTC 7 originally housed highly sensitive government information.” ([DDC FOIA Sec. 1](#), p. 137.) A designated spot for WTC 7 debris at Fresh Kills was set aside (See [Appendix 3](#)). The above note from the DDC morning meeting is clarified by Turner's Summary Report: “All

debris and steel was transported to the Fresh Kills Landfill in Staten Island (a requirement of the FBI). All heavy steel was trucked to Pier 25 and shipped by barge to Fresh Kills Landfill. All Seasons' [Contracting Co., a Demolition Subcontractor "assigned" to Turner] owned/rented trucks were taken directly to Fresh Kills. At peak approximately 500 trucks of debris per 24 hour shift were removed. In total, 13,373 truck loads of material were removed from the site." ([DDC FOIA Sec. 1](#), p. 139.) That document places the end of the job "on or about November 1st." Keep in mind it was a 24/7 job worked in 2 12-hour shifts per day.

Only one thing may contradict the "no WTC 7 casualties" fact that allowed such fast cleanup. In a [map recently acquired](#) from the cache of EMDC data, more than a dozen civilian remains were specifically marked as found in and around the rubble, according to the FDNY Phoenix Unit. (Source: Independent FOIA request.) Of course, since victims were falling from 1,300 feet altitude, the possibility exists that the remains came from WTC 1.

What about the WTC 7 debris leaning against the neighboring Verizon building? Could that have been reason enough to rush the cleanup? Returning telephone service to the area was definitely critical, but debris was not the problem. Water was, according to Tishman Construction, who was responsible for Verizon. (David S. Chartock, "[Day 4: A Unified Industry Digs In So Others Can Dig Out](#)," *Ibid.*) Here are some details on the Verizon damage:

"During the collapses, steel projectiles from the towers hit the Verizon building, sliced the mains and left water cascading into the building's five subbasements, filling the lowermost vaults like a swimming pool. A javelin of steel actually speared through the sidewalk concrete and lodged in the basement. The building's fuel oil tanks were submerged in water, then burst.

Up in the topmost subbasement, a pool of shin-deep water made unusable the miles of snaking phone cables (black for copper, orange for fiber optics) in the 250-foot-long, 60-foot-wide cable vault. At 10:21 p.m., the building's backup batteries ran out of power and the last call went through the switching equipment.

Below, Subbasement B held much of the telephone company's historical records, memorabilia and antique equipment, which was damaged by the flood. It took two months to pump out 12 million gallons of water mixed with 40,000 gallons of petroleum."

- Glenn Collins, "[A Sturdy Survivor Gets Back to Work; Herculean Effort to Restore A Landmark Battered on 9/11](#)," *New York Times*, Jan. 6, 2003.

Notice water everywhere in the Etienne Sauret 9/11 footage ("[WTC: The First 24 Hours](#)"). Also see the video "[WTC7: Let It Burn](#)," which contemplates the FDNY statement that "We couldn't fight the fire in tower 7 because we didn't have enough water. All the water mains were down. What water we had was being supplied by the boats..." [Then Assistant Chief of Department Harry Meyers quoted in Dennis Smith's [Report from Ground Zero](#), *Ibid.*, p. 160.] In the 2008 BBC documentary "Conspiracy Files – 9/11: The Third Tower," FDNY Chief Peter Hayden (Deputy Chief in 2001) recalls consulting an (unnamed) engineer on 9/11 about the possibility of letting the fire burn – if it would lead to collapse of the building. That engineer advised it would likely collapse ([watch clip](#)). Yet the steel-frame building collapse event was unprecedented, not counting the 2 buildings hit by airplanes that day.

Whatever the cause was for the quick, symmetrical WTC 7 implosion, be it unchallenged fire or planned demolition, the subject will always be a hot subject of debate. To help, I enter this very paper documenting the handling of the building's debris as evidence.

"Normally, great care is taken in preserving the evidence from structural failures and crime scenes." (Jim Hoffman, "Destruction of the Towers' Steel Remains," [911research.wtc7.net](#)) Not after 9/11. The analysis of structural steel from WTC 7 was limited

to the journal *JOM* in "[An Initial Microstructural Analysis of A36 Steel from WTC Building 7](#)" ([mirror](#)) and [Appendix C](#) of the FEMA WTC Building Performance Study.

While the NIST assured us in 2008 that its findings were "firm," they had to admit that:

"However, the reader should keep in mind that the building and the records kept within it were destroyed, and the remains of all the WTC buildings were disposed of before congressional action and funding was available for this Investigation to begin. As a result, there are some facts that could not be discerned and, thus, there are uncertainties in this accounting."

- [NIST NCSTAR 1A](#), *Federal Building and Fire Safety Investigation of the World Trade Center Disaster: Final Report on the Collapse of World Trade Center Building 7*, 2008, p. xxxv.

INVESTIGATIONS

"Did they throw away the locked doors from the Triangle Shirtwaist Fire? Did they throw away the gas can used at the Happyland Social Club Fire? Did they cast aside the pressure-regulating valves at the Meridian Plaza Fire? Of course not. But essentially, that's what they're doing at the World Trade Center.

For more than three months, structural steel from the World Trade Center has been and continues to be cut up and sold for scrap. Crucial evidence that could answer many questions about high-rise building design practices and performance under fire conditions is on the slow boat to China, perhaps never to be seen again in America until you buy your next car.

Such destruction of evidence shows the astounding ignorance of government officials to the value of a thorough, scientific investigation of the largest fire-induced collapse in world history. I have combed through our national standard for fire investigation, NFPA 921, but nowhere in it does one find an exemption allowing the destruction of evidence for buildings over 10 stories tall."

- Bill Manning, "[Selling Out the Investigation](#)," *Fire Engineering Magazine*, Jan. 1, 2002. ([mirror](#))

The first official scientific investigation into the 9/11 attacks on the WTC was funded with \$1 million from FEMA and "performed under the auspices of the venerable American Society of Civil Engineers (ASCE)." (Langewiesche, *ibid.*, p. 51.) The product of this effort was the [WTC Building Performance Study](#).

Important criticism points out that this group of scientists "didn't even have the subpoena power to obtain the materials needed to produce a thorough set of findings." See this [May 2002 New York 1 News](#) report that finally confirmed the "lack of solid findings." (Source: NIST FOIA, 911datasets.org release 25, 42A0139 – G25D55.)

[Appendix D of the study](#) [[mirror](#)] said, "Collection and storage of steel members from the WTC site was not part of the [Building Performance Study] Team efforts sponsored by FEMA and the American Society of Civil Engineers (ASCE)." (p. 1.) "As of March 15, 2002, a total of 156 steel pieces (not including most of the fasteners and other smaller pieces) had been inspected. In addition, 7 pieces were set aside from Ground Zero with assistance from the DDC." (p. 10.) *But there were "200,000 individual pieces of steel" for crying out loud!* (Karl Koch III with Richard Firstman, [Men of Steel: The Story of the Family that Built the World Trade Center](#), Crown Publishers, New York, 2002, p. 322.) For more intensive criticism of this report, see <http://www.911research.wtc7.net>.

That is not to imply that investigators were denied access, or that they didn't spend lots of time inspecting steel. "The engineers, who more typically are in Manhattan offices designing bridges or high rises, visit the scrapyards on a sporadic schedule, sometimes taking vacation days to make up for the absences from their regular jobs. The teams -- about 20 people are involved in all -- are made up of a mixture of some of the city's most established structural engineers, like Edward DePaola, a principal at Severud Associates, and younger engineers, like Ms. [Anamaria] Bonilla, who works for a California-based engineering company." Also involved was "Ramon Gilsanz, a structural engineer and partner at Gilsanz, Murray, Steficek in Greenwich Village. . . . The condition of floor studs on the steel hints to Mr. Gilsanz that the floor at this spot in the upper reaches of the north tower collapsed not because of a faulty weld, but for some other reason that investigators have still not determined." (James Glanz and Eric Lipton, "A Search for Clues In Towers' Collapse; Engineers Volunteer to Examine Steel Debris Taken to Scrapyards," New York Times, Feb. 2, 2002.) "From the moment the two towers collapsed on Sept. 11, engineers and other experts have been **struggling to answer the monumental questions of exactly why and how the buildings, designed to sustain a jet impact, completely collapsed**. But despite promises of a broad federal investigation, and after weeks of calls from victims' families and others to halt the destruction of the steel that could hold all sorts of clues, the half-heroic, half-comic scenes at the Jersey City scrapyard continue to play out." (Ibid., emphasis/link added)

The Study was headed by a Ph.D. engineer named W. Gene Corley, who had led the official review of the 1995 Oklahoma City bombing. Corley and author William Langewiesche justified the WTC steel scrapping. "Corley told me that given the weights and quantities involved, even the inspections of the steel . . . proved to be an inefficient means of gathering evidence. . . . More important were videos and firsthand accounts from September 11, the original plans . . . and the application of methodical science. Corley had confidence that the catastrophe could be reasoned through." (Langewiesche, Ibid., p. 53.)

Rebuttal:

"Statistical sampling methods would not be daunted by large quantities and weights. In fact, these methods were developed to manage and obtain rigorous results when dealing with vastness. Direct observation, empirical measure, and sampling of the actual steel would be at the heart of scientific method...."

- [WTC Living History Project](#) (11)

By the end of the investigation, Corley had changed his mind about keeping the steel. He felt – [as did many others](#) – that his/FEMA's study had been inadequate (NY1 News, CBS, WNBC). In testimony before the House Science Committee March 6, 2002 in Washington, D.C., Corley said much more money would be needed to conduct a proper investigation into the World Trade Center disaster. "The \$40 million would cover the expense of stockpiling the steel and other debris; examining the steel; physically testing the steel; partial parametric computer modeling of the steel, the fire, the plane and the blast; and the examination of egress issues, [said] Corley." (Nadine M. Post, "[\\$40 Million Needed to Study WTC](#)," ENR.com, 3/18/02. [Note that the money provided would be 16 million.])

In a second House Science Committee Hearing May 1, 2002, New York Representative Sherwood Boehlert, the Committee Chairman, started by recollecting what had been learned in the hearings two months previous. He said:

“On March sixth, we delved into the procedures that were followed to assess what had caused the towers to collapse in those indelible moments of September eleventh. We were not happy with what we learned. We found that the study of the collapse had been hampered by bureaucratic confusion, hesitation, and delay – by a lack of investigative tools and by excessive restrictions on the flow of information. [. . .] Nothing insured that investigations would begin quickly enough to preserve valuable evidence.”

- [Source](#) – CSPAN (See also [YouTube](#))

Following the “half-baked farce” of the FEMA investigation (in the respected [Fire Engineering Magazine](#)'s opinion), the [National Institute for Standards and Technology](#) (NIST) – a federal agency of the U.S. Commerce Dept. – was allocated \$16 million. (“[Feds To Begin Skyscraper Autopsy](#),” Associated Press, cbsnews.com, Aug. 21, 2002.) Of course, there would be little steel evidence left in the scrapyards by then.

[See the saved steel for yourself](#) in a playlist using mostly [NIST video obtained by FOIA](#) in 2010... also available at <http://wtcdata.nist.gov>. NIST has maintained that their [236 pieces](#) of WTC towers' steel was sufficient. From the [final NIST publications](#), see NCSTAR 1-3 for their metallurgical analyses.

To tackle the subject of the WTC twin collapse investigation deception, engineer [Kevin Ryan](#) presented “[A New Standard for Deception](#),” which has been reviewed and summarized for readers by researcher [Jim Hoffman here](#). Ryan, for example, challenges the official theory that the fireproofing was blown off the steel in the airplane impacts, a necessity for the NIST theory. In support of that NIST theory, Dennis Smith wrote in [Report from Ground Zero](#): “It had been reported, though, that the steel had been allowed to rust while waiting to be used and that the company responsible for applying the fireproofing material might have applied the spray-on fiber-based fireproofing over the rust. An engineer named Ron Hamburger was recently quoted in *The New Yorker* saying of the mineral spray fireproofing: 'If you knock it, that spray-on protection will fall off.’” (p. 187) Of course, Hamburger participated in both the FEMA/ASCE and NIST investigations. Still:

“A fire chief expects any burning high-rise building to stand for at least three hours before its structural steel begins to stretch dangerously, at which point they will begin to worry about a potential collapse. But the south tower, which had no asbestos at all, burned for just fifty-six minutes before it fell while the north tower collapsed in one hundred minutes. This is an issue, I suspect, that I will hear more about.”
Dennis Smith, [Report from Ground Zero](#), *Ibid.*, p. 210.

Naturally, the [NIST report](#) (finally published in September 2005) is the subject of much debate – at least, where any concrete conclusions were drawn. The most glaring shortcoming was that in

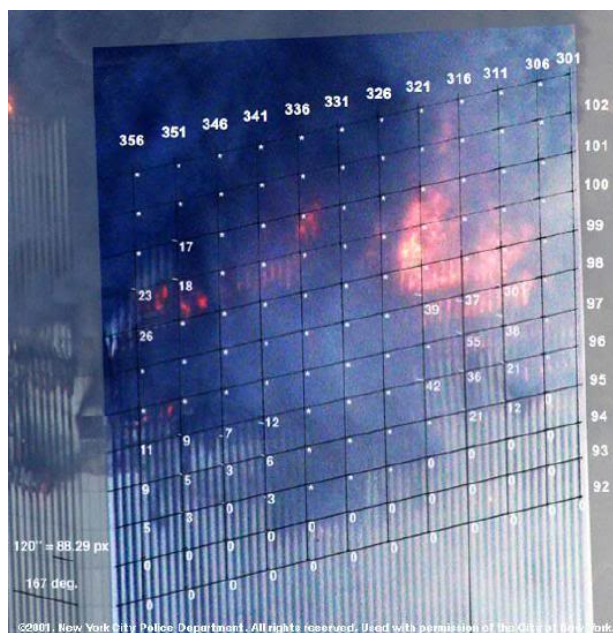


Figure 5-6. Inward bowing of exterior columns of the South wall of WTC 1 at 10:23 a.m. (97 min after impact). Displacements were estimated by NIST from the analysis of this photograph.

NIST NCSTAR 1-6D, WTC Investigation 317

the end, the study did not produce a successful model to show how the towers collapsed. ([FAQ 10.](#)) The explanation was simply (and repeatedly) that “[global collapse ensued.](#)” (NCSTAR 1, pp. 145 & 146; NCSTAR 1-6D, p. 314.) That is, no “model” was produced after the initiations – [both which are still hotly contested](#) if not proven wrong.

Take the case of the north tower. Lead investigator for NIST Shyam Sunder explained with the PBS-NOVA 2006 documentary “[Building on Ground Zero](#)” that exterior columns “snapped” after heated floor trusses sagged and pulled inward. [Independent investigation](#) of this using [Finite Element Analysis](#) has shown it to be an invalid cause for the observed inward bowing of the south wall. Instead a downward movement of the core solved the problem neatly.

Additionally, during “collapse” [a dust jet began on the west side](#) far below and before the [official initiation](#). (Video source: [Craig Braden](#).) Ironically Eugene Corley's early explanation of WTC 1 initiation (in the core) was more accurate. His evidence was early downward antenna movement. (See “[Collapse: How the Towers Fell](#),” Discovery, 2002 at 35:34 – NIST FOIA, 911datasets.org release 27, 42A0249 – G26D125.) Was the NIST report wrong simply because the core columns *could not have* failed first, except in the event of some kind of secondary device(s)? (Was this why President Bush the week of the 5th anniversary of 9/11 told us that terrorists planted explosives high in the buildings? [[watch - see text](#)])

Additionally, the [WTC 2 initiation has been independently investigated here](#), for example. As that tower fell, the upper floors of the southeast side kinked inward. ([See Dean Riviere video](#).) The problem of missing steel evidence prohibited possible answers. Another unexplained event that seemed to mark a destructive [explosion occurred on the northeast corner near the 91st floor](#). The flash of light was seen from several angles in the first seconds of “collapse.” It has not been explained, other than by “conspiracy theorists” as a purposeful event designed to neatly bring down the top section of the building in pieces.

[How](#) this was accomplished with pre-planted explosives is perhaps more difficult to explain. Or should we ask [who](#) could have done it? [[mirror – link](#)]. But I digress.

Even as the final report was being published, NIST admitted to *Engineering News-Record* that “the \$16-million study may never determine the exact sequence of events that led to the collapses,” that only a “most likely” scenario could be offered. (Nadine M. Post, “[Research May Never Pinpoint Sequence of Events on 9/11](#),” ENR, Jan. 19, 2004.)

INVESTIGATIONS, Continued: THE SECOND PLANE

When NIST needed help with the analysis and modeling of the controversial WTC 7 “collapse,” Applied Research Associates, Inc. (ARA) was awarded the contract. ([NIST website](#).) NIST and ARA



[Source:](#) Michael Hezarkhani/CNN [Note the wing tips hit simultaneously.]

worked together to explain the complex mechanisms for that which had never happened before in the history of steel-framed skyscrapers – total structural collapse due to fire.

The [final WTC 7 report](#) was released [in late 2008](#)... and was summarized in an August 21 [press briefing recorded on C-SPAN](#). (See a rebuttal video now: “[WTC7 in 7 Minutes: 9/11 Explosions Not Fire](#)” [[mirror](#)], which contains snippets of the NIST briefing from CNN.)

Five years earlier, ARA had been [awarded the responsibility](#) of analyzing the aircraft impacts on the two WTC towers. The exact amount of money ARA earned is unknown. Whatever the number, it was too much.

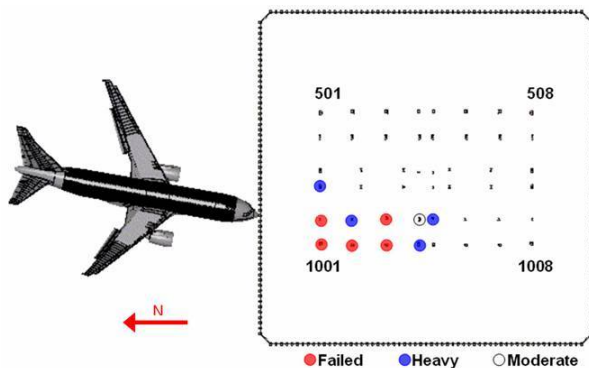
“The analyses of the aircraft impacts performed for this investigation are believed to be the highest-fidelity simulations ever performed for this impact behavior using state-of-the-art analysis methodologies. Wherever possible, the models were validated against observables or supporting test data developed by the WTC Investigation.”

At least one drastic error in those analyses deserves attention. This obvious mistake, explained below, begs the question: If such an oversight could be published, just how much of the WTC 7 report was wrong? If such critical data could be overlooked in order to [try to] make the model fit the end result, what real analysis was there?

It should have been easy to determine the angle at which United Flight 175 impacted WTC 2, specifically the lateral angle. That is, at least to within 3 or 4 degrees. Just look at the video frames above (Source: Michael Hezarkhani/CNN). The wingtips entered virtually at the same time. Therefore – as we have seen in much more video – the angle was nearly perpendicular, between zero and four degrees. **Problem: NIST and their associates missed by ten full degrees.**

The trajectory of the aircraft was crucial in determining which core columns were impacted by what. Ten degrees could have made a substantial difference in the damage estimate. [Such an estimate](#) was included in the NIST's NCSTAR 1, p. 40.

The south tower was struck by an airplane on LIVE TV. Today we have more than 50 videos of this event. See [911conspiracy.tv/2nd_hit.html](#) for a detailed list.



Source: [ARA website](#) [Note the N arrow is incorrect.]

software, Achimspok was able to elaborate on a near-perpendicular lateral impact orientation. See also his short video “[UA175 - The Last 12 Seconds](#)” (part one) and, crucially, [part two](#). These videos describe the final seconds of the flight path in detail, unlike the NIST/ARA study.

This image from Applied Research Associates, Inc. has also been included in the NIST document [NCSTAR 1-2B, Analysis of Aircraft Impacts into the World Trade Center Towers](#) (Chapters 1-8), p. lxxxii, where there is [no “N” arrow](#).

A brilliant video compilation has been assembled with many camera locations pinpointed, thanks to dedicated 9/11 researcher Achimspok. It is titled “[The last 12 seconds of the alleged flight UA175 – refined](#).” By using these precise camera locations and 3D mapping

The NIST only showed us the [supposed] final orientation of the airplane and its “assumed” trajectory. In NCSTAR 1-2B (p. 172) we read the lame disclaimer for the mistake

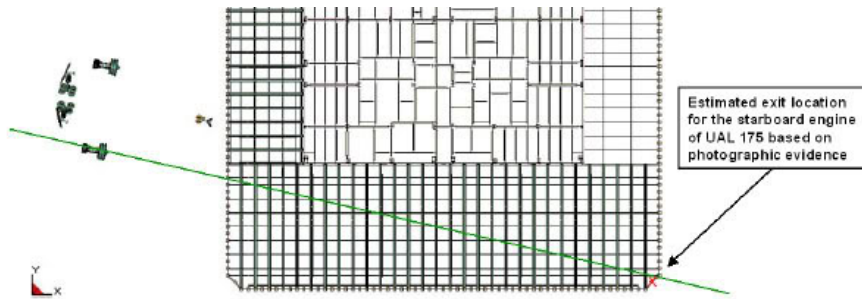
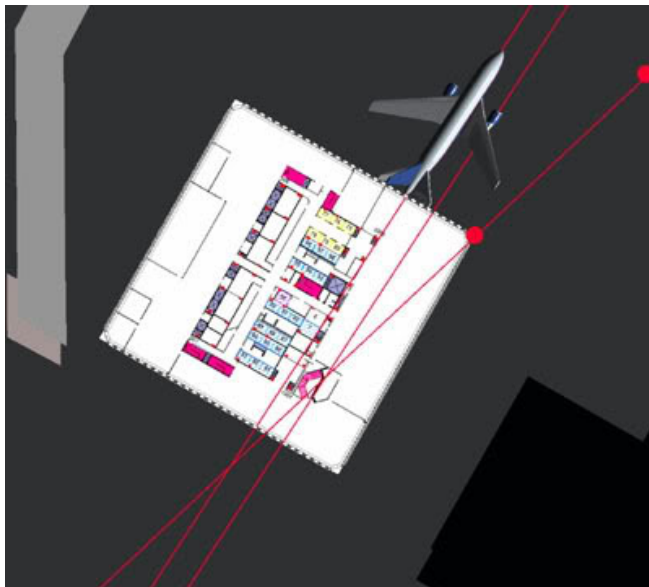


Figure 7-13. Projected trajectory of the starboard engine of UAL 175 with an initial lateral approach angle of 13°.

by Steven W. Kirkpatrick and Robert T. Bocchieri (with Robert A. MacNeill, Samuel Holmes, Brian D. Peterson, Robert W. Cilke, and Claudia Navarro) of the U.S. military contractor helping NIST – Applied Research Associates (ARA).

*“Although the lateral approach angle of UAL 175 had a nominal value of 15 degrees, additional observable information was used to define a most probable flight condition. Figure 7-13 shows the top view of WTC 2 with the engines and landing gear in their pre-impact location. Also shown is the projected trajectory of the starboard engine of UAL 175 with an initial lateral approach trajectory of 13 degrees instead of 15 degrees, **assuming** the engine was not significantly deflected as it passed through the building. With this lateral trajectory, the starboard engine would exit the tower at the northeast corner, consistent with the observables from video and photographic evidence.”*
 [emphasis added] *“It is possible that the tower structure and/or contents deflected the engine from its initial trajectory. The global simulations described in Chapter 9 used a standard configuration for building contents similar to WTC 1. This configuration did not cause substantial deviation in the trajectory of the starboard engine. This lateral trajectory was, therefore, the most likely and was adopted for the global analyses.”*

They ASSUMED that “the engine was not significantly deflected as it passed through the



[Revised plan](#) for floor 81 from NIST NCSTAR 1-5F, p. 129.

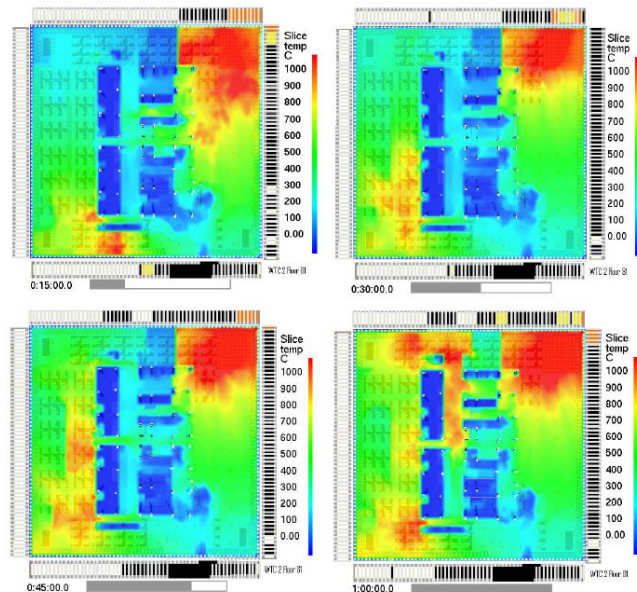


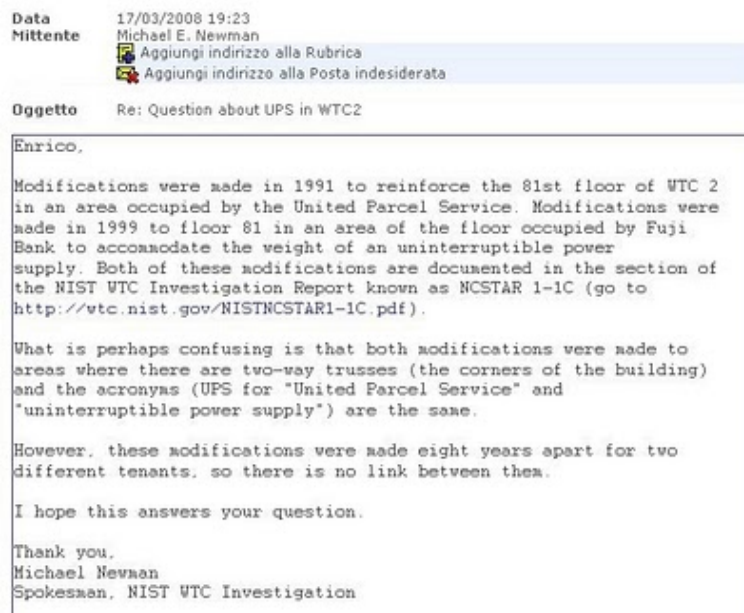
Figure 6-33. Upper layer temperatures of WTC 2, floor 81.

building.” They disregarded important data, i.e. the correct entry angle, for this reason. This irresponsible act of bad science was done out of laziness. These people were paid by the government (NIST = Dept. of Commerce) and, hence, the taxpaying public.

Additional research into the contents of floor 81 was required. All that really meant was collaborating with the rest of the NIST team. The first clue is provided by the NIST Building and Fire Research Laboratory (Kevin B. McGrattan, Charles Bouldin, and Glenn P. Forney). See [NCSTAR 1-5F, Computer Simulation of the Fires in the World Trade Center Towers](#), to find a custom drawn floor plan ([see image from Appendix A](#)), which proved to be helpful. “The basic layout from the 78th floor was used for the higher floors with adjustments made to the elevators, vents and major partitions, based on recollections of floor occupants.” (p. 117.)

From the acknowledgments we learn that “Wayne Schletter, a survivor of WTC 2, provided information about the layout of floors 79 through 82.” (p. xxix.) [According to nymag.com](#) (and the NIST), he worked on floor 80. “Note that the abrupt change in temperature seen in the northeast corner in the temperature plots of Fig. 6-33 [seen below] are due to a wall assumed in the floor plan. The coincidence of the wall and the observed window breakage for the first 30 min was merely fortuitous - the wall was put there based only on a rough sketch of the 81st floor by an occupant of the 80th.” (NIST NCSTAR 1-5F, p. 94.)

In addition to extra walls, the



Source: Enrico Manieri, "[11-Settembre](#)" blog

4.3.3 Structural Members That Were Reinforced

A summary of the structural members that were reinforced in WTC 2 is given in Table 4-6. The Tenant Alteration Application Review Request Form is included in the documentation for the modifications performed in 1999.

Table 4-6. Structural members that were reinforced in WTC 2.

Date	Floor(s)	Tenant	Structural Engineer	Description of Modification	Reference
1993	96	Fiduciary Trust	LERA	A number of long-span floor trusses and their connections in the northeast quadrant of the building were reinforced due to additional loads from high-density mobile filing cabinets.	W93-2179 PANYNJ (Newark)
1999	81	Fuji Bank Limited	LERA	Documents reference adding reinforcement to existing two-way floor trusses to accommodate new UPS workspace. Documents do not specify the required amounts of reinforcement due to the new superimposed loads.	W99-2125 PANYNJ (Newark)

Source: [NIST NCSTAR 1-1C](#), p. 116.

important [revised plan for floor 81](#) (seen above with plane) contained a stairwell in the path of the starboard engine. (NIST NCSTAR 1-5F, pp. 127-130.) This was not in the [original plans](#) because it was built for the tenant Fuji Bank. Although specific records for this particular feature of custom construction are not available, some renovations are listed in the NIST report. See [NCSTAR 1-1H](#), p. 57 [[image here](#)] (“Floors affected” is obviously wrong, mixed up with WTC1 chart, not pictured. Another mistake by NIST/ARA.) Seen here are some details offered about renovations.

The letters UPS in the relevant “description of modification” above stand for “uninterruptible power supply” – batteries – not United Parcel Service... which the NIST actually confused. See the email from NIST to researcher Enrico Manieri (image). [NCSTAR 1-1](#), p. 136, says in 1991 the WTC 2 floor 81 “two-way floor trusses were reinforced in area occupied by United Parcel Service.” ([Two-way floor trusses](#) were used in the corners of each floor.) This tenant being named was certainly a mistake, considering the coincidence of UPS battery systems being installed on the same floor. We could consult a list of tenants at the WTC to verify, I am sure.

Speaking of coincidence, as fate would have it, the second plane impacted a floor with literally tons of highly flammable materials. This point was made clearly with detailed photographs of an actual UPS room, by the Italian blog, “[11-Settembre](#).” ...

Here it was shown that the tenant modifications on floor 81 caused the starboard engine deflection. If not the staircase alone, the racks of lead-acid batteries probably helped. Even without those details, how hard was it to draw the conclusion, without throwing out the plain fact that the doomed jet hit nearly head-on, not at 13 or 15 degrees?

Fact: We have established beyond a doubt that NIST and ARA twisted and ignored input data - the cause - in order to match the observed effect.

What does this say about the [controversial WTC 7 collapse study](#) that ARA assisted? Could the cause for that “collapse” – not to mention the towers’ – have been invented after ignoring inconvenient data like **explosions**? (See section “102 Minutes.”)

In closing the Investigations chapter here, you will notice I'm not including the [9/11 Commission Report](#), since it was not a scientific inquiry but instead a story of international terrorism and domestic failures. Those failures can be best investigated by those not in a legislative position. Paul Thompson has fastidiously collected relevant mainstream media stories and arranged them with links and quotes in order, both in print as [The Terror Timeline: Year by Year, Day by Day, Minute by Minute: A Comprehensive Chronicle of the Road to 9/11--and America's Response](#) and on the web, at [historycommons.org](#). Kevin Robert Ryan has written [Another Nineteen: Investigating Legitimate 9/11 Suspects](#) (2013). Last there's me with this book... and a collection of *all the 9/11 videos* arranged at [911conspiracy.tv](#) for a closer technical look at the physical evidence (perhaps done best at [the911forum](#)). Let's not forget [Loose Change](#), [Alex Jones](#), [William Cooper](#) (R.I.P.)...



Fresh Kills processed debris from 9/11/2001-7/26/2002.(Source/date info missing.)

FRESH KILLS

“Kill” is Dutch for “river” or “stream,” for your information.

Fresh Kills Landfill on Staten Island was immediately chosen as the WTC debris repository and sorting site. It had very recently been closed to incoming garbage, with plans to build [a park](#) there. The Dept. of Sanitation:

“Within 24 hours after the attack, some 1,500 sanitation workers had been dispatched and were already beginning the removal of debris. During the early hours, the material leaving Ground Zero was transported directly to the Fresh Kills Landfill by truck and/or tractor-trailer.

Simultaneously, the Department recognized that its existing infrastructure could be utilized. In particular, the Department’s Marine Transfer Stations (MTS) at 59th Street in Manhattan and at Hamilton Avenue in the borough of Brooklyn could provide outlets for limited truck traffic from the site. These facilities were immediately made available and the first loads were received at 11:00 p.m. on September 11.”

- Martin J. Bellew, Director of the Bureau of Waste Disposal for the New York City Department of Sanitation. "[Clearing the Way For Recovery at Ground Zero: The Role of the NYC Department of Sanitation](#)" November 26, 2002.

Operations at the landfill had been allocated \$125 million from FEMA. Only \$67 million was spent, or 53.6 percent. (Eric Beck, Taylor Recycling Site Supervisor at Fresh Kills is quoted in the film “Collateral Damages,” the section titled “[Fresh Kills](#).”) This is one of the reasons why more than 1,000 people were never identified by found remains (see chapter titled “[Bodies](#)” for more detailed analysis). Still, Mark Schaming, Director of Exhibitions at the N.Y. State Museum, described the operation as “very organized.” His description of the “ground remains of the World Trade Center” resembling “mountains of dirt” explained one of the other reasons so few remains were found. (“Collateral Damages,” Ibid. [Watch](#).)

Very little video came out of the forensic crime scene at Fresh Kills. [Photography was prohibited](#). Schaming was accurate in his assessment: a **“hidden history.”** A documentary titled “Behind the Lens: [Covering 9/11](#)” (by Anthony Fioranelli) shares an [images directory \(collected here\)](#). The History documentary [“Relics from the Rubble”](#) visited the site also [\[mirror\]](#). Fly over the site in a helicopter with [Cryptome on January 25, 2002](#) to see some high resolution photos (bumpy [video](#) also available). More images include Sept. 23: [example 1](#), [ex. 2](#). (Source, NIST FOIA 911datasets.org release 21, 42A0073 – G20D1of6, EPA Photos. [see album](#))



Shaker Screen Operation

“After the debris arrived from the piers, the large metal pieces were extracted, most significantly the vicious tangles of rebar “spaghetti,” which by hanging untrimmed off trucks had threatened workers at the Trade Center site with decapitation and now in due justice were to be sliced, sold, and melted down. Once the metal was extracted, the rest of the debris was scooped up and poured into giant shakers, of which there were as many as four.

Debris that was larger than six inches across was removed, spread over a field, and raked through by hand. The remaining materials were fed into equally giant mechanical sifters, which shook and spun the loads into three separate debris streams according to size. The first stream contained material less than a quarter inch across, and (with the exception of the occasional fingernail, as an FBI agent mentioned to me) it consisted almost entirely of asphalt millings and dirt, and was discarded without being inspected. The second and third streams contained the larger debris. These materials were carefully scrutinized. They were fed onto variable-speed conveyor belts that ran through plastic-walled structures where white-clad workers sat on stools along what amounted to disassembly lines, watching ninety minutes at a time for anything that might be assigned to a victim – badges, guns, and Palm Pilots, for instance – or that might be material evidence bearing on the acts that brought the buildings down.”
- Langewiesche, *Ibid.*, pp. 195 - 196.



The above quote may be too harsh of an accusation where the author says the smallest debris (<0.25-in.) was largely “discarded without being inspected.” David Shayt, the Smithsonian Institution's Museum of American History specialist [“Behind the Lens: Covering 9/11”](#) chosen to collect September 11 debris items [noted](#), “Before the dirt is loaded onto the conveyor belts there are debris fields where the material is spread out. But they were using rakes and pitchforks to do this, to pick through the material.” Shayt was impressed by the honor shown to the victims by the workers. A [re-edited clip from History's 2002 “Relics from the Rubble”](#) titled “Archiving the WTC” also had positive comments about the work at Fresh Kills: “[E]very single piece of debris, having already been combed through at Ground Zero, went through three more passes under the careful eyes of the officers and agents of the FBI and the NYPD.” Ideally, sure.

“Relics from the Rubble” gave us this scene at the landfill. Narrator: “New York City Police Deputy Inspector Jim Luongo and FBI agent Richard Marx have been in charge of the operation from the beginning. They've also led the effort to save personal property and

artifacts for museums, hoping to keep these memories alive with future generations.” There on site, narrator/interviewer Josh Binswanger asked Luongo, "Is there one artifact that stands out, for any particular reason for you?" The reply: "I think the lack of artifacts stands out to me quite a bit. I think the fact that I haven't seen a door, I haven't seen a phone, I haven't seen a computer. I haven't seen a doorknob. I think that stands out.”

The debris inspection conveyor belt in the History video seemed to be running slower than the one in [“Behind the Lens: Covering 9/11,”](#) seen also [here](#). The [New York State Museum website](#) elaborated on the conveyor belt sorting job. “Work could only be done in 45-minute shifts or the strain from watching the constantly moving material might result in vertigo.”

“Frequent statements made to Rhonda Shearer and London Allen by NYPD Fresh Kills workers indicate that the speed of the conveyor belts were too fast for proper observation of materials and that like at ground zero, a struggle to reduce speed existed between officers doing the observation and management pushing for speed. **The quest for speed in dealing with debris was at ground zero and the Fresh Kills Dump.**” That quote was from the [WTC Living History Project](#), number 52, part of a response to Langewiesche’s p. 124: “the process ensured that none of those particular body parts (and obviously very few others) had been treated disrespectfully or “thrown out at the dump.”

Before the heavy sorting equipment arrived in October, debris sorting was done entirely by hand using rakes or shovels. Taylor Recycling was employed as a private contractor by the U.S. Army Corps of Engineers to essentially speed up the process – or to make it more effective with machinery. (“Reshaping the Hill: Backgrounder on the Taylor Recycling Facility, LLC,” [mobiiconsultants.com/taylorid.pdf](#).) **“I was constantly told ... to move the job, to run the conveyor belts faster and to keep the tonnage up,”** Taylor supervisor Eric Beck wrote. (Thomas Zambito, [“9/11 Remains Fill Potholes, Worker Claims,”](#) NY Daily News, Mar. 24, 2007.) The article also mentioned a lawsuit against the city in which “[t]he families argue[d] that the cleanup was hurried and slipshod, with the result that more than 400,000 tons of debris weren't properly combed for human remains.”



Source: Museum of American History, Smithsonian Institution

“Phillips and Jordan officially took over management of the Staten Island Landfill



Operation on October 2nd. At that time there were about 137,000 tons of debris already stockpiled at the site that had not been inspected. That number grew to around 170,000 tons by the third week of October. By the eighth of November, under P&J’s management, the number was down to less than 1,400 tons.”

- Phillips and Jordan, [“Anatomy: World Trade Center/Staten Island Landfill Recovery Operation”](#) [mirror],

disaster.pandj.com (dead link)

That meant in 3 weeks an average of 8,028 tons were processed per day, or 334.5 per hour including night hours. To visualize that, imagine 16 big dump trucks unloading and being completely searched every hour – at 20 tons per imaginary truck. About four 2,000-pound loads every 15 minutes. “At the close of the Staten Island Landfill mission... 806,000 tons of debris had been screened, an average of 75 tons per hour. ... Over 1.7 million man hours had been worked. ... When P&J took over the operation the Landfill was processing about 1,750 tons of debris a day; at the peak of operations in mid-October we had increased that number ten-fold to 17,000 tons a day. Over the duration of the project the average amount of debris processed was 4,900 tons per day.” Also, “14,968 workers had been through the PPE process,” or [personal protective equipment](#) – a required training for those working near toxic substances or biohazards. That meant many visitors and temporary hands joined in raking, sifting, and spotting for human remains, evidence, and personal property.

[Philips and Jordan has claimed](#) that 2,000 agents were on hand to do this 24 hours a day, 7 days a week (average shift length not specified). If true, a somewhat thorough job may have been possible. Note that the “agents” were “members of the FBI, FDNY, NYPD, and other government agencies.” ([National Museum of American History, Smithsonian Institution webpage](#)). They weren't all employed by the Dept. of Sanitation.

According to the photo seen here (in low resolution unfortunately [[enlarge photo](#)]), on day 193 (or 173 or 143) less than one million hours had been worked (bottom figure, “Hours Worked” may begin with 9, 7, or 4. We'll say 9.). Using these figures we learn that $193 \times 24 = 4,632$ hours since 9/11 (or $143 \times 24 = 3,432$). If one person was doing all the work at Fresh Kills, that's how many hours would have been worked. Total hours worked 919,491 (?) divided by 4,632 equals 198.5 24-hour shifts. Or divided by 3,432 equals 267.9 24-hour shifts. If each person worked a regular 8-hour shift with two days off per week, how many people would have really worked there?

Using the P and J final figures of 321 days and 1.7 million man hours, we get 7,704 hours since 9/11 and 220.66 24-hour, 7-day a week shifts – or **662** 8-hour, 7-day shifts, or **851** 40-hour a week shifts – an approximate average number of workers on any given day. Not 2,000 (although that may have been accurate for the number of people who picked up a rake).

[P and J said](#) that in the end, “1,462,000 tons of debris had been received and processed, [and] 35,000 tons of steel had been removed (165,000 tons were removed directly at Ground Zero)” - to recycling plants. Total tonnage then was 1,662,000. One photo from “Collateral Damages,” seen above, shows [most of] a sign that suggests there was a scale to accurately track the weight totals arriving by truck. For barges, the totals could have been tracked by measuring the draft, or depth in water, to determine the displacement mass. No documentation has been released to show this was done, however at one of the loading piers in Manhattan the process was described. (James Glanz, "[From Torn Steel, Cold Data of Salvage](#)," NY Times, Oct. 9, 2001, p. B13.)

At Fresh Kills [the end officially was July 26](#), as noted in the film "Collateral Damages," as well as by P and J. Also [according to the landfill](#), debris removal finally ended June 28. "In the first six months, trucks and tugs removed more than 80 percent of the debris, and in June 2002, the effort drew to a close, at least four months sooner than originally predicted." (R. J. Menard and J. L. Knieff, "[GPS at Ground Zero: Tracking World Trade Center Recovery](#)," *GPS World*, 13:9. 2002.)

The sentimental, symbolic [last steel column](#) was [[believed to have been](#)] removed in a ceremony May 30 ([CNN](#)). It had been cut down the night before in a more private ceremony (See "[America Rebuilds](#)" [here](#), Steve Spak's DVD video "Day of Disaster," or "Metal of Honor.") Of course it would be saved for historical value, unlike most of the steel.



Steel at Fresh Kills on Sept. 18, NYPD photo from [Above Hallowed Ground](#), p. 131



RECYCLE

“Of the estimated 1.5 million tons of WTC concrete, steel, and other debris, more than 350,000 tons of steel have been extracted from Ground Zero and barged or trucked to salvage yards where it is cut up for recycling.”

- FEMA Building Performance Study, Appendix D.

Recyclable metals went from Fresh Kills to the scrap dealers. That is, after as much as 10,000 tons of mixed scrap was buried before efficient recycling began. (Wendy Neu of Hugo Neu Schnitzer East [Hugo Neu Corporation/HNSE] speaking to the Empire State Chapter of the Institute of Scrap Recycling Industries [ISRI] on November 28, 2001. Online at <http://www.hugoneu.com/includes/pdfs/Speech-11-28-2001.pdf>) After this initial period of amassing more than 35,000 tons of heavy steel (in 10 days), most of the structural beams bypassed the landfill/forensic crime scene. (Wendy Neu, *Ibid.* and Philips and Jordan, *Ibid.*)

“On the 22nd of September the first contracts were awarded to Metal Management and HNSE for 25,000 tons [of recyclable steel] each, to be shipped within a 30-day period in 400-1000 ton barge loads directly from Ground Zero.” (See also “[ISRI Assists in Cleanup of Recyclable Metal at World Trade Center Site](#),” PRNewswire, Oct. 4, 2001.) Ms. Neu went on to say, “The first barges started arriving at our Claremont facility on September 24th and we completed the contract on November 7th.” As production picked up speed in October, “[d]ischarging of the barges that were arriving continuously at our Claremont facility became a 24-hour 6-day a week operation employing every piece of equipment we had.”

That was after “**another** 60,000 tons was auctioned in (3) 20,000-ton lots in October. Metal Management [of Newark, N.J.] was awarded 2 of the lots with Blandford Land Clearing [of Brooklyn, N.Y.] awarded the remaining lot.” [emphasis in [original](#)] These auctions were held by the “government” of the City of New York, who thereby sold the steel for an estimated \$75-100 a ton. (“[Baosteel Will Recycle World Trade Center Debris](#),” china.org/eastday.com, Jan. 24, 2002 and “[Baoshan Group Buys Steel Debris from WTC](#),” People's Daily Online, Jan. 24, 2002.)

Although their name was kept out of the media, the Port Authority of New York and New Jersey – the government agency/“public corporation” who built and owned the WTC towers – likely got the money from the auctions. (quoted phrase from Eric Darton, [Divided We Stand, A Biography of New York's World Trade Center](#), Basic Books, 1999, p. 41.) Consider the Port Authority web article (2009-2010) “[PA Seeks New Homes for WTC 9/11 Steel](#).” ([image](#)) Regarding steel relics stored at the JFK Airport Hangar 17 for future use in memorials: “Letters requesting a piece of steel should be sent on official letterhead to the Port Authority...” (This subject is addressed in the section below, “[Specific Items Recovered](#).”)

Hugo Neu, Metal Management, and Blandford Land Clearing profited little due to the low cost of steel at the time, plus added labor. That is, according to Bob Kelman, senior vice president and general manager at Hugo Neu Schnitzer East (Hugo Neu Corporation).

“Scrap steel prices are the lowest in 50 years, he said, as developing countries construct their own subsidized steel plants.

He's selling the steel for about \$105 a ton. But he also pays to store it, and up to \$25 a ton to ship it. 'I'm hoping I net \$5 a ton, but I don't know,' he said.”

- Lauren Coleman-Lochner, “The Cutting Edge: Steel Recycler Works on Remains of WTC,” *The Record* (New Jersey), Nov. 2, 2001 [[full text cached](#)].



Hugo Neu, Nov. 21, 2001. [Source](#) found in NIST FOIA 911datasets.org release 27 42A0269 - G26D145 (American Society of Civil Engineers)

Contrary to Kelman's early November estimate here, the china.org and People's Daily Online articles say the steel sold for \$120 a ton... from Metal Management, at least. And, in China, “[t]he average price paid by local mills [in 2001] for scrap steel was 1,250 yuan (US\$150.6) a ton.” Granted, that could have been in metric tons, about 10 percent heavier than US tons of 2,000 pounds. (The metric ton, or tonne (t), is 1,000 kilograms, or 1.1023 US tons.)

“Baosteel Group, the nation's largest steel firm, has purchased 50,000 tons of the scrap steel from 'Ground Zero,' the ruins of the September 11 terrorist attack, at no more than US\$120 each ton, according to yesterday's Beijing Youth Daily. [...]

“Another shipment of 10,000 tons of scrap from the WTC arrived in India earlier this month, reported Shanghai Morning Post. The metal will be melted down and recycled into kitchenware and other household items, the paper said.

“India bought its lot at US\$120 per ton from the New Jersey scrap processor Metal Management, which purchased 40,000 tons of the debris at an auction held by the New York City government.” (china.org/eastday.com, [ibid.](#)) “Two 33,000-ton consignments have already

arrived in the southern port of Madras, a third is on its way and a fourth would arrive soon at the west coast port of Kandla.” ([“Ground Zero Steel China-bound,”](#) CNN.com, Jan. 23, 2002.) See a video on the subject shot in India from the [AP archive](#) (#348393, login required, or see [YouTube](#)).

Despite FEMA's bloated figure quoted above (350,000), the total amount of structural steel in the WTC complex was estimated at 285,000 tons by Port Authority Chief Engineer Frank Lombardi. Estimated. (James Glanz, [“From Torn Steel, Cold Data of Salvage,”](#) *New York Times*, Oct. 9, 2001.) Therefore, at a theoretical \$20 profit per ton, that was \$5.7 million to split among the three scrap dealers... and the Mafia (see above, [“The Big Four”](#)).

Note, however, that one steelworker made \$22.65 an hour doing manually what the shredder machines couldn't. His job was to cut steel beams with a torch into sections no longer than 5 feet for the melting furnaces overseas. Kelman estimated one “worker can cut 20 tons a day.” (Lauren Coleman-Lochner, *Ibid.*) One such man said he worked 12- to 15-hour shifts five or six days a week. Visit Hugo Neu's Claremont facility now and [watch Nov. 21, 2001 as welders cut the steel](#). (Source: NIST FOIA 911datasets.org release 27, 42A0269 – G26D145.)

Then there was the assorted scrap metal like aluminum, which sold for \$1,346 a metric ton in September 2001. ([indexmundi.com](#)) The towers were [covered in aluminum](#), calculated by 9/11 researcher Dr. Frank Greening at 43,600 panels to weigh 2,000,000 kg, or about 2,200 US tons. (F. R. Greening, Ph.D., [“Aluminum and the World Trade Center Disaster,”](#) 2006.) That meant \$2.96 million worth of aluminum was recycled, minus what was buried at Fresh Kills in the first days, or melted in the WTC fires before, during, and after the collapses. (We won't entertain theories that metal was turned to dust, as 2.9% of WTC dust samples were aluminum, and 1.63% iron [[USGS website](#)], which is consistent with cement composition. See [“The Overwhelming Implausibility of Using Directed Energy Beams to Demolish the World Trade Center Towers,”](#) by Dr. Greg Jenkins and Matt Sullivan, 2007. [And [“Solving The Great Steel Caper: DEW-Demolition Contrary Evidence,”](#) Dr. Greg Jenkins, 2007.]])

In her speech quoted above, Wendy Neu gave us more detail on the operation. “Within a few days [of Sept. 23] we started an (8) man burning crew [welders/torch operators] and on the 27th of September we went to a (13) man crew.” [This was at Fresh Kills on Staten Island with the previously mentioned 35,000 tons of beams stacked there in the first 10 days.] “Within 24 hours of visiting Fresh Kills for the first time we mobilized the first of what was soon to be an army of people and equipment at that site. By the 23rd of September, 2 days later, we were moving cut up steel beams from the landfill.” At the Claremont plant in Jersey City, they “also employed a contractor with 22 burners from Louisiana along with 2 cranes and grapples.” (Wendy Neu, *Ibid.*) See the map below for location details.

“We have people and equipment from all over the country here,” Kelman said. The company has bolstered its 300 employees with about 80 from other companies, who have come to Staten Island and Jersey City to prepare the steel. The company, which operates seven sites in the metropolitan area, has temporarily closed its facility in Plainfield and shifted its seven workers up here.” (Lauren Coleman-Lochner, *Ibid.*)

The huge job of cutting up the WTC steel began, of course, on site at Ground Zero. The ironworkers played a vital part in the rescue/recovery effort. Again, please watch [“Metal of Honor: The Ironworkers of 9/11”](#) by Rachel Maguire, 2006). None of these guys thought they were destroying evidence. They worked long hours in dangerous, toxic conditions with a sense of purpose, fueled by encouraging letters from schoolchildren. The environment at the

time was one of patriotism and duty-bound cooperation in an effort to save lives in the early days, and later, to help bury the dead and clean a wound. Plus there was the OT (overtime = time and a half pay). These factors of course worked to the advantage of those who needed the site cleared as quickly and quietly as possible.

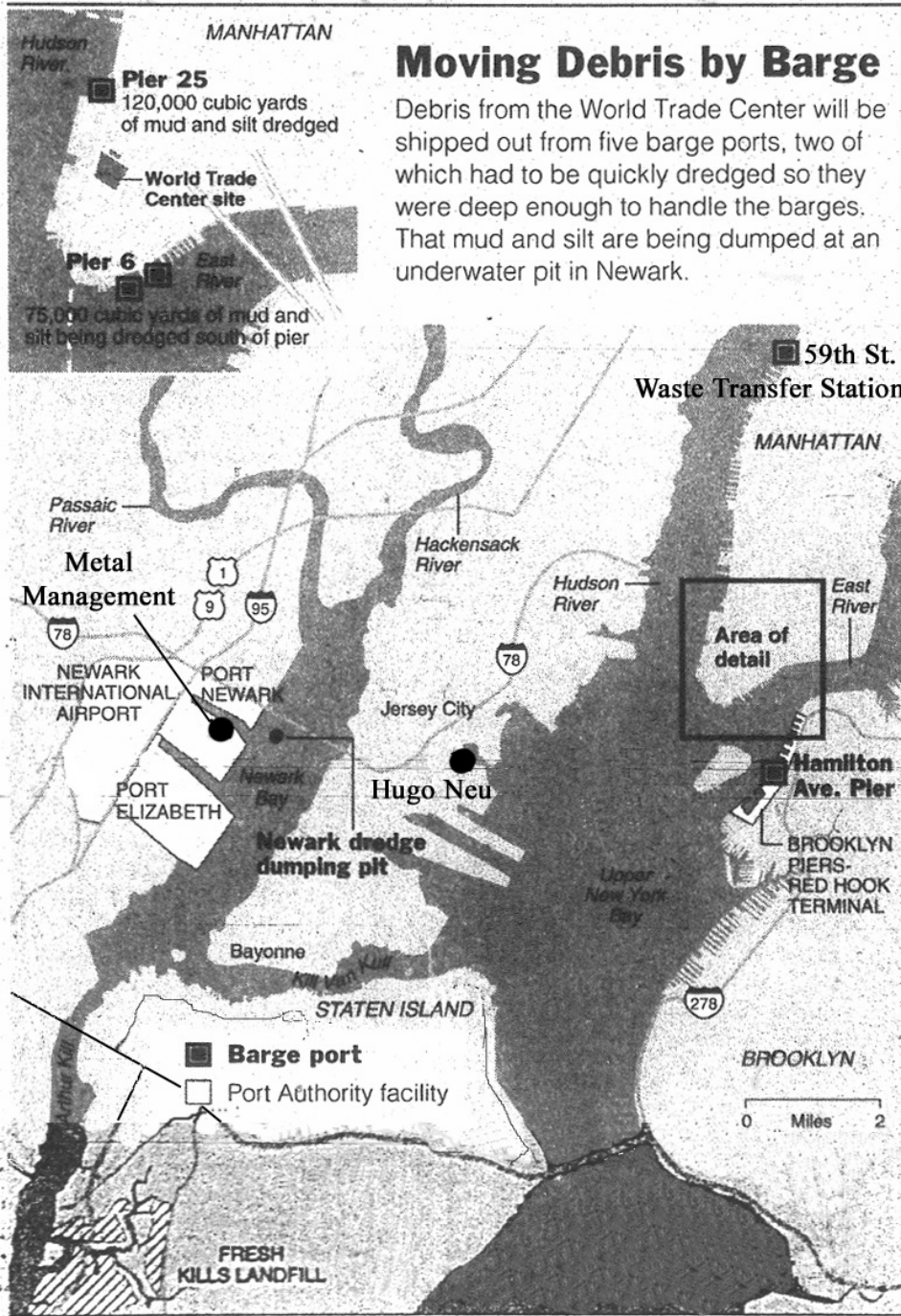
See this poignant article on the subject: "[WTC Steel Removal: The Expeditious Destruction of the Evidence at Ground Zero](#)," by Jim Hoffman. Another resides at sourcewatch.org: "[Destruction of Evidence from Ground Zero at the World Trade Center](#)." Perhaps the mainstream documentary "[World Trade Center: Anatomy of the Collapse](#)" (TLC, 2002) put it best: "Time is short. The piles of high strength steel evidence are being cut into chunks for export to recycling plants in the Far East."

Not all the steel went overseas to India and China. Some took the form of the [USS New York's](#) 7.5-ton bow stem in 2005. This ship's symbolic front piece was hoisted into place in 2006, and officially launched in 2009.

No known record or chart accounts for all the steel actually measured by weight, beyond the details I could find above. As will be seen below in "Truckloads" and "Barges," we can only get an idea using final numbers of total debris amount, which I believe was largely figured by volume projections based on the regular aerial mapping by LIDAR. (The details of which hide with mapping experts. See next chapter, "Tonnage.") Of course the trucks were tracked. "[T]here were big concerns, because the loads consisted of highly sensitive material. One driver, for example, took an extended lunch break of an hour and a half. There was nothing criminal about that, but he was dismissed. There were also cases where trucks did little detours from their routes." ("[GPS on the Job in Massive World Trade Center Clean-Up](#)," Jacqueline Emigh, Access Control & Security Systems, July 2002.) By Nov. 26 the tracking of all vehicles "in real time" by GPS kept the beams from being diverted from said channels. That was after attempted tracking by paper. (See above, "250 tons" stolen under "[The Big Four](#).")

"Just days after the disaster, authorities implemented a paper-ticketing system to direct and track more than 200 trucks from five cartage contractors using dozens of trucking companies to haul debris to five different locations, ranging from 3 to 25 miles from the site. [Note: all 5 locations weren't open until early October. See below.] Manually completed paper tickets accounted for each truckload from the disaster site to the five dump locations. Each ticket included information about the truck, the debris type, the destination, the driver, and other critical data. Handwritten on numbered forms at the load points, the exit from the site perimeter, and the entrance to the dump locations, the information was later collected and entered into computer databases." - Menard, R. J., and Knieff, J. L. 2002. "[GPS at Ground Zero: Tracking World Trade Center Recovery](#)," GPS World. 13:9. (This quote will be repeated in the next chapter)

But for weight/mass totals we have guesstimates.



Moving Debris by Barge

Debris from the World Trade Center will be shipped out from five barge ports, two of which had to be quickly dredged so they were deep enough to handle the barges. That mud and silt are being dumped at an underwater pit in Newark.

The New York Times
 Originally published Oct. 2, 2001 with "Red Tape Cut and Rivers Dredged to Carry Debris by Water," by Eric Lipton. Combined here with Oct. 9 version of same map (bottom portion and added text), see p. B13

TONNAGE

About the unit of measure. The [US ton](#) or "short ton" is 2,000 pounds, or 907 kg. The metric ton, or tonne (t), is 1,000 kilograms, or 1.1023 US tons. The traditional UK ton (pre-metric system "Imperial"), "long ton" is 1,016 kg, or 2,240 pounds, or 1.12 US tons. This unit of measure alone complicates the info below. Since the 2,000-pound ton is the preferred, standard method in the US, and since the WTC was in the US, it stands to reason that measurements should be in US tons. Of course, this isn't specifically defined in each of the sources below. I will do my best to pay attention to this important detail.

Note that the ton also measures energy (as in kilotons of TNT) and volumes of water. The long ton is equal to 35 cubic feet (0.9911 cubic meters) of salt water with a density of 64 pounds per cubic foot. Similarly, the "displacement ton" has some limited use in the United States, most commonly in measuring the water displacement of ships, which comes into play when measuring debris as transported in barges. The displacement ton is often measured in long tons or metric tons, one exception the US makes for the UK system(s). This is not to be confused with "tonnage," as in a measure of the size/volume or cargo capacity of a ship that, if full of material, could *weigh* twice as much in tons.

Finally, the often interchangeable terms *mass* (fundamental amount of matter) and *weight* (gravitational force) may add questions for readers. The difference comes into play when altering acceleration and gravity.

WTC Twin Towers' Weight

Recently published peer-reviewed research from engineer Gregory Urich puts the number at 317,500 tons per tower, for WTC 1 specifically. See "[Analysis of the Mass and Potential Energy of World Trade Center Tower 1](#)" for details. The methods used are then applied to the complex as a whole to find the total expected debris mass of about 1.6 million tons. See those [calculations here](#) in a screenshot of the spreadsheet found in Urich's Appendix 1.

"The mass and potential energy of one of the Twin Towers is calculated based on available data. The mass for each floor is established based on floor types, documented design loads, and estimated in-service live loads. The calculated mass of 288,100 metric tons (317,500 short tons) is found to correspond with two other comparable structures in terms of mass per unit floor area, NIST's SAP2000 model, and the reported amount of recovered debris. The calculated mass refutes the popular notion that the building weighed 500,000 tons." - Gregory Urich, "[Analysis of the Mass and Potential Energy of World Trade Center Tower 1](#)," *Journal of 9/11 Studies*, 2007.

Mr. Urich's thorough, technical work does help explain the lower examples of final reported debris mass. At the same time it reveals the higher final numbers as exaggerations, fabrications, or maybe a fraud. The thesis: with less true mass/energy during the collapse initiation, the possibility for arrested collapse progression was real. That math is studied [by Gordon Ross](#) in "Momentum Transfer Analysis of the Collapse of the Upper Storeys of WTC 1," *Journal of 9/11 Studies*, 2006.

Leslie E. Robertson Associates (LERA), the primary structural engineering firm involved in building the two towers, provided the *New York Times* with the total of 1,176,000 tons for both towers together (James Glanz, "[From Torn Steel, Cold Data of Salvage](#)," *New*

York Times, Oct. 9, 2001, p. B13). Did this include more than the towers? The number used by engineers Eagar and Musso was “about 500,000 t.” - metric tons, or about 551,150 tons - per tower (“[Why Did the World Trade Center Collapse?](#) Science, Engineering, and Speculation,” JOM, 53 (12) (12/2001), pp. 8-11.), while physicist Frank Greening used the number 510,000,000 kg, which converts to 562,169 tons ([source](#), p. 23.) Similar numbers come from documentaries by PBS. Peter Tyson says “500,000 tons” ([www.pbs.org](#)). The “[America Rebuilds](#)” webpage says 600,000 tons yet links to another page that says 500,000.

Before construction officially began in 1966, one Port Authority engineer said, “the rock-based foundations will carry 1.25 million tons of superstructure load.” (Martin S. Kapp, “[Tall Towers Will Sit on Deep Foundations](#),” *Engineering News Record*, July 9, 1964.) The same article qualifies him stating, “Mr. Kapp is Engineer of Soils in the Port of New York Authority’s Engineering Department, which designed the foundations for the World Trade Center.” It is uncertain if the “superstructure” of which Kapp spoke included more than just the towers. But the towers were the main subject of the article, not the entire complex.

For LERA, the WTC building materials were supposedly known with a great deal of accuracy. The estimated total amount of debris produced by the towers' destruction was thus obtained by adding up a long list of materials. The total: 1.2 million tons.

“The assessment came with a striking level of detail. It estimated that each of the twin towers contained 3,881 tons of steel reinforcing in the concrete floor slabs; 47,453 tons of vertical steel columns; 8,462 tons of aluminum and glass on the exterior walls; 2,531 tons of various ceiling materials; 4,218 tons of flooring; and 31,350 tons of partitions or walls.” - James Glanz, “[From Torn Steel, Cold Data of Salvage](#),” *New York Times*, Oct. 9, 2001.



Figure 3-8 Remains of WTC 3 after collapse of WTC 1 and WTC 2.

Other WTC Weight

The other World Trade Center buildings have no such published weight estimates. Below is a brief attempt at finding approximate figures, to help us understand about how much the final debris numbers should have been... not counting for loss of material due to pulverization and/or fire. See also how “official numbers” might compare with Ulrich's, had there been any.

To see WTC 3 before 9/11, watch the introduction to the UK Channel 4 documentary “[The 9/11 Hotel](#)” (2008). The 22-story Marriott Hotel rose 265 feet above street level and contained 825 guest rooms. The floors were about 64 feet wide and 330 feet long, according to the [FEMA report](#) (source for the image above also [here](#)). That gives the approximate area of 21,120 sq. ft. per floor, or about half an acre per story (1 acre = 43,560). Total area equals about 464,640 sq. ft, not counting basement.

Gregory Ulrich calculated WTC 3 mass to be 42,179 tons. Scaled up to reflect the excess difference between popular estimates (500,001) and his number for a tower, Ulrich figured the Marriott would weigh in at 66,401 (if reflecting the bloated numbers of the towers).



WTC 4, also called the Southeast Plaza Building, rose nine stories at 119 feet tall. [FEMA reported](#) that “all but the northern 50 feet of the building” was destroyed. Ulrich calculated WTC 4 mass to be 74,203 tons. Scaled up to reflect the difference in his WTC 1 estimate and popular numbers: 116,817.

WTC Building 5 ([photo - source](#)), the Northeast Plaza Building, was nine stories and 119 feet tall. Ulrich calculated WTC 5 mass to be 84,357 tons. Scaled up: 132,802.

WTC Building 6 was the NY/NJ metro region consolidated Customs House and was eight stories, 130 feet tall. It contained about 540,000 square feet of space according to [Wikipedia](#). Ulrich calculated WTC 6 mass to be 41,998 tons. Scaled up: 66,117.

WTC Building 7 was 610 feet high and had 47 floors of office space for a total 1,868,000 square feet ([FEMA](#)). Ulrich calculated WTC 7 mass to be 119,752 tons. Scaled up: 188,523.

The weights of all 7 buildings, then, add up to 997,701 tons for Greg Ulrich. Scaled up: 1,570,662. But what about the expansive underground levels? See photos, video, and computer models of the 70-foot deep “bathtub” in “[9/11 Debris Part 2](#)” at vrt 5:22. Construction

of the slurry wall and foundation is explained in "[World Trade Center: Rise and Fall of an American Icon.](#)" To understand the layout, look at this [map of the shopping mall](#). Note that the deepest part of the bathtub only made up part of the 16 acre WTC plot. The deepest part occupied 980 x 520 feet [according to experienced engineer George Tamaro](#) in "World Trade Center 'Bathtub': From Genesis to Armageddon." See a diagram of the WTC basement at [nytimes.com](#), reproduced in [GIF form here](#).

"In the hole, contractors are building what is undoubtedly the world's largest basement. It is 980 ft long, 510 ft wide and close to 70 ft deep. Its six levels provide a total of 48 acres of floor space and will house, among other things, a 2,000-car garage."
- "[World's Tallest Towers Begin To Show Themselves On New York City Skyline,](#)"
Engineering News Record, January 1, 1970.

Urich got a total 444,926 tons for basement levels, including the WTC 7 Con Edison substation. (No basement in WTC 7, FYI.) Scaled up to reflect the ratio at which the towers were publicly overstated: 700,441. (The ratio adds 36.5% in the case of the towers. Total debris it adds 34.5%) These numbers [Urich gives](#) are from Table 17: Calculation of Debris Amount. The totals: 1,595,420 tons in reality. Scaled up overestimates total guess 2,437,462.

WTC Debris Weight

As "[America Rebuilds](#)" noted, as many as 800 trucks hauled debris away from the site daily. This may have been an exaggeration, considering how the film rounded up 1.8 million tons of debris total (a widely reported number) to "[two million](#)." (The video clips [[mirror](#)] have been included in "[9/11 Debris: An Investigation of Ground Zero, Part 2.](#)" [[mirror/download](#)]) Specifically, narrator Kevin Spacey says "They had **two million tons** to clear." The female narrator [repeats this number](#), also – despite the fact that the [America Rebuilds website](#) put the total debris number at 1.8 million. The PBS crew, or actually producers Great Projects Film Co., Inc., and Shadowbox Films, Inc., in association with Trigger Street Productions, Inc., had exclusive filmmaking access granted by Mayor Rudolph Giuliani ([www.pbs.org](#)). That is not to say that this "rounding up" was part of the government's propaganda. (Other 1.8 million tons quotes include: [Tom Bearden](#), "Solemn Ground," PBS *Newshour* May 30, 2002....)

It's fascinating to follow the updates from various sources on the amount of debris being removed and the total expected number of tons. Take this article from Sept. 28:

"So far, about 130,000 tons of the debris have been removed [...]. Officials now estimate that more than a million tons of rubble remain, almost twice the original estimate." - David Sapsted, "[250 Tons of Scrap Stolen from Ruins,](#)" Telegraph.co.uk, Sept. 28, 2001.

Note that the half million tons "original estimate" was made by FEMA Director Joe Allbaugh Sept. 14 on CBS speaking with Dan Rather (watch in "[9/11 Debris" part 2 at 12:47](#))... a bad guess that perhaps only included the two towers? Yet Allbaugh repeated the figure on [CBS 9/15 at 12:10 a.m.](#) In the next of [Allbaugh's listed TV interviews](#), 1.2 million tons was the total ("Newshour" with Jim Lehrer, 9/18/01). "On 9/26 it was agreed by all agencies that the quantity work [sic] would be 1.2 million tons." (Bill Cote, DDC Memo RE: Debris Monitoring Program, [DDC FOIA Sec 1](#), p. 246 of 294.)

During the first 2 weeks at Ground Zero, a few estimates were made by mapping professionals. “Total” amounts of debris were predicted. However, the amount of debris at that time did not include the non-collapsed parts of WTC 4, 5, and 6. Or did it? And what about 7 WTC, across the street? That’s the problem with the mapping figures: these specifics are not given with the numbers.

*“Before planning the potentially unwieldy cleanup project, officials needed to estimate the dimensions of the task they faced. Early numbers emerged from a computer program that the Army Corps of Engineers uses to gauge the debris created by natural disasters like hurricanes. **Hastily adapted to the World Trade Center**, the calculations predicted that the site contained 308,900 tons of steel, 351,000 tons of concrete and a total of **1,051,000 tons of debris over all**, said Beau Hanna, an Army Corps expert on debris.”* - James Glanz, [“From Torn Steel, Cold Data of Salvage,”](#) *New York Times*, Oct. 9, 2001. [emphasis added for more discussion below]

Additionally, thanks to the U.S. Army Corps of Engineers:

*“On Sept. 23rd, 12 debris specialists started debris monitoring. USACE completed its part of the Debris Operations Plan on Sept. 23rd and turned the operations over to FEMA at the DFO [Disaster Field Office at Pier 90]. The official joint estimate of the **total debris amount was released at 1.2 million tons.**”* - [“Role of USACE at the WTC Response Operations,”](#) from George Washington University’s “Assessment of Geospatial Technology Applications by the U.S. Army Corps of Engineers during World Trade Center Operations.” See also http://avalon.law.yale.edu/sept11/eng_004.asp

“Total debris amount,” meaning... what exactly? How do we make sense of the 1.2 million tons figure in comparison with our often-quoted final [total of 1.8 million](#)? “The site” – as described by Beau Hanna in the *NY Times* article – is not defined. Maybe WTC 7 was left out of the estimate. Why, I don’t know. Perhaps because Building 7 was across Vesey Street and technically in a different postal zip code? (The towers each had their own, by the way: 10047 & 10048, both now retired. [See map](#)). To attempt to clarify what was being included in the 1.2 million, let’s look at the definition of “debris” as it should be: “the remains of something broken down or destroyed: RUINS.”

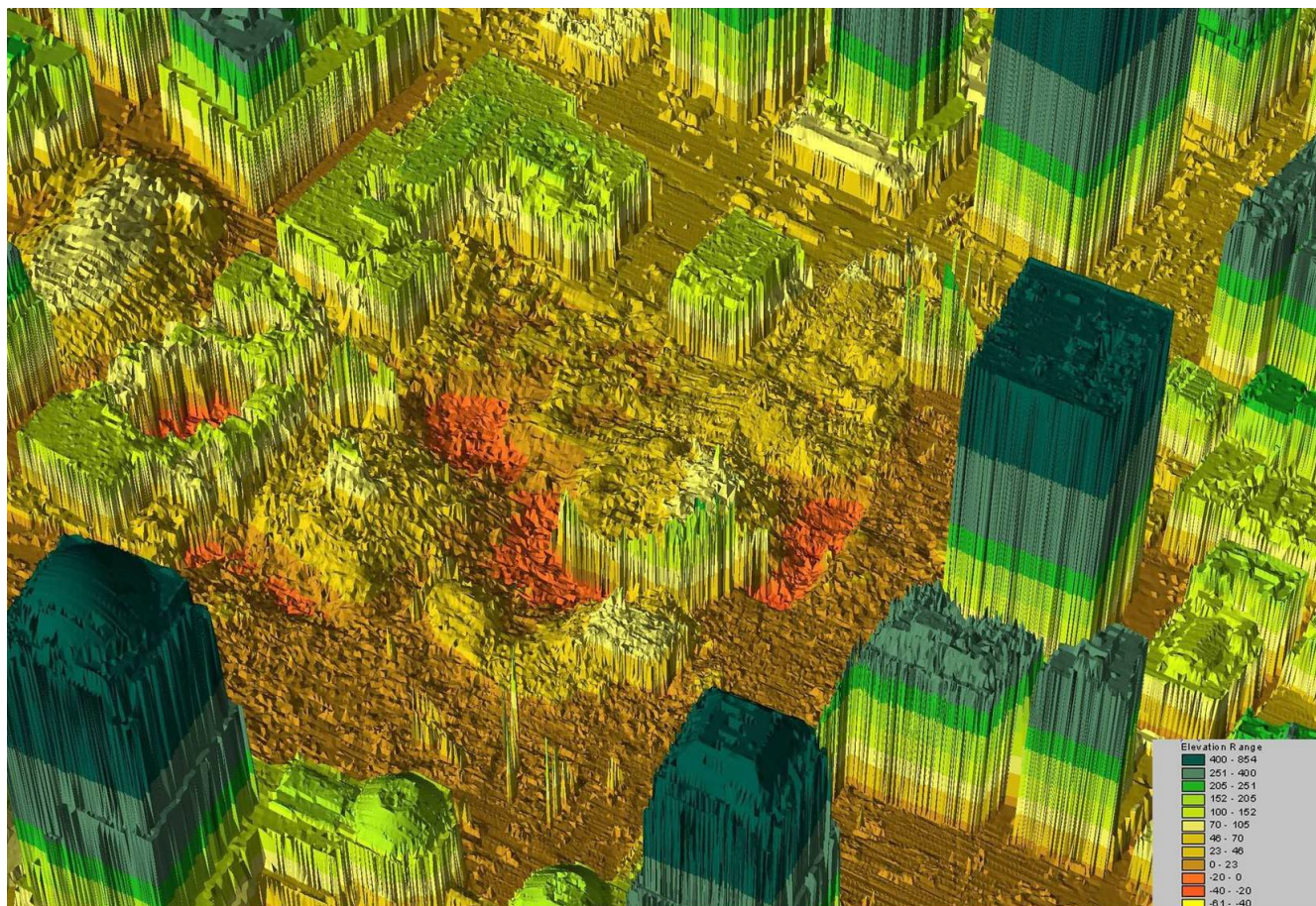
“Most of WTC 4 collapsed when impacted by the exterior column debris from WTC 2; the remaining section had a complete burnout. WTC 5 and WTC 6 were impacted by exterior column debris from WTC 1 that caused large sections of localized collapse and subsequent fires spread throughout most of the buildings.” - [FEMA Building Performance Study](#), Chapter 4, page 1 or in plain text at 911research.wtc7.net

It seems logical that the “total debris amount” should have included “most of WTC 4” and “large sections” of WTC 5 and 6, in addition to the towers. WTC 7 should have been 100% included by the USACE, along with the hotel (WTC 3) and most if not all of the basement levels. What is the debris experts’ excuse for the missing hundreds of thousands of tons in these early estimates? It seems too wrong to ignore. Does that explain why the *NY Times* said the USACE’s computer program was “hastily adapted to the World Trade Center?” Because their original estimate was so low in comparison with the LERA’s figures? – which I

emphasize were not the product of ongoing observations, but simple math with records.

Straight from “Available Images” I cut the following text:

“The volume of debris was calculated through GIS analysis. This helped the city determine how much debris was removed. Images were compared daily to determine changes in the site.” (Vince Elias, et. al., [“New York District in the Red Zone”](#) The New York District Times,



Sept. 17 LIDAR image, credit EarthData, from the OEM/EMDC 911datasets FOIA.

U.S. Army Corps of Engineers, NY District. Vol. 26, No. 5, Fall, 2001. p. 8.) Again, G.I.S. stands for Geographic Information Systems (see for example [“Mapping the Hazards to Keep Rescuers Safe,”](#) New York Times, Oct. 4, 2001). The “systems” constituted software, hardware, and people. Visit New York City's makeshift OEM headquarters (that replaced the WTC Building 7's 23rd floor “bunker,” destroyed on 9/11) in a [Sept. 19 NBC News report](#) (911datasets.org release 28, folder 42A0295 - G27D25).

The next early debris mass estimate isn't in any way specific, but it does illustrate that another professional observation failed to account for the full expected amount. Professor Sean Ahearn of Hunter College appeared in the 2002 History Channel documentary “World Trade Center: Rise and Fall of an American Icon” after being appointed by the New York Office for Technology to map Ground Zero. According to the film's narrator, Ahearn's estimate was that the debris totaled “more than one million tons,” which was described in the narrator's hindsight as being “far too low.” (See “9/11 Debris Part 2: Ground Zero Investigation” [at vrt 7:20](#) for the documentary clip.) The *observation* came from aerial pictures gathered using a laser system that was able to see through the smoke. Again (see “Available Images”), LIDAR

– or "light detection and ranging" – provided the clearest view of the site on September 15.

"As of Oct. 20, workers had removed 359,299 tons of debris from the site's 16 acres, according to New York City Mayor Rudolph W. Giuliani's Office of Emergency Management. Only 66,797 tons of that is steel. The total estimated debris tonnage is 1.1 million tons." - Nadine Post, "[WTC 'Bathtub' Stabilization Begins](#)," Engineering News Record, Oct. 29, 2001, p. 1.

Two authorities in this massive job give us a final number far lower than 1.8 million. The first, I should note, was published two months before the final truckloads were removed. "Of the estimated 1.5 million tons of WTC concrete, steel, and other debris..." (FEMA's WTC [Building Performance Study - Appendix D - WTC Steel Data Collection](#), May 2002. [[mirror](#)])

*"In closing, **approximately** 200,000 tons of steel were recycled directly from Ground Zero to various metal recyclers. The Fresh Kills Landfill received approximately 1.4 million tons of WTC debris of which 200,000 tons of steel were recycled by a recycling vendor (Hugo Neu Schnitzer). The remaining material, approximately 1.2 million tons of WTC debris, was landfilled on the western side of Section 1/9 at the Fresh Kills Landfill in a 40-acre site."* - Martin J. Bellew, Director of the Bureau of Waste Disposal for the New York City Department of Sanitation. "[Clearing the Way For Recovery at Ground Zero: The Role of the NYC Department of Sanitation](#)," apwa.net, Nov. 26, 2002

The word "approximately" does not come with a margin of error. The total amount of excavated debris and steel given by Mr. Bellew is only 1.6 million tons, a very round number. Perhaps this is a mistake, an act of carelessness. Yet, when we read the source article, it seems Bellew should be one of few qualified individuals to provide such a number.

Phillips & Jordan, Inc., called upon by the U.S. Army Corps of Engineers as their "Advanced Contracting Initiative (ACI) Disaster Debris Management Contractor," reported a total 1.662 million:

"The last debris was processed on July 26, 2002, day 321 of the project. At the close of the Staten Island Landfill mission: 1,462,000 tons of debris had been received and processed, 35,000 tons of steel had been removed (165,000 tons were removed directly at Ground Zero)." - "Anatomy: World Trade Center/Staten Island Landfill Recovery Operation," Phillips & Jordan, Inc. Document originally at the Disaster Recovery Group web site, [now cached](#).

A similar figure comes from the U.S. Army Corps of Engineers (USACE) debris subject matter experts (SME) Allen Morse and Beau Hanna. "**As of 21 May 2002, 1,625,550 tons of debris had been removed from the WTC site.**" (See "[Role of USACE at the WTC Response Operations](#)") Likewise, a May 29, 2002 [Fox News/AP](#) story reported that 1,642,698 tons of WTC debris had been removed. Spokesman Alfred Ferguson of the New York City Department of Sanitation gave the same figure in a now missing Waste Recycling News article. [USA TODAY May 31, 2002](#) added the detail that 190,568 tons of that same number was steel, incidentally pointing to the "almost **miraculous** speed" of the effort. (Rick Hampson, "Silently, WTC Recovery Effort Ends")

That was the end of May but "[t]he last WTC debris was received at the Fresh Kills

Landfill on *July 29, 2002.*" (Martin Bellew, apwa.net, Ibid.) This means that the USACE May 21 estimate wasn't the grand total, despite the virtually clean bathtub during the closing ceremony in May. Also a date contradiction: the [end of sifting was done July 26](#), according to the film "Collateral Damages." Watch the part titled "[Fresh Kills \[Landfill\]](#)," which says specifically that debris removal ended *June 28*. Was Bellew mistaken by a month? And if he was mistaken about that, what else did he get wrong? Of course he may be right. Who knows.

"In the first six months, trucks and tugs removed more than 80 percent of the debris, and in June 2002, the effort drew to a close, at least four months sooner than originally predicted." (Menard, R. J., and Knieff, J. L. 2002. "[GPS at Ground Zero: Tracking World Trade Center Recovery](#)," GPS World. 13:9.) On page 1 of this same article, the total number is quoted as "more than 1.8 million tons." So in the last 3 of 9 months – April, May, and June according to GPS World – less than 20% of that 1.8 million (360,000 tons) was removed rather slowly by comparison. This means about half of that 360,000 (probably much less than half, being the final weeks, including some of May and most[?] of June) would have been removed after the USACE estimate mid-May. That would bring our total closer to 1.8 million tons; but how close?

*"On Thursday, May 30, 2002, the closing ceremony was held at the Trade Center site, and was televised to the world. A 460-foot inclined steel bridge had been built from Liberty Street to the bottom of the foundation hole, which, with the exception of the intact basement structures along the north side, **now appeared to be barren and almost clean.** The occasion of the closing ceremony was the removal of the last load, a steel column from the South Tower."* - Langewiesche, Ibid., pp. 196-7.

So, even if the "2 million tons" statement in "America Rebuilds" was rounding up 1.8 million as an embellishment, should we simply throw out the disparate 1.6 million approximations given by the Department of Sanitation and P & J? After all, that difference does amount to more than TWO of the smaller WTC buildings! (see [Urich's calculations](#)) Was there really THAT much dust because the buildings fell?

Construction Equipment Guide, Northeast Edition published June 6, 2002 gives us the total "1.7-million tons (1.5 million t) of twisted wreckage from Ground Zero in Lower Manhattan." (Pete Sigmund, "[After Nine Months, WTC Site Cleanup Concludes](#)") Is that an example of rounding up, from 1,642,698?

Tonnage reports during the work track the progress. NYC Office of Emergency Management's Richard J. Sheirer ([more on Sheirer here](#)) sometime in December of 2001, according to a graphic on the screen, said "We've removed about 750,000 tons of debris and steel. Still have another 650-or-more-thousand tons to go." ("[World Trade Center: Rise and Fall of an American Icon](#)," History, 2002.) **By the end of November, debris removal operations were "ahead of schedule. Approximately half of the 1.2 million tons of debris have been removed."** (Allen Morse, U.S. Army Corps of Engineers, Debris Subject Matter Expert, Nov. 30 memo to Sean Dowling of FEMA, [DDC FOIA Sec. 1](#), p. 252)

On Jan. 7, 2002 in an article by Eric Lipton, "[Cleanup's Pace Outstrips Plans for Attack Site.](#)" (*New York Times*) "Already, 962,725 tons of debris and steel have been carried from the site," Lipton wrote. The article quoted Capt. Raymond Reilly, "a Fire Department official who has worked at the site since Sept. 11," who said "**I just can't understand how they did it that quickly.**" (emphasis added, as above) Days after the 962,725 tons report, we get

another update:

"To date, according to the city's count, 1,036,837 tons of charred steel, smashed concrete, crumpled ductwork and other assorted debris has been removed from the site since Sept. 11. Engineers originally estimated it would be a 1.2 million-ton cleanup job; now, the city says, with a likely wrapup date of June, the total could rise to 1.5 million tons." - Eric Lipton and James Glanz, "[In the Pit, Dark Relics and Last Obstacles](#)," *New York Times*, Jan. 13, 2002, p. 1.

That was 74,112 tons in 6 days! 12,352 tons per day, or 514.67 tons per hour! At the highest point of "production" at Ground Zero, 13,900 tons of steel and debris were handled per day (Langewiesche, *Ibid.*, p. 192.) [CNN said](#) 108,342 truckloads total were used in the 9-month effort ([USA TODAY](#) said 108,444). The popular total of [1.8 million tons](#) divided by *that* equals 16.6 tons per truck average. Using a 17-ton load average, you get 726.6 trucks per day – 30 per hour – for the second week of January, 2002. In a related note, "100,000" happens to be the number of truckloads it took to excavate the basement and foundation area in the 1960's (according to History's 2002 documentary "[Modern Marvels: World Trade Center](#)" at 9:00).

What about the early days? On TV [CNN said 9/13 at 4:33 p.m.](#), "6,000 tons of debris removed from scene" (graphic on screen) while the announcer mistakenly(?!) said, "workers have carted well over 300,000 tons" away. On Sept. 14 as rain hampered rescue efforts: "Mayor Giuliani has confirmed that 10,000 tons of debris have been removed to date." (["Archive of Week 1 Events at WTC/Pentagon"](#), [fireengineering.com](#)) On Sept. 16 [ABC News reported](#): "Rescue workers have now cleared away 21,000 tons of debris, using 1,200 truckloads." In a Sept. 18 memo to Gov. George Pataki from New York State Emergency Management Office Director Edward F. Jacoby, Jr.: "Cumulative total of 46,760 tons were removed from WTC site on Monday, 9/17." ([OEM FOIL Sec. 4](#), p. 16.) [ABC News Sept. 21](#): "5,476 trucks have removed 76,459 tons of debris from the site." [Time Magazine](#) reported for the next day: "90,937 Tons of debris removed from the World Trade Center site as of Sept. 22, 2001." Three days later [CNN reported](#): "FEMA said Monday [the 24th] that 101,164 tons of debris have been removed from the disaster site." Updated [the next day](#): "By New York City estimates, debris removal to date has topped more than 108,756 tons." That same day Sept. 25 we got another update from [ABC News](#): "So far, 115,755 tons of debris has been removed." By Sept. 28, "More than 128,050 tons...." ([CNN website](#))

Truckloads

According to one source, dumptrucks were weighed. "Every dump truck is being weighed to make sure that it is, in fact, carrying a full load. Drivers are required to sign load tickets to make sure that valuable scrap steel is not diverted to secret dumps." (David Barstow, "[Officials Are on the Lookout for Relief Effort's Dark Side](#)," *NY Times*, Sept. 22, 2001, p. B11.) If indeed this was the case, a rather accurate total could be expected. However....

The paper tracking system was exchanged for an Internet accessible GPS application that more efficiently and comprehensively tabulated the available data. It was cheaper and much faster. **Unfortunately, measuring the exact debris weight was not one of the principal elements of the operation.** Instead, "the FBI and the NYPD [were] closely monitoring the movement of the steel being transported out, since some of it [had] been found in Long Island junkyards." (Dennis Smith, [Report from Ground Zero](#), *Ibid.*, p. 289.)

*“To address the issue of potential load tampering, we explored several ideas for added load verification. **The team quickly rejected using truck scales to weigh each truck at Ground Zero and again at the dumpsites, because much of the debris was still burning, months after the tragedy. As a result, fire hoses sprayed loads before they headed to the dumpsites, adding water weight and altering actual truck and load weights.**” - Menard, R. J., and Knieff, “GPS World” Ibid. [emphasis added]*



Dust suppression was critical considering the asbestos and lead, etc., in very fine particles (photo unknown source)

Even after the underground fires were finally extinguished mid-December (See [“Metal of Honor: The Ironworkers of 9/11”](#)), construction crews took over for FDNY hosing down the debris. Water was sprayed on the pile to minimize airborne dust, especially during large movements (See an example during "America Rebuilds" at [vrt 0:00:46](#)). Nevertheless, health issues among Ground Zero workers have become pervasive. For a collection of related reports and stories, please see [“9/11 - The Dust of Ground Zero,”](#) a project by Jeff Hill. Or skip ahead to “Dust.”

Urich's calculations do include water, by the way: “One easily overlooked factor is the amount of water that inundated nearly all debris areas. Broken water mains and fire-fighting must have made the larger portion of cementitious debris and earth heavier during removal.”

Water wasn't the only weight alteration to take into consideration when counting

dumptrucks' weight. "We were putting milled asphalt, you know, to kind of build a road and flatten certain areas and put, **put dirt over the debris**, so we could bring trucks in and whatnot..." (Kenneth Holden, Former Commissioner, Dept. Of Design & Construction, "The Center of the World - New York: A Documentary Film" 2003, directed by Ric Burns and broadcast on PBS - transcript available online at www.pbs.org) How much added earth mass are we talking about here? Let's do some digging. :P

"One morning in the late fall, I accompanied Ken Holden into the expanding valley at the center of the pile, where a temporary access road of ground-asphalt millings was being built. A fire chief came up and said, 'You've gotta give us time. You gotta get these guys to stop covering up the debris, burying us with dirt.'" - Langewiesche, p. 70

"After the first few weeks, work at the site settled into a certain rhythm. The fires continued to burn, water was poured onto the pile, the backfill operation delivered dirt to the south side to shore up the slurry wall, and the contractors began pushing in roads of finely ground asphalt, known as millings, which they laid on top of the rubble." - Langewiesche, p. 135.

Building roads for vehicles wasn't the only reason to fill voids in the debris pile. The southern wall of the bathtub – the slurry wall – was dangerously unsupported, and creeping inward. The quick solution was simply to dump earth in front of it, or "backfill." The long-term solution was **priority number one** on the site (to paraphrase a comment on the subject from the film "[America Rebuilds](#)"). As quoted also in "Miracle" above:

"[W]e very quickly came up with this idea of tying the wall back. The circumstances you had to work with were that you couldn't even find the wall initially, there was burning debris all over it.'

But before the work could begin, as engineers were assembling equipment and materials, the southern portion of the wall, near Liberty Street, began to move. A member of the construction crew brought it to [engineering manager for the Port Authority of New York & New Jersey Peter] Rinaldi's attention.

'A crack opened up on the street overnight,' Rinaldi recalled. 'I looked at it and recognized the wall was failing.'

*So the Port Authority brought in **50,000 cubic yards of sand** to prop the wall in place. Shortly afterward, work began to secure the wall by drilling pipes into the bedrock, anchoring steel cables through those pipes to the wall and fastening them at a 45-degree angle.*

'We put in almost 1,000 of these,' Rinaldi said. They finished the job in May 2002.' - Caren Halbfinger, "[WTC slurry wall a symbol of survival](#)," The Journal News

Engineer George Tamaro quotes the volume of earth added for this particular purpose at 40,000 cubic yards. See www.pbs.org.

"How much does a cubic yard of [earth] weigh?" you ask? Answer: "Sand - approximately 2600 lbs. Gravel - approximately 2750 lbs." See www.earthhaulers.com. So, according to Tamaro, about 104 million pounds, or 52,000 tons was dumped into the south end of the bathtub for the backfill operation. After visiting earthhaulers.com, we learn 5 yards can fill up a single axle dump truck and 10 to 15 yards a "big dump truck." Now we can figure

it took between 2,700 to 4,000 trucks to take out that contaminated sand (at 15 and 10 yards per truck, respectively).

No such figures have become available for the road building activities. We can only look at [images like this](#) (seen below), and [this](#), and [this](#) (source FEMA) to imagine.

Of course the trucks going out were tracked, for security.

“Each load of material generated from Ground Zero was given a four-part disposal ticket for tracking purposes. A representative from the Army Corps of Engineers completed the required information at the loading site and indicated the disposal location for transport (for example, Pier 6, Pier 25,



59th MTS [Marine Transfer Station], Hamilton MTS, or the Fresh Kills Landfill). At the disposal location, two copies were given to the driver, one for the trucking firm and one for the contractor. The remaining copies were forwarded to the Department of Design and Construction for the reconciliation of loads.” - Martin J. Bellew, Director of the Bureau of Waste Disposal for the New York City Department of Sanitation, [Ibid.](#), Nov. 26, 2002.

“October 13, 2001 -- Debris removal at the Ground Zero continues 24 hours a day. Photo by Andrea Booher/ FEMA News Photo” ([source](#))

“Just days after the disaster, authorities implemented a paper-ticketing system to direct and track more than 200 trucks from five cartage contractors using dozens of trucking companies to haul debris to five different locations, ranging from 3 to 25 miles from the site. [Note: all 5 locations weren't open until early October. See below.] Manually completed paper tickets accounted for each truckload from the disaster site to the five dump locations. Each ticket included information about the truck, the debris type, the destination, the driver, and other critical data. Handwritten on numbered forms at the load points, the exit from the site perimeter, and the entrance to the dump locations, the information was later collected and entered into computer databases.” - Menard, R. J., and Knieff, J. L. 2002. [“GPS at Ground Zero: Tracking World Trade Center Recovery,”](#) GPS World. 13:9.

The Case of 120 Dumptrucks

“We were able to move 120 dumptrucks out of the city last night, which will give you a sense of the work that was done overnight. So, some of the debris has already been removed.” - Mayor Rudy Giuliani, Sept. 12th press conference, [NBC LIVE at 9:52 a.m.](#)

This statement/announcement sounds scripted to me, like an important bullet point on a list. That is not to say Giuliani was in on some grand conspiracy. But notice he didn't say “about

120.” Why did he say it? Because the Dept. of Sanitation dispatched exactly 120 trucks according to a report handed to the Mayor's office? Maybe. We can see a line of **dozens** moving down the road in [one amazing home video \[mirror\]](#).

Or was it because the media had raised the topic of missing debris? Listen to ABC News anchor Peter Jennings wonder about the missing rubble [9/12 at 12:44 p.m.](#), after interjecting a comment that a coworker had raised the topic earlier. Jennings: “There is surprisingly so little rubble. Where did all the rubble go?” The explanation/answer given by the on-site ABC reporter is the fact that trucks have been carrying out debris (after saying much of the buildings had been pulverized, “evaporated”).

History Channel's documentary “World Trade Center: Rise and Fall of an American Icon” (2002) says **75 truckloads per day** were removed from Ground Zero during the early stage of the effort (See “9/11 Debris Part 2” [here](#) for the clip.) – and that 75 was only after a routine had increased productivity. Peter Tully of Tully Construction gave the same estimate while speaking about the operation as a whole, not his firm alone: “We had 75 trucks leaving a day during the first few days.” (Debra K. Rubin and Gary Tulacz, with Thomas F. Armistead, “[Crews Mobilize To Remove Debris But Painstaking Work Takes Toll](#),” *Engineering News Record*, 9/24/2001.) Using this figure, in the 4 days between disaster and mapping – in reality – about 300 truckloads were removed from the site. Why lie or embellish?

William Langewiesche's book provides evidence against the plausibility of Giuliani's dumptrucks claim. Remember the first loads were received at the disposal site (Fresh Kills Landfill on Staten Island) at 11:00 p.m. on September 11 (Bellew, *Ibid.*). “City trucks began rolling there the very first night, each carrying its dusty little load along a congested route through much of New York – by tunnel to Brooklyn and expressways across the borough, then over the Verrazano Narrows Bridge and down the length of Staten Island. One way alone, that trip could take two hours or more.” (Langewiesche, p. 110.) Dusty little load is right. Dump trucks were going [uncovered and dry](#). [See some images](#) showing some of the dumptrucks.

“First hours and days

... Within 24 hours after the attack, some 1,500 sanitation workers had been dispatched and were already beginning the removal of debris. During the early hours, the material leaving Ground Zero was transported directly to the Fresh Kills Landfill by truck and/or tractor-trailer.

*Simultaneously, the Department recognized that its existing infrastructure could be utilized. In particular, the Department's Marine Transfer Stations (MTS) at 59th Street in Manhattan and at Hamilton Avenue in the borough of Brooklyn could provide outlets for limited truck traffic from the site. These facilities were immediately made available and the first loads were received at 11:00 p.m. on September 11” - Bellew, *Ibid.* [See map](#) a few pages above.*

While there may have been 120 dumptrucks in Manhattan the evening of 9/11, so many loads cannot have been gathered out of the pile while firefighters and others carefully searched for survivors. During that urgent time, all the clamor and commotion would stop when a suspicious noise was heard, sounds of possible survivors. [Watch that happen](#) on the night of 9/12 in the famous Naudet documentary “9/11” (link directs to a shot overlooking “the pile” [later called “the pit”] on 9/11 evening as seen in the Etienne Sauret film “WTC: The First 24 Hours,” followed seconds later by the shot of busy searching immediately stopped in silence, [I think on 9/12 evening] shot by the Naudet-Hanlon team). You'll notice the FDNY and

hundreds of other volunteers using their hands and buckets to clear the rubble. See Lou Angeli's "[Ground Zero's Bucket Brigades](#)" for more film on the scene that first week. Shovels would just bounce off the steel, one man said. The only way to do it was with your hands and the buckets.

Said U.S. Army Corps of Engineers' Stephen Browning: "I was talking to a group of NYC firefighters at Ground Zero – they asked me how long the limited and slow 'by-hand' debris removal would continue." (Vince Elias, Sue Hopkins, Wayne Stroupe, Corps Waterways Station, and Justine Barati, Rock Island District, "[New York District in the Red Zone](#)," *The New York District Times*, U.S. Army Corps of Engineers, NY District. Fall, 2001. p. 7. See also ABC News reporting on the same problem, having to take apart the debris pile by hand... [Sept. 13 at 9:58 pm](#).)

In Matt Siegel's film "[Three Nights at Ground Zero](#)," it wasn't until day 5 (Saturday the 15th) that the rescue operation "changed course" and "abandoned an ocean of five-gallon buckets in favor of heavier equipment." (See vrt 15:35.) Heavy equipment could only work on the perimeter of the site on the night of 9/11. Bulldozers (etc.) first had to clear the streets to provide access.

*"Mike Burton and Richard Tomasetti stayed together, each struggling to maintain an analytical frame of mind. It helped to confer with each other. Their focus was on lifting the steel to uncover survivors. It was obvious that large numbers of skilled workers were necessary, along with more heavy equipment than two men could have imagined before. They needed not just the largest diesel excavators and cranes to pick up the pieces but, for lack of stockpiling space, a fleet of trucks to haul off the debris – and they needed it all right away. **The first problem was access:** a major effort would be required to clear a path down West Street just to get equipment to the ruins of the north pedestrian bridge. That bridge by chance was a Tomasetti design, and it was stout, but it had been hit with impossible force when the North Tower fell. Now it was blocking the best route to the pile." - Langewiesche, *Ibid.*, p. 92.*

A [Sept. 19 NBC News interview with FEMA Director Joe Allbaugh](#) had the following exchange:

KATIE COURIC: How has the site changed since you saw it the first time Wednesday following the attacks?

DIRECTOR JOE ALLBAUGH: Well Wednesday it was devastation. We hadn't really had our teams in place to move as much debris as we needed to. Now they are really working quickly and as fast as they can on the peripheries so to facilitate removal of a hundred, well it's a million-two tons, 1.2 million tons of debris.

*KATIE COURIC: How much of that debris has actually been transported? I know about read about [sic] **trucks taking the debris...***

DIRECTOR JOE ALLBAUGH: I think there's probably 55 thousand tons. Not very much quite frankly when think about it [sic], but we have men and women down there just working their hearts out trying to get to individuals who may be alive. Every minute that goes by is a minute against us.

*KATIE COURIC: The actual wreckage it's self look [sic] pretty much the same, **then it's just the periphery that that [sic] has been cleaned out...***

DIRECTOR JOE ALLBAUGH: We need to clear it, we need to clear the streets. Make sure everyone is safe so the environment, you know, we can really ___ quite frankly

[sic].” - <http://www.fema.gov/doc/diz01/couric0919.doc>

Not only was massive debris in the road, but also destroyed cars were. (Listen to “On the Frontlines: [Ironworker Terry Strobel](#) on arriving at Ground Zero.”) It is hard to believe Giuliani's 120 dumptrucks were filled during that first night, when travel was difficult and no clear plan had been established. Go yourself, reader, to Ground Zero on 9/12/2001, thanks to cameraman Tim Cothren ([ABC at 11:59 pm on 9/12](#)) – which shows plainly that the initial work on the pile was mostly hands-on and slow going. Additional related video testimony is compiled in “[9/11 Debris Part 2](#).”

“Amazingly, within 48 hours of September 11th the city had started removing material from Ground Zero and by the 14th, 3 days later; over 10,000 tons of debris and scrap had been moved to Fresh Kills Landfill. Shortly thereafter, the rate increased to 7,000 tons per day to the Fresh Kills Landfill. This involved 6-700 truckloads a day leaving Ground Zero [in October]. Some by truck thru the Battery Tunnel and over the Verrazano Bridge and the balance by truck transferred to barges on the Fresh Kills Landfill.” - Wendy Neu of Hugo Neu Schnitzer East (Hugo Neu Corp.) to the Empire State Chapter of ISRI (Institute of Scrap Recycling Industries) [on Nov. 28, 2001](#).

Limitations included the 40-ton weight limit imposed on US roads (exceptions only for long flatbeds that widely distributed the load)... and the meager makes of trucks seen in footage between 9/11 and 9/14. See the [amazing video](#) also linked above ([original is private](#) as of Aug. 2013), when more than 20 (maybe 120 before directorial editing) small empty dump trucks pass in succession on their way to Ground Zero 9/11 evening. These were Dept. of Sanitation trucks, not construction contractors' earth hauling trucks (some of which did participate immediately, as I understand).

Federal axle limits are 20,000 pounds (10 tons) for a single axle and 34,000 (17 tons) for a tandem, making 27 tons a standard limit for a 3-axle design. ([See one source](#).) Granted, large cranes, flatbeds and long trailer trucks were on the scene (at first in limited numbers) to remove large pieces of steel. Taking into account the mixed, non-uniform characteristics of the Trade Center debris, a more accurate average truckload would be between 10 and 17 tons. That's average, but of course loads weighed much less with no steel.

Using the CNN figure above quoted at 108,342 truckloads, we can divide by the number of days the entire project took – until May 30, 2002, officially 259 days – for an average of 418 trucks per day. Using the extended cleanup time provided by the Dept. of Sanitation (Bellew, *Ibid.*), July 29, 2002 or 320 days, we get an average 338 trucks per day. (End date of June 30, or 290 days – 374 trucks average, per day.)

Barges

“It is a very slow process. We're working with the Corps of Engineers to dredge out an area near Pier 6 to bring in barges to help expedite the debris removal as opposed to trucking everything out. That's what takes so much time.” - FEMA Director Joe Allbaugh, to Katie Couric on NBC's Today Show, [Sept. 26, 2001](#) ([See transcript list](#)).

Mayor Giuliani was quoted above saying 120 dumptrucks were moved out of the city last

night, meaning the night of 9/11. He (or somebody scripting his talking points) thought it was important to tell the public that “some of the debris ha[d] already been removed.” He continued by saying, “**and it will be done by barge all throughout the day today.**” It’s not documented anywhere that *any* barges were loaded on the 12th. Before the barges could travel safely, especially at low tide, a dredging operation had to be completed.

The History documentary “World Trade Center: Rise and Fall of an American Icon,” after wrapping up its section on dump trucks and related environmental ramifications, says:

“The Army Corps of Engineers knew there had to be a more efficient and safer way to move the debris. Joe Seebode of the Army Corps of Engineers had finally secured his dredging permits to create the channel that would allow large barges to carry off the wreckage of the World Trade Center.

[Seebode:] ‘That survey showed that the average water depth was about four to five feet in here, and having worked with Weeks Marine, the contractor to New York City, we established that they needed about fifteen feet to properly operate a barge in this location.’”

The film continues by describing the process. “The operation continued for nine days until there was sufficient draw for the debris barges to pass unhindered.”

“Already by that second day huge volumes of steel and debris were emerging from the site as AMEC fought its way down West Street toward the north pedestrian bridge, and Bovis came in from the south, both companies working furiously to clear room for the cranes and heavy equipment that might help in the search for survivors. Tully was cranking up too, over in the southeast corner. Something had to be done with the resulting material, and right away, or it would start to clog the rescue operation.”

- Langewiesche, p. 110.

So why did the mayor tell us on national TV at 9:52 a.m. that barges would be removing debris “all throughout the day today” on 9/12? Granted, using barges was a logical course of action. But after some investigation it appears that trucks were the sole method of transportation for the debris in the first few days. As a matter of fact, according to Langewiesche (pp. 110 - 11), the first meeting between self-appointed Ground Zero operations manager Mike Burton and Weeks Marine construction engineer Marty Corcoran - in order to solidify the contract - didn’t happen until Corcoran “had arrived the day after the attack on behalf of his employer, Weeks Marine” and “[a]fter three hours of wandering the site in astonishment and confusion.” So unless Corcoran got to lower Manhattan before 6:52 a.m. (likely from New Jersey, where Weeks was based), the Giuliani press announcement was based on an assumption, not fact.

“Since the truck route to the landfill was more than 20 miles, barges were quickly engaged for debris transportation due to the proximity of the Hudson River to both the World Trade Center and landfill sites. With **each barge carrying approximately 30 truckloads**, barging offered a great cure for traffic congestion and road wear.” (emphasis added) - Vince Elias, Sue Hopkins, Wayne Stroupe, Corps Waterways Station, and Justine Barati, Rock Island District, “[New York District in the Red Zone](#),” *The New York District Times*, U.S. Army Corps of Engineers, NY District. Fall, 2001. p. 15.

That “approximately 30 truckloads” per barge was either a limitation imposed by

shallow waters, or a terribly low approximation. Langewiesche tells us “each barge was capable of carrying fifty to a hundred truckloads of debris.” (pp. 110 - 11) This truckloads per barge figure is interesting to ponder.

“A total of 508 barges of material were loaded by the Department [of Sanitation] at the 59th Street and Hamilton Avenue MTS's [Marine Transfer Stations], and another 1,423 barges were loaded by the city's contractor, Weeks Marine, at Pier 6 and Pier 25.” (Bellew, [ibid.](#)) [There was another barge loading area, near Pier 6 on the East River. I believe it should be assumed that crane operator and primary contractor Weeks Marine considered it part of the same operation. (See [map](#). Note the two barge ports beside each other.) I have no real reason to doubt the total barge number, other than Bellew's apparent error in the final date of debris received at Fresh Kills - see above.]



"New York, NY, March 15, 2002 -- A truck dumps debris into the bucket of a 500-ton floating crane located at FEMA's Pier 25 Loading Site, a few blocks from Ground Zero. Each day, an average of 290 loads are delivered to the pier, totaling nearly 6,332 tons. Photo by Larry Lerner/ FEMA News Photo" - the original image's metadata. See this location [from an apartment above \(mirror\)](#), in Sept./Oct. 2001. 911datasets.org FOIA release 30, 42A0354 – G30D8, thanks to the International Center for 9/11 Studies.

Let's use the above figures for a couple quick equations. Bellew says **1,931 total** barges and the USACE says approximately 30 truckloads per barge. The product of these numbers is 57,930 truckloads. Did the remainder of trucks really drive all the way to the landfill? For the sake of argument, let's say 100,000 of the 108,342 trucks loaded barges. We conclude there were an average of 52 truckloads per barge... less so if more than 8,342 truck loads drove to the landfill site.

"Weeks was still dredging the Pier 25 site even as trucks began delivering steel to the site for offloading by crane to barges that can hold up to 3,000 tons. 'That's equivalent to 150 truckloads,' says Weeks Senior Vice President George Wittich." - Nadine M. Post and Debra K. Rubin, "[Debris Mountain Starts to Shrink](#)," enr.com, 10/1/2001.

Note quickly that V.P. Wittich allotted 20-ton truckloads in his 150 trucks per 3,000 ton barge equation. The final average truckload actually weighed 16-18 tons, according to the final debris count of 1.6 - 1.8 million tons. Also note that the average barge load traveled at less than a third of its capacity. (18% capacity using 30 trucks at 18 tons each or 31% at 52 trucks) Considering the government relief money involved, an obvious reason is found for short-loading a truck or barge to prolong the job. That's not the only reason that makes sense, though (in addition to the end result of creating the appearance of a more gigantic job).

Also, there was a flow to maintain. The loading process in Manhattan might have taken longer than the unloading on Staten Island, so that problem was remedied as economically as possible, in order to keep the unloaders busy. Remember the trucks were not weighed consistently (see above, "Truckloads") as part of the documentation process. Their location was of primary significance. That, and keeping the mammoth cleanup machine moving.

"A blue barge, actually a garbage scow on loan from the city's Sanitation Department, was the first to fill up. By measuring its draft, or depth in the water, dockworkers determined that it held 443 tons of steel. The tugboat, the Kathleen, was lashed to the barge and it headed to the relay point, a Port Authority pier at the foot of Atlantic Avenue in Brooklyn.

'We always have a barge to load,' said Rudy Wohl, a Weeks port captain, who is along for the ride. 'We don't want a slowdown.'" - James Glanz, "[From Torn Steel, Cold Data of Salvage](#)," NY Times, Oct. 9, 2001, p. B13

It was easily possible to weigh the debris by observing the depth of a barge in the water – in other words, by measuring the water displacement. Whether or not that measurement was documented is another matter. One source suggests there was that documentation, at least for the steel going directly to recycling (where/when the money was counted). "[W]e have had a representative from the NY Department of Sanitation at our scale around the clock, inspecting and monitoring every truck scale ticket and draft weight on each barge received." (Wendy Neu of Hugo Neu Schnitzer East (Hugo Neu Corporation) to the Empire State Chapter of ISRI on [November 28, 2001](#).) Remember that steel was the [property of the Port Authority](#) of New York and New Jersey, as discussed above. They wanted to get their money's worth, about 100 bucks a ton. (See "[Recycle](#)," above.)

Quickly consider that 1.8 million tons divided by 1,931 barges (barges loaded in Manhattan, not unloaded at Fresh Kills or recycling centers) equals 932 tons per barge. But first, for a more accurate number, subtract the debris that trucks drove the whole way to the landfill (about 100,000 tons; see below), and we get 880 tons per barge. "In December 2001, up to 17 barges a day, some capable of holding 650 tons, delivered material to Fresh Kills." ("Recovery," New York State Educational Department at www.nysm.nysed.gov) To Fresh Kills – so not steel.

The minimum recommended barge load was apparently 400 tons for Hugo Neu (see quote below). The maximum recommended load was 1,000, despite the claim of capacity at 3,000 tons according to Weeks V.P. Wittich (and Eric Lipton in "[Red Tape Cut and Rivers](#)

[Dredged to Carry Debris by Water](#)," *New York Times*, Oct. 2, 2001, p. B7.). Lipton does however note that the total weight was limited by the shapes of the steel and debris, so that barges "may be able to fit only about 1,000 tons. A truck, by comparison, can carry 10 to 30 tons of steel, again depending on its shape." Remember now that the above example showed 443 tons being tugged off for delivery. The date of that is also important – October 4th, according to the writer. Dredging was complete.

"On the 22nd of September the first contracts were awarded to Metal Management and HNSE for 25,000 tons [of recyclable steel] each, to be shipped within a 30-day period in 400-1000 ton barge loads directly from Ground Zero." - Wendy Neu, [ibid.](#), Nov. 28, 2001.

Testing Mr. Bellew's figure of 1,931 barges, we find the minimum recommended load (400 tons) gives a debris total of 772,400 tons. The maximum load of 1,000 tons produces 1,931,000. Here again we see the 2 million tons out of the range of possibility, and 1.8 million pushing the boundaries of belief. Remember the first days of debris removal, when trucks were the primary mode of transport. Consider the following figure, not that it is completely limited to truck hauling: "By the end of 29 Sept., approximately 145,000 tons of debris was removed from the WTC site inclusive of the steel designated for recycling." ("[Role of USACE at the WTC Response Operations](#)") A similar quote from an Oct. 2nd *NY Times* article tells us about how much of the initial amount was moved by barge: "Already, barges have been used to move about a third of the 154,000 tons cleared from the site, city officials said." (Lipton, "Red Tape..." *Ibid.*, Oct. 2) So about 100,000 tons' worth of dust, steel and debris was trucked to Staten Island in September, 2001.

Again, dredging the river was required before full scale barge transport could begin. "Dredging started on Sept. 24 at Pier 6 in the East River, close to Ground Zero at the World Trade Center." (Wayne Stroupe, U.S. Army Corps of Engineers, New England District, "[Under the World Trade Center](#)," *Yankee Engineer*, World Trade Center Edition, Dec. 2001, p. 7.)

"The Corps also assisted with arranging emergency dredging operations at Pier 6, near the World Trade Center, to facilitate additional barge loading facilities. Under the emergency contract with Great Lakes Dredge and Dock Company, 75,000 cubic yards of material was dredged in nine days to allow full loading of the barges."

- Wayne Stroupe, U.S. Army Corps of Engineers, New England District, "Corps of Engineers Tackle Debris Management Mission at World Trade Center," *Yankee Engineer*, World Trade Center Edition, Dec. 2001, p. 10.

Another figure from the October 9 *NY Times* "Cold Data" article is particularly interesting, considering the above information on Pier 6. According to records kept by Weeks Marine Inc. – the company responsible for operating the dockside cranes that loaded the barges – "By 7 a.m. that Thursday morning, Oct. 4, exactly 1,688 truckloads had been loaded into barges at the pier." If dredging took 9 days from Sept. 24 – or until Oct. 3, then 98% of the barges operating from those 1,688 truckloads would have been traveling at the limited capacity to avoid scraping the bottom of the river. This is why the number of truckloads per barge was estimated at 30 instead of 150. Also, with this total of 1,688 truckloads for Pier 6, we can use the number of days between the 11th and then to come up with a "trucks per day" number... 73 on average, *from one of several ports*. Math for the other piers is not so straightforward.

“Work is already complete at one of the new ports: a barge loading area has been set up by Weeks Marine Inc. just north of Battery Park City, at the former Pier 25.

A second contractor, Great Lakes Dredge and Dock Company, is scheduled to be finished today on the second new port, which is between the Downtown Manhattan heliport (Pier 6) and the Staten Island Ferry terminal on the East River in Manhattan.

The fifth barge port is just north of the heliport, at a spot where the East River is already deep enough to accommodate barges.” - Lipton, Ibid. (Oct. 2)

[LINK TO MAP](#) (above).

“The dredging mission is expected to conclude on 3 OCT after around-the-clock operations. The mission is around Pier Six involves dredging to facilitate barge access for debris removal. 18 personnel, four USACE and 14 contractors, are performing the mission. To date, more than 53,900 cubic yards of dredged material have been removed. Great Lakes Dredge and Dock Company is performing the work under a Corps contract.” - “United States Army Corps of Engineers World Trade Center/Pentagon Bombings Recovery Efforts 9:00 AM; October 4, 2001” [online at avalon.law.yale.edu](http://avalon.law.yale.edu).

To clarify, the first barge port in operation was the 59th street Marine Transfer Station operated by the Dept. of Sanitation. Trucks using this facility had to travel 4 miles north along West Street and 12th Avenue. Steel was not handled there, according to this article:

“To accelerate steel removal, Weeks Marine Inc. has created two steel offloading areas that ramped up operations last week to transport debris by barge for recycling. The sites are located at Pier 25 on the Hudson River and at Pier 6 at the tip of lower Manhattan (see map). The city’s usual garbage removal facilities, which is handling smaller site debris, could not accommodate steel pieces.” - Nadine M. Post and Debra K. Rubin, “[Debris Mountain Starts to Shrink](#),” enr.com [cached], 10/1/2001

The second barge station was a Port Authority facility at the Hamilton Ave. Pier and Brooklyn Piers-Red Hook Terminal. Trucks using this facility had to travel 2 miles south through the Brooklyn Battery Tunnel, a toll road... or take a detour northeast and across the Brooklyn Bridge for a convoluted 5+ mile drive through traffic. I don't know which route was taken more often. As I understand, these ports were available immediately, unlike Piers 6 and 25.

“From the north end of the site the newspapers call 'Ground Zero,' caravans of trucks haul scrap and debris less than a mile to the Pier 25 site, just North of Chambers St. Trucks from the southern end of the site head for Manhattan’s Pier 6, East River. The congestion of streets and disturbance of residents is reduced to the minimum. [edited out text]

*Weeks developed the proposal for the barge loading ports, with benefits of water transport over land transport. 'We had multiple solutions, including our own fleet of tugs, barges, and cranes.' Company literature tells us 'by the mid 1930s, scrap iron became the main business of Weeks.' so besides equipment, Weeks also knew who to talk to. 'We proposed that Weeks put out the solicitations to the steel recyclers.' **But***

before barges could be loaded, the area around Pier 25 needed more depth. 'The dredging permit was issued in 45 minutes,' Wittich recalls, 'and the first emergency dredging commenced on September 13th. Around the 21st, sufficient dredging was completed at Pier 25, and the site began developing into what you see today.'” - [“WTC Clean-Up: Getting Down and Dirty,”](#) marinelink.com, Dec. 5, 2001



City of New York Department of Design and Construction

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NYC DDC

Recall the one to two year timeline originally anticipated for the job at Ground Zero. That wasn't acceptable to the DDC, especially the ambitious project leader Michael Burton (see him in the PBS documentary "[America Rebuilds](#)" [here](#) [[mirror](#) at 4:14] and [here](#) [[mirror](#) at 6:03], for example).

“Leading the effort was the unlikely duo of Kenneth Holden and his lieutenant, Michael Burton – the two Department of Design and Construction officials who had emerged from bureaucratic obscurity on September 11 to orchestrate an effective response... .
[...]

As the second-in-command of an obscure city agency in Queens, Burton had not the slightest authority here at the Trade Center site, but he was willing to assume it anyway. This was typical of him. Burton's brashness was well known within the DDC, where people tended to be cautious of him for his disdain of procedure, and for what many saw as his arrogance. Holden himself was wary of Burton, and said he felt the need to “cage” him regularly, but he recognized Burton's effectiveness nonetheless. Burton was the DDC's doer. And Burton had an agile mind. He was a right-wing conservative but also surprisingly supple, and he understood now that conventional standards of safety simply did not apply to these ruins.” - Langewiesche, p. 65 and 93.

“No [OSHA] citations were written or even considered during the first three months of the recovery effort.” (Jeffrey W. Vincoli, Norman H. Black and Stewart C. Burkhammer, [“SH&E at Ground Zero,”](#) cached webpage).

Critics of Langewiesche's [American Ground](#) have listed the first sentence quoted

above as a factual error (see wtclivinghistory.org/..., number 12). The WTC Living History Project reminded us that the job was technically a rescue and recovery operation, so FDNY led the efforts in that regard. (Also, since Langewiesche was given [access](#) by the DDC, he was predisposed to writing positively about them. [[source](#)]) Dennis Smith wrote in his Sept. 12 entry that “the mayor has given responsibility for clearing the site to the city’s Office of Design and Construction, though the fire department has complete charge of the operations.” ([Report from Ground Zero](#), *Ibid.*, p. 194.) An organizational chart included in the [FDNY Incident Action Plan for Sept. 30](#) (to Oct. 1) placed Assistant Chief Frank Cruthers at the top, with all other cooperating agencies reporting to him. A [video on globalimageworks.com](#) shot sometime in October reveals his anticipation of a 9 month to one year job – info perhaps relayed from DDC’s Burton. The problems were yet to come.

To sum up the conflicts among leadership, wtclivinghistory.org elucidates: “[T]he fight between ‘speed in debris removal’ versus ‘the civilized recovery of human remains’ embodied the one over-arching and driving conflict that both separated us from the external administrators and joined us (in our 8 perspectives that actually did the work at Ground Zero) into a common goal.” Those 8 were “construction, iron workers, engineering, supply and logistics, NYPD/ESU [Emergency Service Unit], PAPD [Port Authority Police Dept.], FDNY victims’ family members and workers in recovery.”



Mayor Giuliani, Gov. Pataki, President Bush

The “external administrators” worked for the city’s DDC – Kenneth Holden and Michael Burton. As an October 31 CBS program noted, “Holden is under pressure to get the job done.” (*60 Minutes II*, “[Under Ground Zero](#)” - Watch it [here on YouTube](#) [911datasets.org release 25, 42A0140 – G25D56], where Dan Rather says “enormous pressure.”) And who was responsible for the city? Mayor Rudolph Giuliani was.

The International Association of Firefighters (IAFF) was the most outspoken opponent of Giuliani’s run for President of the United States in the 2008 election. Watch “[Giuliani Gets Exposed As Fraud by Firefighters](#)” (also known as “Rudy Giuliani: Urban Legend”). While this video drives to the heart of the matter, some [fact checking](#) is appropriate. The following words from the video may be a bit harsh, but they illustrate well the feelings of the FDNY at the time of early November, 2001 (and after). Also, an important altercation will be introduced.

“Narrator: ‘When Rudy started his scoop and dump operation, just 101 FDNY members had been recovered. Two hundred and forty-two FDNY members and hundreds of civilians would either stay buried at ground zero or be removed like garbage and deposited at the Fresh Kills Landfill.’

Steve Cassidy, president, Uniformed Fire Officers Association Local 94: ‘Scoop up the debris, dump it in a landfill; the heck with the fact that it was firefighters or others who would never have a funeral for their family.’

Narrator: ‘Families and off-duty fire fighters protested Rudy’s appalling lack of respect. In response, Giuliani had them arrested. When faced with the public outrage, Mayor Giuliani relented and let FDNY members go back to work on the pile.’”

- Excerpt from IAFF video "[Rudy Giuliani: Urban Legend](#)"

Ironically, [factcheck.org](#), in their critique of the IAFF video, got the protest date wrong. They said Nov. 3. *The New York Times* accurately plots the event on Nov. 2. (Diane Cardwell, "[City to Drop Charges Against 17 of 18 Firefighters Arrested Over Protest](#)," Nov. 11, 2001. See also the November 2nd entry in Dennis Smith's [Report from Ground Zero](#), *Ibid.*, p. 339.)

This protest/demonstration came after Mayor Giuliani instituted a new protocol that limited firefighter access, speeding up the debris removal work (in the name of safety, though not in response to an accident. Fewer firemen were allowed to search for remains: 25 instead of 64. (Jennifer Steinhauer, "[Mayor Criticizes Firefighters Over Stand on Staffing at Trade Center Site](#)," *New York Times*, Nov. 9, 2001.) There were also 25 officers each from the NYPD and PAPD. (Smith, *Ibid.*, p. 336.) FDNY would have no authority to stop equipment to dig carefully for suspected remains, without consent from engineers and "construction types" (Langewiesche, *Ibid.*, p. 163). The 25 each from the uniformed services would be "placed on stand-by basis until a crane or a Cat or an excavator exposed a body." (Smith, *Ibid.*, p. 336.) Last but not least, there now had to be a 50-foot distance between FDNY personnel and machines' excavation areas (mentioned in "[America Rebuilds](#)" [here](#)). Firefighters were justifiably pissed.

Psychologically speaking, this couldn't have come at a worse time. In the natural "stages" of grieving, anger was practically scheduled to rise. (See [grief.com](#).)

Unwilling to give up control of the site, but more upset by the dishonor done to the remains of their deceased brothers, FDNY protested. Their families joined in with them. They approached the Ground Zero checkpoint chanting, "Bring our brothers home!"

"The march was stopped at the metal barriers, and with the confrontation now face-to-face, a top police chief ordered a group of officers to handcuff several firefighters who were at the front of the line. [...]

'I'm sorry I have to do this,' the officer said as he grabbed Pete's wrist. Pete, retired after twenty-one years in Rescue 2, and one of the legends of the fire department, did not try to resist. But at that moment, another chief down the line ordered another policeman to handcuff additional firefighters, Captain Jack Ginty of the Fire Officers Association among them. 'We were being arrested for no discernable reason,' Captain Ginty said. 'It was then that things heated up, and the barrier was raised and used to push back the police officers.' With everyone's attention diverted, the police officer took the handcuff off Pete's wrist and said, 'Beat it.'

Later, an officer who was driving the handcuffed fire Captain Jack Ginty to the police station became so upset over the senselessness of the event that he had to pull his car over to the side of the road to bring his sobbing under control."

- Dennis Smith, *Ibid.*, p. 342.

Eighteen people were arrested, making the demonstration a "riot" according to Langewiesche,



FDNY Families Protest (image source missing)

p. 153, 161, and 164. Dennis Smith noted: "It was definitely not a 'melee' or a 'brawl' as the tabloids have suggested. (Ibid., p. 343.) No punch was thrown in Smith's version, but Langewiesche wrote, "I saw one policeman go down with a roundhouse punch to the face" on page 150 of American Ground. This protest – and "melee" according to Steinhauer, *New York Times*, Ibid., Nov. 9 and Cardwell, Ibid., *New York Times*, Nov. 11 – was not mentioned in the PBS program "America Rebuilds" at all. (Watch. [mirror])

The closest "America Rebuilds" came to portraying the conflict began with DDC's Michael Minuto describing the dangerous situation of giant excavators constantly moving. First, inside a shift change meeting with the construction workers, a recovery [of human remains] was mentioned as stopping work. Then Burton introduced the safety issue posed by the massive machines. Next narrator (actor) Kevin Spacey introduced the restrictions posed on recovery, including one spotter per excavator, standing 50 feet away. Spacey said, "Many firefighters objected." Sam Melisi, as the FDNY spokesperson in the documentary, complained about the restrictions. At 50 feet you would basically need binoculars.

Then a "confrontation" on site one day in October was shown, when a stairway was apparently uncovered and cleanup work halted. DDC's Minuto said he wanted "those [FDNY] guys out of there" because it wasn't safe. [Hello! We're talking about **FDNY!**] Recalling the event, DDC's Faisal Choudhury tells the camera about how he radioed "10&10," Engine Co. 10 and Ladder Co. 10, "the firehouse directly across the street from the south tower." (Smith, Ibid., p. 45.) Choudhury's talk with the "chief" there eventually produced the intended result. FDNY backed out.

Melisi was shown on camera again. "It didn't always go smooth. I can honestly say that. [He smiles] There were times when we butted heads, but, you know, you try to come to a reasonable solution." After a heartbreaking interlude of FDNY men carrying out Stokes baskets (rigid orange stretchers) draped in American flags, the subject of the documentary changed to rebuilding.

On the other hand, in "Rudy Giuliani: Urban Legend," the conflict was highlighted, minus the brief violence, as resulting from the "scoop and dump" operation kicking into high gear once the cache of millions of dollars in gold and silver was recovered from the Bank of Nova Scotia by armored truck. (On the subject of gold, see this article by Jim Hoffman of 911research.wtc7.net.) Removing the gold and silver only marked the acceleration of debris removal by coincidence, apparently. Yet it was symbolic.

As a consequence of this protest and the attention it garnered, Giuliani politely doubled FDNY search crews. (Diane Cardwell, "City to Drop Charges Against 17 of 18 Firefighters Arrested Over Protest," *New York Times*, Nov. 11, 2001.) New safety measures stood, though, so many firefighters would basically "wait on the sidelines while [...] so-called spotters keep their eyes peeled for remains." (Jennifer Steinhauer, Ibid., Nov. 9.)

Note that the Steinhauer article said the FDNY presence was reduced to 25 from 64 "last week." This wasn't a sudden change, but the second or third step in an incremental transition. Dennis Smith reported on September 28 that there were fewer firefighters there, after hearing on the 27th from an angry battalion chief that only 150 from the fire department would be "allowed" to help. (Smith, Ibid., p. 253.) The "crime scene" status of the site was apparently invoked for that change. On September 29, Smith wrote, "The fire department presence has been cut. 'Guys are reeling,' Lieutenant McCaffery says to me. 'And no one has the slightest idea how it will end.'" (Smith, Ibid., p. 262.) A month later, Smith reported the new, harsher limits being instated on October 31, the same day the gold and silver was excavated: "There would be no more continual hand digging, and no more on-the-site

spotting,” despite the “250 firefighters unaccounted for out of 343 reported missing.” (p. 336.)

With tensions running high between the city and its fire department, Giuliani set up a meeting. Langewiesche said the firemen “demanded a meeting.” (Ibid., p. 164.) Dennis Smith, a Giuliani supporter, said it was the mayor's idea (on page 352). FDNY widow Marian Fontana had recently founded the September 11th Widows' and Victims' Families Association, so with her help 75 families showed up November 12, 2001 at the midtown Manhattan Sheraton hotel. Here the wives and widows were given a voice... much to Michael Burton's dismay.

“Burton started gamely into an explanation of the transition on the pile, including the new placement of spotters, the 'safe areas,' and the handling and inspection of the debris. The crowd listened sullenly for a while, until a woman stood up and yelled, 'We don't even want to hear from you! You're Mr. Scoop and Dump!'

[...]

Others joined in, shouting, 'Scoop and Dump! Scoop and Dump! Scoop and Dump!'”

- Langewiesche, Ibid., p. 166.

Despite the negative attitudes and name calling, positive steps were taken as a result of the meeting. Lee Ielpi, “one of the most decorated firefighters in department history,” lost his son Jonathan on 9/11. He took the chance to speak and “told of how he ha[d] been digging with his friends almost every day since September 11. [...] Lee suggested that the mayor remove the huge red crane that st[ood] in the middle of the site, gobbling debris in such large bites that it [was] impossible to spot the area for remains.” (Smith, Ibid., p. 353.) To have more firefighters was another request. The mayor, and therefore his DDC, complied.

Today if the question were asked: Who won “the fight between 'speed in debris removal' versus 'the civilized recovery of human remains,’” who would the “winner” be – the administrators or the workers? The “production” numbers were staggering, and seemed to close the case. By definition the managers were responsible.

On the other hand, many people did believe the search for human remains was rather intensive. That makes it all the more shocking that the building “collapses” disappeared more than one thousand people.



Nearly all the 9/11 victims. [Source](#): Wikipedia.

Bodies

Apologies, because I - as the writer in Oregon - cannot truly know the losses felt and shared. Of course, I have cried during my 9/11 studies. If you don't cry in these next few pages, I don't know what to tell you.

For this book I had to title the chapter with the crude word "bodies," yet "body parts" would have been more accurate. (See for example [NBC News on Sept. 13 at 8:49 a.m.](#)) For some intimate [portraits of grief, see the New York Times site \(also from 2002\)](#). Also go to the [9/11 Memorial](#). So many memorials.

"[T]he mayor has acknowledged that specialists have told him that because of the great force of the collapse, many if not most of the bodies at Ground Zero have been disintegrated, or atomized. Certainly, every firefighter who has been at the site knows that there is not a piece of glass or marble to be seen anywhere, not a desk, a sink, or a doorknob. It is the virtually indestructible bunker clothes of the firefighters that have preserved their remains.... Of the 542 confirmed deaths at the World Trade Center, about 100 have been firefighters."

- Dennis Smith, [Report from Ground Zero](#), *Ibid.*, p. 341. From his entry on Nov. 2.

Immediately, to try to mathematically quantify the scale of the attack in the face of such

crippling emotion, the possible number of victims became a crucial topic. Such should always be the case in mass-casualty events. On 9/11 a popular [TV news](#) comment was that about 50,000 people worked in the two towers.

Early reports (as late as Sept. 21) overestimated the number of casualties as much as two times the actual final number. The highest reported number was “6,453 two weeks after the attacks.” (Dennis Cauchon, “[Not Found or Not Existing: 40 Names To Leave WTC Death Toll](#),” *USA Today*, Oct. 29, 2003. See also Jennifer Steinhauer, “[Giuliani Reports Sharp Increase in the Number of Those Listed as Missing](#),” *New York Times*, Sept. 21, 2001.)

This was due in part to mistaken missing persons reports, name duplication, and fraud. “It will ultimately take old-fashioned police work to arrive at as near to a definitive number as possible, by sending detectives to interview next of kin, and rooting out mistakes and possible frauds.” (Dennis Smith, *Ibid.*, p. 328) In his October 24 entry, Smith notes that the *New York Times* “unofficial tally of the missing and dead at Ground Zero, including the passengers on the two planes, [came] to about 2,950. This figure is 1,657 less than the number of victims that had been reported in the previous day's official tally.” (p. 327) Yet he reports a larger figure the next day, from an undisclosed source – 3,958 missing, and 506 confirmed dead. (p. 329)

In 2003 the City of New York reduced the death toll by 40 (from 2,792 to 2,752), due to fraudulent claims. (“[New York Reduces 9/11 Death Toll by 40](#),” CNN.com, Oct. 29, 2003; also Dennis Cauchon, *Ibid.*, Oct. 29, 2003.) One example was a man claiming one of his children had gone to a fateful job interview in the trade center. Cyril Kendall was convicted of this crime, since he had received \$190,000 from the Red Cross and Safe Horizon after the lie. (CNN.com, *Ibid.*) A similar tale came from “[Tania Head](#)” (actually [Alicia](#)), who took no money, but instead told her fantastic lie for fame and attention.

<editorial> **If** there were an ulterior political motive for the early, exaggerated victim numbers – say for example oil and gas in Afghanistan and Iraq by way of public outrage and support for war to increase military spending... **or** to go to Afghanistan and revitalize the recently Taliban-destroyed poppy crop and, thereby surreptitiously gain hold of **80%** of the world heroin market (Robert Steele, “CIA Clandestine Officer” in [short documentary video \[source\]](#)) – exaggerations weren't needed. As the mayor poignantly said, whatever the losses were, it was “more than any of us can bear.” (“[It's More Than Any of Us Can Bear](#),” CBS News, Sept. 2001.) Regarding motives, consider V.P. Dick Cheney, former Secretary of Defense and former CEO of Defense Dept. and oil rig construction contractor corporation Halliburton. He resigned from the position claiming that “removed any conflict of interest.” {[Wikipedia](#)} See how his [stock soared](#) in the following years of war in Iraq. Also, Dick has insisted upon having Secret Service protection extended beyond traditional limits. (James Gordon Meek and Thomas M. Defrank, “President Barack Obama Authorizes Extended Secret Service Guard for Former VP Dick Cheney,” [nydailynews.com](#), July 21, 2009.) Scared, Dick?</editorial>

A total of 2,753 human beings were killed as a direct result of the attacks on the towers, including the 147 victims in the two planes according to [CNN in 2009](#) and [Wikipedia](#) Jan. 2011 (not including terrorists). As of April 30, 2004 per the Office of the Chief Medical Examiner of New York City (OCME), of the [AA Flight 11](#) total 87 dead (not including 5 terrorists), 52 were ID'd, 45 of those by DNA. [UA Flight 175](#): 60 died (not including 5 terrorists), 27 ID'd, 26 by DNA. (Robert C. Shaler, [Who They Were – Inside the World Trade Center DNA Story: The Unprecedented Effort To Identify the Missing](#), Free Press, 2005, p. 302)

As of June 2005 there were 19,915 remains recovered, with 1,591 out of 2,749 victims

ID'd (1,294 of which were DNA ID's, 822 of those times DNA was the only method of ID. [Shaler, *Ibid.*, p. 320]) – numbers per Charles “Chuck” Hirsch, Chief Medical Examiner, the man “ultimately responsible for identifying those who died at the World Trade Center and for returning their remains to the families.” (p. 340)

2,749 was the number of Death Certificates issued (stats as of 2004). Of those, 399 were issued with physical remains. 1,186 were death by Judicial Decree only. In 1,161 cases, identified remains were returned to families after the Judicial Decree. Recent news reported [a new DNA identification June 2013](#), making the total *known* dead 1,636 (59% identified). The next month [another ID](#) was made on retested DNA. May they rest in peace.

The WTC dust will have killed many more before it's all over. That is why Felicia Dunn-Jones (dead Feb. 10, 2002) was added to the list of victims in 2007, bringing the total to 2,750. (Anthony DePalma, “[For the First Time, New York Links a Death to 9/11 Dust](#),” *New York Times*, May 24, 2007.) Later the [Sept. 11 Victims Compensation Fund](#) – (FYI, quoting a [2011 Associated Press article](#) “Congress created a \$2.78 billion fund late last year to compensate people who might have been sickened by exposure to trade center dust and ash and set aside \$1.5 billion to fund health programs for rescue and cleanup workers.” [AP, *Ibid.*]) – Considering Felicia's case, the Fund agreed that “the disease was linked to the dust and awarded the family \$2.6 million.” For a while in 2004 Hirsch said that conclusion lacked proof, since he thought some disease was already present in Felicia. In 2007 he changed his mind – and the Death Certificate – to say homicide. (AP, *Ibid.*)

July 10, 2008 another certificate was issued (not because of dust) for a man last seen Sept. 10, a doctor who had been added to the list of 9/11 dead at first, then removed in 2004 due to insufficient scientific proof. (AP, July 10, 2008)

Sept. 11, 2009, a 2,752nd name was read for the first time at the ceremonial 9/11 anniversary Ground Zero/Memorial name reading – Leon Heyward (mispronounced “Lennon” actually) (Lisa Foderaro, “[9/11's Litany of Loss, Joined by Another Name](#),” *New York Times*, Sept. 11, 2009.) Then July 17, 2011, victim 2,753 was added, the 3rd to list WTC dust as the murder weapon. See the chapter Dust, below.

Among the list from the World Trade Center were [658 from the firm Cantor Fitzgerald](#) (all [trapped](#) above the impact of the first plane), [343 from the Fire Department](#), [37 Port Authority Police Department](#) officers, and [23 from the New York City Police Dept.](#)

The FDNY family loss was most tragic, considering “About 6 firefighters die in the line of duty annually, which would mean 228 had been killed since I [Dennis Smith] became a firefighter in 1963.” (Smith, *Ibid.*, p. 292.) The 343 included “46 lieutenants, 21 captains, and 23 chiefs, including the chief of department and the first deputy fire commissioner, 1 fire marshal, 2 paramedics, and 1 chaplain.” (*Ibid.*, p. 193.) Rev. Mychal Judge, seen being carried out of WTC 1 after Tower 2's collapse in the [Naudet film](#) as well as [a famous photo](#), was listed as case DM-01-00001 at the Medical Examiner's Office, for the Disaster in Manhattan, in '01. (Dan Barry, “[At Morgue, Ceaselessly Sifting 9/11 Traces](#),” *New York Times*, July 14, 2002. See also Robert Shaler, p. 14.)

Thanks to their protective and distinctive clothing, nearly all of the firefighters remains were recovered and identified. Rick Hampson and Martha T. Moore list three families still waiting for remains in “[Closure from 9/11 Elusive for Many](#),” *USA Today* online, Sept. 4, 2003.) A fireman not listed there was ID'd as recently as July 2013, when his remains were retested using updated technology and matched to those of firefighter Jeffrey Walz. [See the news announcement](#). In April 2013 we read: “Sally Regenhard, whose firefighter son, Christian, is among the more than 1,100 victims whose remains were never found, said it's proof the city

gave up the search too soon,” when a 9/11 plane part was found blocks from GZ. (Vera Chinese and Corky Siemaszko, “9/11 mom angered after Boeing confirms wreckage found near 'Ground Zero mosque' is from one of planes that brought down Twin Towers,” nydailynews.com Apr. 29, 2013)

According to the Dennis Smith quote from November 2, more than 200 of the recoveries occurred after the 2 month mark. This fact goes far in describing the painstaking effort given to the search for human remains, in perhaps the most dangerous work site ever... for some physical symbol – no matter how small – to lay to rest in a proper burial. One WTC widow called this [a basic human need](#), ... to escape what another widow called “the 'vanish factor:' not having anything tangible on which to focus the last goodbyes.” (Eric Lipton and James Glanz, “[DNA Science Pushed to the Limit In Identifying the Dead of Sept. 11](#),” *New York Times*, Apr. 22, 2002.) Dennis Smith noted that a large portion of firefighters' families were Catholic, “and the Catholic Church will not provide a funeral mass without a body or a body part.” (Smith, *Ibid.*, p. 306.) For this reason many of the 5 or so daily services for fallen FDNY in October and November were called “memorials.”

“Michael Ragusa, is the only New York firefighter of the 343 killed that day who has not had a funeral or memorial service. His mother has said for nearly two years that there could be no funeral without something to bury.” (Rick Hampson and Martha T. Moore, 2003, [Ibid.](#)) The same article says she “reached a bitter conclusion about her son: 'He was incinerated.'”

TOM BEARDEN: 'Of the 2,823 people who lost their lives at the site, 1,796 have never been accounted for. Even though recovery at the site has now concluded, officials plan to continue sifting through debris that has been shipped to a landfill, hoping to identify additional remains through DNA testing. Monica Iken's husband, Michael, is one of the missing. He was a bond trader on the 84th floor of tower two.'

MONICA IKEN: 'It's very difficult for me right now, because I don't have any remains, and I had hoped that I would get something back even if it was bone fragment, just to know that he didn't go 'poof' one day. You know, he got up and went to work and went 'poof.' Where is he? And the... it just brings me back to 9/11. It makes me realize that he's not coming home. 9/11, I knew he wasn't coming home, and now he's really not coming home.'” - PBS “[Newshour](#)” **May 30, 2002** (The last day of work at the site.)

About 11:30 p.m. on December 11, 2001 Brendan Ielpi (Ladder 157, FDNY) got the urge to drive to Great Neck and visit his dad's house. His dad Lee Ielpi was Special Operations Company Rescue 2, FDNY, and Chief of Dept. at Great Neck Vigilant Fire Department. Comforting his dad would help him, too, after the loss of his older brother Jonathan (FDNY Squad 288). Lee Ielpi had searched the pit countless hours for his son Jon, all the while recovering other firemen and civilians, but personally to no avail. When Brendan got to the house, Lee wondered how he knew to come over, because Lee just minutes before had got the phone call – that they had found Jonathan at Ground Zero. So they went down there. Brendan recalls:

“All the guys were lined up already, like they do for every guy. They line all the guys up and they salute them, when they bring the body up. And when we walked down they saluted my father on the way down. That was something that touched me. I know it touched him. I've never seen that down there before, how they saluted him on the way

down. When we got down there, and he was in the Stokes [stretcher], he had the flag on him, covered up already. – See the smile on my dad's face – he got on his knee and patted him on the back and said 'We gotcha buddy. We got ya.' And to smile for something that - that horrible.... It really doesn't make a lot of sense – that was, probably the greatest day of my life, being able to carry him up the hill.” - [“Report from Ground Zero,”](#) based on the book by Dennis Smith, a film by Greengrass Productions, 2002. The story above is told at about 1:26:00

MISSING



Source: hereisnewyork.org

In the days after 9/11, hundreds of worried family members wandered the city visiting hospitals, carrying pictures of their loved ones. Desperate 8 ½ by 11-inch [posters](#) soon painted the city with grief. To accommodate the bereaved crowds, a Family Assistance Center was set up September 17th at Pier 94, where victims brought DNA-laced items like razors and toothbrushes, along with dental records (Martin Mbugua and Dave Goldiner, [“Grieving Kin Continue to Wait for Word of](#)

[Missing,”](#) nydailynews.com, Sept. 18, 2001). Earlier, on Wednesday September 12th, “a temporary collection spot” was set up at New York University Medical School (NYU Medical Center next to the Office of the Chief Medical Examiner of New York [OCME] headquarters building). (Robert C. Shaler, [Who They Were..](#), *Ibid.*, 2005, pp. 52, 144.) “Then at an armory on 26th Street, and finally at Pier 94 on the west side of Manhattan.” (Shaler, *Ibid.*, p. 144) On 9/13 Police “wrested control of the entire Family Assistance Center operation” (p. 54) away from OCME, who feared NYPD wasn't qualified. More specifically “the New York City Police Department's procedures were the genesis of a nightmare.” (*Ibid.*, p. 52) Errors would occur.

“Grieving family members were filling out a seven-page questionnaire by hand and supplying a photograph of a missing person.” (*Ibid.*, p. 52) This Victim Identification Profile questionnaire was designed by Disaster Mortuary Operational Response Team, DMORT (p. 144), “a group funded by FEMA” (p. 35) who worked in the OCME lab “for two twelve-hour shifts each day,” and were “terrific.” DMORT stayed until May 2002. (p. 36) Tattoos, jewelry, X-rays... any and all info could be cross checked during the identification process.

The methods of NYPD data management early in the effort left Shaler and crew wanting (pp. 52-55), with nothing being tracked electronically. “Some samples were not labeled properly and thus could not be used.” (p. 187) The DNA lab scientists had many concerns with computer software (pp. 110, 116, 120, 183, etc.) for comparing various data sets – some then on *paper* that needed to be entered by human hands on keyboards, as well as some data from different types of DNA tests, because with the badly decomposed DNA, one test often wasn't enough to satisfy the recommended statistical probability to officially make an ID (See a few paragraphs below, KADAP).

All of this work of course transpired for the families, many of whom needed a detailed explanation of the ID process, or just more assurance. Shaler helped them directly face to

face when the NYPD or DMORT struggled. Many families were frustrated, mostly from rumors or “misinformation from the print and broadcast media.” (p. 141) Between the OEM, the DDC, and the Mayor's office, those supposedly managing the operation could not help. Some families only asked *why* hadn't their loved one been found? Could they be lost [at Fresh Kills](#), to the birds? (This fear was expressed to Shaler by victim's families. [p. 141])

It was a cold fact that there were very few “whole” bodies found – 293 total. (p. 320)

According to the Medical Examiner's Office July 26, 2004, there were 526 IDs by dental X-rays, who knows how many heads recovered with the teeth to provide them (98 times the dental ID was the only method, plus 428 ID'd also by other “multiple modalities” such as DNA (single modality: 822; DNA with multiple: 472). There were at least 268 fingers, who knows how many attached to hands and arms, used to obtain that many fingerprint IDs. (single modality: 52; with multiple: 216) Tattoos were used to ID six times alone. (p. 320)

No DNA identifications had been made until October 19, the “first real match.” (p. 123) By Oct. 31 there had been 10 DNA identifications of the 193 total ID'd, the 8,655 remains recovered, and 3,354 personal effects (razors, tooth/hairbrushes of the deceased) at the NY State Police. (p. 112) By Nov. 30: 55 DNA IDs, 10,055 remains received; 3,429 personal effects at the police. (p. 136) By Dec. 31: 99 DNA IDs; 12,360 remains recovered. Jan. 31, 2002: 666 Missing ID'd and 132 DNA IDs. By Feb. 25: 741 Missing ID'd and 146 DNA IDs....

“We really did not begin making steady direct identifications – matching World Trade Center site DNA profiles to personal effects – until Howard Cash [president, Gene Codes



Sept. 17 recovery (from 911datasets.org\NIST_FOIA_12-057_Feb_07_2012\..WTCI-62-FEMA\NYC-OEM-WTC Disk 2)

Forensics] delivered the first version of MFISys on December 13.” (Shaler, *Ibid.*, p. 170) A story on genomeweb.com tells us that “M-FISys [Mass Fatality Identification System, pronounced *emphasis*] was developed by Gene Codes in the months following the Sept. 11, 2001, tragedy under a \$10 million contract with New York City's OCME [Office of the Chief Medical Examiner]. According to the city, that amount was later increased to \$13 million.” (Uduak Grace Thomas, “[Gene Codes Sues New York Over 9/11 Victim ID Software; City Countersues, Calls for Dismissal](#),” genomeweb.com, Nov. 5, 2010.) Dan Barry of the *NY Times* reported in July 2002 the cost of \$24 million. (*Ibid.*) MFISys helped combine the up to “nine software packages” being used by OCME at one point, “five of which were directly related to DNA.” (p. 183)

Victims' families supplied personal effects with DNA of the victim, but also DNA from any next of kin was needed to help make DNA matches. These DNA samples included mouth/cheek swabs mostly (buccal swabs), referred to as “kinship swabs.” (p. 121, etc.) Shaler mentioned “many of the samples they [NYPD] collected were inappropriate. For them, it was mission impossible!” (p. 54) Did they draw blood? Given the circumstances of their pain from losing comrades and the “chaos of the time,” Shaler said afterward, he understood and commended NYPD. (p. 55) The New York State Police DNA lab in Albany worked on STR profiling the family samples. WTC remains were handled elsewhere. (p. 57, etc.)

“More than 5,000 cheek swabs have been taken from blood relatives, and more than 15,000 personal articles have been collected. Some items, like a victim's teddy bear or pillow case, have been of no value, while others - including 1,400 toothbrushes, 140 razors and 126 hairbrushes - have yielded valuable DNA.” - Dan Barry, NY Times, [Ibid.](#)

In all there were 6 DNA laboratories working on the WTC project, 7 if you include the important research of [Dr. John Butler](#) at NIST. (link to his book [Forensic DNA Typing: Biology, Technology, and Genetics of STR Markers](#), Elsevier, 2005) This was long before the NIST investigation, of course. Beyond these 7, an entire field of experts convened on a regular basis to hear about the ID work, and to discuss: the Kinship and Data Analysis Panel (KADAP). Read their detailed [recommendations document](#) at massfatality.dna.gov.

Myriad Genetics Laboratory “operate[d] a state-of-the-art robotic format for its STR DNA testing.” (p. 58) Beginning the job with them meant OCME had to *carefully* transfer prepared remains from their 1.5mL tubes to Myriad's 96-section microtiter plates. (p. 99) STR (Short Tandem Repeat) was/is the standard DNA test on samples prepared by OCME – yet “From the World Trade Center data I was receiving from Bode, Myriad, and our in-house work, a large percentage of the [WTC] samples were giving little or no STR data.” (p. 132)... “[O]nly about half of the samples were giving usable STR results because of the extreme damage done to the remains in the building collapses and subsequent fire. Eventually, the number of DMs giving borderline STR results would exceed 60 percent.” (p. 114) Myriad would also do profiles for the State Police lab in Albany, of personal effects, antemortem DNA. (p. 170.)

The Bode Technology Group (Springfield, Virginia) handled bones. (Eve Conant, “[Remains of the Day](#),” *Newsweek*, Jan. 12, 2009 [[mirror](#)]). Not usually, but they could do it, they promised. Shaler relates when Oct. 8, Tom Bode's evidence clerk drove from Virginia to the NYC OCME to pick up “approximately two thousand bones.” Shaler immediately says “they delivered on their promise.” (Shaler, p. 65) By mid-January, 2002, “Bode had received 7,120 bones. ... Sadly, only 2,014 samples, less than 4 percent, yielded a sufficient STR

profile to make an identification.” Each of those IDs would make all the work worthwhile. (Coincidentally, Bode was acquired by ChoicePoint in early 2001, the latter of which 9/11 profiteer [think PNAC/Deputy Secretary of State under Colin Powell] Richard Armitage was a director. See [Another Nineteen: Investigating Legitimate 9/11 Suspects](#) by Kevin Robert Ryan, Microbloom, 2013, p. 40.)

Celera Genomics of Salt Lake City apparently “leaked to the print media that it would have a significant role in the [WTC] work” (p. 122), after Shaler had unofficially invited them. Celera and sister company Applied Biosystems began in Sept. 2001, planning to work with mitochondrial DNA. “Nine months later, I was still waiting for the Celera promise.” ... “their mtDNA effort had become a monumental project and was, at best, complicated.” (p. 230) They *did* help, though.



Across the street from Ground Zero.

Orchid Cellmark in Dallas Texas worked with SNPs, single nucleotide polymorphisms. Shaler called these variations of “the base pair, the rung of the ladder” ... the ladder being a DNA molecule. (Shaler, *Ibid.*, p. 130-133). Of these SNPs, “there are literally thousands,” so comparing them made sense. But by using them to make identifications Shaler “was wading into uncharted waters.” (p. 264) For DMs (remains) with partial STR profiles, though, SNPs (like a mitotype from mtDNA [p. 233]) could add the required statistics to make a possible match a clear match. “On December 11, 2003, we had our first SNP identification.” (p. 260)

Rewind to the beginning of the process. When making a recovery, the possession of the remains had to follow the chain of custody documentation procedure known in all matters of evidence as accession, ending with the Office of the Chief Medical Examiner of New York (OCME), home of the Morgue.

See the OCME [webpage memorial](#). Doctor Robert C. Shaler was Director of the Forensic Biology Department, a.k.a. the DNA lab, at OCME (retired 2005).

“Refrigerated tractor trailers from UPS, Ben & Jerry’s, and other companies began arriving on 9/12. Shiya [Ribowski] segregated them on 30th Street into preprocessing and postprocessing stations; ‘processing’ refers to the autopsy. At one point, tractor trailers formed a line on Second Avenue from 30th Street to 38th Street. Eventually, they lined both sides of 30th Street between First Avenue and the FDR Drive. . . . The Department of Transportation paved the area and the sixteen tractor trailers were lined up, eight on a side, their back ends facing each other. Eventually, on October 11, the trailers were



The refrigerated trailers at Memorial Park the day Cardinal Egan came to bless them. (Photo by Carole Meyers) from Robert Shaler, *Ibid.*, p. 331 ([See Memorial Park today](#), 2013)

covered by a large white tent. . . . The area at the FDR end of 30th Street became known as Memorial Park.” - Robert C. Shaler, Who They Were – Inside the World Trade Center DNA Story: The Unprecedented Effort To Identify the Missing, Free Press, 2005, pp. 13-14.

The identification effort's “first major error” surfaced in April 2002. A bad ID had led to a delivery of incorrect remains to a family back in November. The personal effects matched to remains had actually been from a second victim whose effects were mixed together at Pier 94. That is not to blame the NYPD. Mistakes happen. Months later, cross-checked numbers caught the eye of quality assurance. (p. 152) Another problem came when working on an ID in April 2004, due to lack of proper documentation at a Family Assistance Center – confusion about who brought in the toothbrush. (p. 295) Imagine having to tell somebody she/he had received the wrong human's remains. Doing this one time, traveling to the Dominican Republic to re-recover the remains, OCME's Shiya Ribowsky got thanked for the effort with spit in his face. (p. 161)

CBS News' Scott Pelley reporting on scene at New York University Hospital with two ER doctors asked them, “Where are all the people?” ([CBS News Sept. 12, 9:03 p.m.](#)) One of the doctors mentioned after about noon (on 9/11), people stopped coming in with any injuries. Similarly [NBC News \(Sept. 13 at 8:49 a.m.\)](#) observed that EMTs (Emergency Medical Technicians) and doctors waited on the sidelines with nothing to do. There were “body parts instead of bodies.”

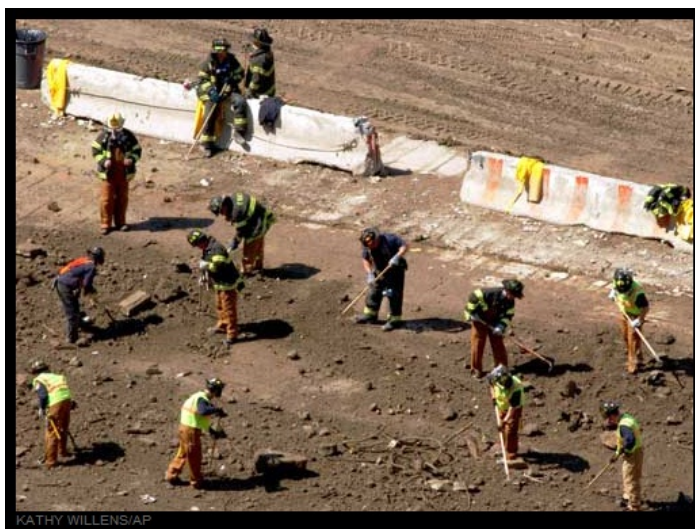
Much worse, [firefighters thought people were part of the dust](#) (FDNY interviews in “Collateral Damages” [[mirror](#)] [“This is people.”]). See [this rare glimpse of Ground Zero](#), likely shot in early October 2001, where firefighters sift through buckets of dust for remains or clues. (Source: International Center for 9/11 Studies NIST FOIA, 911datasets.org release 10, WTCI-30-NYC_Pt6of6.wmv [[download](#)])

“A serious week-long search and we've found 200 [bodies] in a pile of 5,000? What's going on? Where is everyone? Why aren't we finding more bodies? Cause it's all vaporized – turned to dust. We're breathing people in that dust.” - Brooklyn firefighter, from Christopher Ketcham, “[A Season in Hell](#),” salon.com, Sept. 19, 2001.

This seemed like an illogical conclusion based on the fact that a building collapse would not have incinerated/[cremated the remains](#); nor would the fires on the upper floors. Certainly the underground fires contributed, but could they claim full responsibility for the cremations? (see “[Molten Steel and Extreme Temperatures at the WTC](#)” by this author).

[Time Magazine online made the statement](#) that “so much of the Trade Center ended up as ash, incinerated.”

Jim Hoffman in his article/webpage “[Missing Bodies: More Than 1000 Bodies](#)



Ground Zero, April 2, 2002. [Source](#): Time.com.

[Are Unaccounted for,](#)” wrote in his opinion:

“The aircraft impacts and fires in all probability would not have destroyed a single body beyond positive identification. Nor have building collapses ever been known to destroy human remains beyond recognition. However, the buildings were destroyed in a manner that converted most of their non-metallic contents to homogeneous dust, including the bodies. This destruction of the bodies assured that no exact determination could ever be made regarding who was piloting the jets at impact, and the condition of the people on board.”

WTC dust expert Dr. Paul Lioy said the dust contained “everything we consider near and dear to us.” ([Dust: The Inside Story of Its Role in the September 11th Aftermath](#), Ibid., p. 93.) A *New York Times* article commented, “Everything we hold dear’ also includes the essence of those who died in the collapse; Dr. Lioy talks about it with reluctance. When pressed, he says minute amounts of organic material are probably mixed with the dust.” (Anthony DePalma, [“What Happened to That Cloud of Dust?”](#), Nov. 2, 2005.) Granted, Lioy was correct in saying that the percentage of human remains per unit mass of debris was tiny. “Furthermore, over the twenty-five years of WTC occupancy, there would [have been] hair follicles from thousands of occupants and even more from visitors to the WTC Towers present in the rugs that were crushed during the collapse.” (Lioy, Ibid., p. 44.) This means a comprehensive DNA scan of the dust would have yielded thousands of false positives instead of guaranteed true 9/11 victims.

First responders, firefighters, cops, and construction/iron workers, in some cases family members – they did a comprehensive scan of the site for remains – before the massive debris removal machines and their 50-foot rules for “safety.” (See details in [“NYC DDC”](#) section above.)

Flash back to a meeting between firefighters' families and city officials, organized in protest of the excessive November 2001 safety restrictions at the site. “[F]amilies spoke about their need to find remains. The medical examiner answered bluntly that many of the bodies disintegrated in the terror attack.” (Jennifer Steinhauer, [“Ex-Firefighter's Quiet Plea Ends Conflict Over Staffing,”](#) *New York Times*, Nov. 17, 2001.)



FDNY Families Protest ([source](#))

*“Shaler and the other New York pathologists [a staff of 105 scientists] sent some of the most damaged human fragments to private forensics labs that specialize in advanced DNA-retrieval techniques. One was the Bode lab in Lorton, Va., which is known for extracting genetic material from bones. The New York team gave the lab a seemingly impossible challenge: to identify 12,000 burnt bone fragments. The bones ‘had been burning in the rubble at extreme temperatures,’ says Mike Cariola, the lab's director, ‘and we were only getting DNA samples on half the ones we tested.’ Cariola recalls that ‘some pieces of bone were so charred that if you held it with two fingers it would disintegrate.’” - Eve Conant, [“Remains of the Day,”](#) *Newsweek*, Jan. 12, 2009 ([mirror](#)).*

Was that out of the 14,000 bones total given earlier? (Shaler, Ibid., 2005, p. 63)

Dr. Shaler, who basically led the identification effort, said that the “DNA in the bodies” of WTC victims “was in pretty bad shape. These bones were exposed to extreme temperatures.” (Anna Mulrine, “[Identifying the Victims of September 11](#),” *US News and World Report*, Dec. 5, 2005. See also [historycommons.org](#).) Shaler described some destroyed bones as “white cremains,” as in [ashes](#) remaining after cremation (p. 60).

What percentage of bones were destroyed in this manner? Shaler notes in his book that “By the end of the first week, we had only 3 bones. On September 30, we had 631, and by October 8, we had 1,241, nearly double in eight days.” (p. 61) Also by Oct. 8 OCME “had 3,038 muscle specimens in-house.” (p. 62) Final count of bones received “would approach 14,000.” (p. 63) This included any found at Fresh Kills Landfill.

The [Fresh Kills slideshow](#) in “Collateral Damages” reported that over the period of nine months of intensive sifting, raking, and searching conveyor belts of moving debris on Staten Island, there were 4,257 human remains found. 400 of these helped identify people by DNA analysis. All remains were taken to the morgue/Office of the Chief Medical Examiner at 1st Ave. and E. 30th Street for examination in an “open-air bay,” then under a busy white tent. (Dan Barry, [ibid.](#), *New York Times*, July 14, 2002.)

See “[Fresh Kills](#)” above, also “[Recycle](#).” To sum up, Mike Hennessey from Gene Codes Forensics, who worked at the OCME DNA lab and in fact “devised the administrative review process,” (Shaler, [ibid.](#), p. 340) reported after his October visit to Fresh Kills that their “process itself allowed the possibility that remains might be missed.” ([ibid.](#), p. 147) This is still a sore wound for many families.

It is important to remember the dedication of those searching in the rubble, including those also hampered by the need for speed at Fresh Kills. Again, see section above, [NYC DDC](#), from which I'll copy and paste: [wtclivinghistory.org](#): “[T]he fight between 'speed in debris removal' versus 'the civilized recovery of human remains' embodied the one over-arching and driving conflict that both separated us from the external administrators and joined us (in our 8 perspectives that actually did the work at Ground Zero) into a common goal.” Those 8 were “construction, iron workers, engineering, supply and logistics, NYPD/ESU [Emergency Service Unit], PAPD [Port Authority Police Dept.], FDNY victims' family members and workers in recovery.” Speed in debris removal was a force from the “external administrators.”

Again, those administrators worked for the city's DDC – Kenneth Holden and Michael Burton. As an October 31 CBS program noted, “Holden is under pressure to get the job done.” (*60 Minutes II*, “[Under Ground Zero](#)” - Watch it [here on YouTube](#) [911datasets.org release 25, 42A0140 – G25D56], where Dan Rather says “enormous pressure.”)



Fresh Kills, Staten Island on Sept. 18, NYPD photo, [Above Hallowed Ground](#), p. 131 (See a [Sept. 23 photo](#))



NYPD photo, from [Above Hallowed Ground: A Photographic Record of September 11, 2001](#) by Photographers of the New York City Police Department, Viking/Penguin, 2002, p. 157.

When a body or body part was found at Ground Zero, the spot was marked and noted. (“America Rebuilds,” Ibid. [[mirror](#)]) See the [grid used for this purpose](#) (source: [OEM-EMDC FOIA, 1430_pa_groundzero.pdf](#), or see Shaler’s book, p. 278, image included below in Appendix 2.) Due to hand-held GPS equipment issues [“interference” according to the MCEER document, Ibid., p. 12.] the fancy system was not always possible. The GPS system was “not much use” according to mapping expert Dr. Sean Ahearn ([WTC: Rise and Fall of an American Icon](#) at 1:07:06.) [A Dec. 2001 SatNav News article](#) touted its successes during recoveries, for one. I haven’t seen any photos of FDNY using high-tech scanners, though.

While not 100 percent complete or detailed specifically, a [document](#) with pinned recovery locations has been retrieved showing progress as of November 6, 2001 – which includes various other items. (Source: Independent FOIA) The [final version of victim location documentation](#) was created by the FDNY Phoenix Unit and the EMDC. (Source: FOIA) Yet “FDNY did not begin collecting grid data until sometime in October 2001.” (Shaler, Ibid., p. 277) In at least one case Shaler used a victim’s “grid number” in the ID effort. (p. 306)

Of course many weren’t searching so much as they were pulling things, cutting them out of the way. For most the job was 12-hours a day, 7 days a week. Remains were recovered because of these people. By these people, to their dismay. One ironworker, who incidentally helped erect the towers, left the site on Sept. 20 because he “just couldn’t take it.” It reminded him of the Vietnam War.

“One particular day they found a woman, all right. Parts of her. I don't even know if I want to tell you – they found a woman and I just couldn't take it, you know. Too much devastation. Too much death. When you see a body bag that's not even full, you know. You see a body bag and it falls in the middle. So... It was just too much for me.”
- Paul Gauden in the film *Metal of Honor*, Ibid.

Much respect to Paul and all others who worked there.

According to a 2005 ABC News story, 57 percent of the victims had been ID'd – using DNA, dental records, or objects identifiable by family members like jewelry. (Bill Blakemore, [“Forensic Identification of 9/11 Victims Ends -- More Than 1,000 Victims Unidentified Due to Technological Limits,”](#) Feb. 23, 2005.) Considering the “incredibly difficult task” presented by “the violence of the collapse and the intense heat of the fires” (as the ABC story says), that percentage was remarkable. Of course, if you take into consideration the speed with which the debris was removed, it is more than remarkable.

*“By then a month had gone by since the attack, and twenty-eight days had passed without a single victim's being found alive. The sense of urgency remained strong, but people knew what they began privately to express – that the effort now would amount only to a search for the dead. It was going to be sad, frustrating work, and all the more disheartening because **it was obvious that many of the victims had been obliterated without a trace, atomized by the collapses or cremated in the infernos that ensued.** Indeed, by the end of the unbuilding and recovery effort, in summer 2002, fewer than half of the people presumed killed had been found and identified – and many of those only through the most ambitious program of DNA matching ever attempted in the United States.”*
- William Langewiesche, Ibid., p. 131 [emphasis added]

Learn more about the ID process in [“9/11: Ground Zero Underworld”](#) at 20:00 and 25:00, as “head of 9/11 identifications” Shiya Ribowsky was interviewed (“medical examiner's deputy director of investigations” [according to USA Today](#)). Of *Medicolegal Investigations*, that is. As seen above, Shiya “had the unenviable responsibility of notifying the families and rectifying misidentifications.” (Shaler, Ibid., p. 161) To explain the apparent lack of remains to victims' families, he imagined the towers' collapses not unlike giant kitchen blenders. [Robert Shaler compared a mortar and pestle.](#)

“Chief liason” from the Medical Examiner's Office in Manhattan, David Schomburg, appeared in Langewiesche's *American Ground*, pages 136-140 (Director of Medicolegal investigations according to Dan Barry, [“At Morgue, Ceaselessly Sifting 9/11 Traces,”](#) *New York Times*, July 14, 2002 and per Robert Shaler, p. 343.). In response to the difficulty finding human remains, Schomburg stressed the grim reality of decomposition. (This is the same man mentioned by Steinhauer/*NY Times* above, with the word “disintegrated” in quotes.)

The smell of death, decomposing flesh, was pervasive at the site, as FDNY survivor Mickey Kross described in [“9/11: Ground Zero Underworld”](#) at 27:30. His cigarettes did not help him cover the smell. In [Report from Ground Zero](#), (book not [video](#)) Dennis Smith mentions the olfactory sense. “Earlier in the search effort we needed the dogs to determine if there was evidence of a human being, but now, after ten days, the bodies have begun to deteriorate and the odor is unmistakable. It is a harder smell than sulfuric acid and ammonia

mixed together, a human smell that few humans know.” (Smith, *Ibid.*, p. 227.)

Cadaver dogs were employed early in the effort. Take for example the way FDNY [Chief of Department Pete Ganci](#) was found – despite being buried in rubble – on Sept. 12, according to firefighter T. J. Mundy of Engine 36 in [Report from Ground Zero](#), pp. 111-12. After digging and prying for more than an hour and becoming uncertain of the dog's signal, Mundy uncovered Ganci.

Watch a tribute video by firefighter photographer Lou Angeli, “[Ground Zero K9](#),” and another with more footage from Ground Zero, featuring [K9 hero Riley](#). Captions for some NYPD photos in [Above Hallowed Ground: A Photographic Record of September 11, 2001](#), (Christopher Sweet, ed., Viking/Penguin, 2002, p. 147) tell us “Some dogs needed paw pads to walk over the jagged terrain, but most of the dogs didn't like using them.” Veterinarians on site did what they could, but “[m]ore than one [rescue dog] suffered serious injuries and at least three died while working at Ground



From the film "WTC: The First 24 Hours," E. Sauret, 2002.

Zero.” (“[SH&E at Ground Zero](#),” Jeffrey W. Vincoli, Norman H. Black and Stewart C. Burkhammer) By 2004 at least 14 rescue dogs had died – sorry no specific cause(s) of death there, but the figure comes from a [presentation on the toxins of Ground Zero](#). About 300 search and rescue dogs were employed over the course of the effort. (“12th Anniversary Of 9/11 High-lights Legacy Of Search And Rescue Dogs,” [CBS Chicago](#), 9/15/2013.) They were determined to find their people. “After September 12, no one was found alive, and the dogs were distressed not to locate survivors. It became necessary to stage situations where “survivors” were found by the dogs to keep up their morale.” (Sweet, p. 146)

Nan Walton, author of “Partners-Everyday Working Dogs Being Heroes Every Day,” quote: “trained with several of the dogs dispatched to New York after 9/11. “ Nan said, “Most of the dogs who went to ground zero were trained to search in rubble piles and what was left at Ground Zero were dust piles.” She said, “Everything was so blown apart and the odor of death was all over and just it made the dogs almost crazy.” [CBS Chicago](#), *Ibid.*

Another article highlights the missing hundreds: Robert F. Worth, “[800 Victims May Not Be Identified, City Says](#),” *New York Times*, July 13, 2002. We now know that 800 unfound was too hopeful of a figure. An April 6, 2006 article said “the remains of 1,151 have never been identified.” (Jim Dwyer, “[Pieces of Bone Are Found on Building at 9/11 Site](#),” *New York Times*.) In 2009 the number was revised: 1,624 victims identified and 1,129 not. (“[Medical Examiner Identifies Another WTC Victim](#),” ny1.com, April 2, 2009.) One report mentions new DNA extraction methods. (Peter N. Spencer, “[Sifting at Fresh Kills Yields 20 Potential Human Remains From 9/11](#),” silive.com, April 8, 2010.) Even more recent figures from ABC News said 1,630 victims have been identified, or 1,105 not. (Russell Goldman, “[World Trade Center: 1,630th Victim Identified Since 9/11](#),” ABC News, May 12, 2011.) Others with more recent numbers include Mariano Andrade, “[Scientists Still Struggle To Identify 9/11 Remains](#),” AFP, Aug. 26, 2011.

Out of the 20,000-some body parts recovered, “almost half” were ID'd, according to Shiya Ribowsky in “[9/11: Ground Zero Underworld](#)” (2007) at 43:20. “[F]or one victim, nearly 200 pieces have been identified, while for others, there was a single shard of bone.” (Dan Barry, *New York Times*, *Ibid.*) Having been involved in the intense effort, Ribowsky displayed a confidence of success in the ID process. Of course he was on TV.

“I’ll be disappointed if we have fewer than that,” Dr. Charles S. Hirsch, the city’s chief medical examiner, said of the estimate of 2,000 [people’s] identified remains.” (Robert F. Worth, *New York Times*, *Ibid.*) Note that Hirsch was disappointed. That target number was not reached. The next sentence in the article: “There are a number of people who are gone without a trace.” (Worth, *Ibid.*) Dan Barry of the *Times* also came to the conclusion that “hundreds died without leaving a trace.” (“[At Morgue, Ceaselessly Sifting 9/11 Traces](#),” *New York Times*, July 14, 2002.)

The grim statistic came again in my reading: A total of 293 “nearly whole bodies” were discovered, all before the barge/truck ride to Staten Island. In all, 19,693 body parts were found during the recovery effort (Langewiesche, *Ibid.*, 2002, p. 135.) – 21,817 some 10 years later. (Mariano Andrade, *Ibid.*, AFP, Aug. 26, 2011.)

More remains were found 5 years after 9/11, on at least three different occasions. See Jim Dwyer, “[Pieces of Bone Are Found on Building at 9/11 Site](#),” *New York Times*, April 6, 2006. Seventy-four bone fragments were found on the roof of a neighboring building, 130 Liberty Street, several hundred feet below the top floors of the towers. Six months later “utility workers discovered bone fragments and personal effects in an abandoned manhole on Oct. 19 [2006].” The article went on to say “most of the 900-plus bone fragments” found in 2006 were “mere shards, smaller than the diameter of a quarter.” (Skye H. McFarlane, “[W.T.C. Remains Search Splits Community Board](#),” *Downtown Express*, Nov. 24-30, 2006.) These well-publicized finds revitalized a search effort that soon unearthed even more human remains. See “[More Human Remains Found At Ground Zero](#),” CBS News/AP, Oct. 2006. Using these 2006 remains, at least one victim was identified. (“[Medical Examiner Identifies Another WTC Victim](#),” *ny1.com*, April 2, 2009.) Peter Spencer of *silive.com* said that after these finds a sifting operation lasting 2 years resulted in 25 more identifications.

In February 2010 it was announced that six or seven truckloads of debris from the WTC construction site and surrounding areas was being taken to Fresh Kills for a search funded with \$1.4 million. (Judy L. Randall, “[Debris from World Trade Center Site Headed to Fresh Kills for Sifting](#),” *silive.com*, Feb. 1, 2010.) See also a video clip from [Russia Today](#). At the end of this effort, it was reported that out of the 72 total new finds, 37 were found in the area excavated “underneath West Street.” Since 2006 1,800 remains had been found and “some” previously unidentified victims had been found. (“[Latest NYC 9/11 Search Finds 72 Human Remains](#),” AP/CBS News [cached], June 23, 2010.)

However, this recent searching has yet to extend into the buried mass at the old landfill. That is, according to a 2008 NY1 News report that said: “A Manhattan federal judge recently dismissed a request from families to sift through debris at Fresh Kills.” (“[WTC-Affected Families Press Bill Clinton To Help Exhume Relatives' Remains](#),” *ny1.com*, Sept. 10, 2008.)

The official Freshkills Park website attempts to comfort victims' families with this defensive testimony:

“During the 10-month recovery effort, rescue workers carefully screened and sifted the 1.2 million tons of material that came from the WTC site to Fresh Kills. The search

effort did not end until all discernible remains and effects were removed and taken to the New York City Medical Examiner's office for identification and safekeeping. After the FBI, NYPD, and Office of Emergency Management determined the process of retrieval had been exhaustive and complete, the screened and sifted WTC materials remaining at Fresh Kills were placed in a 48-acre area immediately adjacent to the recovery site on the West Mound at Fresh Kills. A layer of clean soil at least 1 foot deep was placed in this area prior to placement of the screened materials; afterward it was covered with additional clean soil to protect the site and control erosion. The area is clearly marked to prevent disturbance."

- http://www.nycgovparks.org/sub_your_park/fresh_kills_park/html/about_the_site.html

TERRORISTS' DNA

Some terrorists' remains were reportedly identified, further emphasizing the intensive nature of the search and ID efforts. This was done by using "DNA from tiny traces of skin on the steering wheels of vehicles hired by the hijackers and from hair samples recovered from their hotel rooms," which the FBI used to create profiles of the 10 alleged New York terrorists - profile codes unfortunately not [publicly] paired with names. ("[Remains of 9/11 hijackers identified](#)," BBC News website, Feb. 28, 2003. Also [911myths.com](#)). In February 2003 the FBI provided the hijackers' DNA profiles to the New York Medical Examiner's Office (BBC News website, *Ibid.*). "It took longer than a year" from the time of the OCME requested them. (Robert Shaler, *Ibid.*, p. 300)

"Eventually we received a one-page letter from the FBI containing ten coded STR profiles, presumably those of the terrorists. No names, just a K code, which is how the FBI designates 'knowns,' or specimens it knows the origin of. These Ks had no names. We were certain these were the terrorists' STR profiles, but there was nothing to identify them as such." - Robert Shaler, *Ibid.*

Immediately, two of them were matched to remains beings stored. In time, two more matches would be found. "More than seven years later, . . . the scientists have now ID'd four of the 10 New York hijackers." (Eve Conant, [Ibid.](#))

Through a contact at the FBI, a laboratory director, Shaler was able to procure "the DNA extracts from the terrorists." (p. 301) Again, it must be assumed, no names accompanied the samples. (NOTE: The STR data produced was stored in a database separate from the victims. Also, the physical remains, when ID'd, were located and removed from storage near victims.) Maybe the same remains were ID'd again, after testing the actual samples, but Shaler's book is not specific. The 2005 book says OCME identified 3 of the terrorists.

Those readers who doubt the veracity of this evidence would be keen to point out the fact that in the end these were **anonymous** (classified?) DNA identifications. We don't know if the alleged pilot of American Flight 11, Mohamed Atta was recovered or not (Atta was credited with [striking the exact center of the tower](#) after beginning his day [at a Portland, Maine airport, where he was allegedly videotaped](#) before boarding his flight to Boston. Learn more in the [9/11 Commission Report](#).) We got no names from the terrorist DNA identifications!

That is, maybe except in the case of the Pentagon DNA. Remember that the "FBI told us that brothers Nawaf and Salem al-Hazmi were on board Flight 77. Testing reveals two of the DNA profiles appear to be taken from brothers." (911myths.com, [Ibid.](#), pointing to

evidence from S.M. Edson, et. al., "[Naming the Dead - Confronting the Realities of Rapid Identification of Degraded Skeletal Remains](#)," Armed Forces DNA Identification Laboratory, Jan. 2004, p. 83.) The brothers' DNA was not matched to collected samples like we were told happened in New York, for your information. The Pentagon DNA was simply not matched to known victims' samples.

"Nuclear DNA testing (along with dental records and fingerprints) of the remains from the victims aboard American Airline (AA) Flight 77 and within the Pentagon was useful for identifying 178 of the 183 victims. Five missing individuals (four within the Pentagon and one aboard the airplane) could not be identified due to lack of biological material from the crash. Five remaining nuclear STR profiles were obtained from the crash site that did not match any references for the victims. These profiles were thought to represent the terrorists aboard the flight. The 40 victims aboard the United Airline (UA) Flight 93 that crashed near Shanksville, PA, were also identified by nuclear DNA testing, dental records, and fingerprinting. Four nonmatching nuclear DNA profiles were also obtained from the crash site and again tentatively ascribed to the terrorists."
- S.M. Edson, et. al., *Ibid.*, p. 83.

Dr. Tom Parsons of the Armed Forces DNA Identification Lab, October 18, 2001 at the Kinship and Data Analysis Panel, held at the NY State Police in Albany, "announced that he'd already identified more than one hundred people who had died at the Pentagon and at Shanksville...." The OCME in New York City had no DNA IDs yet. (Shaler, p. 117)

Survivors

“The Greater New York Hospital Association – an organization of some 200 hospitals in the New York metro area – said emergency rooms treated more than 1,500 people after Tuesday's attack.” (Gary Tuchman, “New York Rescuers Search Slowly through the Rubble,” [CNN](#), Sept. 13, 2001.) Survivors to emerge from within the WTC rubble pile included:

1. Pasquale Buzzelli, engineer, 32 years old, who reacted to the thunderous, overhead rumbling instinctively by curling up in the corner at the base of a stairwell near floor 21 of the North Tower. Langewiesche wrote on p. 103 of [American Ground](#):

“For an instant the walls folded onto his head and arms and he felt pressure, but then the structure disintegrated beneath him, and he thought, 'I'm going,' and began to fall. . . He did not actively do anything at all. He felt the wind on his face, and a sandblasting effect against his skin as he tumbled through the clouds of debris. He saw four flashes from small blows to the head, and then another really bright flash when he landed. Right after that he opened his eyes, and it was three hours later. He sat up. He saw blue sky and a world of shattered steel and concrete. He had landed on a slab like a sacrificial altar, perched high among mountains of ruin. He was cut off by a drop of fifteen feet to the debris below him. . . . Somehow an entire huge building had passed him on its way to the ground. Somehow also he had landed just right.”

2. Genelle Guzman-McMillan, Port Authority clerk/secretary, 31 years old, who was in the same stairwell near the 13th floor. Her legs were pinned and crushed, trapping her for nearly 27 hours beneath miraculously fallen debris. See the article at [time.com/.../asurvivor.html](#) (cached) which asks prudently: Why isn't she dead?

Genelle appeared on Oprah as part of a depressing, I dare say tearjerker, 1-year anniversary special, as can be found in the Int'l Center for 9/11 Studies [911datasets.org](#) NIST FOIA release 28, 42A0282 – G27D6.

3 and 4. [John McLoughlin and William Jimeno](#) of the Port Authority Police were rescued after being buried for about 21 and 13 hours, respectively (Rebecca Leung, “[Last Man Out](#),” CBS News, Sept. 10, 2009... McLoughlin being that last man.). The [timeline at national911memorial.org](#) says the two were located at 8:00 p.m. “They free Officer Jimeno after three hours of dangerous tunneling work. Sgt. McLoughlin's rescue takes another eight.” They were the main characters in the Oliver Stone film “[World Trade Center](#)” (2006).

Here's part of the story as told by Jimeno:

“[I]t is like an earthquake when the plane hits the south building. We are just about in the middle of the concourse, between the two buildings, just below and a little south of the big golden globe, when huge parts of the tower and shock waves come down into the plaza area, cracking all the cement. The whole concourse above us collapses. There are a lot of civilians all around, and I don't know what happens to them, but I think it has to be bad. I can see Liberty Street before me as I feel a ball of debris hit us. Now, I see a huge fireball coming at us, and I yell, 'Run! Run towards the freight

elevator!” [The fire has come from the fuel that has poured down the elevator shafts.]”
- from Dennis Smith, Report from Ground Zero, *Ibid.*, p. 114.



PAPD Sergeant John McLoughlin Rescued Sept 12. (NYPD photo, from Above Hallowed Ground: A Photographic Record of September 11, 2001, Viking/Penguin, 2002, p. 107.)

That note in brackets probably came from the author of the book, not Jimeno, and certainly not me. Several similar stories about underground destruction during the first plane crash have been collected. See below, evacuees William Rodriguez, et. al. However, the Jimeno story recounts the South Tower collapse 56 minutes after the second plane hit (the recollection of which is unfortunately placed in the same paragraph). The south tower underground fireball has **to this day** not been explained, but **has** been confirmed by other survivors like Ron DiFrancesco (also with Evacuees below).

Immediately after the quote above, Jimeno's story continued:

“Dominick runs first, I am behind, and the sarge [McLoughlin] is behind me. Antonio is behind the sarge, and Chris is bringing up the rear. But Chris never makes it because the shock wave pushes him back into the main concourse area, and he takes the worst of it. Dominick and I and the sarge just make it around the corner, but Antonio doesn't. Everything just starts hitting us, and then the wall comes down on top of me.” - from Smith, *Ibid.*

5 and 6. Tom Canavan walked away from beneath the surface (in the shopping mall, perhaps) before the north tower destruction, along with at least one more unnamed man. See Canavan's brief interview in footage from FOX News (39/43), his face covered in blood. Many

others such as Jules Naudet and FDNY Battalion 1 Chief Joseph Pfeifer survived the South Tower collapse because they were in the North. Some of this happened on film, and was seen on CBS as "9/11," later Paramount DVD "9/11: The Filmmakers' Commemorative Edition")

7. Kevin Shea of Ladder 35 was pulled from the rubble of the South Tower. All 33 others in the 9th Battalion died, 11 of whom were from Kevin's firehouse, Ladder 35 and Engine 40. When he was discovered he had three fractures in his neck and a severed thumb... and no memory of the collapse. On November 17 he appeared on NBC's *Today* show to help the New York Police & Fire Widows' & Children's Benefit Fund. (Smith, *Ibid.*, p. 354.)

8 - 21. Fourteen people, mostly firefighters from Ladder 6 and Engine 39, survived in the B stairwell at floor 4 of the North Tower. (Mickey Kross distinctly remembered the 4 in the stairwell on page 77 of Dennis Smith's book.) With the help of some rope, eventually they crawled down to safety. They were Firefighters Billy Butler, Tommy Falco, Jay Jonas, Michael Meldrum, Sal D'Agastino, and Matt Komorowski of Ladder 6; Firefighter Mickey Kross of Engine Company 16, Firefighters Jim McGlynn, Rob Bacon, Jeff Coniglio, and Jim Efthimiades of Engine 39; Port Authority Police Officer Dave Lim; Battalion Chief Rich Picciotto of the 11th Battalion; and civilian Josephine Harris. ([source](#)).

A documentary film was made about this group. Watch "[9/11: The Miracle of Stairway B](#)" (History, 2006). Also see Kross and Jonas among others in "[Report from Ground Zero](#)" (a film based on the book by Dennis Smith, by Greengrass Productions, Inc., 2002).

*"...and as I turned the corner on the third floor landing, the stairwell just erupted into a hurricane... This huge incredible force of wind and debris **actually came up the stairs**, knocked my helmet off, knocked me to the ground.... It was pitch black, a large amount of dust in the stairwell..."* [emphasis added] - Firefighter [Rob Bacon](#) describes the WTC 1 event in "9/11: The Firefighters' Story," [Paul Berriff](#), 2002.

Captain Jay Jonas related his story in Smith's book on pages 92-104. "And then, about three to three and a half hours later, all of a sudden a ray of sunshine breaks through the smoke and the dust. Once we see that, I say, 'Okay, guys, there is supposed to be 106 floors above us, but now I see sunshine. There is nothing above us.'" (*Ibid.*, p. 101.) Jonas appeared with other FDNY survivors in the documentary "[First Response - Ground Zero America](#)" (A&E TV, 2001 – where he was mistakenly named John in the graphic at 0:41). He has since been in a host of other 9/11 programs, almost all of which have been listed at www.911conspiracy.tv/mainstream_documentaries.html.

During the emergency that morning, officer Dave Lim of the PAPD Canine Unit left his dog Sirius, a yellow Lab retriever, in his cage on the first basement level of WTC 2. Sirius did not make it out alive. (Smith, *Ibid.*, pp. 89-92.) He was the only police dog killed in the attacks (according to CNN's one year anniversary program, "[America Remembers](#)" at 1:26.)

The above list of survivors is incomplete. So many made it out at the last minute. "Officially only 29 rescues were recorded at Ground Zero, however eyewitnesses and firefighters place the actual number as high as 200." ("[9/11: Ground Zero's Responders](#)," Lou Angeli, 2011, at 11:26.) 200? Modesty.

EVACUEES – 102 MINUTES

The Federal Building and Fire Safety Investigation of the World Trade Center Disaster, [NIST NCSTAR 1-7](#), was published in 2005 as the authoritative document on the evacuation. The [Port Authority's fire safety video](#) for evacuation procedures in the WTC towers never could have prepared everyone for 9/11. (Source: NIST FOIA, 911datasets.org release 29, 42A0333 – G29D19 [\[mirror\]](#).) It **has** given us a rare look at the contents of the mammoth office buildings, though, and a better idea of what was happening as the clock ticked its short 102 minutes between first plane and second utter collapse (8:46 to 10:28 a.m.).

Thousands of people survived the WTC collapses by evacuating as the upper floors burned. See [photos by John Labriola](#) from within the north tower. (See also [pre-9-11 WTC interior photos](#).) WNYW FOX5 camera operator Jack Taliercio was [on the street outside](#) [\[mirror\]](#). (See NIST FOIA 911datasets.org release 14, WNYW Dub1.) [Also nearby](#) were cameramen Keith Lane (WNYW Dub2) and [Dave Corporon](#). [Evan Fairbanks](#) went inside WTC5.

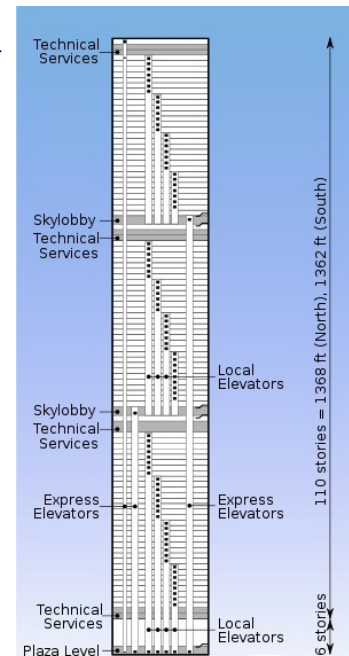
[Video shot by Jules Naudet](#), made available on DVD as “9/11: The Filmmakers' Commemorative Edition” (Paramount, 2002) and on CBS TV as simply “9/11,” captured an elevator opening inside the WTC 1 lobby, releasing more lucky survivors ([see image](#) from NIST NCSTAR 1-7, p. 123). The stairs became crucial not only because of procedural logic, but also since the elevators were almost completely disabled during the plane crashes. See my video [“9/11: The WTC Elevator Key.”](#) ([mirror](#)) “Only one elevator in each building was of use to the responders.” (NIST NCSTAR 1, p. 192)

There were 99 elevators in each tower. ([FEMA Building Performance Study](#), p. 2-13.) See also [Wikipedia](#), which provides a graphic of the 3-tier elevator layout. Understanding this design becomes important when examining the damage on lower floors.

Also there were three staircases per tower, two of which were 44 inches wide and the other 56 inches. (FEMA, *Ibid.*) [See an image of the stairway system](#) from NIST NCSTAR 1-7 p. 29. Was this enough for proper emergency egress? Read a [critical study of the WTC evacuation](#) efficiency, performed by the University of Greenwich, London. It was fortunate the towers were “half-empty.” (Dennis Cauchon, [“For Many on Sept. 11, Survival Was No Accident,”](#) *USA Today*, Dec. 20, 2001.)

Roughly 99% of those below the plane impact zones lived (according to [“9/11: A Tale of Two Towers,”](#) M. Attwell, 2002 [part 7 of 10] and a [USA Today graphic](#) [\[mirror\]](#) from the article by Dennis Cauchon, *Ibid.*, Dec. 20, 2001.). Roughly 50,000 people worked in the towers, according to several sources. Counting the number of dead, that meant in total about 95% of those workers survived – if only by **not** coming to work before 8:46 a.m. Plus the popular tourist attraction at the WTC 2 observation deck hadn't opened (at 9:30 a.m. according to Cauchon, *Ibid.*).

One noteworthy example of those people who survived luckily by not being there was WTC leaseholder [Larry Silverstein](#), who would eventually get \$4.5 billion from insurance settlements related to the “two occurrences” of terrorism that brought down the towers. Instead of attending his usual breakfast meeting on the 107th floor of WTC 1 – and dying like the Windows on the World restaurant staff and patrons ([minus the lucky Chef](#) [\[mirror\]](#)) –



Source: Wikipedia/NIST.

Silverstein went to a doctor's appointment. (Steve Malanga, "[Rebuilding Ground Zero](#)," [\[mirror\]](#) *Wall Street Journal*, May 12, 2007.) [[See video interview, etc.](#), including accusations from [We Are Change](#) lead activist Luke Rudowski that Larry was telephoned and told not to go to the WTC... and that he then called his daughter and told her to avoid the WTC. {[mirror](#)}]

There were literally hundreds of fascinating stories from people involved in the rescue effort that morning. Transcribed oral histories of 503 surviving firefighters, paramedics, and EMTs were published in 2005 by [The New York Times online](#), in PDF format. These "WTC Task Force Interviews" produced detailed recollections of the day's events, all gathered within weeks and months of the attacks.

These 12,000-some pages have been scoured for evidence of explosive demolition by researchers Graeme MacQueen and David Ray Griffin, as seen in the [Journal of 9/11 Studies PDF](#) and the [Snowshoe Documentary Films' video "Explosive Testimony!"](#) The findings were significant, but publicly unacknowledged. (See the generic [debunking/denial](#).)

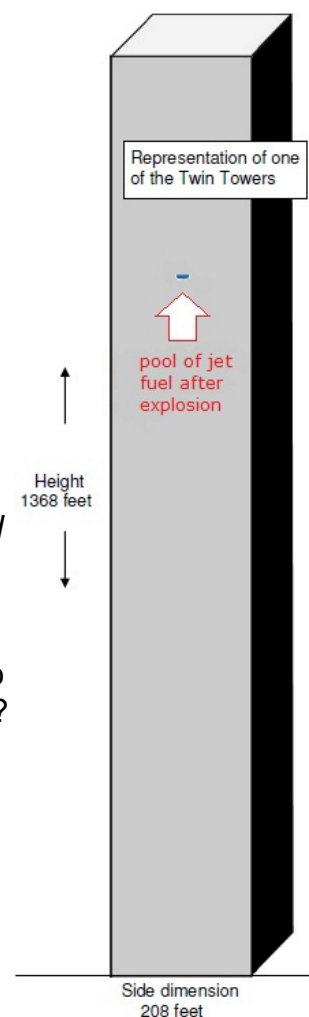
A favorite evacuee survivor story of [mainstream 9/11 documentaries](#) is the south tower escape of Brian Clark and [Stanley Praitnath](#). For details, watch "[9/11: A Tale of Two Towers](#)" (2002) or "[Inside 9/11](#)" (National Geographic, 2005). Often left out, however, are Ron DiFrancesco and Richard Fern (see Dennis Cauchon, "[Four Survived By Ignoring Words of Advice](#)," USA Today, Dec. 18, 2001.) These men were lucky to have walked away from the floors hit by [United Airlines Flight 175](#), the second plane.

Take the story of [Ron DiFrancesco](#) (see the "[Tale of Two Towers](#)" clip, and [ABC's 9/11/2002 anniversary special](#) [see the [full program here \[mirror\]](#), source NIST FOIA, 911datasets.org release 28, 42A0282 - G27D4]). He was reportedly the last person out of the south tower, because **his 60% scorched body regained consciousness days later** in St. Vincent's hospital. (ABC 9/11/2002.) He had been hit by debris in the back of the head.

*"As Mr. DiFrancesco and Mr. Kren passed an adjoining hallway near the Church Street exit, they heard an ungodly roar. Mr. DiFrancesco turned to his right in the direction of Liberty Street, to see a massive fireball – compressed as the South Tower fell – rolling toward them. 'Run!' he yelled. The two men bolted for the exit. Mr. DiFrancesco was bowled over by the explosion as he reached some stairs." - Andrew Duffy, "[Last Man Out : The Aftermath](#)," *The Ottawa Citizen*, June 5, 2005.*

Was this fireball – perhaps the same described by Will Jimeno – the delayed combustion of jet fuel that had dripped down 80 floors? It is hard to believe considering the fact that a lit match thrown into a puddle of kerosene/jet fuel will go out. **You can hold a match right up to the edge of a teaspoon half full of kerosene and it will not ignite** (try that with gasoline and you will need to grow new eyebrows)." (<http://www.milesstair.com/kerofuelprimer.html>)

The image above comes from the [Journal of 9/11 Studies](#), "Non-animated Visualization Aids to Assist in Understanding the Demolitions of the World Trade Center Twin Towers," Nov. 7, 2007.



Here we see an outdoor pool measuring 18 ft. diameter, 4 ft. height, for a volume of 1,018 cubic feet. The NIST told us the planes' fuel tanks were carrying less than half capacity at impact. (Final Report on the Collapse of the World Trade Center Towers [NCSTAR 1], Sept. 2005, pp. 20, 38.) Detailed [data](#) about how much fuel spilled into where comes from the NIST document Computer Simulation of the Fires in the World Trade Center Towers [NCSTAR 1-5F], p. 56. About half of that pool is thought to have dripped down, or "flowed away" as the Journal of 9/11 Studies charted below (NIST data).

This should extinguish any quick-fire assumptions about jet fuel damage to WTC 1 floor 22, the lobby, and/or B4. For additional aviation fuel data, see <http://femr2.ucoz.com/forum/12-11-1>.

	WTC 1 (North Tower)			WTC 2 (South Tower)		
	Gallons	Cubic Feet	Mass (lbs)	Gallons	Cubic Feet	Mass (lbs)
Total Jet Fuel	8,684	1,161	57,922	7,415	991	49,458
20% Burned in Fireballs	1,737	232	11,586	1,483	198	9,892
Total Jet Fuel after Fireballs	6,947	929	46,336	5,932	793	39,566
Remaining on Impact Floors	3,474	465	23,172	2,966	397	19,783
Flowed away	3,474	465	23,172	2,966	397	19,783

Conversion Factors: 1 US gallon = 0.13368 cubic feet. NIST used a weight of jet fuel of 800 kg/cubic meter, which equates to 6.67 pounds per gallon (~20% lighter than water).

[Port Authority radio transcripts](#) from the day help tell another story that has not been properly explained by the official government reports ([transcript source 2](#)). NIST included this in NCSTAR 1-8, The Emergency Response Operations, p. 194: "8.47 a.m. WTC security radio report, PA Channel X - "...?...There is a **fire on 22**. 8.47 a.m. WTC security radio report, PA Channel X- "...?...on the 22nd floor **a lot of debris**." (Bold emphasis added, here and below.) Mention of the situation is made also in NCSTAR 1-7, p. 86: "Unfortunately, the individual was unaware of the condition of the 22nd floor, where critical communications hardware in the hidden security command center lay in ruins, likely preventing any building-wide public address announcements from reaching the occupants." How did this happen?

"A jet fuel fireball erupted upon impact and shot down at least one bank of elevators. The fireball exploded onto numerous floors, including the 77th and 22nd; the West Street lobby level; and the B4 level, four stories below ground."
 - The 9/11 Commission Report, 2004, p. 285.

But only one elevator with a shaft extending to the plane impact zone (floors 93 to 98) had access to floor 22 – freight car 50. Express cars 6 and 7 did not serve 22. (See NIST NCSTAR 1-7, [p. 34](#), more details below.) The freight car 50 shaft [in the middle of the building core](#) cannot possibly have caused the selective destruction described. "When I got to the 22nd floor there was a lot of debris, everything was pushed to the center of the building. The windows were knocked out and I could feel the wind. I could not see. I got a radio transmission that everyone in Tower 1, get out." (NIST NCSTAR 1-8, p. 106.) Firefighter Paul Bessler said, "On the 22nd floor, some of the elevator shafts were actually open." ([WTC Task Force Interview](#) Jan. 21, 2002.) Another witness said "part of the 22nd floor was sheared away and the corridor was blocked by fallen debris. [...] We had to crawl for ten to fifteen feet under debris to get to the fire stairs." ([huemer.com](#) accessed Dec. 2001.) This next witness describes cables in the blown out shaft where it may or may not have been the 50 car being saved below by the emergency brakes. (Arturo Griffith and Marlene Cruz, details below.)

"When we got to 22, we heard there was a Port Authority command post on 22. So we were stopped there. My officer wanted to find out some information, my officer Lieutenant Andy Desperito. He went over to the command post. We noticed in the hallway that the elevator shaft had been blown out. There was nothing there, no doors, no framing, nothing. When you looked down, all you saw was the cables for the elevator and the brick work that was surrounding."

- Firefighter Michael Yarembinsky, [WTC Task Force Interview](#), Jan. 14, 2002.



Source: Wolfgang Staehle (Not once in the NIST report.)

If not a jet fuel fireball, then what? More importantly, why? Elaborate investigation of the damage to the 22nd floor Security Command Center, including numerous witness accounts, has been done at the [Loose Change Forum](#) (see [full work](#), which was [originally titled](#) "The Basement Explosions."). Collected clips from the NIST report help us understand the unacknowledged reasons why.

First, access to the "mechanical rooms and roof were controlled electronically." (NIST NCSTAR 1-7, p.112.) "On September 11th, the WTC 1 Security Control Center (SCC) attempted to release all locks controlled by the computerized access

system but was unable to do so because of aircraft damage to the system." (NCSTAR 1-8, p.48.) At 9:54 a.m., "WTC Vertical Transportation message indicates that an officer is located on floor 22, fire command center and that there is heavy traffic in the B stairway. The person indicates that they cannot release any emergency locked doors due to fire and the loss of electrical power." (NCSTAR 1-8, p.35.) As will be seen shortly, the building did in fact have electricity, however limited it may have been.

With the doors electronically sealed, nobody could investigate the 75th to 76th floor mechanical room after it exploded smoke and/or dust out the east side when the plane crashed into floors 93 to 99 – crash and explosion being significantly divided. See [NIST NCSTAR 1-2B, Analysis of Aircraft Impacts into the World Trade Center Towers](#) [Chapters 1-8], where you won't find the Staehle photo. For more information go see an [inquiry of that unexplained first plane damage](#), including photos showing the lack of windows on the 2-story MER [Mechanical Equipment Room] floors. (Floors 7-8 were 14 and 10 feet high, respectively. Floors 41-42 were 14 feet each; as were 75-76. [\[source\]](#)) "Setbacks" were used for ventilation and protection from the elements, with only two safety rails in the empty window spaces. (Source: [Merritt and Harris Property Condition Assessment, 2000 – download.](#)) Note however that no smoke was observed emanating from the

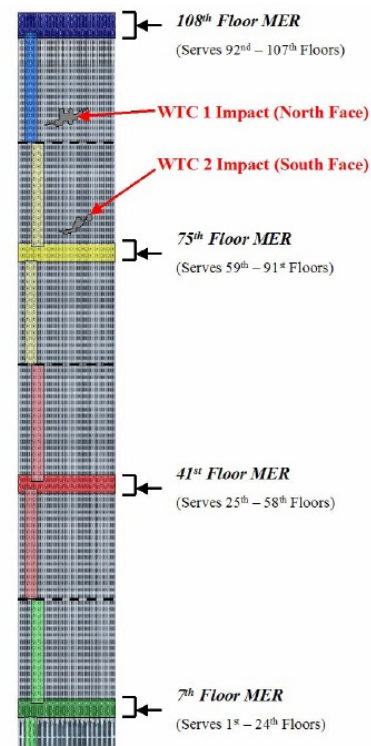


Figure 5-4. Location of MERs, WTC 1 and WTC 2.

Source: NIST NCSTAR 1-4, p. 77.

area(s) throughout the 102 minutes after the explosion.

Also, with the doors sealed that meant nobody could investigate the 75th to 76th MER floor **before** it exploded during collapse [[see image](#): WTC 1 from North during collapse initiation, source: Vincent Poydenot/NIST]. See a [collapse video collection](#). If the buildings were somehow rigged for demolition, these floors – built with heavy [beams](#) instead of [lightweight trusses](#) – were primary targets. These floors essentially acted like the bases of 3 sectioned blocks stacked on each other.

Additionally, the elevator motor generators were housed there – the sabotage of which could have caused the elevator issues detailed below (speculation). See an [architectural drawing](#), also for the 41st floor MER ([source](#)). Further study has shown the exhaust from the elevator machine rooms (and toilets – in WTC 2 and its “twin” – [seen in green](#) [source: [NCSTAR 1-4D](#), p. 46.]) pointed out the sides of the building where the core was thinner, in WTC 1 being east and west. See the Wolfgang Staehle photo above and compare to the MER floor details here, noting the specific fact that the crash zone was above the floors served by that MER.

As a side note, consider a report that before 9/11 “Daria Coard, 37, a guard at Tower One, said the security detail had been working 12-hour shifts for the past two weeks because of numerous phone threats. But on Thursday, bomb-sniffing dogs were abruptly removed.” (Curtis L. Taylor and Sean Gardiner, “[Heightened Security Alert Had Just Been Lifted](#),” [nynewsday.com](#), Sept. 12, 2001, updated 2005.) Were these phone calls real threats or misunderstood warnings from people in the know, to whom nobody would listen? Take for example undercover FBI informant [Randy Glass](#) [[mirror](#)], who heard in 1999 specifically that “those towers are coming down.” ([historycommons.org/WPBF-TV Ch. 27, Palm Beach, FL, Aug. 5, 2002](#) [[transcript](#)] and [Palm Beach Post](#), Oct. 17, 2002.). That may go hand in hand with the story told by former WTC occupant Scott Forbes (and [Gary Corbett](#)), who reported an unprecedented “power down” in the south tower midday Saturday September 8th through the afternoon of Sunday the 9th. (“[The Elephant in the Room](#),” Dean Puckett, 2008.) No electrical power meant no closed-circuit surveillance TV... also a responsibility of the Security Control Center. (Carol Carey, “[World Trade Center](#),” [securitysolutions.com](#), July 1, 1997.) To date, no 9/11 CCTV footage from the WTC has been made available.

Another perhaps more important purpose for attacking the SCC (and elevators, etc.) was the need to prohibit firefighting efforts from succeeding. After all – as the story goes – fire was a primary culprit without which the twin collapses could never have happened.

This points to another consequence of the mechanical rooms being electrically “emergency locked.” “Each tower had three 750 gpm [gallons per minute] manually initiated electrical fire pumps, located on the 7th, 41st, and 75th floors to supplement standpipe pressures.” (NCSTAR 1-4, p. 14.) Those were apparently inaccessible. FYI, “[t]he standpipes provided fire suppression water to pre-connected [125-ft long] hoses located in the stairwells at each floor.” (Ibid.) In addition to the supplemental pumps, there were several [5,000-gallon tanks](#) in each of the towers, as well as high pressure Fire Department connections (FDCs) at the base of the buildings... all to supplement the [city water supply](#). The three standpipes (at one per stairwell) were not rendered useless by the 1st plane impact, even if they were all severed (an unknown clarified by the NIST as “likely” loss of 2 [stair A and C] and “possible” loss of B [Ibid, p. 38.]). “The manual fire pumps and FDCs could have been used to supply water to the hose stations below the 88th floor” where there was an isolation valve. “However, the status of these systems was unknown and communications from above and below the impact zone were sporadic, making it unlikely that partial restoration would have been

practical even if the procedure were documented ahead of time.” (Ibid.)

“It was found that the emergency communications system used to make the emergency announcements was inoperable as a result of the aircraft impact. It was also learned by FDNY personnel upstairs inside WTC 1 that the warden phone system was damaged and the standpipe phone system was not operating.” (NCSTAR 1-8, p. 46.) This combined with the [poor quality FDNY radios](#) caused problems, to say the least. (See “The Real Rudy: Radios.” [\[mirror\]](#)) **The same radios that had problems during the 1993 WTC bombing were still in use**, with the exception of a repeater device designed to boost transmissions, which was installed in the top floor of WTC 5 by the Port Authority after the 1993 disaster. (Jim Dwyer and Kevin Flynn, “[9/11 Tape Raises Added Questions on Radio Failures](#),” *New York Times*, Nov. 9, 2002.) When the police first reported the north tower was “leaning” (NYPD aviation at 10:20 a.m. – NCSTAR 1-8, p. 37.), the lack of NYPD-FDNY radio interoperability prohibited communications between services. A [scene from Jules Naudet’s camera](#) in the lobby of WTC 1 shows vividly how poorly the radios operated. “While chiefs in the north tower lobby issued orders to come down, they received no response.” (Jim Dwyer and Kevin Flynn, Ibid.) Since the repeater device was tested successfully before 9/11, its selective failure (in WTC 1) remains a mystery.

The SCC had a backup, the Operations Control Center (OCC). “Security Command Center was built on the 22nd floor of 1 WTC, backed up by a new Operations Control Center on the subgrade B1 level at 2 World Trade Center.” (“[Testimony of Alan Reiss](#) before the National Commission on Terrorist Attacks Upon the United States,” May 18, 2004, p. 4.)

“A new operations center will contain backup for the security command center, and the security command center will contain backup for operations center functions, including alarms, intercoms and elevator controls.

Remote processors for access control and alarms at the parking garages, and workstations at the guard booths, parking office, visitor centers and security command center and other areas, are connected to a main, redundant file server.”

- Carol Carey, “[World Trade Center](#),” securitysolutions.com, July 1, 1997.

At least a half hour before the first collapse, the OCC was evacuated. Why, we don't know exactly. “Male S2: S2 to SCC. / Male: S2! / Male: I want to tell you, the OCC is out. They had to evacuate (38:45) [about 09:25].” ([Port Authority radio transcript](#)) During that radio traffic, before the second plane hit at 9:03 A.M., a female was repeatedly calling the OCC with no success. It is important to know that the loss of the OCC during the 1993 bombing had been “one of the most significant events in the incident period” since “[t]he emergency response of the complex was based on the premise that trained OCC operators would be able to receive information from areas involved in an emergency and provide response instructions to trained people throughout the complex.” (Dr. Richard Westfal, et. al., “[The Explosion at the World Trade Center in New York, February 26, 1993](#),” SoS Report 1996:20, p. 39.) Regardless, the NIST investigation did not address the reason why the new OCC was evacuated so early. (Not to mention the ignored, easily-reached conclusion that the SCC floor was targeted by bombs to sabotage the fire prevention effort.)

Note that the 22nd floor SCC crew apparently survived. “‘When the fire started, the room was sealed,’ said [Security guard Hermina] Jones, who was in the command center when explosions rocked the building. ‘Flames were shooting off the walls. ... We started putting wet towels under the doors. The Fire Department unsealed the door and grabbed us by the hand

and said, "Run!" (Curtis L. Taylor and Sean Gardiner, "[Heightened Security Alert Had Just Been Lifted](#)," nynewsday.com, Sept. 12, 2001, updated 2005.)

The HVAC system (heating, ventilation, and air conditioning) was also controlled to an extent from both the SCC and the OCC. "A new Operations Control Center with the capability to monitor all HVAC systems and elevators in both towers was constructed on the B1 level of WTC 2." (NIST NCSTAR 1-8, p.17.) NIST NCSTAR 1-7 provided [a chart listing reported conditions on all WTC 1 floors](#), which showed smoke on nearly all floors. This smoke was anything but helpful to rescue efforts. "HVAC systems that are not shut down during a fire, or are set in a mode that re-circulates air through the building, may directly cause smoke to spread through the building." (NIST NCSTAR 1-4, p.70.) Had the OCC remained occupied, and had the SCC remained intact, the HVAC issue could likely have been corrected. As the [Port Authority fire safety video](#) told us, a "smoke purge system" could have been activated to "draw smoke and fumes from tenant areas and simultaneously pump fresh air into corridors." NCSTAR 1-4: "smoke management systems were not initiated." (p. xxxiii) There was no reason to believe that the massive A/C system in the central plant on B6 had been damaged.

Finally, the elevator systems – also monitored/controlled by the SCC/OCC (Carol Carey, *Ibid.*) – could have been utilized to dramatically improve response times. Of course building occupants were advised against using elevators. "Every elevator lobby contained a sign reading, "IN CASE OF FIRE USE STAIRS UNLESS OTHERWISE INSTRUCTED." (NIST NCSTAR 1-7, p. 35.) It was under direction of the Fire Department, who had special keys, that elevators could be used. (*Ibid.*)

But reports suggest almost all the elevators became useless when the plane hit. (Coincidentally the WTC 1 express elevators had been out of service for a while! Details below.) Note that "some firefighters actually reached the 78th floor in WTC 2. This ascent to the 78th floor was assisted by the use of an elevator that operated until just before the building collapsed. The elevator became stuck in the elevator shaft, and the firefighter operating the elevator was chopping his way out when the building collapsed." (NIST NCSTAR 1-8, p. 31.) According to recorded radio transmissions, FDNY found (and used) one elevator in WTC 2 operating up to floor 40. (*Ibid.*, p. 33.) It was Chief Orio Palmer who climbed 38 flights of stairs and radioed from 78 saying "we've got two isolated pockets of fire. We should be able to knock it down with two lines." ([FDNY transcript online](#), as heard in the documentary film "[102 Minutes that Changed America](#)" History, 2008. [[mirror](#)]) Seven minutes later – as if to deny FDNY the opportunity – the south tower collapsed.

In WTC 1 it was a different story – one that wasn't recorded because of the failing or misused equipment. (Jim Dwyer and Kevin Flynn, *Ibid.*) "As it turned out, we had no usable elevators." (FDNY Battalion Chief Joseph Pfeifer in "9/11: The Filmmakers' Commemorative Edition," *Ibid.*, at 29:20.) In one famous story, when the first plane hit, "six men, including Polish immigrant window washer Jan Demczur, found themselves trapped in an express elevator at the 50th floor. Thinking quickly, Demczur and the others pried open the elevator doors and used [this squeegee handle](#) to cut their way through the drywall of the elevator shaft. They squeezed through the hole in the wall, fleeing from the building just minutes before the tower fell." ([Smithsonian Institution website](#))

"We entered in through the front doors of the lobby. The lobby was screwed. All the windows were already broken. Marble walls that surrounded the elevator shaft, they were cracked and broken. I'm still thinking a bomb went off.

*We headed for the B staircase. It was pretty much **in the center of the core**. We had*

to go through these turnstiles. I remember there was **a lot of rubble** on the floor there. There were elevator doors ajar. There were elevator doors missing. I could see an **elevator car twisted in the shaft**.

I remember I looked up at the ceiling because I thought maybe the ceiling got charred because there was a bunch of rubble on the floor. It was about three feet high in the middle. The ceiling wasn't charred. So I had thought the floor blew up.

I was telling guys afterwards the floor must have blown up. Maybe there was a bomb downstairs or something..."

- Firefighter William Green, [WTC Task Force Interview](#), Dec. 26, 2001.

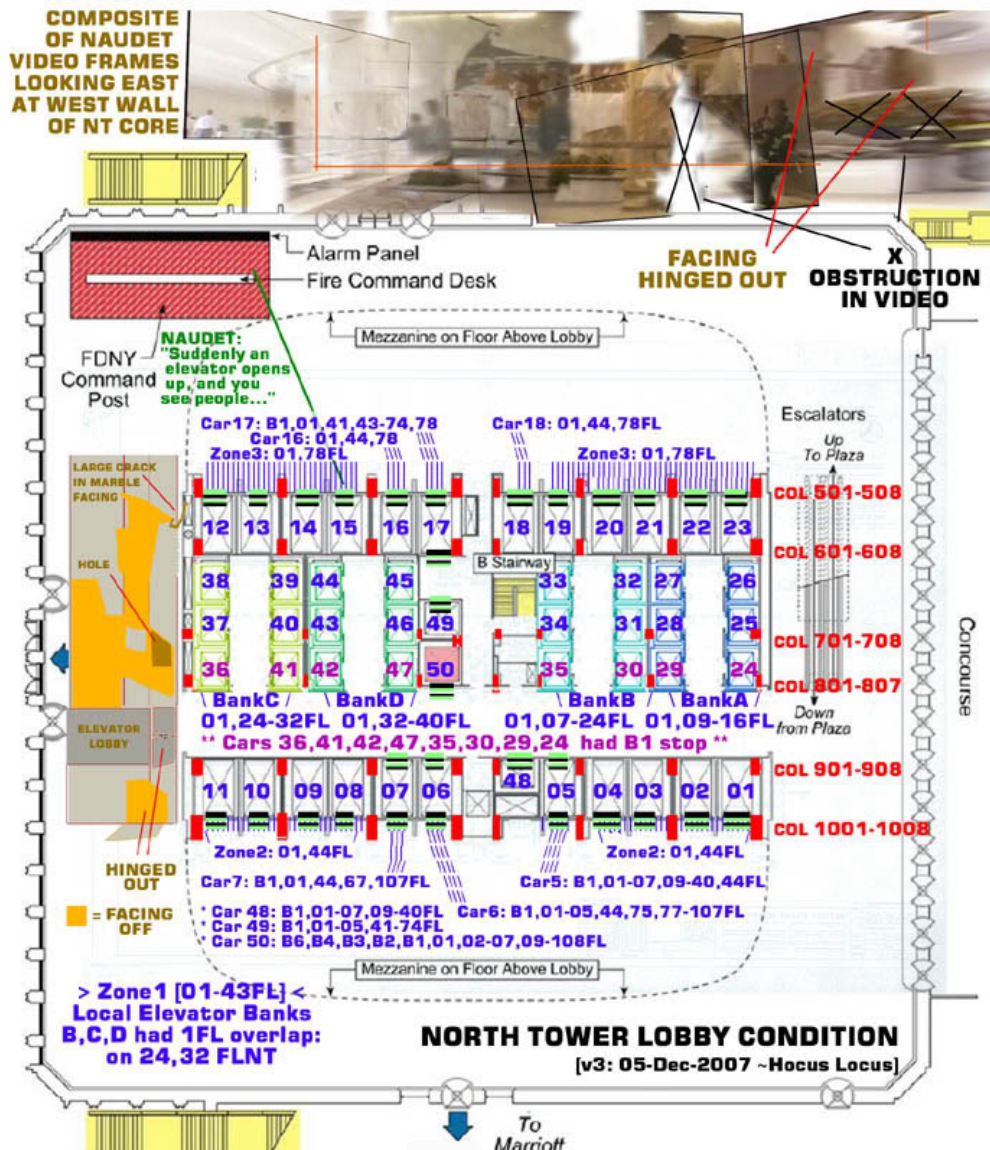
Green came to believe the debris was a pile of bodies incinerated in the elevator. See his account years later in "[Collateral Damages](#)" [here](#) (at 26:20 in "[9/11: The WTC Elevator Key](#)." This must have been a case of memory being managed to fit the official story, because as we will see below, the only cars in shafts extending up to the impact zone **were in the basement**. Green thought his eyes deceived him into seeing rubble in order to avert his consciousness from processing the violent death. As if he weren't in the New York Fire Department!

"The first arriving firefighters observed that the windows of WTC 1 were broken out at the Concourse level. This breakage was most likely caused by overpressure in the elevator shafts. Damage to the walls of the elevator shafts was also observed as low as the 23rd floor, presumably as a result of the overpressures developed by the burning of the vapor cloud on the impact floors."

- [FEMA Building Performance Study](#), p. 2-21.

Windows were blown out 93 floors down. Marble facing was knocked off the walls of the lobby core. Both of these features were [captured in the Naudet film \[mirror\]](#), which explained that "flaming jet fuel had shot straight down the elevator shaft." Although that film was first broadcast in March 2002 when no official report had yet been published, the writers have not had to revise that line for later editions. (See the [5-year anniversary broadcast](#).)

*"There were 99 passenger elevators in each tower, arranged in three vertical zones to move occupants in stages to skylobbies on the 44th and 78th floors. These were arranged as express (generally larger cars that moved at higher speeds) and local elevators in an innovative system first introduced in WTC 1 and WTC 2. There were 8 express elevators from the concourse to the 44th floor and 10 express elevators from the concourse to the 78th floor as well as 24 local elevators per zone, which served groups of floors in those zones. **There were seven freight elevators, only one of which served all floors.** All elevators had been upgraded to incorporate firefighter emergency operation per American Society of Mechanical Engineers (ASME) A17.1 and Local Law 5 (1973)" ([NIST NCSTAR 1-1, p.50](#))*



Note that 2 express elevators shared the other shaft that extended to the impact zone – cars 6 and 7. “Also due to the building design, two express elevators share a common hoistway enclosure...” (Robert Baamonde, Jr., “[Drive to the Top](#),” *Elevator World*, Mar. 2001, p. 61.) These served different floors. Car 6 served B1 to floor 5, as well as 44, 75, and 77 through 107. [NIST NCSTAR 1-7, [p. 34](#).] Car 7 served B1, 1, 44, 67, and 107 [2007 graphic above]. See the “pit” of the 6/7 cars’ shaft in [Sub-level 2](#) and [Sub-level 3](#) architectural drawings. Note that these original floor plans for the basement are named differently. The floor plans’ Service level = B1 (NIST). The floor plans’ Sub-level 1 = B2 (NIST). Sub-level 2 = B3 (NIST). Sub-level 3 = B4. Sub-level 4 = B5, and Sub-level 5 = B6.]

Now we hear the case of elevator operator Arturo Griffith and carpenter Marlene Cruz. Both were riding the 50 freight car in the basement at the time of the first plane crash (and multiple explosions). Marlene Cruz appeared on [NBC News Sept. 13 at 12:31 p.m.](#) Arturo was on with CNN’s Larry King on October 6 ([see transcript](#) or [watch \[mirror\]](#)). They started on B2,

only seconds into their ascent when trouble began. (CNN, Oct. 6, 2001.)

Marlene Cruz: 'I got on the fifty car, which is the freight elevator. I was going to do a job on the forty-sixth floor and the elevator operator closed the door. It was just me and him in the elevator. All of the sudden I heard that explosion and the doors blew and the elevator dropped and there was smoke, fire, water all over the place, debris, concrete, you name it, just fell on top of us. He was out cold for a second.'

Matt Lauer: 'How far did the elevator drop?'

Marlene Cruz: 'I can't really tell you, but I was caught in between the floors. I was lucky. There was some other guys, coworkers, like Artie says, there's [always] workers down on the B-levels and they just pulled me out and they laid me on the floor.

- [NBC News Sept. 13 at 12:31 p.m.](#) (emphasis added)

This means the NIST was incorrect in their statement that “cars 6 and 50 could have fallen all the way to the pit in the sub-basement level, and car 50 in WTC 1 was reported to have done so.”⁵⁹ ([NIST NCSTAR 1-7](#), p. 122.) The source of the 2004 “NIST interview” referenced by the footnote number 59 is unspecified.

Elevator operator Arturo Griffith offered more details.

“And as I took off, it was amount it was a matter of seconds – five, six, seven seconds, I don't know. And there was a loud explosion and the elevator dropped. And when the elevator dropped there was a lot of debris and cables falling on top of the elevator. And I just – I just put my hand over my said and I said, 'oh God I'm going to die.' But I didn't know what was happening.

When the elevator finally stopped, they had an explosion that bring the doors inside the elevator, and I think I'm sure that that was what broke my leg. And then they had another explosion and the panel that threw me, you know, against the wall, and I guess I was unconscious for a couple of minutes....”

- CNN's Larry King Live Oct. 6, 2001.

The Cruz and Griffith accounts have also proved the **basement explosions** (described below) could not have come through their elevator shaft from energy far above, since the pressure would have had to travel through them to lower basement levels **in addition to** blasting open the doors on floor 22 where the shaft for express elevators 6 and 7 didn't open. ([See the blueprints.](#)) Firefighter Paul Bessler: “On the 22nd floor, some of the elevator shafts were actually open.” ([WTC Task Force Interview](#), Jan. 21, 2002.) Shafts, plural? Impossible.

FDNY had to rescue civilians trapped on floor 22. (9/11 Commission Report, p. 316.)

“Elevators 6A and 7A were out of service for modernization.” (“PA Interview 5, fall 2003” noted in NIST NCSTAR 1-8, p.43.) Express cars 6 and 7 – [on the south side](#) of tower A, or WTC 1 – were out of operation on 9/11, evidenced by photographs seen here. Unfortunately no 9/11 photos of the south side interior are known to exist. However, these elevators were usually marked by a [sign](#) for the “Greatest Bar on Earth” up on the 107th floor. On 9/11 that sign stood on the north side (seen below) where the FDNY command post was set up [in the northwest corner](#). Also, it was reported by ABC News correspondent Don Dahler on 9/11 at [11:47 a.m. \[mirror\]](#) – “for at least a month” there had been problems with the elevators that went all the way to the top.



9/11/2001 - Photo by John Labriola



Not 9/11/2001 - Anonymous.

These two elevators were parked on B1 at their lowest service level, as would have been logical during maintenance. The above quote saying they were out of service for modernization continued by saying, “The doors were blown off by the fireball that came down the elevator shaft and the elevator cars were burned.¹² (Basement level of WTC 1).” [parentheses in original] The footnote 12 references “PA Interview 5, 2003” [unavailable] in NCSTAR 1-8. Therefore, since the cars were intact but burned, the explosive force causing extensive basement damages [soon to be described] did not originate from the shafts leading up 95 stories.

One “official” type theory – not alleged by the NIST or FEMA reports, however – has involved combustion of the fuel stored on the lowest basement level (of the north tower/WTC 1) for the backup generators. One report to the contrary said at least one of the fuel tanks was recovered intact. (Jeffrey W. Vincoli, Norman H. Black and Stewart C. Burkhammer, “[SH&E at Ground Zero](#)” [cached]). See also the [DDC FOIA Sec. 1](#), p. 18, to read notes from a March 25, 2002 construction personnel meeting that noted a 10,000 gallon tank of oil at slurry wall section W31 had to be removed/emptied, as did the generator crank cases. This theory of generators exploding became relevant when studying a famous north tower survivor's tale.

William Rodriguez was a janitor/maintenance worker in WTC 1. When the first plane hit 94 floors above him, “he was chatting with the maintenance crew on level B1 in the basement [[see drawing](#)]. ‘I heard this massive explosion below, on level B2 or 3,’” said Rodriguez. (Mark Jacobson, “[The Ground Zero Grassy Knoll](#),” nymag.com, Mar. 19, 2006.) He reported this [on WCBS Channel 2 that day](#). As that tower “fell” 102 minutes later, he only survived by diving beneath a fire truck. That was after he helped save as many as 15 lives. Since then he has billed himself as “[the last man out](#)” of the World Trade Center north tower (see [his website](#)).

When the first plane hit and William heard the explosion beneath him, he first imagined a generator exploding. ([Hear him tell the story](#) now. [[mirror](#)] Watch the rest of this video to see compiled reports concerning the same anomaly... the most damning of which is perhaps the [Ginny Carr audio](#) tape [in similar evidence [compilation here](#)]. A female voice places the rumble in the concourse below street level – 9 seconds apart from the second explosion sound – a fact unexplained by distance to her location at One Liberty Plaza across the street. Note that this evidence was not included in the NIST or FEMA reports, and has only been

saved thanks to independent efforts like “Loose Change 9/11, 2nd Edition” at 43:00, and the [911 Digital Archive](#). (see [YouTube](#))

Also consider the [seismic data](#). See “[Seismic Proof – 9/11 Was An Inside Job](#),” by Craig T. Furlong & Gordon Ross. Compare the two airplane impacts, the first of which, granted, [struck dead center](#) on the wide end of the rectangular core, as opposed to the off-center second plane hit on the WTC 2 core's thin end... which seemed to explain the difference in magnitude. Although the WTC 7 (47-story building) collapse only registered a 0.6 on the Richter scale, while the first plane hit scored a 0.9 and the second – [also suspected to have been timed to various explosions](#) – a 0.7.)

To corroborate the Rodriguez story, listen to survivor/evacuee Hursley Lever talk to NBC's Matt Lauer from Bellevue Hospital ([NBC Sept. 13, at 12:32 p.m. \[mirror\]](#)). His ankle was shattered in one of two distinct explosions he witnessed in the north tower basement. Lever thought a transformer might have blown up, but the nearest substation was on B1 while he was on B4 (for WTC electrical system details, see [a quote from Merritt & Harris, Inc.](#), “Property Condition Assessment of World Trade Center Portfolio” [1 WTC], Dec. 6, 2000, p. 101 of 436.) Although the emergency generators (there were no others) might [seem like a good explanation](#) for the underground explosion (or timed explosions), this has been proven otherwise. Not only was the fuel for the generators recovered (from the [lowest basement level](#), on [the opposite side](#) of the tower), as mentioned above, “[i]t is believed the engines came on-line to supply emergency power for a brief period, as in some early videos the lights were on in parts of the building and complex even as the towers started to come down.” (Mark McNeely, “[Generator Set a Survivor of Tragedy](#),” [allbusiness.com](#), Nov. 1, 2002.) The title of that article says it all.

*“At this point, we stopped at the 31st floor to gather ourselves. A couple of my members were a few floors below and not doing very well. It was here that we met up with Engine 33. [...] **We still had electricity** and no smoke condition, but were hearing reports of jet fuel on the upper floors. [...] ... our building was hit. Or so I thought. As I found out later, this was actually tower 2 collapsing. It shook our building like a rag doll. We all dove into the nearest stairwell. [...]*

*[...] began an orderly decent. We picked up firefighters, unaware of the order to evacuate, on the way down. **As we got lower, we lost electricity** and things started to slow down....”*

- Lieutenant Warren Smith, FDNY Ladder 9, from Dennis Smith, *Ibid.*, pp. 265-66.

Also in Will Jimeno's survivor account of the first collapse, “one floor under the main concourse area, where all the stores are,” afterward “[t]he lights are flickering, but they don't go out.” (Smith, *Ibid.*, pp. 114, 115.)

According to Con Edison, the main provider of electricity in New York City, “[a] total of eight 13 kW feeders were located at the WTC,” coming from the two substations at 7 WTC across Vesey Street, where power was routed from a source in Brooklyn. (“[9/11 Commission Interview of Consolidated Edison Company of New York Officials](#),” Memorandum for the Record 04018143, Feb. 26, 2004.)

“Timeline on 9/11/2001:

08:46 a.m. Two WTC open/auto (O/A) 13 kW feeders went off

09:02 a.m. Two additional WTC open/auto (O/A) 13 kW went off

09:52 a.m. Four additional open/auto (O/A) 13 kW feeders went off
10:28 a.m. Status:
Cortlandt 8 of 15 feeders were off
Battery Park City 6 of 8 feeders were off
Bowling Green 6 of 16 feeders were off
Park Place 1 of 12 feeders were off”
- Con Ed Interview, [lbid.](#)

Since the south tower collapsed at 9:59, the above document clearly shows that the backup electrical system worked, when viewed in conjunction with witness testimony. But was that the “2 million watt, tertiary backup power system fed from the New Jersey Public Service Electric & Gas grid utilizing feeders from the PATH rapid transit system” installed by the Port Authority after the 1993 bombing, which “would take over after loss of both normal multiple Con Edison feeds and emergency generator power[?]” (“[Testimony of Alan Reiss](#) before the National Commission on Terrorist Attacks Upon the United States,” May 18, 2004, p. 4.) If so, it would seem *that* system also failed in the time between the twin collapses.

If not the emergency generators on B6 or the transformers on B1, then what was the source of the smoke that filled the subway/PATH [Port Authority Trans Hudson] train station on B5? Some witness reports to the smoke include: 1. George Stephanopoulos, [ABC News reporter on 9/11 at 12:27 p.m.](#); 2. U.S. Army Corps of Engineers Harbor Programs manager Joe Seebode “was on a PATH train from New Jersey under the World Trade Center on Sept. 11 at 9 a.m.” when “the public address system came on and asked us to exit the station immediately due to smoke conditions.” [U.S. Army Corps of Engineers, [The New York District Times](#), Fall 2001, p. 9.]; 3. Civilian Eileen on [CNN 9/11 at 12:13 p.m.](#); 4 and 5. Two unnamed men in the [Evan Fairbanks video](#) (the [2010 release with audio](#)) – one said “[smoke was in the train station](#)” off camera a minute before the 2nd plane [[mirror](#)]. Minutes earlier a man told how on B1 everybody's ears popped (he couldn't hear), and the place filled with smoke. This cannot have been recirculated air from 94 stories above, only seconds or minutes after the 1st plane hit. What was it, if not a bomb? A transformer on B1? OK, then what about B4?

To elaborate on the Hursley Lever account of B4 explosions, Phillip Morelli, a construction worker, was also there:

“I go downstairs, the foreman tells me to go to remove the containers, as I'm walking by the main freight car of the building, in the corridor, that's when I got blown. I mean, the impact of the explosion, or whatever happened, it threw me to the floor, and that's when everything started happening...

*It knocked me right to the floor. You didn't know what it was. Of course you're assuming something just fell over in the loading dock, something very heavy, something very big, you don't know what happened, and all of a sudden you just felt the floor moving and you get up and the walls...And then you know, I mean **now I'm hearing that the main freight car, the elevators fell down**, so I was right near the main freight car so I assume what that was.”*

[Note that “now I'm hearing...” is not part of the recollection. The main freight elevator did not crash down. It was caught by its brakes and therefore could not have caused structural damage.]

“Then, I mean you heard that coming towards you. I was racing, I was going towards the bathroom. All of a sudden, I opened the door, I didn't know it was the

bathroom, and all of a sudden the big impact happened again, and all of the ceiling tiles was falling down, the light fixtures were falling, swinging out of the ceiling, and I come running out the door, and everything, the walls were down, and I started running towards the parking lots.

I just thought something... because I know that the loading dock is on B1, that's three floors above me, I just assumed that a car or something exploded on B1 or something got delivered and something big and heavy fell over. You just knew it was something big...(...)

As I ran to the parking lots, you know, I mean, everybody screaming... There was a lot of smoke down there.... You gotta go clear across the whole -- from One to Two World Trade Center. That's the way you gotta run.

*And then all of a sudden it happened all over again. Building Two got hit. I don't know that. I just know something else hit us to the floor. Right in the basement you felt it. **The walls were caving in. Everything that was going on. I know of people that got killed in the basement. I know of people that got broken legs in the basement. People got reconstructive surgery because the walls hit them in the face.***

- Find video of the Morelli testimony thanks to [New York 1 News \[mirror\]](#) and FOX News/[itnsource.com \[mirror or download\]](#) Emphasis added.

Next there was the case of Mike Pecoraro and his coworker on B2.

*"The two decided to ascend the stairs to the C level, to a small machine shop where Vito Deleo and David Williams were supposed to be working. When the two arrived at the C level, **they found the machine shop gone.***

'There was nothing there but rubble,' Mike said. 'We're talking about a 50 ton hydraulic press – gone!'** The two began yelling for their co-workers, but there was no answer. They saw a perfect line of smoke streaming through the air. 'You could stand here,' he said, 'and two inches over you couldn't breathe. We couldn't see through the smoke so we started screaming.' But there was still no answer. They decided to ascend two more levels to the building's lobby. 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.** '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. He was convinced a bomb had gone off in the building.

Mike walked through the open doorway and found two people lying on the floor. One was a female Carpenter and the other an Elevator Operator. They were both badly burned and injured. Realizing he had to get help, Mike ascended to the Lobby Level."

- <http://www.chiefengineer.org/article.cfm?seqnum1=1029> (cached 2002 webpage – emphasis added here)

Finally, photographer John Labriola had a story to tell. "There were two escalators going down into the mall under Tower 1. At the bottom we had to run through a waterfall. Water was falling everywhere – eight to 10 inches in some places. Rescuers were

strategically placed throughout the area, shouting at us, keeping us focused on where to go. **Many of the stores down in the mall had windows blown out.** All along the way there were emergency workers urging us on. ..." (One Nation: America Remembers September 11, 2001, Time, Inc. [Life Magazine], 2001., p. 44.) Emphasis added.

For more reports of explosions in the towers – all three towers – see "[September 11th Revisited - Were Explosives Used?](#)," or "[Improbable Collapse - The Demolition of the American Republic](#)" for a start. So, what **was** the cause of these "numerous secondary explosions," if not bombs targeting emergency/fire response infrastructure (or even demolition charges), and why were these compelling stories not investigated further except by the 9/11 Truth Movement? ("numerous..." quote from Lt. Glenn A. Daley, NYPD Aviation Unit on ABC Primetime Thursday, [Nov. 8, 2001](#). [NIST FOIA, [911datasets.org](#) release 28, 42A0286 – G27D16])

No terrorist captive has confessed to planting explosives in the basement levels or on the 22nd floor. On the contrary, as President Bush said the week of the 5th anniversary of 9/11, Al Qaeda **terrorists planted explosives high in the buildings**, supposedly to prevent people trapped above from escaping. [[watch - see text](#)]) Of course the NIST team said nothing to confirm or deny that alleged claim from Khalid Sheikh Mohammed. By 2006 the investigation was done, case closed (except for WTC 7, finally [explained in 2008](#)).

Special thanks for research put into this section goes out to Miragememories and NK-44 at the [Loose Change Forum](#).

Were these early explosions meant to help bring down the building? Maybe not. It could have been to reduce casualties by creating more panic. Damage on floor 22 suggests coordinated effort by terrorists, does it not? Well of course, but that – and other secondary damage – wasn't investigated because it didn't matter.

Black Boxes Somewhere

The debris field and mass grave of Ground Zero was dug up so fast – or the damage was so incredibly severe – that the virtually indestructible “black box” ([orange](#)) flight data recorders and cockpit voice recorders from the 2 planes were never found ([source](#) – see also [here](#)) – [a very rare occasion](#) on land. Or they were secretly found.

Briefly consider the *other* 9/11 black boxes. The two devices were found for the Pentagon attack plane, American Airlines Flight 77. Yet the [voice recording was allegedly not usable](#) ([images](#), source NTSB FOIA appeal 2012, 911datasets.org). Recent [flight data recorder analysis](#) contradicts early inaccurate interpretations which had fueled the ridiculous conspiracy theory of a flyover masked by internal explosions ([see the data](#)). Pentagon theories have long been the bane of the 9/11 Truth Movement – the poison in the well, so to speak (Frank Legge, BSc, PhD, “[What Hit the Pentagon? Misinformation and its Effect on the Credibility of 9/11 Truth](#),” [journalof911studies.com](#), 2009). In the [words of researcher Russell Pickering](#), “This plane/no-plane debate at the Pentagon is responsible for more division, destruction and disgusting behavior than any other 9/11 topic. It has deterred more of the general public from understanding the BIG PICTURE than any other aspect of 9/11.”

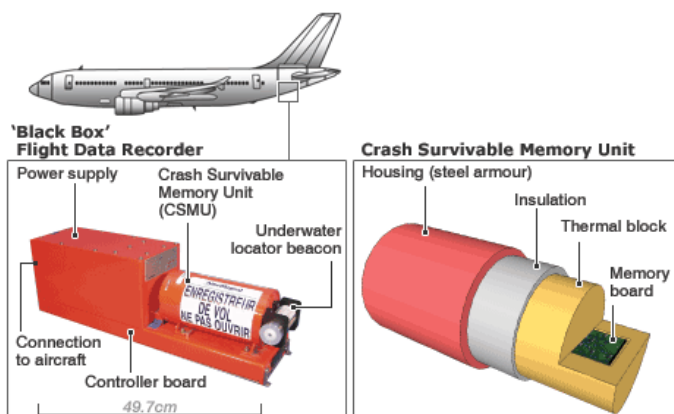
For the Shanksville, Pennsylvania crash of United Flight 93, again the [cockpit voice recorder](#) ([alt. version](#)) and [flight data recorder](#) were recovered quickly. As opposed to the Pentagon device, the CVR was useful. Suspiciously, or to avoid disrespectful media dissemination, the voice recording was only shared at length with the victims' families in closed quarters... and the last 3 minutes were missing. (William Bunch, “[Three-minute Discrepancy In Tape](#),” [philly.com](#), Sept. 16, 2002.) Also, NORAD and the 9/11 Commission place the crash at 10:03 while [seismic data](#) says 10:06:05 and the Federal Aviation Administration (FAA) 10:07 ([historycommons.org](#)). Watch a “[Loose Change](#)” [collection on Shanksville](#) to understand conspiracy theories on why the final minutes were missing. It has been argued the plane was shot down. This (or a bomb on board, or the plane breaking up after excessive velocity stress) would explain why the bits of [plane debris field were spread over several square miles](#). Of course there are witnesses who described a plane – not parts of a plane – diving at a 45 degree angle. [There were witnesses who said lots of things](#). Finally there is the [inconsistent labeling on the two Shanksville devices](#). The CVR was labeled “AlliedSignal” and the FDR, “Honeywell.” [Details](#). See the [NTSB Flight Path Study here](#).

In the New York cases of American Flight 11 and United Flight 175, the black boxes were reportedly found, just supposedly not recovered. That is, despite a contradictory, corroborated claim by Nicholas DeMasi, firefighter. Read his story in the rare book [Behind the Scenes: Ground Zero](#), by Gail Swanson, p. 108. Quoting DeMasi secondhand from that:



Posted at Ground Zero ([source](#) - see [ex. 2](#) & [3](#) & [4](#))

“At one point I was assigned to take Federal Agents around the site to search for the black boxes from the planes. We were getting ready to go out. My ATV was parked at the top of the stairs at the Brooks Brothers entrance area. We loaded up about a million dollars worth of equipment and strapped it into the ATV. When we got into the ATV to take off, the agent accidentally pushed me forward. The ATV was already in reverse, and my foot went down on the gas pedal. We went down the stairs in reverse. Fortunately, everything was okay. There were a total of four black boxes. We found three.” - Bryan Sacks and Nicholas Levis, [“Firefighter Said Black Boxes Were Found at Ground Zero,”](#) summeroftruth.org, Oct. 27, 2004.

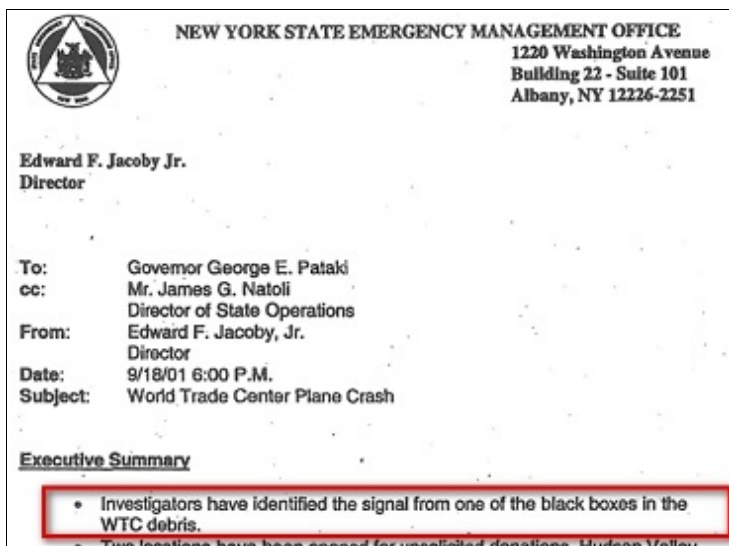


That “million dollars worth of equipment” helped locate the boxes using their waterproof, impact/heat resistant, built-in homing beacons.

On Sept. 19 the *New York Times* reported that the “pinging” of one of the black boxes “might have been detected.” (Susan Sachs, “At the Site, Little Hope of Uncovering Survivors.”) Confirmation: “Investigators have identified the signal from one of the black boxes in the WTC

debris,” said a Sept. 18 memo to Gov. George Pataki from New York State Emergency Management Office Director Edward F. Jacoby, Jr. ([OEM FOIL Sec. 4](#), p. 16.) These investigators included “14 personnel” of U.S. Army's CECOM (Communications Electronics Command), in addition to FBI and USAR (Urban Search and Rescue), from whom “[a] ten-man team is using acoustic sensors and direction finders to locate the audio transmitters (pingers) on the recorders.” ([FEMA Situation Report #15](#), for Sept. 19-20, pp. 8-9) The NTSB (National Transportation Safety Board) was involved, too, helping to set up six observation/camera points to help guide FDNY and USAR ([apparently with laser pointers](#) [[source](#), Sept. 24-25 FDNY Incident Action Plan]) to the area(s) emitting the signal(s). All but two of these camera points were removed Oct. 21/22 ([FDNY Incident Action Plans](#)). That *may just be* our time frame for surreptitious black box collection by the FBI. Thanks to Caveman for his new [research](#) into this matter. It's safe to say [at least one of the devices was found](#), just maybe not retrieved.

One article touting CECOM went as far as to say, “Radio frequency detectors developed at CECOM were used to find 'black box' flight recorders from the airliners that crashed into the two towers.” (Gen. Paul J. Kern, Commanding General, U.S. Army Materiel



([OEM FOIL Sec. 4](#), p. 16.)

Command, "[AMC: Accelerating the Pace of Transformation](#)," AUSA: Army Magazine, Feb. 1, 2002.) It is now undeniable that one or more of the devices was located. Were they *retrieved*?

More testimony to the deception came from a man named Mike Bellone, who told his story on Jesse Ventura's "Conspiracy Theory" episode on 9/11 (TruTV, 2009 – [watch part 4 to see it](#)). Bellone apparently assisted DeMasi. ([See www.pnionline.com/...](#)) Of course, people are suspicious of this man, who traveled the country with Ground Zero "artifacts" as part of a supposed charity group and "honorary firefighter." ([911myths.com](#)) "Fire marshals ... arrested Bellone, 51, of Brooklyn, N.Y., on Sept. 27, for having an FDNY Scott air tank, harness, regulator and mask. He was charged with grand larceny, criminal impersonation and possession of stolen property, but the charges were later dropped after Bellone returned the items." (Ed Zagorski, "[New York 'firefighter' who delivered talk on 9-11 at Concordia was fraud](#)," GM Today, Oct. 19, 2005.) Spokesmen for the FBI and the FDNY denied the claims of these two Ground Zero workers. ([historycommons.org](#) citing [Philadelphia Daily News, 10/28/2004](#).) Finally, a third claim of retrieval:

"A source at the National Transportation Safety Board, the agency that has the task of deciphering the data from the black boxes retrieved from crash sites – including those that are being handled as crimes and fall under the jurisdiction of the FBI – says the boxes were in fact recovered and were analyzed by the NTSB. 'Off the record, we had the boxes,' the source says. 'You'd have to get the official word from the FBI as to where they are, but we worked on them here.'"

Dave Lindorff, "[9/11: Missing Black Boxes in World Trade Center Attacks Found by Firefighters, Analyzed by NTSB, Concealed by FBI](#)," CounterPunch, Dec. 19, 2005.

An NTSB spokesperson denied this.

Where are the New York black boxes, then? Why were the alleged [murder weapons never identified](#) forensically? That is, including Flight 77 and Flight 93, each with no serial numbers on the black boxes (Aidan Monaghan, "[9/11 Aircraft 'Black Box' Serial Numbers Mysteriously Absent](#)," 911blogger.com, Feb. 26, 2008). Since the crashes weren't classified as accidents, the National Transportation Safety Board didn't have the burden of responsibility that the FBI did. Yet, a records search by FBI Record/Information Dissemination Section ("RIDS") section chief David Hardy uncovered no "documentation pertaining to any formally and positively identified debris" from the aircraft used in the attacks (Aidan Monaghan, "[FBI Records Chief Describes Unsuccessful Search For Identifying Records Of 9/11 Aircraft Wreckage & Flight Data Recorders](#)," 911blogger.com, Aug. 26, 2008).

Researchers have turned to photos and video from the events in order to pick up where the FBI left off.

OTHER AIRPLANE DEBRIS

Airplane debris has at least given independent 9/11 researchers hard evidence that the planes crashed into the Twin Towers were indeed Boeing 767s, as alleged. (As if DNA from the victims reportedly aboard the planes weren't enough!) That physical evidence is backed up by more than 30 [photos](#) and at least 60 [videos of the 2nd plane](#). For [the first plane](#) there is one famous video and two lesser known glimpses.

There were [numerous airplane parts](#) found in New York (as well as many in [Washington](#) and some in [Shanksville](#)). FEMA placed some of them in their study. (See the

[illustration](#) from the [PDF document](#).) Among the known parts, many were [photographed at Fresh Kills Landfill](#) (source: “Collateral Damages,” [Ibid.](#)). A specialist from American Airlines, [Jim Haase](#), was on site at the sorting facility to assist in identification of possible airliner debris. At Ground Zero there was an area set aside labeled “[FBI PLANE PARTS ONLY](#).”

Here is an extensive list, perhaps not exhaustive. There were seat belts, a [seat cushion](#), and a life vest, for starters. Plus UA175 passenger Lisa Frost's [United card](#).



[Source](#): Smithsonian Institution



*Figure 6d. Debris at the roof level of 130 Liberty Plaza—
seat from American Airlines plane.*

[Source](#): MCEER [see [closeup](#)]



[Source](#): NY State Museum



*Figure 6c. Debris at the roof level of 130 Liberty Plaza—
American Airlines life vest.*

[Source](#): MCEER [see [closeup](#)]

There were “probably a hundred [pieces of fuselage](#), some of the windows in [them] still....” (“Collateral Damages,” [Ibid.](#)) Many of these were marked with yellow paint by [investigators](#). One such piece of fuselage had distinguishable paint and lettering of the United Airlines body and possibly even the tail number [N612UA](#). The photo below was taken on the roof of WTC Building 5. In the [original](#) see that the letters “NTSB” were spray painted, without effect of a traditional reconstructive inquiry. It was no accident, after all.

A [window section](#) from American Airlines Flight 11 was displayed at the Intrepid Museum in New York... one of many fragments online that have much more impact when seen on the street below the towers ([2. \[source: Cryptome.org\]](#), [3. \[source: NYPD](#)

{911datasets.org NIST FOIA release 8}], [4](#). [source: *New York Daily News* {911datasets.org NIST FOIA release 13} – see also [similar](#) unknown, and Appendix 2 of this book.]....

A [wing section](#) is pictured at the [New York State Museum](#), with some other airplane debris. One error to point out on that website was the [image of an engine part](#) said to be “possibly part of landing gear.” ([See details](#) and some similar engine part images.)



Source: [Airliners.net](#) [minus the red pen outline]



Source: FEMA/Gene Corley [minus the red box]



Source: George Marengo/[nyartlab.com](#)



Source: Anthony Cotsifas

Many jet engines' remnants were found, but only one or two were large enough to easily identify. One is known to have come from the starboard side of the second plane. As seen in dozens of videos of the crash, it flew out of the corner of the 81st floor – which in fact had an opening in the structural steel. See the [damage photo](#) from NCSTAR 1-3, p. 46 and [text from p. 45](#) saying there was a column in every other floor's corner.

This engine chunk was deflected and slowed significantly by the contents of floor 81, as described in detail in the article, “[NIST, ARA Error Speaks Volumes](#),” quoted at length above in the section “Investigations.” Photographic evidence comes from several people, including George Marengo (named at [nyartlab.com](#) and in the Int'l Center for 9/11 Studies [NIST FOIA 09-42](#), 911datasets.org release 7). See a part which broke off when striking the ground, still smoking in the image below. See also [Louis Brendel](#).

Before the engine hit the street at the corner of Church and Murray (knocking down a street sign and [breaking a street lamp](#) [source: Naudet film “9/11”]), it collided with the building at 50 Murray. [Video](#) of the aftermath came from [David Vogler](#) [[mirror](#)], Gedeon Naudet [source: “9/11: The Filmmakers' Commemorative Edition”], and [Kevin Segalla](#) ([continued](#)) [[mirror](#) – source: NIST FOIA 09-42 911datasets.org release 14]. One [property advertisement](#) mentioned this (5th paragraph). An [aerial shot](#) captured repairs under way ([see another](#)).



Source: John G./NFPA (911datasets.org NIST FOIA Release 17)

Another engine part was [reported](#) to have fallen on a vehicle by FDNY Chief of Safety Albert Turi. ([source](#): www) Many [other parts](#) of one or more aircraft engines were found and photographed. The Church/Murray St. engine may have been the same one photographed [by FEMA](#) and [by the EPA](#) at the landfill on Staten Island... then saved for [museum use](#). As for [its origin](#)...

At least two wheels/tires were found ([1.](#) and [2.](#) [NCSTAR 1-2, p. 274 - see [another angle](#) by NYPD]). Many [landing gear parts](#) flew through the buildings (see [another](#)). In an astonishing [April 2013 find](#), another aircraft part was “discovered jammed between the rear of 51 Park Place...and 50 Murray St.,” not far from the landing gear parts reported by FEMA... the newest find was [misreported as landing gear](#) (see [CNN](#) for example); Boeing did confirm according to nydailynews.com: “It’s actually a trailing edge flap actuation support structure from a Boeing 767, which is part of the underside of the wing and helps regulate plane speed.” No trackable “serial number” was found as rumored.



Source: [National Museum of American History, Smithsonian Institution](#)

Such numbers were found once. The day of the attacks a small [numbered bracket](#) was found south of the towers, seen on [CNN 9/12 at 1:09 a.m.](#) Using the Boeing 767 parts manual, it was [identified independently](#) years later as coming from a Boeing 767.

Among other “needles in the haystack” was the suspicious Saudi Arabia [passport](#) of Flight 11 hijacker Satam Al Suqami. (“[Terrorist Hunt](#),” ABC News, Sept. 12, 2001 [cached].) But no black boxes.

Specific Items Recovered

AT THE SITE

As historians watched the “cleanup,” instead of debris they saw artifacts and potentially priceless treasures. They knew a proper memorial would require that a variety of objects be kept. After the Port Authority convened a small committee, this responsibility fell largely on the architectural firm Voorsanger and Associates. Marilyn Taylor, chairman of Skidmore Owings & Merrill, and Saul Wenegrat the WTC art consultant were also included. (Dinitia Smith, “[Competing Plans Hope to Shape a Trade Center Memorial](#),” *New York Times*, Oct. 25, 2001, p. 3 of 5.) See Wenegrat in “[Relics from the Rubble](#)” at 40:20. Bart Voorsanger tasked his young coworker Mark Wagner with the job of identifying and collecting pieces that would either preserve part of the World Trade Center or tell the story of its destruction.

Although [the PBS "America Rebuilds" website](#) says that job took five months, in an online interview at the [9/11 Memorial website](#), Wagner said he was there from late September through May, 2002. The memorial website explains, “Mark Wagner is an associate partner at the architecture firm Davis Brody Bond Aedas, the design architects for the 9/11 Memorial Museum. In the aftermath of 9/11, Wagner served as Project Architect for the World Trade Center Archive.”

Wagner, like many sources cataloged in my “9/11 Debris” video (see [Appendix 1](#)), was surprised at how difficult it was to identify anything at the site.

“People asked me if I saw a lot of furniture in the debris,” said Wagner. ‘But just about everything from the Towers was pulverized. It was surprising to find anything recognizable.’” - http://www.pbs.org/americanrebuilds/artifacts/artifacts_08.html

For this reason items recovered for the memorial included mostly pieces of steel. (**See full inventory of items at** <http://nistreview.org/WTC-STORAGE-AT-JFK.pdf> [mirror].) I should say “memorials” plural, because the beams and pieces of beams have been sent across the world, to 50 states and 5 countries (Paula Rogo, “[Twin Towers Steel Sent for Memorials Across America](#),” Reuters, Jun. 23, 2011), including Afghanistan, where pieces of WTC steel have been buried in numerous locations by the Green Berets (9/11 Memorial & Museum email newsletter, Aug. 8, 2011). Domestic memorials have included [Beverly Hills, California](#), [Pittsburgh, Pennsylvania](#), [Flanders, New York](#) (also Quogue, Rocky Point, and Sound Beach, for examples), [Cherry Hill, New Jersey](#), [Purcellville, Virginia](#), [Mesquite, Texas](#) (and at least 2 others in Texas)....

[As seen in the History documentary “Relics from the Rubble,”](#) [mirror] one 8-ton horseshoe shaped piece powerfully displayed the intensity of the forces at work during the collapse. (A rare image of this beam is on the next page.) The most difficult force to understand was [again] the heat.

“We saw a lot of pieces like this,” said Wagner. “Typically, when steel bends, it buckles and tears. The smooth bend on this piece shows the steel became malleable – a pretty good indication of how hot it was.” (http://www.pbs.org/americanrebuilds/artifacts/artifacts_09.html) An ironworker told Wagner, “I found it hard to believe that it bent because the size of it and how there's no cracks in the iron. It's bent without almost a single crack in it. It takes thousands [of] degrees to bend steel like this.” Then Wagner said, “Typically you'd have

buckling and tearing on the tension side, but there's no buckling at all.” (“Relics from the Rubble”)

It's interesting to see Wagner change his story (from heat to no heat) in the 9/11 Memorial website interview 9 years later. A touchy subject I guess. Of course, this was after a leading statement from host Clifford Chanin, Senior Program Advisor at the Memorial Museum.

“WAGNER: 'The steelworker said there's no way that that bent.'

CHANIN: 'And it was pressure it was not heat. These objects are not damaged by heat.'

WAGNER: 'This was just the speed of the collapse. And it was remarkable. That piece in particular was remarkable, because it happened so quickly. You didn't have the tearing and buckling you would normally have if you start to bend a piece - of compression and tension. This piece just bent cleanly.'”

- End of interview part two, [9/11 Memorial website \(view with commentary\)](#)

About 1,350 pieces of steel, many weighing over 30 tons, were preserved in Hangar 17 of Kennedy International Airport (Rolando Pujol, “[The Relics of the World Trade Center](#),” amny.com, Sept. 4, 2008.). The famous “Last Column” now at the Memorial Museum was weighed at 62 tons (“[WTC Relics – The Last Column](#),” amny.com video) – see also [WTC Relics: The Steel](#), by amny.com [Note that [NBC News](#) said 58 tons.]. The NY Times said “There are 1,800 to 2,000 pieces, half of them very large, which are available for carting away, at the recipient’s expense. This does not include some 200 pieces, among them the most familiar and iconic, that have been claimed by the [National Sept. 11 Memorial and Museum](#).” (Michael Wilson, “[Sept. 11 Steel Forms Heart of Far-Flung Memorials](#),” Sept. 6, 2009). The article has told us about the pieces: “...some weighing tons, others little more than twisted sheets of metal the size of a street sign.”



[Source](#): NIST FOIA, 911datasets.org release 9, Banovic

From this collection came many of the 236 pieces chosen for inclusion in the NIST study. Seen above with its label “B-1022” is an “unidentified wide flange” beam, [as listed](#) on p. 68 of [NCSTAR 1-3B](#), “Steel Inventory and Identification.”

From this collection came many of the 236 pieces chosen for inclusion in the NIST study. Seen above with its label “B-1022” is an “unidentified wide flange” beam, [as listed](#) on p. 68 of [NCSTAR 1-3B](#), “Steel Inventory and Identification.”

“Many of the beams were twisted and distorted as though made of rubber or wax. Some beams were over 6 [inches] thick and bent like pretzels. Structural engineers, who are experts in steel structures that have suffered earthquakes and explosions claimed to have seen nothing like this before and could not imagine the kind of pressure and heat required to do this kind of damage.”

- [Wendy Neu of Hugo Neu Schnitzer East](#) (Hugo Neu Corporation) to the Empire State Chapter of ISRI (Institute of Scrap Recycling Industries) on Nov. 28, 2001.

Unfortunately, due to the level of corrosion on the above piece and many others, the stenciled ID numbers telling exactly where the beam went in the buildings – are gone. The numbering system was described in detail by author Angus Gillespie and quoted by FEMA.

“For example, a given piece might be marked, 'PONYA WTC 213.00 236B 4-9 558 35 TONS.’ Translated, this meant the column was destined for the Port of New York Authority's World Trade Center as part of contract number 213.00. Its actual number was 236B, and it was to be used between floors four and nine. The derrick division number was 558, which determined which crane would lift it onto the building and the order in which it was to be erected.”

- Angus Gillespie, [Twin Towers: The Life of New York City's World Trade Center](#), Rutgers University Press, New Brunswick, NJ, 1999, p. 89 and [FEMA 403 Appendix D](#), “WTC Steel Data Collection,” p. 4. ([example](#) at G.Z. – or see [NCSTAR 1-3B](#))

Besides the steel collection that humbled the million-dollar FEMA WTC investigation, those working for a memorial saved tons of WTC essentials. In the FEMA photo below, and in the [amny.com video](#), you can see the WTC 1 TV antenna in pieces. Elevator motors were lined up. Aluminum from the towers' facades was collected in piles.

Perhaps the most identifiable item saved for a memorial was the centerpiece of the plaza, the [Koenig Sphere](#). See the process of the sculpture's relocation to Battery Park in “[America Rebuilds](#).” [[mirror](#)] This was the temporary New York 9/11 Memorial.



[Source](#): FEMA News Photo, 9/13/2001

The 20-ton, symbolic punctured gold ball helped mark “ground level” inside the varying elevations of the pit/pile. As seen in this [map of the site](#), “The Sphere” stood just outside the edge of the bathtub's east wall. “It had been knocked off its base, but was still in its original location,” said Mark Wagner (“America Rebuilds” [website](#).) One story below was 22 feet of shopping mall space. (“Merritt & Harris Property Condition Assessment... Retail Mall and Plaza,” 2000, p. 81.) Looking at a [map of the WTC Mall/Concourse Level](#), one could see that below “The Sphere” was a hallway right in front of the GAP apparel store. The Plaza right there had collapsed [according to engineers](#) (see a [similar map](#)). It's hard to tell when looking... especially when viewing the [scene from above with LIDAR](#).

See “[The Sphere](#)” on 9/16 (FEMA News photo) standing tall among its apocalyptic surroundings. ([Source](#).) See also FEMA News photo [5313](#) (cropped above) taken 9/13, where

in the foreground the granite blocks pave the top of a reinforced concrete bridge of caved floor that was the Plaza. (Merritt & Harris, Ibid., p. 87.) “The Sphere” is covered in [“Relics from the Rubble” at 40:49](#).

While not very specific of an item, saved from burial or recycling was a [mass of rebar and wire](#) with a shredded kaleidoscope of debris, trapped in time. The sole of a shoe, torn fabric.... (“Relics from the Rubble”) The NIST visited JFK and photographed this, also. ([1](#), [2](#)) Small, identifiable objects mostly surfaced at the landfill debris sorting facility.

AT FRESH KILLS

Mark Schaming, Director of Exhibitions at the New York State Museum, narrated the [“Fresh Kills”](#) portion of the E. Sauret/Turn of the Century Pictures film [“Collateral Damages,”](#) in which we get a detailed list of recovered personal property and other items of interest. Another valuable source is [“RECOVERY”](#) by the New York State Museum.

Schaming described the findings at the landfill site as such:



“Somewhere in that finely sifted heap of debris are the remains of my missing brothers.” - Battalion 27 Chief Mike Puzziferri in [“9/11: The Firefighters' Story”](#) (Berriff 2002)

“We saw nothing we could recognize in the field. We expected to see chairs and file cabinets and what was left of offices. Everything was reduced to the finest state. It basically looked like mountains of dirt.

There were hills of gray dirt, vast expanses of wire, twisted rebar, fields of steel, and fields of vehicles.” - [“Fresh Kills”](#) chapter of “Collateral Damages,” Ibid.

There were more than 4,000 photographs among the [54,000 pieces](#) of personal property, all of which were carefully cataloged. [Time.com said](#) 65,000 personal items were recovered from Ground Zero, including stuff found at Fresh Kills. The Time.com article goes on to tally jewelry found: 144 rings, 437 watches, 77 necklaces, 119 earrings and 80 bracelets. Also listed are 4 autographed baseballs and 3 Auguste Rodin sculptures (one of which is seen in the “Fresh Kills” slideshow, in pieces). There were many credit cards and plastic ID cards (described as one of the most resilient personal objects found), about \$75,000 in cash and coin (last 2 sources: [“Relics from the Rubble” at 27:00](#)) – [many coins melted](#), 200 keys (some or perhaps all just to the WTC, it is unclear in “Collateral Damages”), 25 to 30 numbered metal elevator placards.... Many burned and [melted guns](#) were recovered from the Secret Service “ammunition bunker” in WTC 6 (described as exploding afterward by WTC 1 collapse survivor firefighter Jay Jonas in [Report from Ground Zero](#), Ibid., p. 102.) Hear some explosions yourself, about 45 minutes after the WTC 1 collapse. ([Lucia Davis](#))

There were 1,358 vehicles in total processed at Fresh Kills – civilian and law enforcement and FDNY, and more. [Lost vehicles](#) belonging to the FDNY included “twenty-seven fire engines..., thirty ladder trucks, five rescue trucks, seventeen battalion chief SUVs,

one division suburban, and twenty-two sedans.” (Dennis Smith, [Report from Ground Zero](#), *Ibid.*, p. 195.) Also 144 police vehicles. (history.com “[Archiving the WTC](#)”) [Some video](#) of the vehicle graveyard comes from NIST FOIA release 10, WTCI 33 NYC Pt1of4, and from “9/11: The Firefighter's Story” by Paul Berriff, [clip here](#) ([mirror](#)). One of the ladder trucks – Ladder 3 – was chosen for inclusion in the 9/11 Memorial Museum, after being saved from recycling by Mark Wagner. (That violent recycling was a focal point in the documentary “Collateral Damages.”) The destroyed apparatus and others were taken to JFK Airport Hangar 17 for storage. See the vehicles there in panoramic photos under the tab “INSIDE THE VEHICLE TENT” at the [New York Times website](#). Or see the Ladder 3 rig within hours of its demise [on 9/11](#) in video by Steve Spak (frame seen below). From there it went to Fresh Kills. [In this video it waits at JFK Hangar 17 to enter the 9/11 Memorial Museum.](#)



Some FEMA photos from Fresh Kills are numbered [5462](#) (vehicles), [5463](#) (dirt and twisted debris), [5464](#) (wide shot with equipment), [5465](#) (5464 zoomed with monochrome debris pile), [5471](#) (NYPD in biohazard suits), and [5473](#) (aircraft engine).

The “vast expanses of wire” Schaming mentioned largely came from the concrete reinforcement, as seen pre-construction in a [NIST FOIA image](#) from Laclede Steel Company ([see more](#)). (Source: 911datasets.org release 29) That was laid on every floor before pouring the 4-inch layer of lightweight concrete ([NIST NCSTAR 1](#), p. 10.)

NOT RECOVERED

My collected professional observations highlighting the astonishing degree of pulverization have been explained away in the media with statements like “the building is an egg-crate

construction that is about 95 percent air, explaining why the rubble after the collapse was only a few stories high.” (Thomas W. Eagar and Christopher Musso, "[Why Did the World Trade Center Collapse?](#) Science, Engineering, and Speculation," JOM, 53 (12) (2001), pp. 8-11. William Langewiesche in [American Ground: Unbuilding the World Trade Center](#), wrote in the early pages:

*“Passersby peering at the ruins from afar, from beyond the perimeter fences along Broadway or Chambers, sometimes expressed amazement that two 110-story buildings could collapse into a mass that was relatively so small. But there was no mystery to the dimensions. Because the Twin Towers had been as much as 90 percent air and 10 percent structure, they had contained the equivalent of approximately eleven solid stories of steel and concrete – and beneath these uneven mounds, which stood five stories high and spilled into the streets, their remnants **filled** the foundation hole to bedrock, six levels down.*

Indeed, from the workers' close-in view, the ruins accounted for the former buildings all too precisely. It became apparent that the initial release of powdered concrete into the air, however large it had been, had amounted to an insignificant proportion of the total weight, and that almost every pound of the original structure remained to be extracted, inspected, and hauled away. So the ruins were not small at all. On the scale of people at the site they were in fact gargantuan – not mounds but mountains that reduced the expeditions venturing out across them to ant-sized columns traversing steel slopes. More than 1.5 million tons of heavy steel and debris lay densely compacted there, tied together like steel wool and complicated by the existence of human remains.” - Langewiesche, pp. 11-12. [emphasis added]

For a good intermission here, please watch "[World Trade Center a 3D Visualization](#)," by YouTube channel Natetruth, to help understand the two towers' magnitude. In response to Langewiesche's quote "remnants **filled** the foundation hole to bedrock, six levels down" look at the images/maps above under "[Miracle](#)." The bathtub in reality was only halfway "full."

While it's been argued that the concrete pulverization was not impossible for gravity alone to accomplish (F.R. Greening, Ph.D., [ibid.](#)), there is no dispute that there was 425,000 cubic yards of concrete used in building the two towers. (ABC News, Sept. 13, 7:36 p.m. - see Appendix 1) That would have been a solid cube 225 feet high, or 18 $\frac{3}{4}$ WTC stories.

According to the construction era Port Authority PR department, the concrete used in both towers could have paved a five-foot-wide sidewalk from there to the Washington Monument (in D.C.), or 200 miles. (Karl Koch III, [Men of Steel: The Story of the Family that Built the World Trade Center](#), *Ibid.*, p. 266.) Of course that includes basements and parking garages, about half of which remained intact after the "collapses." (See above, "[Miracle](#).")

Now look for part of that mass in some of the [images](#) provided in the first

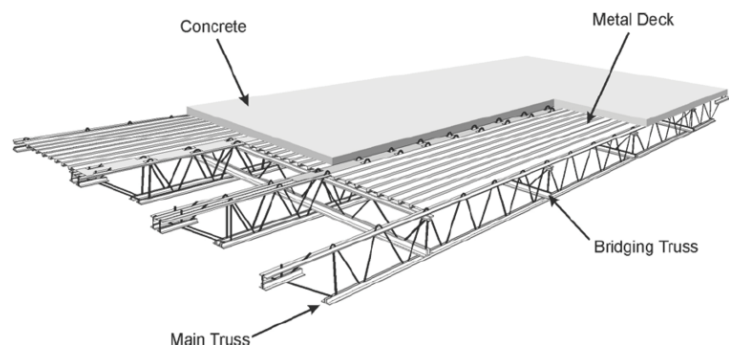


Figure 1-6. Schematic of composite floor truss system.

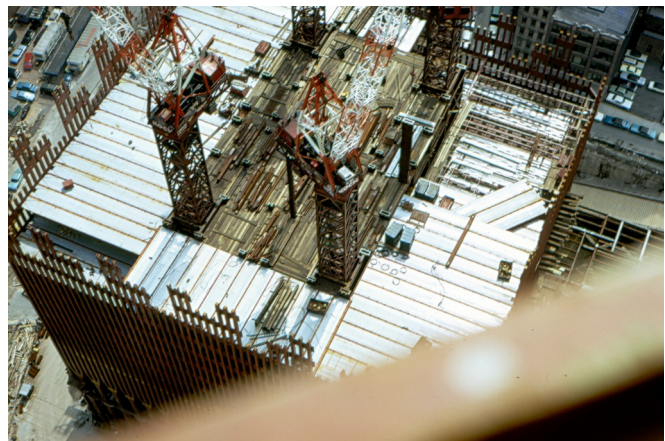
Source: NIST NCSTAR 1, p. 10.

pages above.

*"I've seen collapses and d - demolished buildings. But nothing like this, this was - unbeliev... like I said, there wasn't a door, there wasn't anything to be found. It was all - disintegrated - all rubble. **Concrete was small, little pieces, not even slabs.** No desks, no furniture, no computers, no phones, no anything. So I imagine – I imagine the people were the same as the building. Nothing left." [emphasis added]*
- Tom Spinard, FDNY Engine 7 in "9/11: The Filmmakers' Commemorative Edition"

The concrete in most floors of the towers had been poured over about 5,800 prefabricated floor sections (Karl Koch III, *Ibid.*, p. 318) that joined the [core structure](#) to the exterior walls. Each one had six supports of triangular frameworks called trusses or bar joists, which used 1.09-inch diameter steel bar/rod and measured 29 inches deep (FEMA, Appendix B, p. 2.) After installation side by side, the double trusses were spaced evenly across the floor at 6 feet 8 inches. (FEMA, *Ibid.*) [See truss fabrication at Laclede Steel \(stills here\)](#). Or [see floor installation](#) before concrete application. (Source: NIST FOIA 911datasets.org release 29) [\[more\]](#) Notice the truss rods extended up deeply into the concrete at regular intervals for added strength. On the underside, bridging trusses provided more stability.

These floor sections were either 60 or 35 feet long and mostly 20 feet wide (NCSTAR 1, p. 10.), all with 1-1/2-inch deep corrugated, 22-gauge sheet steel (0.03 inches/0.76 mm thick – designed to hold the 4 inches of concrete) (FEMA/NIST, *Ibid.*) These crucial structural elements also contained heating, ventilation, and air-conditioning ducts as well as telephone and power line ducts built in. Ceiling tile and lighting fixtures would go beneath after installation... and after spray-on fireproofing application. That meant 10,000 lighting fixtures in both towers, according to Mr. Koch, p. 322.



Five days after 9/11 when Koch gained access to the site, he looked for some sign of these **5,800 floor panels** and was shocked to report that he “couldn't identify a single one.” (*Ibid.*, p. 367.) “One day a few months after the attack,” he drove out to Fresh Kills to meet up with a long-time friend, Tom Petrizzo, a “trucker who had been hired by the city to haul away all the scrap metal.” The amazing part about this was that **that** man had helped *deliver the floor panels to the site in 1969* when the tugboat strike had shut down the barge operation [and required a police escort for the convoys of 10 40-foot flatbed trucks that had to drive late at night since they were so wide. {*Ibid.*, p. 327-8}]. (*Ibid.*, p. 374.)

Well, when Koch “asked him if he'd seen any floor sections,” Tom replied,

*“No, that's what I don't understand. [...] I didn't see one goddamn floor deck come here with a bar joist in it. They must have disintegrated. Because they did not get here. And I handled this from day fu*kin' one.”*

“Did they send you any decking that was loose, no joists?” [Koch] asked.

"None," Tom said.

"None? Well, that's impossible. There were six thousand of them."

"There's stuff crumpled up, but go identify it as a floor deck if you can. Impossible. A lot of guys come and ask me, they know I was involved in bringing 'em over, but Karl, not one came where I could say, 'Oh, here's one.' I could not show anybody a floor deck and say, 'This is what I hauled over.'"

I [Karl] couldn't believe it. Not one goddamn floor panel." - Koch, Ibid., p. 375. [* added]

The new NIST image gallery contains several [images from scrapyards \(sample 1., 2., 3., 4.\)](#)... with a reference to NCSTAR 1-3B, "Steel Inventory and Identification." That document has 2 images of truss material ([1.](#), [2.](#)) not unlike that seen in the image from NCSTAR 1-3 here. Trusses apparently retained none of their triangular framework – no straight lines – as if in every instance throughout the building, the steel had been heated significantly. No structure remained.



Source: NIST NCSTAR 1-3, p. 93.

FEMA images at Ground Zero – there are dozens – never produced triangular rod shapes, and rarely turned up a corrugated steel pan. See [4211 \(source\)](#), which focuses on the [famous cross](#) (now part of the [Memorial & Museum](#)) where it was found inside WTC 6, draped with torn, once molten aluminum sheathing from the north tower's exterior. See [3885 \(source\)](#) for another glimpse of shredded floor pan. Granted, the metal was thin.

Before moving on, let's take a moment to imagine stacking up these fully assembled and installed floors like square chips 275 feet high (23 stories). There are two of those. Now take inventory of the additional 79,000 tons of steel for each tower (not counting rebar or grillages [NCSTAR 1-3, p. 16]), also stacked neatly by type. Note that only a few [beams show evidence of explosives](#). There's no reason to think large numbers of columns were "turned to dust." As seen below in "Molten Steel," WTC dust investigator Mark Basile made an interesting point that the majority of his dust sample's **iron spheres were not from A36 structural steel**. (See his [video at 35:30](#).)

Another part of the building many people noticed not literally everywhere as it should have been, was the window glass. Of course it shattered, but listen to this:

"I went to the NYC Police Museum today to verify that the article and accompanying text were genuine. They are, indeed. Furthermore, there were a few shards of glass, with the following text, which I copied down:

'Glass was a rare find at Ground Zero, where these shards were recovered. The collapse and fires pulverized and melted most of the glass from the Twin Towers 43,600 windows.' - Metamars, Jan. 8, 2009 at [the 9/11 Forum](#)

"You didn't find a shard of glass – anything that looked like it would be used by a person, you just didn't see it. It was just concrete, steel, that was it – and dust." ([FDNY Engine 285 firefighter](#) in "Collateral Damages," Ibid.) "I never saw a file cabinet, never saw a desk, a chair, never saw a telephone, never saw any type of office furniture. **There is no glass**. It just disappeared and has become part of this fluffy white or gray dust." (Assistant Chief of Department, FDNY, Harry Meyers in Dennis Smith, [Report from Ground Zero](#), Ibid., p.



Source: New York City Police Museum exhibit “9.11 Remembered” [Enlarge image.]

163 [emphasis added].) “Certainly, every firefighter who has been at the site knows that there is **not a piece of glass** or marble to be seen anywhere, not a desk, a sink, or a doorknob. (Dennis Smith, *Ibid.*, p. 341. From his entry on November 2 [emphasis added].)

There were 600,000 square feet of glass in the two towers, according to Robert Krulwich, [ABC News](#) (aired 9/13 at 7:35 p.m.)

More about the glass: “Powerful gusts can shatter windows, so for the sake of safety tempered glass eight times stronger than needed was specified. Planners designed the towers to withstand prolonged winds of 150 miles per hour.” (Angus Gillespie, *Ibid.*, p. 81.) “The twenty-two-inch spaces between the columns are for the windows, which are recessed ten inches in order to shade them from all but direct sunlight. The architect specified a bronze-tinted, heat-reflective glass for the 43,600 windows.” (Gillespie, *Ibid.*, p. 108.) The glass itself was eighteen and a half inches wide. The 107th floor of the north tower had 30-inch wide windows, for the Windows on the World restaurant. Likewise, “extra-wide windows” were needed for the interior observation deck of the South Tower. (*Ibid.*, p. 216.)

The windows spanned from just above the floor to the ceiling. The foot-high air vents ran the length of the floor. (See them in [this video \[mirror\]](#), source: NIST FOIA, 911datasets.org release 30, 42A0353 – G30D7.) Gillespie estimates the surface area of the towers to be about 30% glass (p. 165), as opposed to the predominant style of modern architecture known as the “International Style,” which uses on average about 60% glass... like WTC Building 7, whose glass was also a part of the WTC dust.

“Each tower has fifty-eight vertical columns of windows per side, and each column is

numbered. The [window washing] machine does about twelve columns of windows per day, so it takes five working days, or one week, to do one side of the building. There is a turntable at each of the four corners on the roof, so at the end of the week, the machine turns the corner to deal with another side. It takes four weeks, or one month, to do the whole building.” - Gillespie, Ibid., p. 215

“The initial debris estimate included **125,000 tons of glass**, 250,000 tons of steel, 450,000 cubic yards of concrete, 12,000 miles of electrical cable, and 198 miles of ductwork.” [emphasis added] (Phillips & Jordan, Inc., “Anatomy: World Trade Center/Staten Island Landfill Recovery Operation,” p. 2. Document originally at the Disaster Recovery Group web site (dead link) but [cached at 911depository.info](http://911depository.info).) Really? This and other initial debris mass estimates (collected below) were calculated in one of two ways, sometimes a mix of the two: observation or pre-9/11 inventory. The P & J number above must have been the second kind.

Silicate, or SiO₂, is mixed with other materials to lower the melting point of glass to about 1500°C (2700°F) – see <http://en.wikipedia.org/wiki/Glass> – so if the NYPD Museum and the above photo are correct and the glass did melt, then there were some extraordinarily hot temps going on. WTC fire temperature: 1000°C ([NIST faqs](#) [7]).

[USGS](#) [emphasis added]: “**Glass shards, fragments, and spheres are also present in the dust samples**. The microscopic glass shards and fragments are less abundant than the ubiquitous slag wool fibers in the fine dust (<150 µm). Most of the glass fragments fall within the compositional range for soda lime glass, a common type used as window glass (TIMA, 1991). Other glass fragments are present which contain mostly Si with trace amounts of Na, K, and/or Al. The majority (> 90%) of glass spheres, generally less than 500 µm in diameter, are of slag wool composition.” So that 10% found in the dust... makes me wonder.

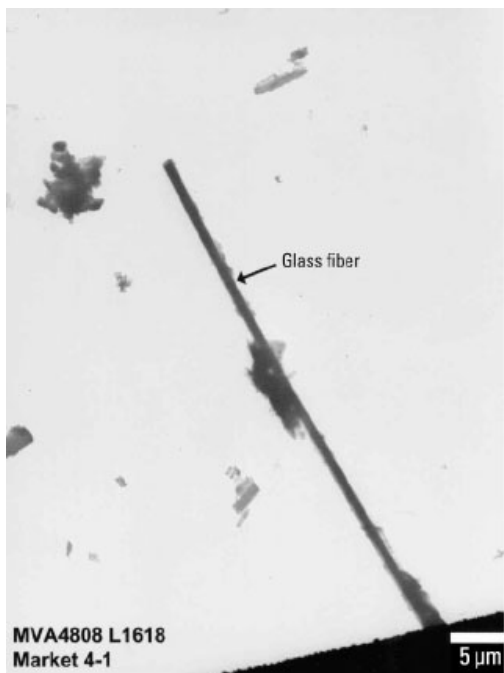
Glass was found mostly by mechanical means, when the Fresh Kills shaker screens separated the debris into different size classes. (See [above](#).) “Upon their collapse, the twin towers were literally pulverized. Workers at the Staten Island Landfill reported not finding glass pieces larger than three inches.” ([U.S. Army Corps of Engineers website](#) [cached])

To find the glass, one had to look in the dust.

“Small shards of glass containing mostly silica and magnesium were also found.[...]”

*This cloud comprised a complex mix of pollutants, among them the products of combustion of 91,000 L jet fuel, pulverized building materials, cement dust, asbestos, **microscopic shards of glass**, silica, heavy metals, and numerous organic compounds....”*

- [Maixin Wu, et. al.](#), “Case Report: Lung Disease in World Trade Center Responders Exposed to Dust and Smoke: Carbon Nanotubes Found in the Lungs of World Trade Center Patients and Dust Samples,” *EHP*, Dec. 2009. [emphasis added]



The WTC dust was composed of 40 percent glass fiber, according to one of the most comprehensive studies done. (Paul J. Liroy, et. al., “Characterization of the Dust/Smoke Aerosol that Settled East of the World

[Source](#): Paul Liroy, et. al.

Trade Center (WTC) in Lower Manhattan after the Collapse of the WTC 11 September 2001,” *Environmental Health Perspectives*, Vol. 110, Number 7, July 2002.) Remember that windows weren't the only form of glass in the place. Not only were there light fixtures, mirrors, TVs and computer monitors, but also there was fiberglass insulation. This widely used insulation was also called slag wool or mineral wool. “These three [dust] samples were composed primarily of construction materials, soot, paint (leaded and unleaded), and glass fibers (mineral wool and fiberglass).” (Lioy, et. al.)

“The Cortlandt Street sample was mainly composed of construction debris [including vermiculite, plaster, synthetic foam, glass fragments, paint particles, glass fibers, lead (Figure 3), calcite grains, and paper fragments], quartz grains, low-temperature combustion material (including charred woody fragments), and glass shards. Chrysotile asbestos fibers were estimated to comprise < 1% of the sample by volume....” - Lioy, et. al., Ibid.

The U.S. Geological Survey said the “dust deposits formed from the WTC collapse are heterogeneous and are composed largely of particles of glass fibers, gypsum wallboard, concrete, paper, **window glass**, and other miscellaneous materials commonly used in building construction....” ([USGS](#), “Environmental Studies of the World Trade Center Area, New York City, after September 11, 2001” [emphasis added, as in next 3 quotes].)

*“The dust also contained a large amount of an **unusual** material: glass fibers. Both towers were 110 stories high and had 880 stories of windows in total since there were 110 stories with four walls times two sides of windows. These windows had been crushed by the collapse of the towers. These were different than other materials since the **glass windows disintegrated into fibrous dust** as well as glass shards [sic].”*

- Paul J. Lioy, Dust: The Inside Story of Its Role in the September 11th Aftermath, Rowman & Littlefield, New York, 2010, p. 96.

*“[O]ver 50 percent of the mass of the WTC dust was made up of the cement and carboneous materials. (Carbon is the fourth most abundant element found in inorganic and organic forms.) As part of the carboneous materials, there were significant quantities of cellulose (paper). Most of the rest of the mass was made up of the glass fiber materials. Some of the **glass fibers were formed from the disintegration of glass windows**. Other fibers released during the collapse would have been part of interior wall board and ceiling tiles. Some of the fibers were characterized as slag wool and would become known as a specific and identifiable component of the WTC dust.”*

- Paul J. Lioy, Ibid., pp. 96-97.

*“The fibrous material was composed of disintegrated material that was present in building interiors or on the exterior. As time went on, we would call a large portion of it slag wool, based on work by the United States Geological Survey. However, there were **other types of fibers that became of interest, including glass. The composition of the nonfibrous portion of the dust is simple to understand....”*** - Paul J. Lioy, Ibid., p. 101.

...as opposed to the abundant, microscopic fibers of glass which is **hard to understand**, right? See my article "[Glass a 'Rare Find' at Ground Zero](#)" for even more on this topic.

For many people working with the debris, it wasn't the construction materials so much as the personal, human things that were missing. “It was like the surface of another planet. ... All there was, was - powdered debris and metal. It was a - a very strange scene.” (Dan Nigro, FDNY Chief of Dept. 2001-2002, in “The Conspiracy Files: 9/11,” BBC, 2007.)

NYPD Deputy Inspector and lead investigator on-site at Fresh Kills (working with FBI),

James Luongo, when asked if there were one particular artifact of interest, replied:



CRT vs. LCD

“I think the lack of artifacts stands out to me quite a bit. I think the fact that I haven't seen a door, I haven't seen a phone, I haven't seen a computer. I haven't seen a doorknob. I think that stands out.”
-“Relics from the Rubble” (History, 2002)

Note that there were roughly 42,000 doorknobs used in the construction of the WTC towers. (Karl Koch III with Richard Firstman, Men of Steel: The Story of the Family that Built the World Trade Center, Crown Publishers, New York, 2002, p. 322.) Another specific comment on the missing doorknobs came from author Dennis Smith above, heading the chapter “Bodies” and quoted once again a few paragraphs above, since he also listed glass as missing.

Mentioned by numerous recovery workers were the missing thousands of computers and computer monitors. Remember in 2001 the screens were cathode ray tube (CRT) boxes, with thick glass and heavy metals, weighing about 20 pounds each. The vented plastic cases hogged most of a person's desk! And yet after the buildings fell, “There wasn't a computer screen, a laptop. There was no office- I mean it was, you know, two 110-story buildings – of office equipment. It's just incomprehensible.” (Tom McHale, PAPD/Ironworker in “Metal of Honor: The Ironworkers of 9/11” by Rachel Maguire, 2006) “You don't find a desk. You don't find a chair. You don't find a telephone, a computer.” (Joe Casaliggi, FDNY Engine 7 in “9/11: The Filmmakers' Commemorative Edition”) “All the furnishings and the fixtures inside the building – none of that existed after the collapse. There were no desks. There were no phones, no computers, no copy machines. No chairs, nothing. It had all been pulverized. [...] It was just pulverized into this dust.” (Captain Jay Jonas, FDNY Ladder 6 in “Inside the Twin Towers,” Discovery Channel, 2006)

There must have been hundreds of copy machines, thousands of desks - each with a heavy cathode ray tube (CRT) monitor, a telephone, and a boxy computer. Adding in WTC Building 7, one researcher concluded “at least ten thousand PCs, in addition to hundreds of servers and mainframe computers connected to them, were pulverized into dust that day or vaporized by the fires in the subsequent months.” (Juan González, Fallout: The Environmental Consequences of the World Trade Center Collapse, New Press, 2002, p. 21.) We can't forget the thousands of various chairs, tables, shelves with books and trinkets, the thousands of filing cabinets (some so large they required the floor trusses be reinforced to support the additional load [see NIST NCSTAR 1-1C screenshot]).... It's hard to estimate the mass of all these items combined, or to imagine how much space they should have occupied in the pile.

There were in fact hard drives recovered from the rubble. Interestingly, some were the subject of a Department of Defense investigation into suspicious financial transactions purportedly made from the doomed buildings in their final hour. Findings of the inquiry remain undisclosed, if there were any. The damaged hard drives, some encased in concrete dust, required a unique and expensive recovery process available only in Europe. Watch this important German TV news report from Mar. 11, 2002, which describes the intensive CONVAR Deutschland GmbH Data Recovery Center project. See another documentary

[source](#) from 2006 [[mirror](#)]. The subject of foreknowledge and stock market activity – directly noted in the German report – is fully covered in the *From the Wilderness* article “[Profits of Death – Insider Trading and 9-11](#).” A related European TV segment, “[Zembla over voorkennis 9/11](#)” ([mirror](#)) directly quoted this article and its source, Michael Ruppert, author of the acclaimed 9/11 conspiracy case [Crossing the Rubicon: The Decline of the American Empire at the End of the Age of Oil](#) (New Society, Gabriola Island, BC, 2004). In this paragraph, therefore, we have found another motive (greed) for incinerating the buildings' contents, if not only to speed up the recovery and cleanup process, thereby decreasing the window of opportunity for an investigation to begin.

While computer records had been obliterated, what was on paper had to be physically swept up with the dust. Some of the paper **was** dust. “In morphologic analyses we found that a majority of the mass was fibrous and composed of many types of fibers (e.g., mineral wool, fiberglass, asbestos, wood, **paper**, and cotton),” the 3 samples containing 9.2, 10, and 20% cellulose, for an average of 13.2% (Lioy, et. al., Table 1). “Significant amounts (≈10% of the mass) of cellulose were found in all three samples. This observation is consistent with the release of large amounts of disintegrated paper and other products that were originally part of the indoor work environments.” (Lioy, et. al., *Ibid.*) “Because people worked in the offices and carried on their daily activities in the various businesses that were housed in the WTC or were visitors to the restaurants..., the WTC dust also contained cellulose from paper, napkins, and other paper products, but it was not present as free molecules since it was used in paper products.” (Paul Lioy, [Dust](#), *Ibid.*, p. 95.) Nevermind the copy machines, printers, faxes....



Photo by Abe Conby, 9/11/2001 (NIST FOIA, 911datasets.org release 2)

When the planes hit the buildings, paper flew out and caught the wind. Reflecting the sun, it was captured in many videos “sparkling like glitter as if some sort of magic was involved in the catastrophe.” ([JoeFelice on YouTube](#), “Artifacts of 9/11.”) Some of the paper flew to Brooklyn, as seen in the [Jennifer Spell video](#). In the Spell video (also used by [CameraPlanet](#)) she picks up some singed paper (before the collapses), as much of the paper was (despite the ABC News quote below saying it was “fully intact”). Note the [JoeFelice collection](#) of paper fallen to ground in Brooklyn after the collapses was **all** partially burned, as he made a point of narrating... not that he necessarily chose them because of that detail. (Two pieces feature black marks he thought was “tar.” One piece of insulation/tin foil and another piece of unknown material were both also charred.)

The paper caught people's attention. But file cabinets – steel, most of them – were not there in anywhere near the ratio required by the amount of paper littering the streets. In a word: “pulverized. Large portions turned into clouds, like this one.” (Robert Krulwich, [ABC News Sept. 13 at 7:35-7:40 p.m.](#)) He continues: “Still, there is this mystery. If some of the

hardest materials were vaporized, **how to account for the presence everywhere of paper** – fully intact letters, business forms, stationary. Paper is so fragile and combustible and yet somehow – maybe because we have so much of it – it was everywhere.” [[mirror 1](#) and [2](#).] More paper on the street images: [1](#). (NIST FOIA 911datasets.org release 14, CNN Dub4 Clip 29), [2](#). (John G./NFPA/NIST [Agree to terms, retry link.]



Source: Port Authority of N.Y. and N.J., NIST

David Shayt of the [National Museum of American History, Smithsonian Institution](#), made it known to the Port Authority Police and others that he was looking for a file cabinet. Shayt's employer had been allocated \$5 million by the U.S. Senate in order to collect

September 11th memories (“Relics from the Rubble” at 7:40). Finally he got one delivered to him, but it was from the concourse level shopping mall, Ben & Jerry's ice cream to be specific. ([Source](#) [see also “Relics from the Rubble” [at 33:25](#)]) Still it was scorched and melted beyond recognition.

Already quoted above was Assistant Chief of Department, FDNY, Harry Meyers. Yet another smart guy who “expected to see chairs and file cabinets and what was left of offices,” although at Fresh Kills and not G.Z., was the narrator from part of “Collateral Damages,” Mark Schaming (Director of Exhibitions at the N.Y. State Museum). Another man, experienced in disasters from being at the site of the Murrah Federal Building bombing: “I said, you know, in Oklahoma City you could see pieces of desks and chairs. There was something that told you this was an office building. At the World Trade Center site, it seems like everything was pulverized. (Col. John O'Dowd, U.S. Army Corps of Engineers in “World Trade Center: Rise and Fall of an American Icon”)

A final thought here, in what seems to be the professional consensus:

*“Fire Department Chief Mike Donoho of Texas Task Force 1 Urban Search and Rescue described the scope of the destruction, ‘Everything had its own look. In the area surrounding what was the two twin towers, there were several buildings still standing that were burned from top to bottom, and some of them were damaged by the collapse. But **the two towers – they were 110-story buildings. And there was nothing that you could put your hands on that resembled anything that would tell you this once was two 110-story office buildings.** What you had were large columns of steel that were just*

stuck into massive amounts of molten steel and other metals, that had just fused together from the heat and bonded together from the strength of the collapse. We dug and we dug and we dug, and we cut and we cut and we cut, and we did not see anything that resembled any type of furniture, any type of personal belongings. We found some pieces of things like a telephone, things like that. I think we found credit cards a few times, and we found a couple of stuffed animals. But you would expect to see, like, a bunch of desks, a bunch of chairs. The only way I can explain it is, if you take a car and put it in one of those machines where they crush it and make it look like a cube, and you can't recognize what it is, that's what the whole area looked like. It looked like a massive, molten mess that had been fused together, like a car that had been cubed and crushed. With all that heavy, heavy stuff, there were wires, rebar, concrete. Most of it was just steel. A lot of what we were walking on was just molten steel.”
- <http://www.theeagle.com/septanniv/091102firefighter.htm>

MOLTEN STEEL

See the NIST 2006 [answers to frequently asked questions](#) (number 13) for the explanation of their investigation's disregard for this [non-] evidence, fully quoted here:

“NIST investigators and experts from the American Society of Civil Engineers (ASCE) and the Structural Engineers Association of New York (SEONY)—who inspected the WTC steel at the WTC site and the salvage yards—found no evidence that would support the melting of steel in a jet-fuel ignited fire in the towers prior to collapse. The condition of the steel in the wreckage of the WTC towers (i.e., whether it was in a molten state or not) was irrelevant to the investigation of the collapse since it does not provide any conclusive information on the condition of the steel when the WTC towers were standing.

NIST considered the damage to the steel structure and its fireproofing caused by the aircraft impact and the subsequent fires when the buildings were still standing since that damage was responsible for initiating the collapse of the WTC towers.

Under certain circumstances it is conceivable for some of the steel in the wreckage to have melted after the buildings collapsed. Any molten steel in the wreckage was more likely due to the high temperature resulting from long exposure to combustion within the pile than to short exposure to fires or explosions while the buildings were standing.”

The last sentence above – like the entire official theory – was a logical assumption that ignored evidence to the contrary – specifically the spherical iron (etc.) particles in the dust, discussed below. And saying “the condition of the steel in the wreckage of the WTC towers (i.e., whether it was in a molten state or not) was irrelevant...” – was tantamount to saying the whole steel inventory of evidence was altogether worthless because conditions in the pile had tampered with it. True, the crime scene had been destroyed after a matter of days/weeks, but the scattered evidence wasn't all tainted, or else the NIST wouldn't have spent hundreds of hours analyzing its 236 pieces more than a year after 9/11. (See above, “[Investigations](#).”)

Due to the high temperatures involved in liquifying iron, this phenomenon cannot have come from any length of exposure to “combustion within the pile” *unless* under the ideal circumstances of a [blast furnace](#). Other than the accidental creation of such a design, the only logical conclusion is that the extreme temperatures were in fact present during the

demolitions. Then the molten steel was insulated and its temperature preserved. A random arrangement of fallen building structure would easily cause this type of void before creating a blast furnace. (I'm no engineer, so this assertion is also a question.)

Witnesses to the molten iron/steel have built a strong case. Of course none of them was aware they were involved in reporting data dangerous to the official story.

"The fires got very intense down there and actually melted beams where it was molten steel that was being dug up." (Richard Riggs, Debris Removal Specialist in "World Trade Center: Rise and Fall of an American Icon," History, 2002. [[Watch](#) for his name at 51:26. The quote is from vrt 54:00.]) How/when was this heat created? Fires in the pile, he must assume.

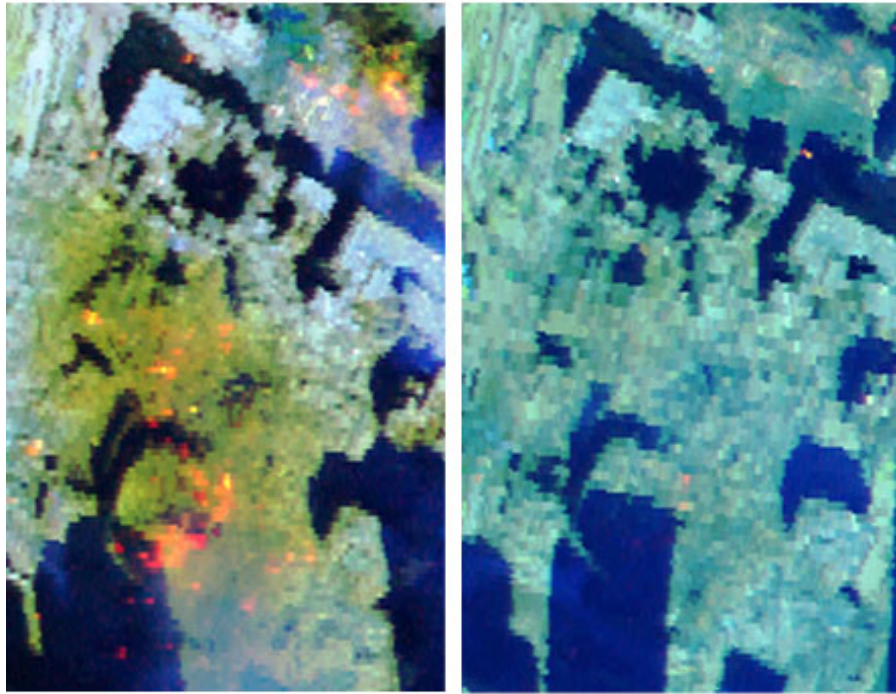
Voicing wonder, Fire Department Captain Philip Ruvolo also testified to the presence of molten steel on camera. "You'd get down below and you'd see molten steel – **molten steel** running down the channelways, like you were in a foundry – like lava." His FDNY brothers sitting with him agreed with that observation. [Watch](#). Source: Etienne Sauret's film "Collateral Damages." A popular review of that film chose to describe the above scene, emphasizing the shocking reality of "heat so intense they encountered rivers of molten steel." (Lou Lumenick, "Unflinching Look Among the Ruins," *New York Post*, March 3, 2004.)

"I saw melting of girders in [the] World Trade Center," said structural engineer Abolhassan Astaneh on PBS "[Newshour](#)," May 10, 2007. He was a professor of civil and environmental engineering at the University of California at Berkeley, who specialized in structural damage done by earthquakes, etc. He flew to New York on September 19, 2001 to help investigate the collapse of the towers. He gained access to much of the steel taken from Ground Zero. Astaneh came across "severely scorched [steel] members from 40 or so floors below the points of impact [by the planes]." (David Kohn, "[Culling Through Mangled Steel](#)," CBS News, March 12, 2002.) Well how did that happen? Was that documented? Where is that steel now?

"A veteran of disasters from the Mississippi floods [to] Mt. St. Helens, [Ron] Burger said it reminded him most of the volcano, if he forgot he was in downtown Manhattan. 'Feeling the heat, seeing the molten steel, the layers upon layers of ash, like lava, it reminded me of Mt. St. Helen's [sic] and the thousands who fled that disaster,' he said." - Francesca Lyman, "[Messages In the Dust](#)," National Environmental Health Association, Sept. 2003 [emphasis added]. (Ron Burger was "a public health advisor at the National Center for Environmental Health, Centers for Disease Control and Prevention, who arrived in New York to help September 11.")

Les Robertson [[Leslie E. Robertson Associates](#)], directing engineer while building the Trade Center, in a presentation April 9, 2002 at Stanford University, said he personally saw workers pull off "a big block of concrete and there was a – like a little **river of steel** flowing" at the B1 level of the WTC debris pile. ([Watch \[mirror\]](#)– [Source](#), NIST FOIA 911datasets.org release 29, folder 42A0346 – G29D32.) Describing a different speaking appearance by Robertson at the National Council of Structural Engineers Associations 9th Annual Conference, one source wrote, "As of 21 days after the attack, the fires were still burning and molten steel was still running." (James Williams, "SEAUNews, The Newsletter of the Structural Engineers Association of Utah," October 2001, p. 3. Source file expired: <http://www.seau.org/SEAUNews-2001-10.pdf>, but quoted [here](#) and [here](#).)

World Trade Center area, New York



Thermal Hot Spots
September 16, 2001 September 23, 2001

<http://pubs.usgs.gov/of/2001/ofr-01-0405/ofr-01-0405.html>

The assumed culprit in the WTC molten steel fiasco - Ground Zero “hot spots” - was [captured by aerial photography](#). On Sept. 16 and 23, photos were taken using Airborne Visible/Infrared Imaging Spectrometer (AVIRIS). See [“Fires in the Rubble Persisted for Months,”](#) by Jim Hoffman. Find much more at [0x1a.com...](#)

Author and DDC-approved journalist William Langewiesche was below the surface of “the pile,” exploring with engineers on more than one occasion. In [American Ground](#) he mentioned “the rattle of cascading debris, the ominous groaning of weakened structures overhead, or, in the early days, the streams of molten metal that leaked from the hot cores and flowed down broken walls inside the foundation hole.” (Langewiesche, *Ibid.*, p. 32.)

“Metal of Honor: The Ironworkers of 9/11” (Rachel Maguire, 2006) featured numerous fascinating comments on the extreme heat of underground fires, which the film confirms were finally extinguished mid-December. (Rivers of molten steel were not mentioned.) One experience from ironworker Larry Keating is repeated in a review by Linda Stasi: “The film shows how they crawled down through and up 100 feet of hot steel, even though sometimes it could explode when the buried ends were exposed to the air.” (See [http://www.najaproductions.com/...](http://www.najaproductions.com/)) Specifically, Keating said: “The grapplers were pulling stuff out, big sections of iron that were literally on fire on the other end. They would hit the air and burst into flames – which was pretty spooky to see.” ([Watch \[mirror\]](#))

“[America Rebuilds](#)” ([mirror at 3:25](#)) included comments on the extreme temperatures also, specifically mentioning “**molten steel**.” One of the workers said the fires were at one point “twenty-eight hundred degrees,” which in degrees Fahrenheit is a good round number for steel’s melting point. While this could have been an overstatement, it was important

information that should not have been discounted.

"It's still cooking," said Thomas O'Connor, who manages the construction and engineering work at the site for the Port Authority of New York and New Jersey, which owned the buildings and arranged for the tour through the basement.

In the days after the collapse of the towers two months ago, the tangled steel was still so hot that it glowed like charcoal briquets in the unlighted basement, Mr. O'Connor said, adding, 'For seven weeks it was surreal down here.'"

- James Glanz, [Below Rubble, a Tour of a Still-Burning Hell](#)," *New York Times*, Nov. 15, 2001, p. B1. (See the same article to read: "A three-foot **stalagmite of steel**, which looks for all the world like a drip candle, sits next to one of the immense steel columns that held up the north face of the tower.")

Witnesses continued to report molten steel in a voice of wonder.

"In the first few weeks, sometimes when a worker would pull a steel beam from the wreckage, the end of the beam would be dripping **molten steel**," said Greg Fuchek, vice president of sales for LinksPoint Inc., maker of the GlobalPoint Global Positioning System receiver used to track debris and/or human remains recovery locations in the pile." (Trudy Walsh, "[Handheld App Eased Recovery Tasks](#)," *Government Computer News*, Vol. 21 No. 27 a, 9/11/2002. [cached])

Bronx firefighter and recovery worker Joe "Toolie" O'Toole remembered "seeing a crane lift a steel beam vertically from deep within the catacombs of Ground Zero. 'It was dripping from the **molten steel**,' he said." (Jennifer Lin, "[Recovery Worker Reflects On Months Spent At Ground Zero](#)," *Knight Ridder Newspapers*, May 29, 2002. [cached])

"Guy Lounsbury with the 109th Air Wing of the New York Air National Guard wrote 'The men who work on this must constantly change their boots as the heat melts them. Two weeks after the attack, one fireman told us that there was still **molten steel** at the heart of the towers' remains.'" ([Source](#) – www)

Yet when confronted with a question about pools of molten steel ([on camera in April 2007](#)), a **leading NIST investigator John Gross said he had heard of no eyewitnesses** ([mirror 1](#) & [2](#)). Selective hearing, perhaps? That statement sounds like confirmation that molten steel should not have been present. The ideal conditions of a blast furnace accidentally falling into place were apparently slim to none, however "conceivable" it had to be. ([NIST FAQ 13](#), *Ibid.*)

The persistent, extreme heat was definitely no secret.

"Another danger involved the high temperature of twisted steel pulled from the rubble. Underground fires burned at temperatures up to 2,000 degrees. As the huge cranes pulled steel beams from the pile, safety experts worried about the effects of the extreme heat on the crane rigging and the hazards of contact with the hot steel. And they were concerned that applying water to cool the steel could cause a steam explosion that would propel nearby objects with deadly force. Special expertise was needed. OSHA called in structural engineers from its national office to assess the situation. They recommended a special handling procedure, including the use of specialized rigging and instruments to reduce the hazards."

- http://www.osha.gov/Publications/WTC/dangerous_worksite.html

“The temperature at the core of 'the pile,' is near 2000 degrees Fahrenheit, according to fire officials.” ([“Search Continues,”](#) ABC News website, Sept. 18, 2001.)

“As in a stubborn coal mine fire, the combustion taking place deep below the surface is in many places not a fire at all. Instead, oxygen is charring the surfaces of buried fuels in a slow burn more akin to what is seen in the glowing coals of a raked-over campfire. But the scale of the trade center burning is vast, with thousands of plastic computers, acres of flammable carpet, tons of office furniture and steel and reservoirs of hydraulic oil and other fuels piled upon one another. Steel beams pulled from the debris at times are so hot they are cherry red. Benzene, propylene, styrene and other chemicals generated by the combustion of computers, office products and fuels drift through the air.”

- Eric Lipton and Andrew C. Revkin, [“With Water and Sweat, Fighting the Most Stubborn Fire,”](#) *New York Times*, Nov. 19, 2001, p. B1.

Somehow, though, steel in places was more than cherry red (1,500 degrees Fahrenheit – [source](#), www), it was liquid. This was despite the virtually constant application of water onto the pile – 3 million gallons between 9/11 and 9/21, plus at least 2 rain events. ([P. Parekh, et. al.](#), “Tritium in the World Trade Center September 11th, 2001 Terrorist Attack: Its Possible Sources and Fate,” May, 2002, p. 9.) Not that G.Z. was unique in that type of fire fight. See examples of landfill fires: [1.](#) and [2.](#)

“Molten steel was encountered primarily during excavation of debris around the South Tower when large hydraulic excavators were digging trenches 2 to 4 meters deep into the compacted/burning debris pile. There are both video tape and still photos of the molten steel being 'dipped' out by the buckets of excavators. I'm not sure where you can get a copy.

Sorry I cannot provide personal confirmation.

Regards,

Mark Loizeaux, President

CONTROLLED DEMOLITION, INC.”

- personal communication to “honway” posted Dec. 13, 2003 at <http://libertypost.org/cgi-bin/readart.cgi?ArtNum=30926>

The “video tape and still photos of the molten steel” of which Loizeaux spoke have not surfaced in the 9/11 research community. The strange **lack of photographic evidence** has significantly deflated the case built by more than a dozen credible witnesses, as listed here. So [what is there](#) in the image database?



Not much exists to support the multitude of claims, not counting the re-solidified blocks included by NIST as “[fused steel and concrete](#).” There were many of these, apparently. A “fused element of steel – molten steel and concrete and all these things fused by the heat into one single element.” (Bart Voorsanger, “[Relics from the Rubble](#).” [[download mpeg-2](#)]) Note that “the melting point of concrete varies between 1800-2500°C” ([weldcare.co.uk...](#)). Iron melts at 1535°C. ([source](#) – www. Structural steel melts at about 20 degrees lower temp.) The phenomenon was [also] [found at WTC Building 6](#) in the ruins of an exploded ammunition and arms stockpile. Exact digging locations for each of the so-called meteorites aren't known. When they were last in a molten state is unknown. Not conclusive evidence.

Likewise, no photos of “molten steel” can be proven authentic. There are a couple shots from excavation worker [Frank Silecchia](#), with [glowing orange metal](#) in darkness. The [second example](#) has unfortunately been shown as a forgery using at least 3 images Photoshopped together, although not for certain faking the orange glow. Sadly this photographic evidence was placed at the top of Steven Jones's infamous “conspiracy theorist” paper, “[Why Indeed Did the WTC Buildings Completely Collapse?](#)”

Video often cited as evidence pre-collapse shows the south tower's northeast corner on the 80th floor dripping a fountain of sparks and yellow-orange, apparently liquid metal. This event happened in the final minutes of the building's incredibly short 56-minute stand post-plane impact. Official explanation:

“NIST concluded that the source of the molten material was aluminum alloys from the aircraft, since these are known to melt between 475 degrees Celsius and 640 degrees Celsius (depending on the particular alloy), well below the expected temperatures (about 1,000 degrees Celsius) in the vicinity of the fires. Aluminum is not expected to ignite at normal fire temperatures and there is no visual indication that the material flowing from the tower was burning.

Pure liquid aluminum would be expected to appear silvery. However, the molten metal was very likely mixed with large amounts of hot, partially burned, solid organic materials (e.g., furniture, carpets, partitions and computers) which can display an orange glow, much like logs burning in a fireplace. The apparent color also would have been affected by slag formation on the surface.”

- NIST website, [FAQ](#) 11.

Another possible contributing factor for this glowing “slag formation” was the presence of

numerous, large lead acid batteries on floor 81. [NIST NCSTAR 1-1C](#), Table 4-6 on page 116 listed a structural reinforcement done to the floor trusses to support the UPS (uninterruptible power supply), but failed to elaborate. If jet fuel started and spread the fire, then the volatile battery room in the path of the plane's starboard engine maintained it. (See above section under "Investigations," titled "The Second Plane" or "[NIST, ARA Error Speaks Volumes](#).") For more details see the Italian blog "[11 Settembre](#)," which took its readers inside a UPS room. This solid evidence of highly flammable and corrosive fuels has devalued the WTC 2 molten fountain for purposes of relevant conspiracy theories involving [thermite](#), despite the appearance of "trademark" white smoke and matching yellow-orange flow. (It was during the collapse that the white smoke, "characteristic of aluminum oxide which is a byproduct of the thermite reaction," was the focus of the video "[South Tower Smoking Guns](#)" by [David Chandler](#) of <http://911speakout.org>.)

Watch the molten spill event(s) in [Ben Riesman's 9/11 tape](#) [[mirror](#) clip], the [Damas home video](#) (source NIST FOIA 911datasets.org release 14, WCBS Dub1 24), the more famous [CameraPlanet video](#), the [Alfie Alvarado](#) footage [[mirror](#)] (Source: "102 Minutes that Changed America," History, 2008), the [Luigi Cazzaniga video](#) (Source: NIST FOIA 911datasets.org release 14 [and "In Memoriam: New York City 9/11/01," HBO, 2002]), [ABC News](#) LIVE on 9/11, and others. When WTC 2 began to crumble, [orange sprayed out](#).

Already seen above was a photo (p. 92) taken through a microscope, of molten metal and silica/glass from the Journal of 9/11 Studies paper "[Extremely High Temperatures During the World Trade Center Destruction](#)" by Steven E. Jones, Jeffrey Farrer, Gregory S. Jenkins, Frank Legge, James Gourley, Kevin Ryan, Daniel Farnsworth, and Crockett Grabbe. Quoting from that:

"The formation of molten spheres with high iron contents along with other species in the WTC dust required extremely high temperatures. Our results are compared with those of other laboratories. The temperatures required for the molten sphere-formation and evaporation of materials as observed in the WTC dust are significantly higher than temperatures associated with the burning of jet fuel and office materials in the WTC buildings."

Arguments against this alleged smoking gun have raised the equivalent of a legal shadow of a doubt, if the evidence is viewed alone and out of the context outlined in the pages above (not to mention the motive, means and opportunity for those in power with much to gain from a false flag attack). "[The problem with microspheres](#)" – or "spherules" – is proving exactly what source of heat caused them. Their recurrence in numerous WTC dust samples was never questioned, although "just how abundant" is good to know. According to one study:

"Particles that either were formed as a consequence of high temperature or were modified by exposure to high temperature are important WTC Dust Markers [. . .] Considering the high temperatures reached during the destruction of the WTC, the following three types of combustion products would be expected to be present in WTC Dust. These products are:

- *Vesicular carbonaceous particles primarily from plastics*
- *Iron-rich spheres from iron-bearing building components or contents*
- *High temperature aluminosilicate from building materials"*

- RJ Lee Group, "[WTC Dust Signature Report, Composition and Morphology](#),"

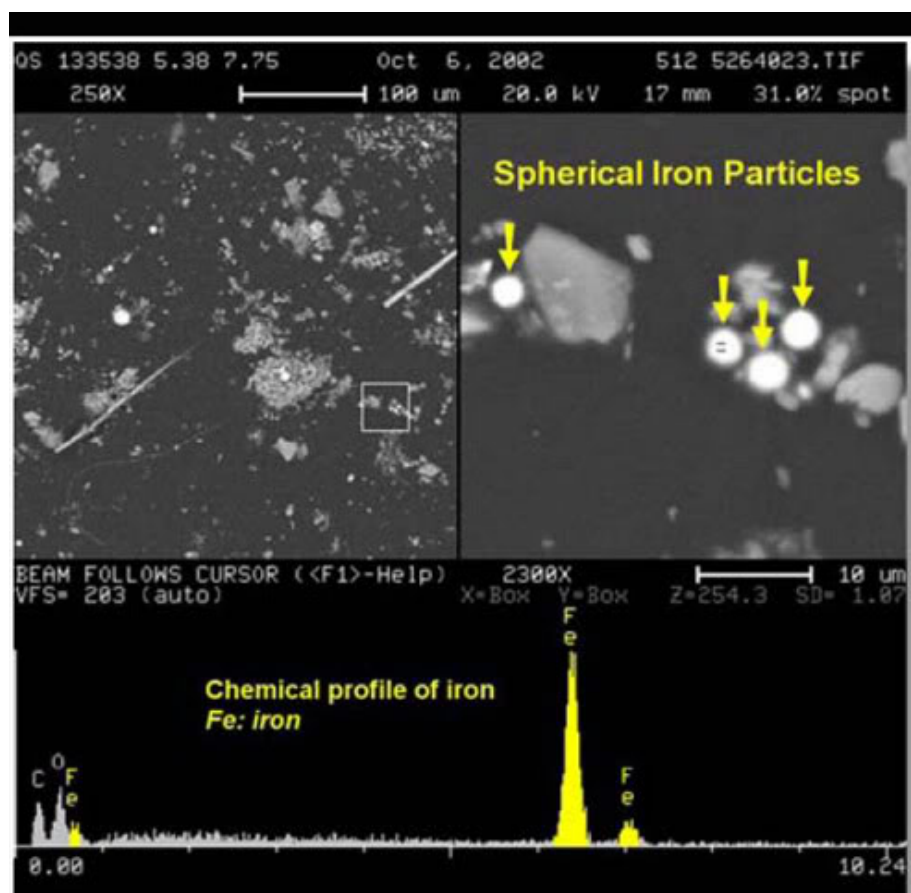


Figure 21.

SEM image and EDS of spherical iron particle “resulting from the melting of iron (or steel).”

From “WTC Dust Signature Study: Composition and Morphology,” p. 18. (Damage Assessment 130 Liberty Street Property, December 2003)

<http://www.nyenvirolaw.org/WTC/130%20Liberty%20Street/Mike%20Davis%20LMDC%20130%20Liberty%20Documents/Signature%20of%20WTC%20dust/WTC%20Dust%20Signature.Composition%20and%20Morphology.Final.pdf>

Do not use web address at right of image. Danger. Source is dead. See wtc7.net cached version.

That report was tasked with outlining the major characteristics of the WTC dust to scientifically prove that it was what caused the contamination of the 130 Liberty Street property. (So when it said [iron-rich spheres](#) “would be expected to be present” that meant in contrast to any ordinary office dust. Thus they were “WTC Dust Markers.”) **The composition of their WTC dust sample was 5.87% “Fe sphere” according to table 3, p. 24.** “Particles of materials that had been modified by exposure to high temperature, such as spherical particles of iron and silicates, are common in WTC Dust because of the fire that accompanied the WTC Event...” The extent and cause of the fire – essentially a mystery considering the extreme temperatures – was not theirs to discuss.

It should go without saying that the minimum temperatures required to form iron and silicate spheres – to literally melt steel and glass – were not reached by the fires seen before collapse in the WTC. Besides, those fires didn't create the falling-through-air situation required to form spheres of molten material. (Welding may account for some of it. Read on.)

“In no instance did NIST report that steel in the WTC towers melted due to the fires. The melting point of steel is about 1,500 degrees Celsius (2,800 degrees Fahrenheit). Normal building fires and hydrocarbon (e.g., jet fuel) fires generate temperatures up to about 1,100 degrees Celsius (2,000 degrees Fahrenheit). NIST reported maximum upper layer air temperatures of about 1,000 degrees Celsius (1,800 degrees

Fahrenheit) in the WTC towers (for example, see NCSTAR 1, Figure 6-36)."
- [NIST faqs](#) [7]

Researcher Frank Greening (Ph.D.) argued with Steven Jones (Ph.D. co-author of "[Extremely High Temperatures During the World Trade Center Destruction](#)" quoted above) in email debate/[correspondence](#) from 2007 that "[fly ash](#) is frequently used as aggregate in lightweight concrete, so microspheres may have been present in the Twin Tower's [sic] concrete even before the fires of 9/11." The [U.S. Geological Survey's](#) dust study made a relevant statement: "Fe-bearing minerals are common in the aggregate in concrete." On another USGS page we read, "Concrete is composed of aggregate, sand, and Portland cement (Chandra and Berntsson, 2003). The aggregate material in WTC concrete sample appears to be expanded shale." (USGS, "[Particle Atlas of World Trade Center Dust](#).") It wasn't specified whether or not their sample was lightweight concrete from the majority of tenant floors, or not.

Greening also argued that "iron-rich" microspheres in ashes have been shown to originate from [incinerated waste](#) in temperatures similar to those on 9/11 (only up to 1200 degrees Celsius), as well as in coal fly ash production at temps less than 1,400. Naturally-occurring chemical reactions – not only heat – were relevant, Greening asserted.

One non-partisan analysis used the words "fly ash" a few times: "The conflagration activated processes that caused materials to form into spherical particles such as metals (e.g., Fe, Zn, Pb) and spherical or vesicular silicates or fly ash." (RJ Lee Group, [ibid.](#), p. 3.) "In addition to the vesicular carbon components, the **high heat exposure of the WTC Dust** has also created other morphologically specific varieties of particulate matter including spherical metallic, vesicular siliceous and spherical fly ash components." (*ibid.*, p. 7.) Notice "spherical metallic" is separate from "spherical fly ash" in their wording. Finally:

"In addition to the spherical iron and aluminosilicate particles, a variety of heavy metal particles including lead, cadmium, vanadium, yttrium, arsenic, bismuth, and barium particles were produced by the pulverizing, melting and/or combustion of the host materials such as solder, computer screens, and paint during the WTC Event.

Combustion-related products are significant WTC Dust Markers, particularly if seen in combination. However, it is worth noting that fly ash and partially combusted products can occur in trace concentrations in ordinary building dusts, but not in the concentrations observed in WTC Dust."

- RJ Lee Group, [ibid.](#), p. 19.

At the end of the discussion with Jones (Mar. 1, 2008) Greening asks, "How does Jones rule out welding/cutting debris in the dust from construction activities?" Good question. According to WTC steel erector Karl Koch III, the huge job of welding ate up the majority of labor costs. On page 295 of [Men of Steel](#), he spoke of "installing hundreds of thousands of shear-connector studs, bolts **welded to the tops of beams designed to anchor the concrete that would later be poured** on each floor." Unless there was a sweeping/vacuuming crew, the concrete would have extra iron content from welding debris. It was not specified exactly how much of the other welding was done before concrete pouring.

This is the shadow of doubt in which some can find shade. Aluminosilicate spheres (creation temperature about 1450 degrees Celsius) remain unexplained. (Jones, et. al., [ibid.](#))

Previously seen melted glass (silicate, not necessarily window glass) also **contained iron** particles, as described by investigator Mark Basile in his WTC dust study. ("[9/11 Dust Raises Questions](#)," Lancaster, New Hampshire on June 26th, 2010.) Silicates should not have been magnetic, but were.

Basile made an interesting point that the majority of his dust sample's iron spheres were **not** from A36 structural steel. (See his [video at 35:30](#).) This has agreed with the photographic record, which has found [little evidence of melted beams](#). Steel cubicle partitions and filing cabinets, maybe. Still: "Pieces of steel have also been found that were apparently melted and vaporized not solely because of the heat of fires, but also because of a corrosive contaminant that was somehow released in the conflagrations." (James Glanz and Eric Lipton, "[A Search for Clues In Towers' Collapse: Engineers Volunteer to Examine Steel Debris Taken to Scrapyards](#)," New York Times, Feb. 2, 2002.) Where this has been found (in one instance for example), it originated from WTC Building 7.

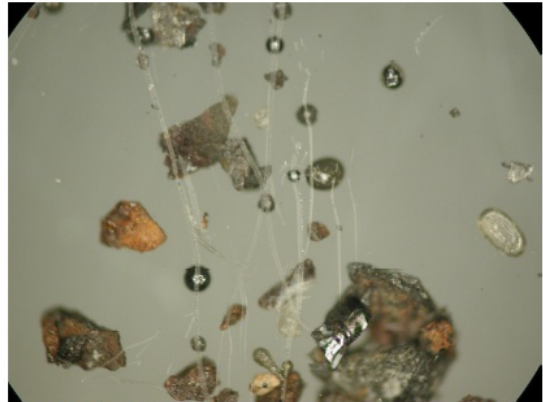


Figure 1. Optical micrograph of collected dust particles observed in WTC dust sample 2, showing shiny metallic and semi-transparent silicate-rich spherules. (For example, the pill-shaped droplet at far right is silicate rich.)

[Source:](#) Steven Jones, et. al, Journal of 9/11 Studies

"A combination of an uncontrolled fire and the structural damage might have been able to bring the building down, some engineers said. But that would not explain steel members in the debris pile that appear to have been partly evaporated in extraordinarily high temperatures, Dr. Barnett said."

- James Glanz, "[Engineers Suspect Diesel Fuel in Collapse of 7 World Trade Center](#)," *New York Times*, Nov. 29, 2001.

Dr. Jonathan Barnett was professor of fire protection engineering at the Worcester Polytechnic Institute and, according to this same *New York Times* article, "part of an assessment team organized by the American Society of Civil Engineers and the Federal Emergency



Figure C-2
Closeup view of eroded wide-flange beam section.

Management Agency to examine the performance of several buildings during the attacks." He examined some of this evidence in the [FEMA report, Appendix C](#).

"The severe corrosion and subsequent erosion of Samples 1 and 2 are a very unusual event. No clear explanation for the source of the sulfur has been identified. The rate of

corrosion is also unknown. It is possible that this is the result of long-term heating in the ground following the collapse of the buildings. It is also possible that the phenomenon started prior to collapse and accelerated the weakening of the steel structure. A detailed study into the mechanisms of this phenomenon is needed to determine what risk, if any, is presented to existing steel structures exposed to severe and long-burning fires.”

- Jonathan Barnett, Ronald R. Biederman, R. D. Sisson, Jr., [FEMA WTC Building Performance Study, Appendix C, Limited Metallurgical Examination](#), p. 13.

BBC's 2008 documentary/hit piece "[The Conspiracy Files – 9/11: The Third Tower](#)" [[mirror](#)] mentioned this particular evidence at 6:09 as a mystery and later attempted to explain it with the help of FEMA Appendix C co-author Richard Sisson. First Barnett told how he knew the piece/pieces came from WTC 7, for its non-use in the towers (at 47:59). Then Sisson said that the piece wasn't melted, but was instead eroded/corroded by a combination of heat and a "liquid slag" consisting of sulfur-rich gypsum wallboard. Neither Barnett nor Sisson clarified whether or not that constituted an official correction to the FEMA report's earlier assertion of possible pre-collapse structural weakening.

Another bit of interesting data comes in the form of melted molybdenum (2623 degrees Celsius) and *vaporized* aluminosilicates (2760 degrees Celsius). (Steven Jones, et. al., "Extreme Temperatures...", *Ibid.*) It stands to reason, then, that there would have been vaporized steel (2750°C [source](#)).

*“Engineers at the firm that built the buildings best guess to account for the missing twelve hundred feet of material from each tower is that large portions simply **vaporized** into the dust that rained down on New Yorkers immediately after the collapse.*

[...]

But most interesting: In the mix they are looking, they think, at specks of steel that used to be beams and elevators, marble from the lobby floor and facings...”

- Robert Krulwich, [ABC News Sept. 13, 2001](#) at 7:35 p.m.

WTC dust expert Dr. Paul Liroy didn't touch the subject other than to mention University of California, Davis researcher Dr. Thomas Cahill's interesting finding of "fused iron spheres." (Liroy, [Dust](#), *Ibid.*, p. 154. ["I felt that the WTC air quality issue did not gain any substantially new information at the meeting. Some new chemicals were mentioned by Dr. Cahill, such as fused iron spheres, and they added to a long laundry list of compounds released during the collapse and fires."]) Liroy and Cahill took part in the American Chemical Society Meeting, Sept. 7-12, 2003 in New York. Sept. 12, 2003 was the date on Cahill's "[Very Fine Aerosols from the World Trade Center Collapse Piles: Anaerobic Incineration?](#)" That paper did not mention iron spheres once.

Besides that 5.87 percent, so much else was in the dust.



Dust

“The pile – now removed – consisted primarily of dust made up of the pulverized contents of the towers.” - [Laura Kurgan](#), “[Around Ground Zero](#), March, 2002.”

It covered lower Manhattan. It was shoveled with papers like snow and bagged. In fact, the NYC Department of Sanitation (NYDS) “revised its snow removal operational scheme and began implementing a plan based on many of its winter weather strategies.” (Tom R. Arterburn, “[D-Day: NY Sanitation Workers' Challenge of a Lifetime](#),” waste360.com, 2002)

The debris pile was sprayed with water constantly, even after the fires were defeated in December, wherever the giant excavators were working – because the poisonous dust was so fine that its re-suspension in air happened so easily when moving anything. (Lioy, et. al., p. 713. Also see videos.) The dump trucks had to be sprayed before leaving the site, but this wasn't done well early in the effort ([photos by Nicolas Cianca](#)). FDNY and city (NYDS) water was replaced with civilian sources (construction contractors drawing on federal aid from FEMA. See “[The Big Four](#)” above.) officially on December 1. (Tom Arterburn, “[D-Day](#),” Ibid.)

“Mountains” of it ran through the conveyor belts at Fresh Kills. (Mark Schaming, Director of Exhibitions at the N.Y. State Museum in “Collateral Damages” - quote below) That is, combined with the dirt and asphalt millings brought *into* the site to make roads and brace certain areas. (See “[Truckloads](#),” above.)

“We saw nothing we could recognize in the field. We expected to see chairs and file cabinets and what was left of offices. Everything was reduced to the finest state. It basically looked like mountains of dirt.”

- “[Fresh Kills](#)” chapter of “Collateral Damages,” Ibid.



WTC dust, New York Historical Society (nytimes.com)

So much has been said about the dust already, in the chapters above. Re-read "[Bodies](#)," for example. And the section before this chapter, "Molten Steel." Vaporized metal, mind you. Everything "smashed to atoms." (Tim Cothren, camera operator on ABC News 9/12 at 11:53 p.m.) Pulverization on a massive scale.... The WTC erupted with particulate matter, bits much smaller than expected by professional first responders and PhD's alike. (See video "9/11 Debris: An Investigation of Ground Zero").

Quotes: "Everything was dust and metal." (Lt. Kenneth Christiansen, FDNY Ladder 5 in "Relics from the Rubble" History, 2002) "The building collapsed to dust." (Joe Casaliggi, FDNY Engine 7 in "9/11: The Filmmakers' Commemorative Edition" Naudet-Hanlon, Paramount, 2002) "All the furnishings and the fixtures inside the building – None of that existed after the collapse. There were no desks. There were no phones, no computers, no copy machines. No chairs, nothing. It had all been pulverized by the tremendous amount of energy that was created by this collapse. It was just pulverized into this dust." (Captain Jay Jonas, FDNY Ladder 6 in "Inside the Twin Towers," Discovery Channel, 2006) Environmental medical doctor Stephen Levin was interviewed by ABC sometime before 9/13 evening news. Levin said, "I was astonished at the degree to which solid materials were turned into pulverized dust as a consequence of that building collapse. I think it was striking."

How much of the buildings blew away in the ([9 to 10 MPH winds](#))? ...as soot and ashes or microscopic charred wood fragments, six acres of obliterated marble walls, powdered

cement from 425,000 cubic yards of concrete, tons of microscopic shards of glass and glass fibers, and countless “grindings” of thousands of computers and cubicles, office walls, doors, carpet refrigerators toilets vending machines, nothing recognizable.

Watch the three "collapse" events again. How do you measure those clouds? With all this talk of extreme pulverization of the debris, we *have to ask* if there was too much dust and ash to be explained by a gravity-driven collapse.

Was there? See some [images](#) from different [sources](#) to get a feel for the cloud that killed, then escaped into the air and flew. Watch some video to better understand the blackness within the cloud: [Dr. Mark Heath](#) and [CBS camera Mark Laganga](#) also [CameraPlanet Archive](#). See the [WNYW FOX5 NY](#) shot of the South Tower plume; and don't forget the [WTC Building 7](#) cloud on [MSNBC](#)... [CBS](#)... There were 3 clouds, after all.

“[T]he scene looked like Pompeii after the eruption of Mount Vesuvius. Inches of ash on the ground.”

- John Bussey, [“The Eye of the Storm,”](#) *The Wall Street Journal*, Sept. 12, 2001, p. A4.

Remains of a *Day* TIME



◀ PREVIOUS 6 of 6

FADING FOOTPRINT
So much of the Trade Center ended up as ash, incinerated. A whole terrain of loss at Fresh Kills carefully catalogs what was left behind.

PHOTO BY BETH A. KEISER/AP

[time.com](#) “So much of the Trade Center ended up as ash, incinerated.”

Possible evidence of explosive demolition relating to the dust was the density resembling [pyroclastic flow](#) from a volcano. The argument says that the energy required to generate the exponential growth of volume of dust (specifically after the North Tower "collapse") was decidedly too high to be explained by a gravity-driven collapse. Please see [911research.wtc7.net](#) for Jim Hoffman's quest for "proof" using volume. It would logically follow that the initial blast of dust would have been hot.

HOT CLOUD

We know there was extreme heat. But during the collapse? Maybe due to friction and force only? No, and *neither would the fires* in such little time have cherry-heated the iron enough to achieve the [bending observed](#) – with no buckling or tearing (see "[Specific Items Recovered](#)"). Myself, I agree with the ironworker in "Relics from the Rubble" about the required heat, but this proves nothing. People who were *there* when the towers "fell" can tell us more.

See the article "[Ground Level Fireballs Disprove Official WTC Collapse Theories](#)" New York Post journalist Don Halasy describes the blast of warm air on CBS News here: <http://www.youtube.com/watch?v=RfnZkcFQp04> . CBS News correspondent Carol Marin describes the "giant ball of rolling flame" that came from street level: <http://www.youtube.com/watch?v=38kEFdUPQyI>. One of the last people to escape from the South Tower was severely burned as he ran. See the short videos "[ABC Witness saw fireball and was blown across street](#)" and "[WTC survivor, Ron DiFrancesco](#)."

*"Then the dust cloud hits us. **Then it got real hot.** It felt like it was going to light up almost."* -Thomas Spinard, FDNY Engine 7

*"A wave — a hot, solid, **black wave of heat** threw me down the block."* – David Handschuh, New York's Daily News

*"When I was running, some **hot stuff went down by back**, because I didn't have time to put my coat back on, and I had some — well, I guess between first and second degree burns on my back."* -Marcel Claes, FDNY Firefighter

*"And then we're engulfed in the smoke, which was horrendous. One thing I remember, it was hot. **The smoke was hot and that scared me**"* -Paramedic Manuel Delgado

*"I remember making it into the tunnel and it was this **incredible amount of wind, debris, heat...**"* -Brian Fitzpatrick FDNY Firefighter

*"A huge, huge blast of **hot wind** gusting and smoke and dust and all kinds of debris hit me"* -Firefighter Louis Giaconelli

*"This **super-hot wind** blew and it just got dark as night and you couldn't breathe"* -Firefighter Todd Heaney / Quotes compiled from [Kevin Ryan's blog](#).

*"When I get to the rig, about half a block down West Street, the building came down. It is the most amazing thing I have ever seen in my life.
At first I look up and I hear a boom and a strange noise. I can't really describe it*

[...] *We hold each other, and then we get engulfed in that cloud right away. And we don't know what it is. It is such a weird color, and we don't know if it is going to light up or not. It is very hot.*

We are in front of 90 West Street, just across the street from the south tower, and we really try to outrun it, but the cloud hits us so fast that we cannot run anymore."
- Battalion Chief Tom Vallebuona, Battalion 21, in Dennis Smith's Report from Ground Zero, Ibid., p. 123.

[T]he second building is starting to come apart. [...]

We run across the street back towards the World Financial Center and get to those big floor-level windows. Luckily for us the glass had been knocked out when the first building came down, so we [were able to] jump into the [lobby] and hide behind a large column just in the interior. But with all the windows out, it is like a large, open garage space. Then, hiding behind this column, my arms crossed like a mummy, I begin to feel the power of all the debris and rubble rushing past. And there is a great deafening noise. It feels like the world is falling apart. If you've ever been at a demolition site, where you hear a building coming down, if you magnify that by a hundred or a thousand, it might have given you a good idea [of the sound].

*So I stay pressed against the column, and first I feel a positive wave of energy go by, and then a negative pressure because it is creating a vacuum, and I am hoping that it doesn't suck me out. And then I can't breathe. I try to put my mask on, and then there is a **tremendous amount of heat**, but it only lasts for a minute before everything goes black."*

- Firefighter Phil McArdle, Hazmat Unit 1S in Dennis Smith, Ibid., p. 119. (Brackets in italics were in the original.)

Similar stories from both towers. More from the second "collapse": Again, as in "[Survivors](#)" above, I quote from one of the "miracles" in the stairway:

*"...and as I turned the corner on the third floor landing, the stairwell just erupted into a hurricane... This huge incredible force of wind and debris **actually came up the stairs**, knocked my helmet off, knocked me to the ground.... It was pitch black, a large amount of dust in the stairwell..."* [emphasis added] - Firefighter [Rob Bacon](#) describes the WTC 1 event in "9/11: The Firefighters' Story," [Paul Berriff](#), 2002.



Craig Monahan's rig. [Source](#): NYDailyNews.com

I won't speculate. There are only questions here.

I'm led to believe that heat from the buildings destroyed vehicles by the dozens, melting plastic, frying paint, and exploding gas tanks in some cases (See Ondrovic quote below). Was it all just fire spreading by embers and jet fuel? See quote below. I'm not sure.

A certain blue pickup truck only got scorched... by surrounding vehicle fires, maybe? Its "front lights had melted into what

looked like huge tears.” (Michael Daly, “[Give This Pickup Truck the Gold](#),” NYDailyNews.com, Aug. 11, 2008.)

*“Craig drove down to the scene after the second plane hit. **When the second building came down, the truck’s windshield was blown out, the paint started on fire, and the headlights melted.** At the same time, the ladder truck got completely destroyed by the fire. So Craig took the 5 sign off the rig, the one that goes alongside the FDNY, and puts it on the pickup truck. [emphasis added]*

That’s now our truck, and we drive back and forth every day to the scene in it.”

- Lieutenant O’Neill, FDNY Ladder 5, in Dennis Smith, *Ibid.*, p. 260.

Dr. Judy Wood, notorious for her bizarre theory of WTC demolition by exotic directed energy weapons, has collected photos of such vehicles. Visit her 2006 webpage, “[Toasted Cars](#),” at your own risk – with no endorsement from this author! Cars burned.

*“I was still on Vesey, [be]cause the building that blew up on me was on Vesey, it was on the corner next to the West Side Highway. Cause I know I was running west, I didn’t run that way. Thank God, I would have been dead had I run the other way. But I ran towards the West Side Highway, and I kept running up Vesey. As I was running up Vesey, **the first car blew up on me** on the corner of Vesey [sic] and the West Side Highway. That set my turnout coat on fire, that set my hair on fire, and that set my feet on fire. I kept running. I got news for you, those turnout coats need to be called burn out coats, cause this thing **caught up in flames**. They cut two inches off my hair in less than two minutes, my coat was completely engulfed, and that was the only way I could see where I was running at that point, because I had a glow from my coat.”*

- EMT Patricia Ondrovic, [WTC Task Force Interview](#), Oct. 11, 2001.



[source](#): unknown

SCIENTIFIC STUDIES

Take a good look at several major scientific studies of WTC dust (in no particular order). Take my commentary or leave it. Facts are here.

1. Lioy, P.J., et. al., Environmental Health Perspectives Volume 110, Number 7, July 2002 "[Characterization of the Dust/Smoke Aerosol that Settled East of the World Trade Center \(WTC\) in Lower Manhattan after the Collapse of the WTC 11 September 2001](#)," pp. 703-714.

[Paul Lioy](#) is author of [DUST: The inside Story of its Role in the September 11th Aftermath](#) (Rowman & Littlefield Publishers, 2010), a book quoted above, for example, on the subject of glass. Lioy was thorough in his many analyses of the dust samples he took.

*"It was anticipated that the actual compounds and materials present in the plume would be similar to those found in building fires or implosion of collapsed buildings. The primary differences would be the simultaneous occurrence of each type of event, the intense fire (> 1,000°C), the extremely large mass of material (> 10 × 10⁶ [1 million] tons) reduced to dust and smoke, and the **previously unseen degree of pulverization of the building materials.**" [emphasis added] - Lioy, et. al., Intro.*

Everything was in the dust. For evidence of demolition by incendiaries, you may notice the repeated fact that Lioy and team "found charred wood particles in all three samples" (p. 710) along with a long list of "products of incomplete combustion," including materials "common as padding in office furniture" and "in thermoplastics (e.g., computers)." (p. 712). Then of course there was the ash and soot... complete combustion.

Was the creation of those widespread remnants of fire – all those ashes – really due to the towers' and WTC 7's fires being smothered, embers blown with pulverized fireproofing among all else (pulverized by falling, the story goes in each case)? Keeping in mind the many observations and questions implying too much destruction to believe (see [video](#) collection and [Appendix 1](#) transcript), was it possible this incineration took place on a scale greater than that which could have been produced by observed fires? (Fires listed below #2.)

Where were the dust samples taken?

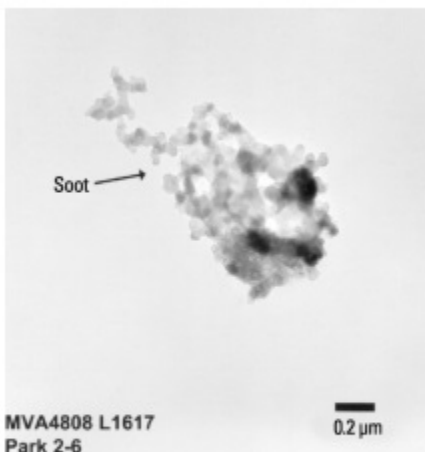


Figure 6. A soot particle containing coagulated ultra-fine particles detected in the Cherry Street sample.

Lioy, et. al., p. 708.

"These two samples were collected from 10–15 cm-thick deposits that were on the top of two automobiles about 0.7 km from the WTC site. The automobiles were in locations protected from rain that occurred on Friday, 15 September 2001. One automobile was located on Cherry Street, and the other was on Market Street, one and two city blocks, respectively, west of the East River between the Manhattan and Brooklyn Bridges. These cars appeared to have been in their respective locations since 11 September, but it is possible that each could have been moved from an adjacent thoroughfare on the east side of NYC (FDR Drive)." (p. 704)

Liroy's dust was in "10-15 cm-thick" piles (3-6 in.) created by the "collapse" clouds, so some ash flakes on top may have been derived from subsequent fires in the surrounding area.

2. "[Signature Assessment 130 Liberty Street Property](#), WTC Dust Signature Report Composition and Morphology" RJ Lee Group, Inc., Dec. 2003.

To determine if dust contaminating the Deutsche Bank property was indeed a product of the "collapses," the dust had to have an identifiable trait, or signature, for legal proof. One of these signature ingredients was the iron sphere – a topic discussed at length in the Molten Steel section a few pages above (which quotes this paper more than once). After reading the RJ Lee Group paper, it is impossible to discount the proof that extreme temperatures were involved in the destruction of the WTC. The Summary on page 19 reads:

"The differences within the WTC Dust and typical background dusts include the fineness and evidence of heat, the size and concentration of the chrysotile, and the length and concentration of the mineral wool and other fibers, as well as the frequency of occurrence of spherical particles produced by fire and heat, char and soot, and other building products."

Of course there were several acres of offices, storerooms and all else up in those two towers, a total of about **14 acres of building burned**. (One floor nearly equaling an acre square, yet shafts and hollow areas should be subtracted for accuracy.) The NIST investigation modeled the fires in WTC 1 as spanning 8 floors (92 – 99, not including observed fires on the 104th floor for example [or 22nd floor for that matter.... See section "[Evacuees – 102 Minutes](#)"]; for WTC 2 six floors were included in the simulations/models, 78 – 83. (NIST NCSTAR 1-5F, "Federal Building and Fire Safety Investigation of the World Trade Center Disaster: Computer Simulation of the Fires in the World Trade Center Towers," 2005, p. 47.) **Add the fires of WTC 7** as reported by NIST: "meandering" around floors 7 – 9, 11 – 14, and also parts of 19, 22, 29, and 30 (NIST NCSTAR 1A, "Final Report on the Collapse of World Trade Center Building 7," 2008, p. 19.) Including Building 7 maybe 24 floors burned.

Repeating and emphasizing this quote from a few pages above:

"In addition to the spherical iron and aluminosilicate particles ...[edit out text] Combustion-related products are significant WTC Dust Markers, particularly if seen in combination. However, it is worth noting that fly ash and partially combusted products can occur in trace concentrations in ordinary building dusts, but not in the concentrations observed in WTC Dust."

- RJ Lee Group, [Ibid.](#), p. 19.

3. [US Geological Survey](#) collected more than 35 samples [[image](#) – or see [Summary](#)] and utilized NASA's Airborne Visible /Infrared Imaging Spectrometer ([AVIRIS](#)) remote sensing data, also used for [thermal readings](#). The carcinogen chrysotile asbestos was a major focus of interest. However, USGS did study the fascinating and prevalent "iron rich sphere," seen enlarged with more info at [Jim Hoffman's site](#). (Again, see "Molten Steel" section above.)

This study, in a word, was **huge**... but government funded (www.usgs.gov/aboutusgs/). Above, in "[Molten Steel](#)," find this study quoted with thermal images from AVIRIS.

4. Cahill, T.A., et. al., "[Analysis of Aerosols from the World Trade Center Collapse Site](#), New York, October 2 to October 30, 2001," *Aerosol Science and Technology*, vol. 38, 2004, pp. 165-183. and "[Very Fine Aerosols from the World Trade Center Collapse Piles: Anaerobic Incineration?](#)" (2003)

Thomas Cahill (Professor, Dept. of Applied Science at Univ. of California at Davis) used data from smoke and dust collection weeks after the events of 9/11. Look here for details on the caustic burning rubble pile. Yet the smoke carried [bits of glass](#) ("slab in lower left") and other "course" particulates. See "[Trade Center Debris Pile Was a Chemical Factory, Says New Study](#)" September 10, 2003.

According to Dr. Lioy, who also attended the American Chemical Society Meeting, Sept. 7-12, 2003 in New York, Cahill had shown some interest in "fused iron spheres." (last paragraphs of Molten Steel section above, quoting Lioy, [Dust](#), *Ibid.*, p. 154.). Yet for the purposes of their research, Cahill and company focused on the aerosols.

5. John McGee, et. al., "[Chemical Analysis of World Trade Center Fine Particulate Matter](#) for Use in Toxicologic Assessment," *Environmental Health Perspectives* Volume 111, Number 7, June 2003 ... in which we read from the results:

"Elemental carbon levels (an indicator of carbon black produced by incomplete combustion during the fires prior to collapse) were low, indicating that the fine fraction of WTC PM_{2.5} [fine particulate matter 2.5 millionths of a meter or less in diameter] was dominated by the presence of pulverized building materials rather than the products of incomplete combustion."

As it should have been. This could be a voice for the no-incendiaries theory of "collapse." But, of course we are talking about the total mass of two 110-story buildings, one 47-story and everything inside – mixed as dust (not including structural steel which wasn't "dustified"). For that which was pulverized, how much was even combustible per unit mass? Less than 10%, you think? Besides, look at all the paper that wasn't burned, critics may say. (See above, "[Not Recovered](#)" [regarding file cabinets vaporized in the paper's stead].)

For all sizes of PM's chemical composition see first the [USGS chemistry table](#) showing organic carbon comprising between 0.98 and 4.02% of the samples where the element was measured, for an average 2.48%. Is that level really so low? Out of about 267 floors (110+110+47) included in the dust, roughly 9% of them burned (see #2 above), sending ashes into the sky, leaving an unknown amount of "incomplete combustion." We are talking about area of space, not mass of solid materials, but this does help gain a perspective. The way I see it, elemental carbon levels may have been conspicuously higher, were it not for the "previously unseen degree of pulverization of the building materials." (Lioy, et. al., *Ibid.*)

6. Agency for Toxic Substances and Disease Registry (ATSDR)/ New York City Department of Health and Mental Hygiene (NYCDOHMH) Study, "Final Report of the Public Health Investigation to Assess Potential Exposures to Airborne and Settled Surface Dust in Residential Areas of Lower Manhattan" ([ATSDR/NYCDOHMH, 2002](#)). This study was part of the "Limited investigation of residential indoor environments ... conducted in the weeks and months after the WTC collapsed." (quoting the December 2005 EPA paper "World Trade Center Residential Dust Cleanup Program" [Final Report](#).) Another related study in the immediate aftermath: "Characterization of Particulate Found In Apartments After Destruction

of the World Trade Center” ([Ground Zero Taskforce \[Chatfield & Kominsky\], 2001](#))

7. Maoxin Wu, et. al., "Case Report: Lung Disease in World Trade Center Responders Exposed to Dust and Smoke: [Carbon Nanotubes Found in the Lungs of World Trade Center Patients and Dust Samples](#)," *Environmental Health Perspectives*, Volume 118, Number 4, April 2010, from which we read:

“Tissue mineralogic analyses showed variable amounts of sheets of aluminum and magnesium silicates, chrysotile asbestos, calcium phosphate, and calcium sulfate. Small shards of glass containing mostly silica and magnesium were also found. Carbon nanotubes (CNT) of various sizes and lengths were noted. CNT were also identified in four of seven WTC dust samples. [. . .] The finding of CNT in both WTC dust and lung tissues is unexpected and requires further study.”

After their studying they concluded simply, “[h]owever, **the high temperatures generated during the WTC disaster as a result of the combustion of fuel in the presence of carbon and metals would have been sufficient to locally generate large numbers of CNT.**” (*EHP*, p. 503... emphasis added.) Must have been.

Aside: Funny, I just found borderline plagiarism in an article that paraphrased that conclusion almost word for word, and inserted the word “jet” before “fuel.” See [“Exposures at the World Trade Center: Ten Years Later, What Have We Learned?”](#) Jack Springston, *The Synergist*, Sept. 2011, p. 25. “The authors noted that **the high temperatures generated as a result of the combustion of jet fuel, in the presence of carbon and metals, would have been sufficient to locally generate large numbers of CNT.**” (emphasis added) Again the magic jet fuel, able to leap to the 22nd floor, the lobby, etc.... essentially kerosene (http://en.wikipedia.org/wiki/Jet_fuel). See above section [“Evacuees: 102 Minutes.”](#)

What kind of fuel, then?

It just so happens that [“nanothermite produces the same kinds of carbon nanotubes.](#) That finding has been confirmed by independent analysis in a commercial contract laboratory.” (Kevin Ryan, [“How to Debunk WTC Thermite,”](#) 911blogger.com, Dec. 8, 2013.) Which brings us to

8. [Niels Harrit, et. al.](#), “Active Thermitic Material Discovered in Dust from the 9/11 World Trade Center Catastrophe,” *Open Chemical Physics Journal*, 2009, Vol. 2, p.7.

“If further studies of the debris confirm the findings of extremely high temperature, Dr. Barnett said, ‘the smoking gun would be the fuel.’” - James Glanz, [“Engineers Suspect Diesel Fuel in Collapse of 7 World Trade Center,”](#) *New York Times*, Nov. 29, 2001.

This smoking gun was published and announced in 2009 as having been found among the omnipresent dust from the events. It is remaining active thermitic (explosive) material, aluminothermics... nanothermite. Read the paper, [“Active Thermitic Material Discovered in Dust from the 9/11 World Trade Center Catastrophe”](#) [here](#). Try <http://femr2.ucoz.com/load/1-1-0-3> also 911research.wtc7.net. Danish television (TV2News) featured the story April 6, 2009, by hosting one of the authors, Niels Harrit, in a [program available to watch with English subtitles](#). This and more can be found at ae911truth.org or in their video [“9/11: Explosive Evidence – Experts Speak Out.”](#)

Dr. James Millette of MVA Scientific Consultants, who was interested in debunking this, conducted some experiments with his own "[independent](#)" professional laboratory and [released his results on the WTC dust](#) in February 2012. "The red/gray chips found in the WTC dust at four sites in New York City are consistent with a carbon steel coated with an epoxy resin that contains primarily iron oxide and kaolin clay pigments." "There is no evidence of individual elemental aluminum particles of any size in the red/gray chips, therefore the red layer of the red/gray chips is not thermite or nanothermite."

The debate rages on.

Millette found no elemental Al after an MEK soak, and no evidence of thermite. Harrit et al not only found elemental Al after an MEK soak, but also iron-rich spheres in the residue after chips were subjected to heating in a DSC - evidence that a thermite reaction had occurred. The conflicting results may be due to the fact that Millette's chips were "washed in clean water" prior to analysis, whereas Harrit's "samples were left unwashed and uncoated unless otherwise specified". Elemental aluminum and oxidizer(s) from the accelerant weren't in the chips; they were on the outer surface of the red layer, which corresponds to the left-hand side of Harrit's Figures (12) (b) and (15) (c). Information contained within this page not only proves beyond all doubt that OBL and KSM did not orchestrate 9/11, but identifies the principal perpetrators.

- "Millette study fails to refute crucial findings by Harrit et al," [takeourworldback.com](#)

A terse response from Kevin Ryan (one of the et. al. with Niels Harrit) basically laughs in Millette's face. "As he worked to debunk the WTC thermite research, Millette was still unable to find any iron microspheres. But he did claim to have finally found the red-gray chips. Curiously, he did not attempt to replicate the testing that would determine if those chips were thermitic." (Kevin Ryan, "[How to Debunk WTC Thermite](#)," 911blogger.com, Dec. 8, 2013.)

Chemical Engineer Mark Basile tends toward agreeing with Niels Harrit, [Steven Jones](#), et. al., as you can see in an [interview by ae911truth.org](#). I personally found it fascinating watching [his experiment with the red/gray chips](#), applying electricity/heat and making it [flare up and create molten steel](#).

SAFE TO BREATHE

Health issues are paramount, of course. 9/11 has taken more lives since then, at least once officially, on a (revised) death certificate. (Anthony DePalma, "[For the First Time, New York Links a Death to 9/11 Dust](#)," *New York Times*, May 24, 2007. See above, "[Bodies](#).") Sadly NYPD James Zadroga's death certificate listed misuse of prescription medication as the cause of death. (nytimes.com "[James Zadroga](#)"). Of course his death was the direct result of 9/11. In 2011, "the health care programs of the [James Zadroga 9/11 Health and Compensation Act](#) [link added by this author] formally took effect, six months after it was [passed by Congress](#) [Sept. 2010] and signed into law by President Obama, providing \$4.3 billion in long-term federal financing for both treatment and financial compensation for those suffering lingering effects of the attacks." (Anemona Hartocollis, "[9/11 Health Care Law Takes Effect](#)," nytimes.com, July 1, 2011.)

This being many years after the 2004 "final" payout of the [September 11th Victims Compensation Fund](#), which some say sought to pay off the hostile grieving families and settle

any future possible litigation. “The government offered their survivors the same deal: collect a check for all the money your loved one might have made if they had lived, absolutely tax-free. And give up your right to bring a lawsuit.” (Ilya Marritz, “[How They Spent It: Recipients Reflect on 9/11 Victim Compensation Fund](#),” wnc.org, September 6, 2011) “Over 7,300 claims for death and physical injury arising out of the 9/11 tragedy will have been processed.” Of which “over 4,400 physical injury applications were processed by the Fund.” (Closing Statement from the Special Master, Mr. Kenneth R. Feinberg, on the Shutdown of the September 11th Victim Compensation Fund) A difference of just under 2,900 (# of fatality-related claims) seems wrong considering the tally of 9/11 dead (2,753), unless multiple people were affected by the deaths and each counted as a separate case.

The [Zadroga Act reopened the victim compensation fund](#).

See the documentary film [Dust to Dust -- The Health Effects of 9/11](#) and read “[Cancer Incidence in World Trade Center Rescue and Recovery Workers, 2001-2008](#).” Listen to/watch [Jenna Orkin testify](#) Sept. 9, 2004 at the 9/11 Omission Hearings (Cynthia McKinney, Mindy Kleinberg, Michael Ruppert, many more – and a crowd). Also visit government sponsored links at the [Center for Disease Control \(CDC\) WTC page](#), or at [nyc.gov](#). If you were affected you should be listed on the [WTC Health Registry](#) (PDF – 2013 report).

About the Registry

The World Trade Center Health Registry is the largest post-disaster public health registry in United States history, tracking the health of more than 71,000 people directly exposed to the WTC disaster. The Registry was established by the New York City Department of Health and Mental Hygiene and the federal Agency for Toxic Substances and Disease Registry. The National Institute for Occupational Safety and Health has funded the Registry since May 2009. - [WTC Health Registry](#) 2013 report

The first responders, ironworkers, sanitation workers, volunteers and firefighters who worked there are dying. Especially those who succumbed to the initial cloud(s) and took desperate unfiltered breaths. We know the pH level, or alkalinity of the original cloud, before rainfall and firefighting, “was equivalent to that of drain cleaner” (Jenna Orkin “[Air Toxicity and Coverup](#)” 9/11 Omission Hearings, Sept. 9, 2004) The USGS team found alkalinity levels as high as 12.1 (like drain cleaner), when most samples they collected were “between 9.5 and 10.5,” which is like ammonia. (Gonzalez, [Fallout](#), p. 88) After that cloud settled and dissipated somewhat, and after the city sanitation workers and thousands of volunteers bulldozed and swept up the mess enough to pass it off as liveable, people (civilians) were urged to continue with their daily lives and get back to work. Meanwhile life for many was on the pile, within the mess. Thanks pumpitout.com for compiling relevant news items in the thread “[9/11 First Responders – The Dust at Ground Zero](#).” Which brings us to the EPA's work.

“I am glad to reassure the people of New York . . . that their air is safe to breathe and their water is safe to drink.” -Christie Todd Whitman, EPA Administrator, Sept. 18, 2001.

Fortunately New Yorkers weren't dumb enough to believe that, at least according to a poll by New York 1, the city's all-news cable station, and the *New York Daily News* March 2002: “70 percent of New Yorkers did not believe the EPA's assurances that the air around Ground Zero was safe.” (Juan González, [Fallout: The Environmental Consequences of the World Trade Center Collapse](#), The New Press, New York, 2002, p. 134.) They still had to

breathe the freakin' air! Despite what the people believed, when tested – herded into the poisonous field, so to speak – they breathed what they had to breathe for their brothers and their country. The world's eyes were on them.

And without an official federal “danger” notice, insurance companies were less likely to pay a claim. Where entire ventilation systems and carpets should have been completely replaced, a wet rag was used... and a vacuum cleaner. Either way, people moved back into their homes in the days and weeks after 9/11. And of course, “The desire to reopen Wall Street played a role in the EPA's air quality statements.” ([Jenna Orkin testimony](#), 2004, *Ibid.*) The stock market couldn't stop for more than a week, surely. [The 17th](#) was pushing it.

The EPA's investigation of the WTC dust was doomed to failure – to the pleasure of insurance companies and Wall Street, and politicians – by a restriction on quality equipment:

“On September 12, a regional EPA office volunteered to send 30 to 40 electron microscopes to Ground Zero to test bulk dust samples for the presence of asbestos fibers, according to EPA whistle-blower Cate Jenkins, yet the local EPA office declined the offer, opting for the less effective polarized light microscopy [PLM] testing method instead. Jenkins had further alleged that regional office personnel were told by the local EPA office: ‘We don't want you fucking cowboys here. The best thing they could do is reassign you to Alaska.’”

- Michael Mason, "[The 9/11 Cover-Up: Thousands of New Yorkers were endangered by WTC debris--and government malfeasance](#)," *Discover Magazine*, Oct. 2007, published online Sept. 7, 2007.

Cate Jenkins included that last quote in her July 2004 paper/book *Comments on the EPA Office of Inspector General's 1/27/03 interim report titled: "EPA's Response to the World Trade Center Towers Collapse" A DOCUMENTARY BASIS FOR LITIGATION* (p. 223).

Ongoing EPA work at the Libby, Montana Superfund asbestos cleanup project was using electron microscopes (TEM method) to analyze dust samples. A few days after 9/11, **in the WTC EPA HQ** at 290 Broadway, EPA used TEM. Yet for the reports that would determine whether or not the 1% asbestos benchmark was detected on *Wall Street* and in *businesses*, etc., EPA recommended the less effective PLM method. (Jenkins, *Ibid.*)

“Many indoor tests being done by federal or local health officials or by private cleanup companies used a testing procedure called phase contrast microscopy, which detects only larger asbestos fibers of at least 5 microns in size. But when [...they...] used a more exact – and more expensive – method of analysis, electron microscopy, the same samples they had tested with the cheaper method showed far greater amounts of asbestos.” (Gonzalez, [Fallout](#), *Ibid.*, p. 110.) One example compared the study of 11 dust samples using both methods. The cheaper one found 2 out of 11 exceeded the EPA's standard. The more expensive found 7 out of 11. (*Ibid.*, p. 111.) Doing that particular testing was an independent Virginia-based firm H. P. Environmental. According to them, “an **unusually high percentage of dust resulting from the trade center disaster was composed of these smaller microscopic fibers**, most likely because of the high level of pulverization caused by the enormous pressures produced in the collapse of the Twin Towers.” [emphasis added] (*Ibid.*) Note that the Liroy study found “[m]aterial < 2.5 μm in aerodynamic diameter was 0.88–1.98% of the total mass.” (p. 703)

H. P. Environmental met in a conference with several top contractors and city officials in early October. (EPA deferred most authority in the matter to the city. [Jenna Orkin, “[Air Toxicity and Coverup](#)” 9/11 Omission Hearings, Sept. 9, 2004]) Their findings were given little

attention. But when they posted their results on the website of the American Industrial Hygiene Association to make the information public, within five hours “their report had been removed from the site without any explanation. The next day [the scientists] were told that their services were no longer needed at Ground Zero.” (Ibid., p. 112.)

September 18 City Councilwoman Kathryn Freed asked the Giuliani administration if her independent group called the Ground Zero Task Force, “a dozen politicians representing lower Manhattan,” (Ibid., p. 109) could do some environmental testing in local buildings. The request was denied, so “Freed resorted to sneaking a team of environmental scientists past police barricades....” (Ibid.) Their results found four to six times the EPA asbestos max.

For the heroes who got their hands dirty (along with everything else inside and out) – FDNY, first responders, police, search and rescue, ironworkers... all the workers on the site – as recovery operations held desperately onto hope of a rescue, dust and smoke were the number one problem, when asked by volunteers on the sidelines managing the early effort to distribute materials from overwhelming numbers of donations rolling into the Jacob Javits Convention Center miles north of the disaster area. See the film “[The Heart of Steel](#)” (2008) after the introductions. Hear about the independent mission of tracking down \$50,000 worth of ideal quality respirators (at cost) before the emergency management system could. In the most extreme early hours, a ridiculous dust mask was being worn by many.



Ideal respirator cartridges routed to WTC by civilian volunteers “[The Heart of Steel](#)” (2008)

Mrs. Lowey: I have several questions, but, Chief, I just want to respond to something that you just said. No one was aware that they needed a mask. Now, there has been a lot of discussion about this, from the mayor, from the former head of the EPA, if you could elaborate on that, you said about a week later?

Deputy Chief Visconti: Yes.

Mrs. Lowey: The masks were delivered.

Deputy Chief Visconti: Yes to the best of my recollection. The first few days on the pile, seeing somebody with a filter mask on was not uncommon, but it wasn't widespread. I saw several people, firefighters, police officers and construction workers with the little filter masks on. Where they got them, how they got them, what made them think about getting them, I don't know.

But then it was later on, after that first week, that the HEPA masks were brought in. Now, initially, it was just handed it out, and then it was realized that they must be fitted. You had to have a fit test. Otherwise, you would do more damage by using the mask than not using it. So then they got into the program of you had to have one of



those masks, you had to be fitted for it and you had to use it.

Mrs. Lowey: After the first week.

Deputy Chief Visconti: I am guessing, I am going to say the first 4 days, I don't think anybody had the capability of realizing or capability of gathering enough respiratory protection to bring it into the site.

- Nita M. Lowey, New York, U.S. House of Representatives, Committee on Homeland Security, Sept. 20, 2007

It was too little, too late.

On 9/11 Emmanuel Gomez “and his entire [NYPD] academy class of 800 were deployed to the [WTC] to secure the site and help with rescue and cleanup efforts.” He would (six months later) testify before EPA hazardous waste ombudsman Robert Martin “that they had worked for weeks at Ground Zero without being provided with anything more than paper masks....” (Gonzalez, [Fallout](#), p. 84.) When asked during the hearing if “[f]or that 25 days straight, starting from Sept. 11, did anyone try to provide you a respirator?” Gomez replied, “No, sir.” It was 3 days before even a paper mask was issued. (Ibid., p. 85)

The 2011 Lancet Study confirmed widespread effects. “[A]sthma is the most commonly reported respiratory disorder in WTC-exposed people, and a dose-response relation between WTC-related exposures and asthma has consistently been identified in both rescue and recovery participants and non-rescue and non-recovery participants in several WTC-survivor study cohorts. (“Mortality among survivors of the Sept 11, 2001, World Trade Center disaster: results from the World Trade Center Health Registry cohort,” New York City Department of Health and Mental Hygiene, Long Island City, NY, USA [H T Jordan MD, R M Brackbill PhD, J E Cone MD, I Debchoudhury MPH, M R Farfel ScD, C M Greene MD, J L Hadler MD, J Kennedy MPH, J Li MS, S D Stellman PhD], Lancet 2011; 378: 879–87.)

In the study's 71,437 original interviews and numerous follow-ups, “We did not identify excess overall mortality in the WTC Health Registry cohort between 2003 and 2009 relative to New York City rates. Within the cohort, however, high levels of WTC-related exposure were associated with an increased risk of all-cause mortality and heart-disease-related mortality in non-rescue and non-recovery participants.” (Ibid., p. 885) In not so many words, people are getting sick and dying; but not so many deaths can be proven to have resulted from the dust.

OTHER TOXINS

See a recent [official tally](#) of the toxic agents observed around the WTC disaster site from the Zadroga Act-mandated World Trade Center Health Program, from the Centers for Disease Control and Prevention (CDC) and the National Institute for Occupational Safety and Health (NIOSH) Feb. 2012.

What of the reports of Freon® (chlorodifluoromethane) stored beneath the towers? “Huge underground tanks held more than 200,000 pounds of Freon stored to cool the seven buildings of the WTC complex. This had been the largest air-conditioning system in the country.” ([OSHA website](#), “A Dangerous Worksite”) “Nearly 180,000 pounds for the primary system and another 20,000 pounds for the backup system were located in separate tanks at two different levels in the WTC basement. While this chemical has a relatively high threshold limit value and is nonflammable, it emits hydrochloric and hydrofluoric acids when heated. Final status: Both tanks were eventually located and inspected; **both were damaged and**

one was leaking slightly. The same contractor that designed, built, installed and serviced the tanks eventually recovered the Freon®.” (Jeffrey W. Vincoli, Norman H. Black and Stewart C. Burkhammer, “[SH&E at Ground Zero](#)” [cached].) However, a conflicting report came from William Langewiesche, who explored below the surface and witnessed firsthand the apparent discovery: “that the Freon had vented, and the beast at the center of the pile was a myth.” (Ibid., p. 34.) At least [one aerial map](#), from October 24, indicates significant detection of both Freon and ammonia. (Source: NYC OEM Map FOIA – see article [297 Files from NYC OEM 09/11 Maps Database](#), also for more information on the subject of Freon and ammonia.) The Freon was a concern at [FDNY incident command meetings late September](#) and would stay in the meetings for weeks.

What other hazardous chemical leaks were there? Just north of “the” pile, at the WTC 7 site, “In addition to Con Ed’s [100,105 gallons of transformer] oil, there was a maximum loss of 12,000 gallons of diesel from two underground storage tanks registered at 7WTC. To date, EPA and DEC have recovered approximately 20,000 gallons from the other two intact 11,600 gallon underground fuel oil storage tanks at 7WTC.” (Memo to Con Edison Company, “Re: 7 World Trade Center (Trade Center Substation) Investigation Plan,” New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 2, Spill Prevention and Response, Nov. 19, 2001 [[source](#): independent FOIA].) Under the Twin Towers' ruins, at least one of the fuel tanks was recovered intact. (Jeffrey W. Vincoli, Norman H. Black and Stewart C. Burkhammer, “[SH&E at Ground Zero](#)” [cached]). See also the [DDC FOIA Sec. 1](#), p. 18, to read notes from a March 25, 2002 construction personnel meeting that noted a 10,000 gallon tank of oil at slurry wall section W31 [[21?](#)] had to be removed/emptied, as did the generator crank cases.

The Con Edison power substation's lost 100,105 gallons of transformer oil contained low levels of a toxic and carcinogenic PCBs... less than 10 parts per million according to a Con Ed spokesman (Gonzalez, [Fallout](#), p. 77) Gonzalez warns “that Con Edison was fined on several occasions during the 1990s by both the DEC and the courts for falsely reporting hazardous spill information.” (p. 78) I wonder about the possibility of an underground leak, like the one next door, and if WTC 7 fires would have burned the oil at all.

The neighboring Verizon building's fuel oil tanks burst when being submerged under water from the broken mains. That amounted to 40,000 gallons of petroleum mixed with 12 million gallons of water that had to be pumped out over a period of 2 months. (Glenn Collins, “[A Sturdy Survivor Gets Back to Work; Herculean Effort to Restore A Landmark Battered on 9/11](#),” *New York Times*, Jan. 6, 2003.) It's uncertain how much if any fueled the fires across the street in the pile. The diesel fuel being burned by hundreds of dump trucks hauling debris constantly for months likely had a more dangerous effect to the environment.

Benzene. “OSHA's maximum permissible exposure limit (PEL) for benzene is 1,000 parts per billion in air for an eight-hour average, 5,000 ppb for short-term exposure. Anything greater than that requires the use of cartridge respirators or gas masks to filter out organic vapors. [...] In fact, throughout all of September and October there were only six times when benzene readings at the North Tower plume were below OSHA's permissible...” (Gonzalez, [Fallout](#), p. 83.) Jet fuel was mentioned.

Dioxins, furans. Chlorinated Dibenzo-p-dioxins (CDDs) and Chlorodibenzofurans (CDFs). Burnt plastic and PVC (polyvinyl chloride) cable fumes. Burnt bleached paper products and other chlorinated chemicals. Smoke is technically fine particulate, right? “[E]xposure to even low levels of dioxins and furans can be severe, since they accumulate in body fat and have a half-life of from seven to twenty years.” (Ibid., p. 63) Many of the 75

related dioxin compounds and 135 furans are highly toxic and carcinogenic. Some kinds directly attack the body. Think Agent Orange in Vietnam.

When the 9/11 environmental disaster happened, EPA had no safety standards for dioxin and many other toxins in the air there. That gave them power to spin the numbers in the press. Nevertheless, “[a]ccording to EPA records, 43 percent (32 of 73) of all dioxin tests in air the agency took between Sept. 16 and Oct. 18 were above its proclaimed thirty-year benchmark, and 5 percent (4) were above its one-year benchmark. Given that the thirty-year exposure level had been so hastily established at such a questionably low cancer-risk level, and without standard review process, the high number of tests that surpassed that level should have set off alarms.” (Gonzalez, p. 67) Testing for dioxins in the air “between October 1 and October 4, from a sixteenth-floor window at the EPA’s own headquarters at 290 Broadway, half a mile north of the World Trade Center, ‘showed results above EPA’s action level based on a 30-year exposure,’ according to EPA documents.” (Ibid., pp. 68-69)

Mercury. Minute amounts were in fluorescent lamps and thermostats. The problem is that mercury is extremely toxic. It vaporizes and attaches to other particulates... and “there were 500,000 fluorescent lamps inside the Twin Towers on September 11, according to the Port Authority of New York, and unknown thousands more in other buildings that were damaged or destroyed.” (p. 59) EPA’s limit in drinking water is 2 parts per billion and 3.1 ppb in the air. (p. 60) EPA’s own tests September 14 “of water draining into the river from an overflow pipe near the trade center. ... reported to the agency on September 20, showed extraordinarily high levels of mercury and other heavy metals as well as dioxins, furans, and PCBs in the water samples. For mercury, the tests showed levels of 8.8 parts per billion.” (pp. 60-61)

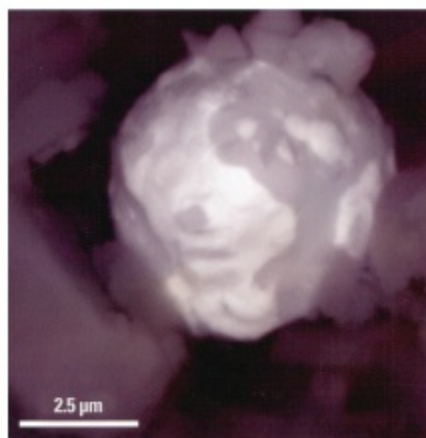


Figure 3. Appearance of lead from the Cortlandt Street sample.

Lioy, et. al., Ibid., p. 708. Levels “ranged from 101 to 625 µg/g.”- p.703

Lead damages the central nervous and reproductive systems, kidneys. Children risk brain damage. Some compounds cause cancer. “[A]nywhere from 200,000 to 400,000 pounds of lead were present in the thousands of personal computers that were instantly destroyed.” (p. 55) Also lead paint was found in the Lioy study. “Much of that lead became pulverized into microscopic dust... When released into the air [it] easily attaches itself to other particulates and can travel long distances before settling to the ground.” (Gonzalez, p. 55) Air tests naturally found elevated levels of lead, but “only” in some 17.5 percent of EPA samples. (p. 56) Lead was mentioned above also, in the “Molten Steel” microsphere analysis. High levels were measured at Stuyvesant High School ([blocks from GZ](#) and adjacent to Pier 25 debris processing) in the gymnasium and cafeteria (Orkin, Ibid.); and after the school reopened less than a month after 9/11, the ventilation system was found to have remained uncleaned! (Julie Shapiro, “[Stuyvesant High School Grads Sick 10 Years after 9/11](#),” [dnainfo.com](#), Sept. 8, 2011) In Summer 2002 the shutdown and cleaning finally happened.

Although not an immediate threat, radioactive Americium 241 was used in the thousands of smoke detectors. Other radioactive matter like Uranium and Tritium were measured in the dust – yet still barely above background levels. (Jim Hoffman, “Nuclear Devices: Theories that Nuclear Weapons Destroyed the Twin Towers,” [911research.wtc7.net](#)) Pointing out cancers as evidence of radiation from bombs wasn't logical considering all the other carcinogens there. (See [also] J.M. Moline, et. al., “[Multiple Myeloma in World Trade](#)

[Center Responders](#),” J Occup Environ Med. 2009 Aug;51(8):896-902. [Mirror](#)) The fact that people think “mininukes” or some other extreme devices were employed in the demolitions says something at least, again, about the excessive destruction.

CONCLUSION

All of the contents and floors of the towers falling through themselves did [that](#)? I don't know. Maybe one day science will be able to model the “global collapse” that ensued after such a short time of fire in the twin steel structures. If so, the brave scientists will probably have to ignore the recently upgraded fireproofing in the affected areas. ([NIST NCSTAR 1-6A](#) [see [image](#)]) The 16-million dollar NIST investigation wasn't up to the challenge. Reaching for support in their preconceived theory, they asserted the fireproofing was knocked off in the airplane impacts.

“Blown to smithereens” would fit the observations. Incendiaries/explosives would certainly guarantee successful “collapse” to the true engineers of the single most influential false flag attack in history. As a bonus – or as an integral part of the plan – complete demolition of the towers made the cleaning and coverup easy. Cheap and fast. No time for investigation. And not much left to investigate.

It was hard enough finding the bones of people – some in tiny pieces on adjacent buildings' roofs finally noticed in 2006. [Human remains](#) were the main motivation for searching in the rubble. Personal property and evidence being the other two categories for which FBI, police and others were tasked, especially [at Fresh Kills](#). Yet hundreds of death certificates had to be issued with no matching remains.

The area of unprecedented disaster in downtown New York City was named Ground Zero because it looked like a bomb exploded. The debris that remained once the dust settled had to be explained without professional controlled demolitions, i.e. bombs/ explosives. The likely conclusion/ theory that terrorists may have used bombs in addition to planes was therefore not considered a serious avenue of investigation – because of what would have been [and eventually was] found when looking for such explosives. The name Ground Zero wasn't popular for that reason. But it stuck. Workers at the time preferred calling it “the pile,” or as it became known rather quickly – “the pit.”

See a video by Nick Irving and Anthony Lawson, "[9/11: The Towers of Dust](#)." The low height of the rubble pile was a subject of interest from day one. Vehicles parked beside the towers were unharmed in some [photos](#). On Sept. 12 the mayor told us that 120 dump trucks had been working through the night (despite the fact that they could not access most of the site due to blocked roads), and that barges would be transporting debris away throughout the day (despite the fact that Weeks Marine had only signed the deal that morning; and the Dept. of Sanitation could not transport steel with their limited barge capacity before



Mayor Giuliani press conference 9/12 a.m.

river dredging could begin. [see "[Tonnage](#)"] Giuliani said these things on TV only a couple hours before ABC News anchor Peter Jennings asked his on-site reporter George Stephanopoulos: "When you look at where the towers used to stand there is surprisingly so little rubble. Where did all the rubble go?" The subject had been raised earlier, he said. George thought maybe the vehicles carrying out debris had some bearing. Also he mentioned a witness's thoughts using the word "evaporated" to describe the pulverized debris... some of which did literally vaporize, of course.

The total amount of debris mass is an ethereal figure. The numbers we heard so often updated were fascinating but immaterial because they were reached by computer processing of aerial LIDAR [imaging](#). The numbers were [estimations](#) only. Volume measurements applied to such contents of varying mass surely were not exact. Professionals involved in this aspect of the mapping effort are not available for comment. Disaster debris experts from the USACE, mapping experts with the city, and WTC construction engineers disagreed on initial figures. And the details of exactly what was being included as "the debris" was a matter of some uncertainty. Was WTC 7 included? How about 3, 4, 5, and 6, parts of which were left standing? To confuse matters there were weight scales used inconsistently, with wet debris – some of which was brought *into* the site for road building and slurry wall support.

[Maps of the basement levels](#) showing damaged/ collapsed areas are not detailed or complete. A round figure might say the basement was half collapsed. The "bathtub" area was so vast that people could imagine the "missing" debris was simply compacted underground. So the presence of voids and undamaged areas below the surface were somewhat of a surprise to [journalists](#). In the mall just below the surface, [looting was reported](#), after the "collapses." The symbolic Koenig sphere remained in its spot, only slightly damaged by the 110-story towers that once loomed overhead.

The debris most accessible for investigators was *and is* the dust. What may be a smoking gun for demolition is up for debate among PhD's. I can only quote the two opposing sides. The one I'm leaning toward at the end of this investigation is obviously that of the "conspiracy theorists."

Please contact me with any comments, whether about errors, dead links, grammar, omissions, aesthetics, or otherwise, at [matt\(at\)911conspiracy.tv](mailto:matt(at)911conspiracy.tv). Or comment at www.facebook.com/911conspiracytv

- Matt Nelson, September 2014

(First edition, updated with Appendix 3 and minor corrections/additions.)

Appendix 1

Timed Text Closed Captions for “[9/11 Debris: An Investigation of Ground Zero, Part 1.](#)”

Notes have been added in brackets. Sources have been named in parentheses after the paragraph's closing tag </p>.

```
<tt xml:lang="en">
<head>
<layout/>
</head>
<body>
<div xml:id="captions">
<p begin="00:00:01" end="00:00:03">The debris is just unbelievable.</p> (Witness at Ground
Zero on ABC News, 9/11 at 8:28 p.m.)
<p begin="00:00:12" end="00:00:15.5">That's the part that's crazy is just that's all that's left.
[The UTF-8 xml text file format requires the apostrophe to be written as such: &apos; Leaving
that code in will be noticed starting now.] </p> (Kevin Sutavee, independent camera operator
on ABC News, 9/11, 4:10 p.m.)
<p begin="00:00:15.6" end="00:00:19.4">You don&apos;t find a desk. You don&apos;t find a
chair.</p> (Joe Casaliggi, FDNY Engine 7 in “9/11: The Filmmakers' Commemorative Edition”
Paramount, 2002)
<p begin="00:00:19.5" end="00:00:22">You don&apos;t find a telephone, a computer.</p>
(Joe Casaliggi, Ibid.)
<p begin="00:00:22.1" end="00:00:23.2">...that&apos;s all that&apos;s left...</p> (Kevin
Sutavee, Ibid.)
<p begin="00:00:23.3" end="00:00:26.2">...towers collapsed almost cleanly on themselves.
Where did they go?</p> (Philippe Petit in “New York: The Center of the World” PBS, 2003)
<p begin="00:00:28.5" end="00:00:30">Everything was dust and metal.</p> (Lt. Kenneth
Christiansen, FDNY Ladder 5 in “Relics from the Rubble” History, 2002)
<p begin="00:00:31.5" end="00:00:34">The building collapsed to dust.</p> (Joe Casaliggi,
Ibid.)
<p begin="00:00:39" end="00:00:41">Early estimates were that it would take</p>
<p begin="00:00:41.1" end="00:00:43.5">up to 2 years to clean up Ground Zero.</p>
<p begin="00:00:43.6" end="00:00:48">But in fact the process went much more quickly, and
was significantly under budget.</p> (PBS “Newshour” May 30, 2002)
<p begin="00:00:51.6" end="00:00:55">Architects, engineers, people who work with steel,
welders,</p>
<p begin="00:00:55.1" end="00:01:01.2">have just never seen the level of destruction and
the level of deformation of this material in our lives.</p> (Architect Bart Voorsanger in “Relics
from the Rubble”)
<p begin="00:01:02" end="00:01:05.5">I found it hard to believe that it actually bent because
of the size of it</p>
<p begin="00:01:05.6" end="00:01:10">and how there&apos;s no cracks in the iron. It&apos;s
bent without almost a single crack in it.</p> (Ironworker in “Relics from the Rubble”)
<p begin="00:01:10.5" end="00:01:16.5">Just everything is smashed to atoms. There are no
big pieces of anything.</p> (Tim Cothren, camera operator on ABC News 9/12 at 11:53 p.m.)
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<p begin="00:01:17" end="00:01:24.5">There were no desks. There were no phones. Maybe now and then you would find a fragment of something, </p>

<p begin="00:01:25.6" end="00:01:28.4">but basically everything was just pulverized.</p> (Ironworker Larry Keating in "Metal of Honor: The Ironworkers of 9/11" by Rachel Maguire, Spike TV, 2006)

<p begin="00:01:29.6" end="00:01:34.6">There wasn't a - a computer screen, a laptop. There was no office...</p>

<p begin="00:01:34.7" end="00:01:40.4">I mean, it was, you know, two 110-story buildings -- of office equipment.</p>

<p begin="00:01:41.1" end="00:01:44.5">You know, it's just -- beyond comprehension.</p> (Tom McHale, PAPD/Ironworker in "Metal of Honor: The Ironworkers of 9/11")

<p begin="00:01:45" end="00:01:48">It was like the surface of another planet.</p>

<p begin="00:01:48.1" end="00:01:51.5">All there was, was - ah - powdered debris and metal.</p>

<p begin="00:01:52.5" end="00:01:56">It was a - a very strange scene.</p> (Dan Nigro, FDNY Chief of Dept. 2001-2002, in "The Conspiracy Files: 9/11," BBC 2007)

<p begin="00:01:57.5" end="00:02:01">Just the debris field is amazing. It's beyond -</p>

<p begin="00:02:02.1" end="00:02:06.9">anything I've ever seen like that. I've seen collapses </p>

<p begin="00:02:07" end="00:02:08.8">and d - demolished buildings.</p>

<p begin="00:02:08.9" end="00:02:15">But nothing like this, this was - unbeliev... like I said, there wasn't a door, there wasn't anything to be found.</p>

<p begin="00:02:15.1" end="00:02:21.5">It was all - disintegrated - all rubble. Concrete was small, little pieces, not even slabs.</p>

<p begin="00:02:21.8" end="00:02:26">No desks, no furniture, no computers, no phones, no anything. So I imagine -</p>

<p begin="00:02:28" end="00:02:33.4">I imagine the people were the same as the building. Nothing left.</p> (Tom Spinard, FDNY Engine 7 in "9/11: The Filmmakers' Commemorative Edition")

<p begin="00:02:34" end="00:02:37">Where did all that building material disappear to?</p> (Irving and Lawson, "9/11: The Towers of Dust" 2008)

<p begin="00:02:37.2" end="00:02:39.8">It just disappeared into it's own dust.</p> (unknown)

<p begin="00:02:44" end="00:02:47.5">You were walking in dust maybe up to your ankles.</p> (Ironworker Paul Gaulden in "Metal of Honor")

<p begin="00:02:51" end="00:02:55">All the furnishings and the fixtures inside the building -</p>

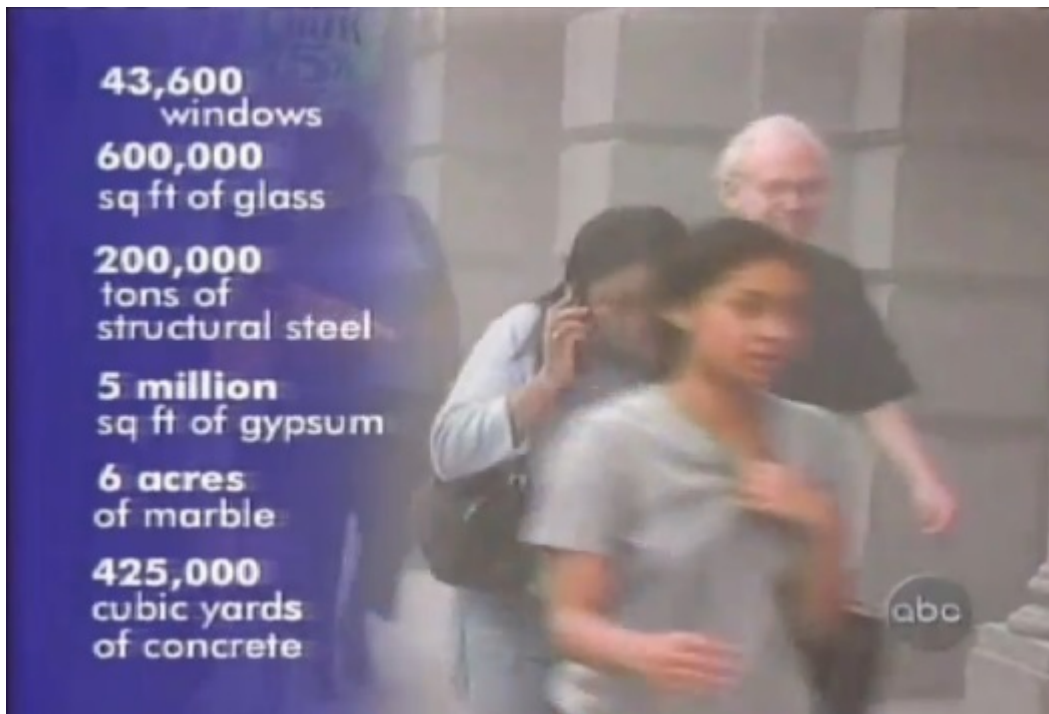
<p begin="00:02:55.1" end="00:03:02">None of that existed after the collapse. There were no desks. There were no phones, no computers, no copy machines.</p>

<p begin="00:03:03" end="00:03:09">No chairs, nothing. It had all been pulverized by the tremendous amount of energy that was created by this collapse.</p>

<p begin="00:03:09.8" end="00:03:11.8">It was just pulverized into this dust.</p> (Captain Jay Jonas, FDNY Ladder 6 in "Inside the Twin Towers," Discovery Channel, 2006)

<p begin="00:03:37.5" end="00:03:45">...I started digging those first couple of buckets, I started to look at this dust, this - ah - powder. All I could think of is that peop- .</p>

<p begin="00:03:46" end="00:03:48">This is people.</p>
 <p begin="00:03:48.1" end="00:03:52.2">... have the feeling that there was people in this pulverized dust.</p>
 <p begin="00:03:53" end="00:03:55.1">Where is everybody?</p>
 <p begin="00:03:55.2" end="00:03:59">Yeah. I mean you didn't find a shard of glass...</p>
 <p begin="00:03:59.2" end="00:04:05">Anything that looked like it would be used by a person - you just didn't see it.</p>
 <p begin="00:04:05.1" end="00:04:09">It was just concrete, steel, that was it. And dust. -- Papers.</p>
 <p begin="00:04:10.2" end="00:04:14.5">...you didn't find a shard of glass...</p>
 (FDNY firefighters in "Collateral Damages," Turn of the Century Pictures, 2003)
 <p begin="00:04:15.2" end="00:04:21">Engineers at the firm that built the buildings best guess to account for the missing twelve hundred feet of material</p>
 <p begin="00:04:22" end="00:04:28.8">from each tower is that large portions simply vaporized into the dust that rained down on New Yorkers immediately after the collapse.</p>
 <p begin="00:04:29.5" end="00:04:32">It was that powerful.</p>
 <p begin="00:04:34" end="00:04:37">We're talking here about ...</p>



ABC News, Sept. 13, 7:36 p.m. "We're talking here about..." -Robert Krulwich

<p begin="00:04:53" end="00:04:58">Turned in good part into a cloud, says environmental medical doctor Stephen Levin.</p>
 <p begin="00:04:58.3" end="00:05:01">I was astonished at the degree to which</p>
 <p begin="00:05:02" end="00:05:07">at the degree to which solid materials were turned into pulverized dust as a consequence of that building collapse.</p>
 <p begin="00:05:07.1" end="00:05:08.8">I think it was striking.</p>
 <p begin="00:05:09" end="00:05:12">The Environmental Protection Agency has been

sampling the dust</p>

<p begin="00:05:12.1" end="00:05:18.9">and one specialist told ABC they believe the clouds that appeared immediately after the collapse </p>

<p begin="00:05:19" end="00:05:25.5">were mostly gypsum dust from drywall, cement dust, and plaster - which can cause problems.</p>

<p begin="00:05:26" end="00:05:31">Cement dust is an irritant. Fine glass powder is also an irritating material.</p>

<p begin="00:05:31.1" end="00:05:39">The EPA did find spotty levels of asbestos. A sample on a police car turned out dangerous. Another sample a couple of blocks away, not dangerous.</p>

<p begin="00:05:40" end="00:05:46.5">But most interesting: In the mix they are looking, they think, at specks of steel that used to be beams and elevators, </p>

<p begin="00:05:54" end="00:06:00.5">marble from the lobby floor and facings. So what were once the strongest architectural elements in the two towers</p>

<p begin="00:06:00.9" end="00:06:06">were pulverized. Large portions turned into clouds, like this one.</p> (Robert Krulwich of ABC News 9/13 at 7:35 p.m.)

<p begin="00:06:06.3" end="00:06:09.3">They're both down now. It's just a huge cloud of smoke.</p> (unknown)

<p begin="00:06:09.4" end="00:06:14.5">People who have been right down next to the base of what was the trade towers</p>

<p begin="00:06:14.6" end="00:06:19.5">say there's virtually nothing left. Maybe a few flights of stairs, a few stories of one of the buildings.</p>

<p begin="00:06:19.6" end="00:06:26">But that when they came down there was so much melting and so much demolishing of any kind of structure...</p> (Bill Blakemore of ABC News 9/11 at 9:52 p.m.)

<p begin="00:06:27" end="00:06:34">It's an interesting question. When you saw those two giant towers collapse almost cleanly on themselves.</p>

<p begin="00:06:34.1" end="00:06:36">Where did they go?</p>

<p begin="00:06:37" end="00:06:42">I have read in some architecture article that they were made mostly of air,</p>

<p begin="00:06:42.3" end="00:06:49">if you consider the space between the solid molecules of the steel, the concrete, the glass, the aluminum.</p>

<p begin="00:06:49.1" end="00:06:52.3">There was a lot of air. It was mostly air, actually.</p>

<p begin="00:07:01.5" end="00:07:05.5">Where did they go was part of the disbelief that I was feeling.</p> (Philippe Petit in "[New York: The Center of the World](#)")

<p begin="00:08:20.1" end="00:08:22">Oh, my goodness me.</p>

<p begin="00:08:22.5" end="00:08:25.5">That's the ah - That's all that's standing of the Twin Towers right now, in the background.</p>

<p begin="00:08:25.6" end="00:08:28">That's all that's standing. That's it. That's all that's left.</p>

<p begin="00:08:29" end="00:08:32.5">So you were literally right inside - um...</p>

<p begin="00:08:37.8" end="00:08:40">What time did you actually photo- take these-</p>

<p begin="00:08:42" end="00:08:46.5">I don't - Actually, I rode my motorcycle right up there. That was about an hour ago, not even.</p>

<p begin="00:08:47" end="00:08:51">And this is right at the center of where the trade towers stood until-</p>

<p begin="00:08:51.1" end="00:08:55">You can see- When you see the firemen there's

nothing they can do. It's just like-

<p begin="00:09:10" end="00:09:11">It's absolutely-

<p begin="00:09:11.1" end="00:09:14">Look at that. That's all that's left.

<p begin="00:09:14.1" end="00:09:16">Do you know whether that's the South Tower or the North Tower?

<p begin="00:09:16.1" end="00:09:17.8">That's the South Tower.

<p begin="00:09:18.5" end="00:09:20">And you saw no sign of life...

<p begin="00:09:20.2" end="00:09:24">See that's the concourse below. That's going down like twenty feet or so.

<p begin="00:09:36" end="00:09:39.5">But that's the part that's crazy it that's all that's left. (Camera operator Kevin Sutavee and Anchor Peter Jennings on ABC News, 9/11, 4:10 p.m.)

<p begin="00:09:45" end="00:09:50">On the surface, firefighters and others continued to comb the debris for remains.

<p begin="00:09:52" end="00:09:59">Aside from huge pieces of twisted steel from the towers, there was little that was recognizable in the debris.

<p begin="00:09:59.5" end="00:10:02">Shrapnel-like fragments. Gray dust.

<p begin="00:10:03.1" end="00:10:09">No one had ever seen anything like it, even at the site of the Murrah Building in Oklahoma City,

<p begin="00:10:09.2" end="00:10:11.5">also destroyed by an act of terrorism. (Narrator in "World Trade Center: Rise and Fall of an American Icon," History, 2002)

<p begin="00:10:12.8" end="00:10:15.3">I said, you know, in Oklahoma City

<p begin="00:10:16" end="00:10:18.5">you could see pieces of desks and chairs.

<p begin="00:10:18.6" end="00:10:21">There was something that told you this was an office building.

<p begin="00:10:21.2" end="00:10:25">At the World Trade Center site, it seems like everything was pulverized. (Col. John O'Dowd, U.S. Army Corps of Engineers in "World Trade Center: Rise and Fall of an American Icon")

<p begin="00:10:28" end="00:10:31">One of the more unusual artifacts to emerge from the rubble

<p begin="00:10:31.1" end="00:10:35.5">is this rock-like object that has come to be known as the "meteorite," [The UTF-8 xml text file format requires the quotation marks to be written as such: "] (Narrator in "Relics from the Rubble")

<p begin="00:10:35.7" end="00:10:40">It's this fused element of steel - molten steel -

<p begin="00:10:40.1" end="00:10:45">and concrete, and all of these things all fused by the heat into one single element. (Architect Bart Voorsanger in "Relics from the Rubble")

<p begin="00:10:45.3" end="00:10:50">And almost like a chunk of lava from Kilauea or Iceland, where there are very sharp-

<p begin="00:10:50.5" end="00:10:54">but breakable shards on the end here. (Man in "Relics from the Rubble")

<p begin="00:11:04" end="00:11:08">By September 12th the Fresh Kills Landfill had been chosen

<p begin="00:11:08.1" end="00:11:11">as the site where small debris would be sorted.

<p begin="00:11:11.3" end="00:11:18">Fresh Kills - an enormous waste facility on Staten Island - sits across the New York harbor from Ground Zero.

<p begin="00:11:19" end="00:11:22.2">New York City Police Deputy Inspector Jim

Luongo

<p begin="00:11:22.3" end="00:11:26"> and FBI agent Richard Marx have been in charge of the operation from the beginning.</p>

<p begin="00:11:26.5" end="00:11:31">They've also led the effort to save personal property and artifacts for museums,</p>

<p begin="00:11:31.3" end="00:11:35">hoping to keep these memories alive with future generations.</p>

<p begin="00:11:36" end="00:11:41">Is there one artifact that stands out, for any particular reason for you?</p> (Narrator/Interviewer Josh Binswanger in "Relics from the Rubble")

<p begin="00:11:43" end="00:11:46.3">I think the lack of artifacts stands out to me quite a bit.</p>

<p begin="00:11:47" end="00:11:52">I think the fact that I haven't seen a door, I haven't seen a phone, I haven't seen a computer.</p>

<p begin="00:11:52.1" end="00:11:55"> I haven't seen a doorknob. I think that stands out.</p>

<p begin="00:11:55.2" end="00:11:59.4">But for the things that we have seen.... Every now and then we'll come across</p>

<p begin="00:11:59.5" end="00:12:04">a stuffed animal that might have been on somebody's desk,</p>

<p begin="00:12:04.2" end="00:12:07">pictures that were on people's desks, that we're trying to restore.</p> (Deputy Inspector James Luongo, NYPD in "Relics from the Rubble")

<p begin="00:12:07.8" end="00:12:12.8">Perhaps the most astonishing object Shayt found is something there should have been thousands of.</p>

<p begin="00:12:13" end="00:12:16.8">This one probably only survived because it was in the basement.</p>

<p begin="00:12:17" end="00:12:19">It belonged to an ice cream store.</p> (Narrator in "Relics from the Rubble")

<p begin="00:12:21.1" end="00:12:25">I've pretty much given up trying to find some sort of intact file cabinet.</p>

<p begin="00:12:25.2" end="00:12:28">But while I was at the compound for the Port Authority Police,</p>

<p begin="00:12:28.1" end="00:12:33">this ball of metal about the size of a basketball was delivered to them.</p>

<p begin="00:12:33.1" end="00:12:37">You can see what remains of the - </p>

<p begin="00:12:37.1" end="00:12:40">file folders that were inside.</p> (David Shayt, September 11 Collecting Curator and Museum Specialist, Division of Cultural History, National Museum of American History, Smithsonian Institution in "Relics from the Rubble")

<p begin="00:13:01" end="00:13:05">In the beginning there were people that wanted the name of the landfill changed.</p> (Mark Schaming, Director of Exhibitions at the N.Y. State Museum in "Collateral Damages" – also speaking until 14:07)

<p begin="00:13:05.1" end="00:13:07.5">They thought it was a morbid thing.</p>

<p begin="00:13:07.7" end="00:13:11">But 'kill' is Dutch for 'river,' and so, the name was kept.</p>

<p begin="00:13:11.1" end="00:13:16">At first when I saw it I thought they were moving mounds of dirt around with loaders.</p>

<p begin="00:13:16.1" end="00:13:21.7">And what we were seeing was the ground remains

of the World Trade Center.</p>

<p begin="00:13:22" end="00:13:24.9">And it had a very organized sense to it. </p>

<p begin="00:13:25" end="00:13:30">The material came in in these buckets all together and put in one place. And then it was sorted.</p>

<p begin="00:13:32" end="00:13:39">We saw nothing we could recognize in the field. We expected to see chairs and file cabinets and what was left of offices.</p>

<p begin="00:13:39.3" end="00:13:45">Everything was reduced to the finest state. It basically looked like mountains of dirt.</p>

<p begin="00:13:45.9" end="00:13:52.5">There were hills of gray dirt, vast expanses of wire, twisted rebar, fields of steel,</p>

<p begin="00:13:53" end="00:13:56">and the fields of vehicles.</p>

<p begin="00:13:59" end="00:14:03.8">The minute they - we got there, they wouldn't let us take our pictures,</p>

<p begin="00:14:04" end="00:14:06.9">we planned to figure out a way to get back there and take photographs.</p> (Mark Schaming, Director of Exhibitions at the N.Y. State Museum in "Collateral Damages")

<p begin="00:14:29" end="00:14:34">Ah, well, first of all let's go back to your basic premise that there was a pool of molten steel.</p>

<p begin="00:14:34.3" end="00:14:38">I know of absolutely nobody -- no eyewitness who has said so.</p> (John Gross, NIST Investigator at http://www.youtube.com/watch?v=3SLIzSCt_cg)

<p begin="00:14:38.2" end="00:14:42">You'd get down below and you'd see molten steel.</p>

<p begin="00:14:42.5" end="00:14:44.9">Molten steel running down the channelw--s. </p>

<p begin="00:14:46" end="00:14:48.8">Like you're in a foundry --</p> (Captain Philip Ruvolo, FDNY in "Collateral Damages")

<p begin="00:14:48" end="00:14:48.5">Yea.</p>

<p begin="00:14:49" end="00:14:50.8">like lava.</p>

<p begin="00:14:50" end="00:14:50.9">like it was lava from a volcano.</p> (FDNY firefighters in "Collateral Damages")

<p begin="00:14:51" end="00:14:57.3">The fires got very intense down there and actually melted beams where it was molten steel that was being dug out.</p> (Richard Riggs, Debris Removal Specialist in "World Trade Center: Rise and Fall of an American Icon")

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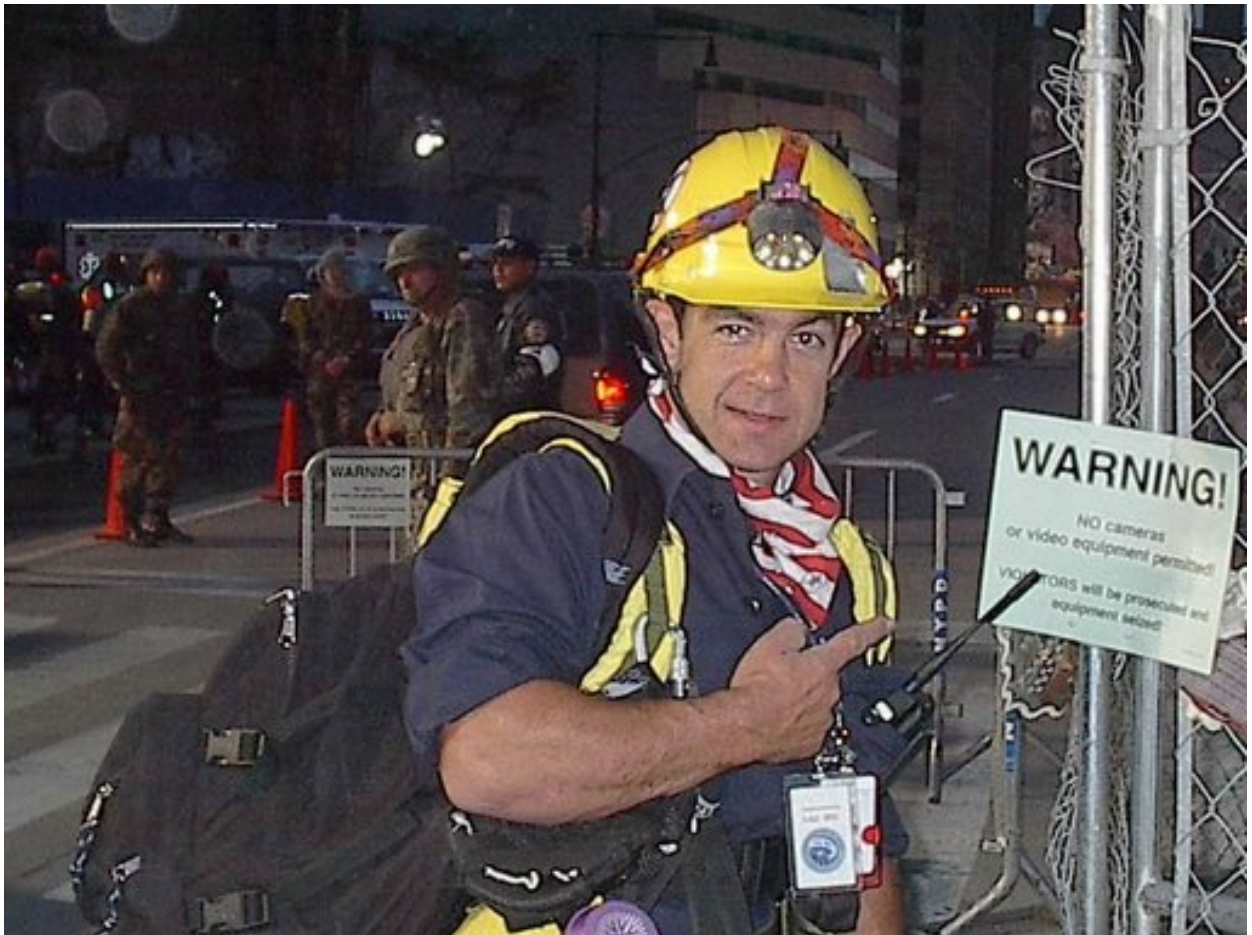
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Appendix 2

Images linked/mentioned above

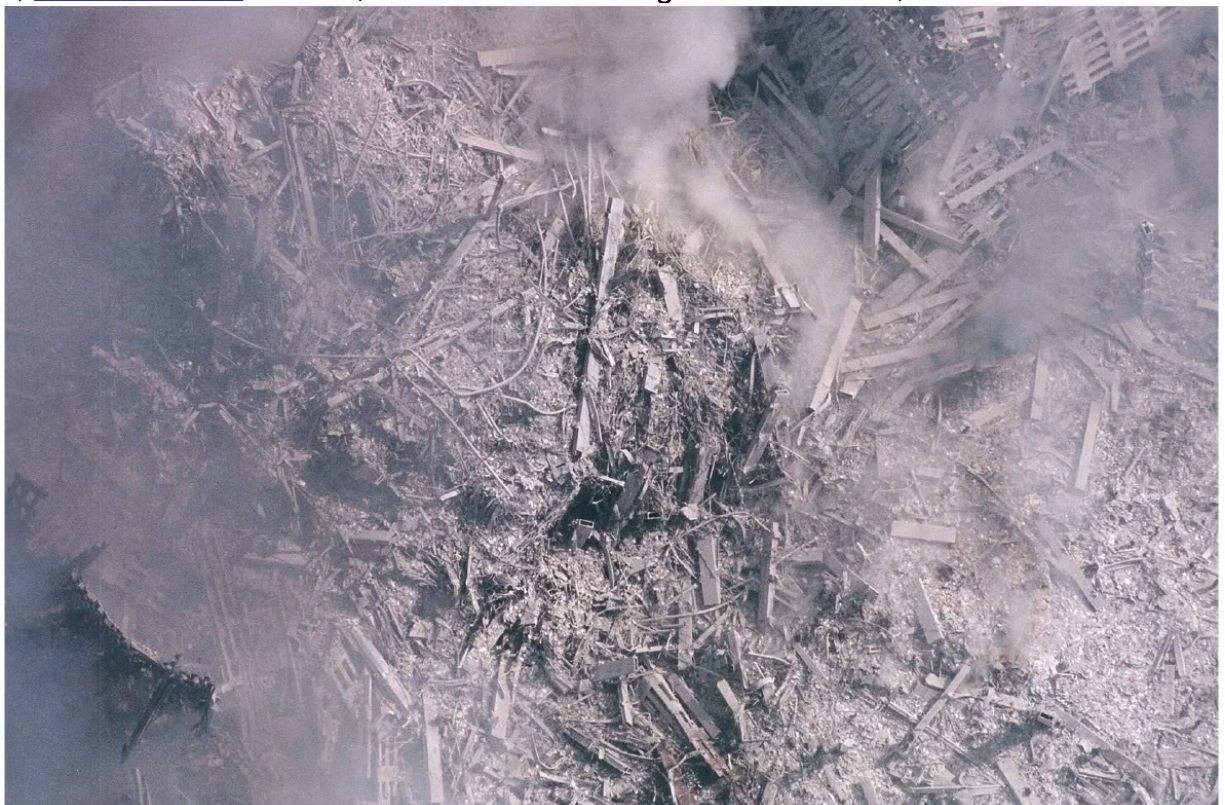
p. 8, shot by photographer [Kurt Sonnenfeld](#) of FEMA:



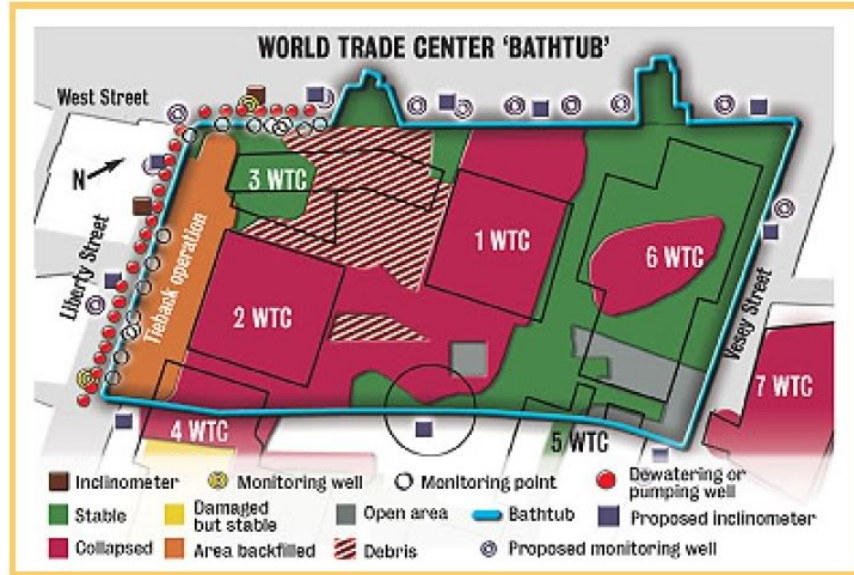
p. 11, [Deborah Hardt](#) on 9/11, from 911datasets.org FOIA release 29, 42A0325-G29D11:



p. 11, [NYPD Aviation](#) on 9/11, from 911datasets.org FOIA release 8, 42A0007:



p. 17, *Engineering News-Record* Oct. 29 diagram. "Tieback operation" in orange area:



p. 18, "Looting..." *New York Times*, Sept. 21, 2001:



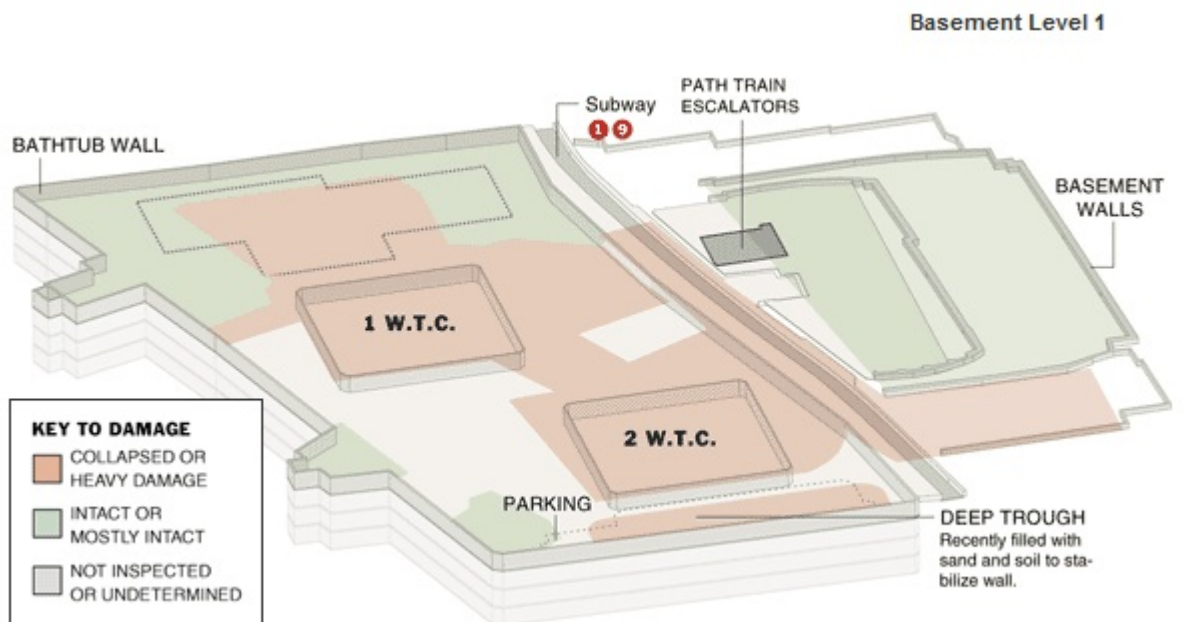
Subterranean passageways somehow survived the collapse of the twin towers. A New York National Guard unit discovered that stores there had been looted.

UNDERGROUND

p. 19, image caption "See Thomas Nilsson"

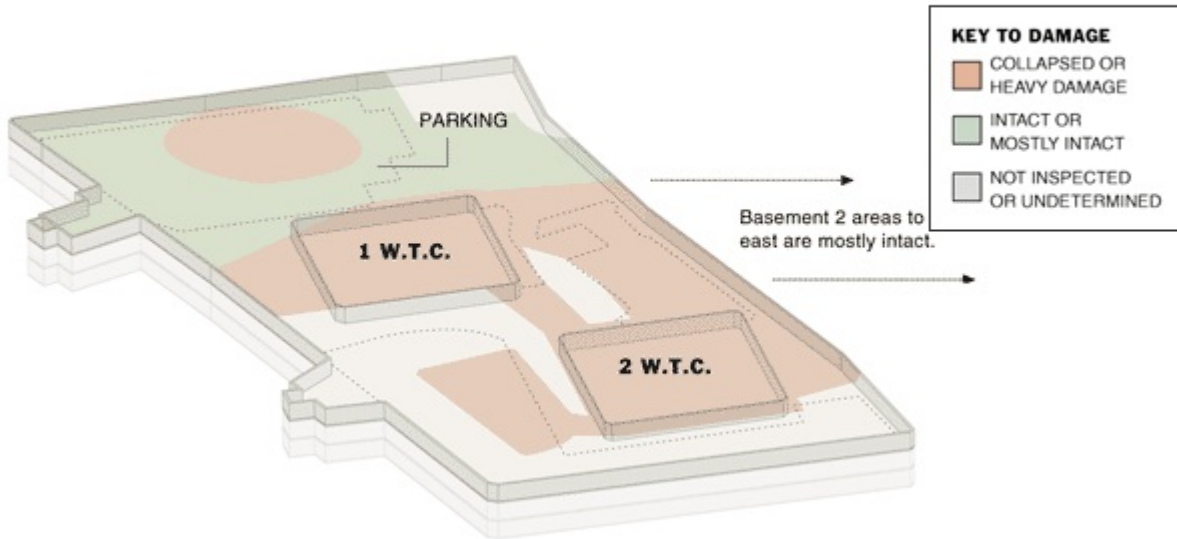


p. 17, from [The New York Times website](http://www.nytimes.com). See [a gif version](#).



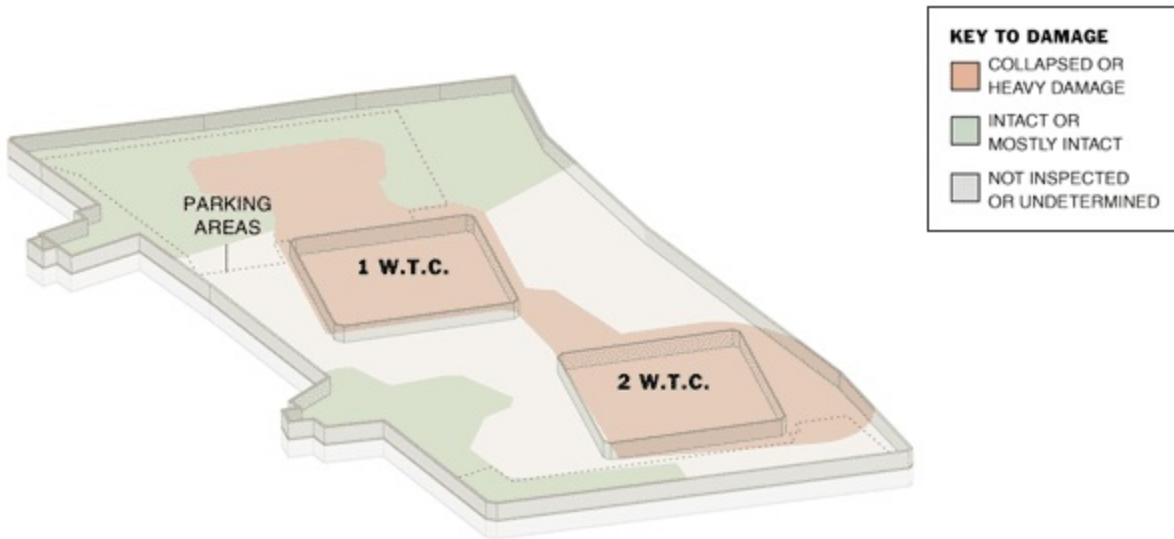
Steve Duenes/The New York Times

Basement Level 2



Steve Duenes/The New York Times

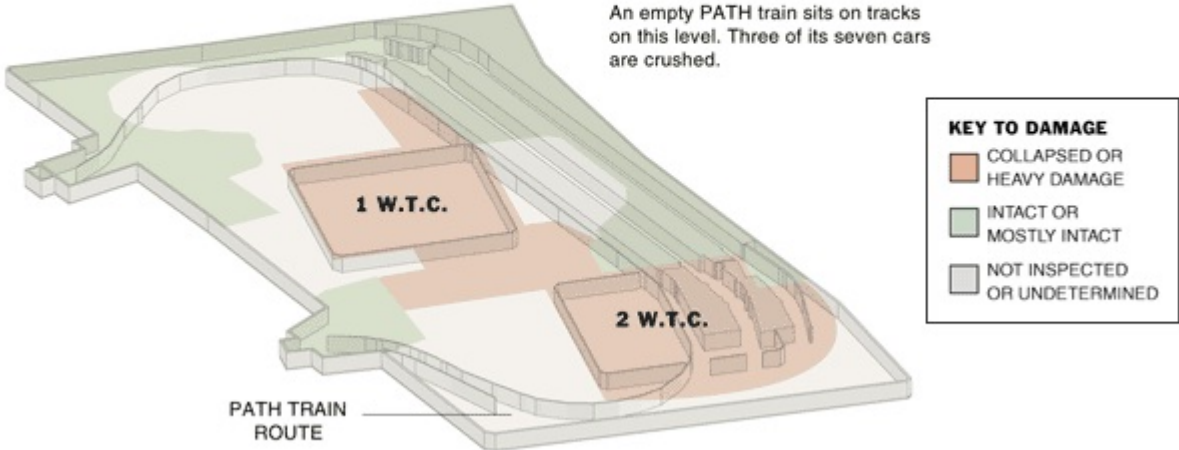
Basement Level 3



Steve Duenes/The New York Times

Basement Level 6

Damage patterns on basement levels 4 and 5 are nearly identical to basement level 6.



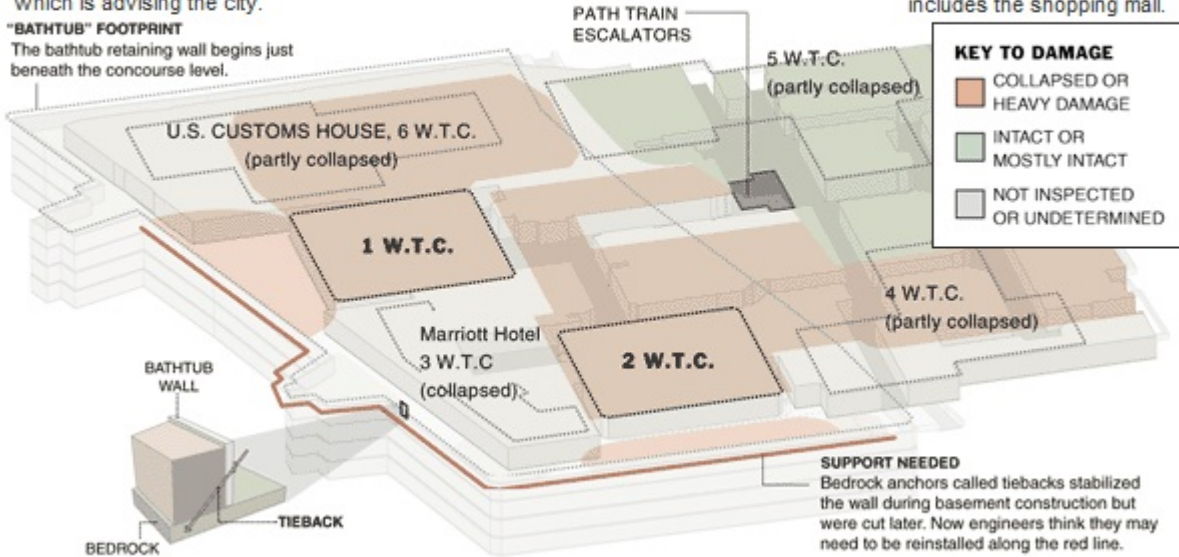
Steve Duenes/The New York Times

The diagrams are based on floor-by-floor assessments of the basement levels of the World Trade Center complex by Mueser Rutledge Consulting Engineers, which is advising the city.

"BATHTUB" FOOTPRINT

The bathtub retaining wall begins just beneath the concourse level.

Concourse Level
Below the plaza level, includes the shopping mall.

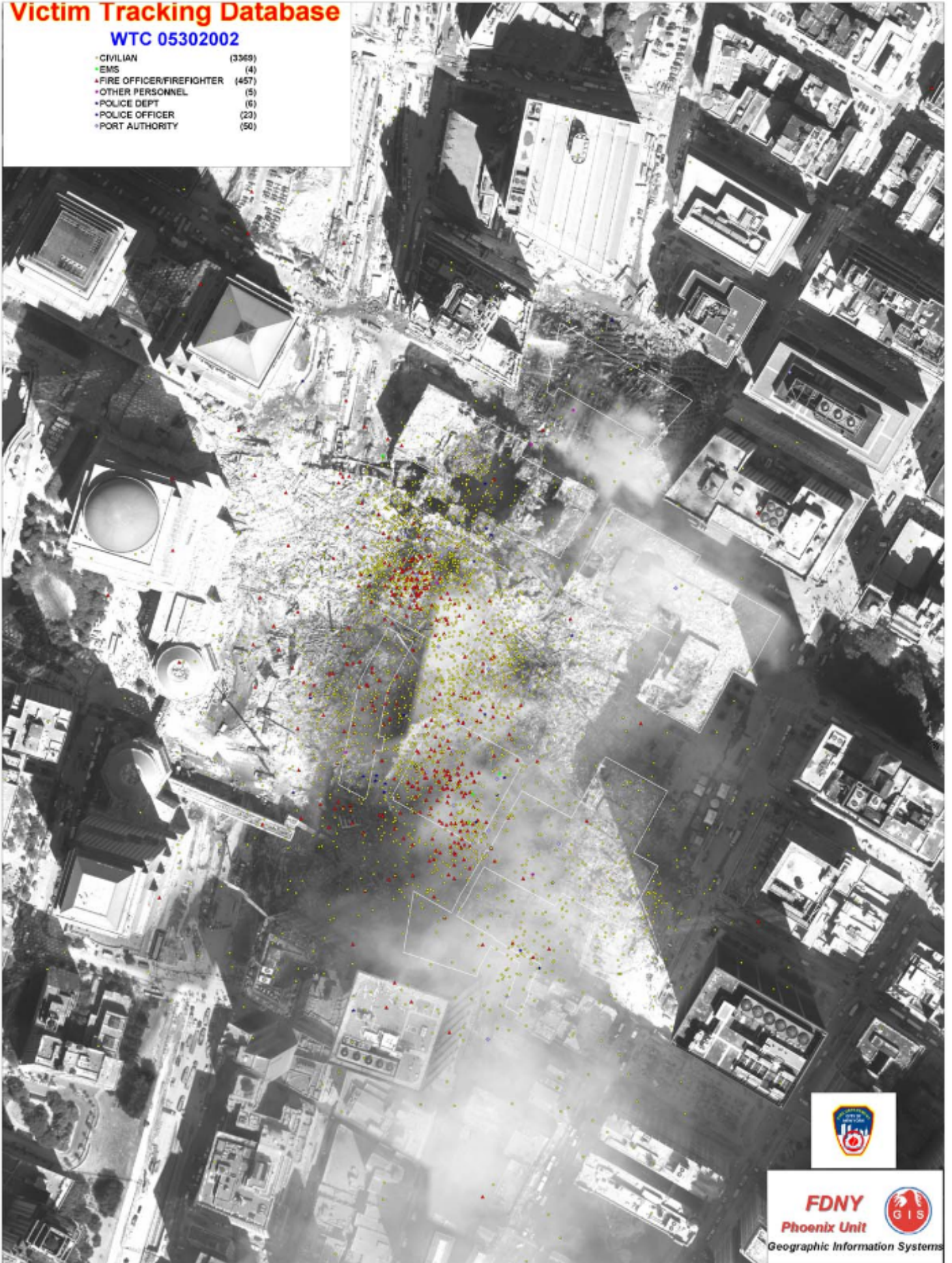


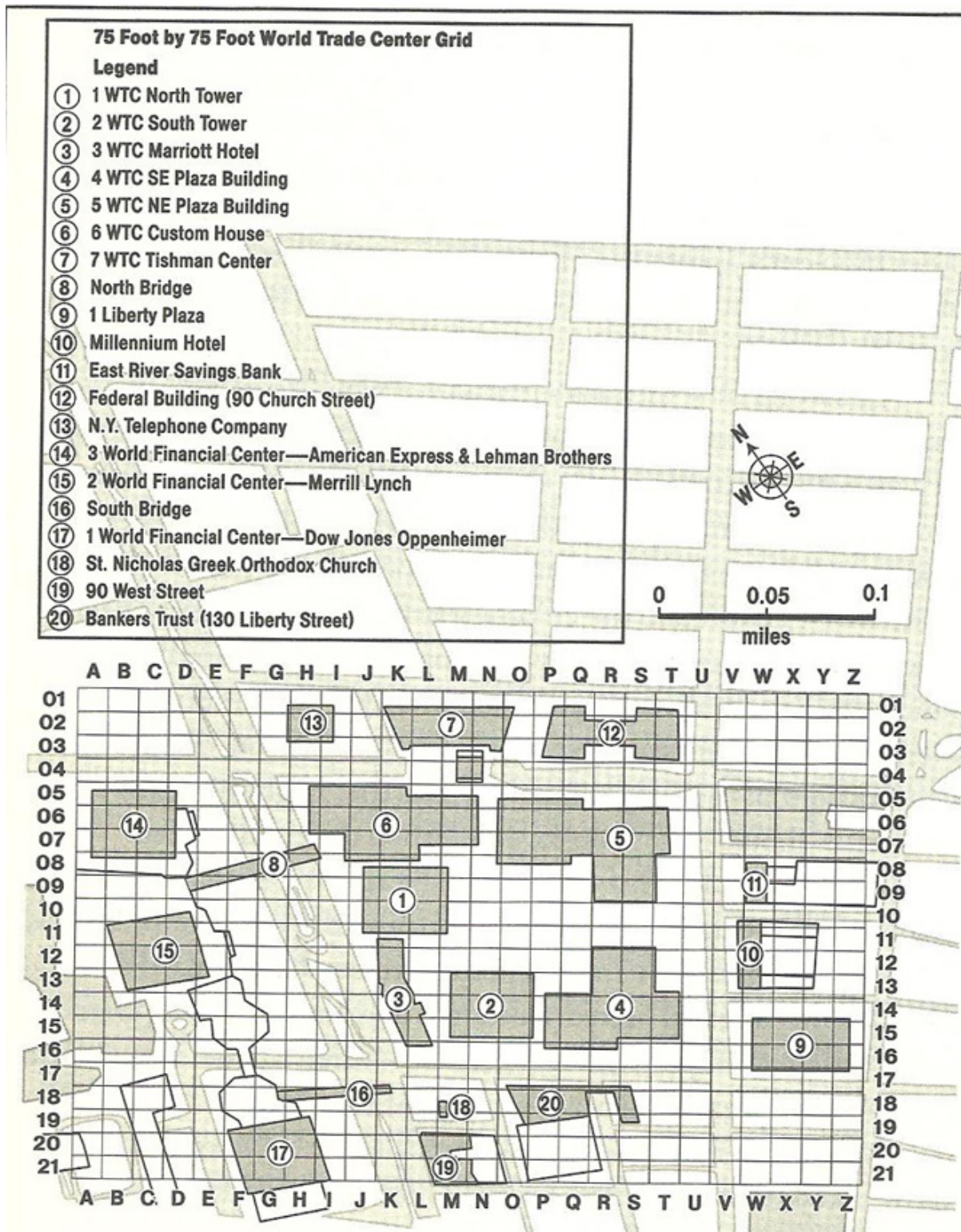
Steve Duenes/The New York Times

Victim Tracking Database

WTC 05302002

• CIVILIAN	(3369)
• EMS	(4)
• FIRE OFFICER/FIREFIGHTER	(457)
• OTHER PERSONNEL	(5)
• POLICE DEPT	(6)
• POLICE OFFICER	(23)
• PORT AUTHORITY	(50)





p. 80, "the grid" from Robert C. Shaler, Who They Were - Inside the World Trade Center DNA Story: The Unprecedented Effort to Identify the Missing, Free Press, 2005, p. 278.

Appendix 3

Excerpt from Kevin Robert Ryan, Another Nineteen: Investigating Legitimate 9/11 Suspects, Microbloom, 2013, pp. 251-259

Many thanks to Kevin Ryan for his work, which focuses more on people and relationships than my more general theme in this short book. The following comes from the middle of his chapter 14, “Rudy Giuliani and the World Trade Center,” with endnotes included within text:

An Unprecedented Destruction of Evidence

Regardless of who had foreknowledge or what the imminent danger was, in the weeks and months after 9/11 there were heroic efforts made to rescue survivors. But those efforts were hampered by Giuliani's drive to clean up the site rapidly. The commonly held story was that the government wanted to re-open Wall Street, and for that reason didn't care about the health of New Yorkers and first responders or about facilitating the most careful rescue operations. ⁵³ (Suzanne Mattei, Pollution and Deception at Ground Zero: How the Bush Administration's Reckless Disregard of 9/11 Toxic Hazards Poses Long-Term Threats for New York City and the Nation, [Sierra Club Report](#).) But the facts also align with the hypothesis that authorities were actually in a hurry to remove evidence that pointed to the use of explosives.

The U.S. House Committee on Science reported, in March 2002:

“In the month that lapsed between the terrorist attacks and the deployment of the [FEMA] BPAT team, a significant amount of steel debris – including most of the steel from the upper floors – was removed from the rubble pile, cut into smaller sections, and either melted at the recycling plant or shipped out of the U.S.. Some of the critical pieces of steel – including the suspension trusses from the top of the towers and the internal support columns – were gone before the first BPAT team member ever reached the site.” ⁵⁴ (Report from the Committee on Science, US House of Representatives, March 6, 2002)

The steel evidence, “a significant amount” of which was quickly removed before investigators arrived, might have shown evidence of explosive damage, like metal “pedaling.” But the steel was not the only evidence that was removed. For example, the black boxes that contain the flight data recorders and cockpit data recorders on every airliner were officially never found for either American Airlines Flight 11 or ^[begin page 252] United Airlines Flight 175. This claim came from the FBI and was supported by the *9/11 Commission Report*, but was contradicted by a number of people who worked at the site. Two Ground Zero workers claimed that they helped authorities find three of the four black boxes in October of 2001. One of them, New York City firefighter Nicholas DeMasi, described the recovery of the devices in a book. ⁵⁵ (Gail Swanson, *Behind-the-Scenes: Ground Zero, A Collection of Personal Accounts*, available at this link: <http://www.summeroftruth.org/groundzero.html>) Additionally, a source from the National Transportation Safety Board (NTSB) said, “Off the record, we had the boxes. You'd have to get the official word from the FBI as to where they are, but we worked on them here.” ⁵⁶ (Jim Hoffman, *Black Boxes: Contents of Flight Data and Cockpit Voice Recorders Are*

Missing, 911research.wtc7.net)

The idea that the indestructible black boxes could not be found also appears to be in contradiction to the official claim that a passport of one of the alleged hijackers was found. On September 12th, 2001, it was reported that the passport of Satam al Sugami, who was said to be aboard American Airlines Flight 11, was recovered. ⁵⁷ (ABC News, Terrorist Hunt: Suspects ID'd; Rescue Efforts Go On; White House Originally Targeted, September 12, 2001.) Because Flight 11 crashed directly into the middle of the north face of the north tower, and was buried within the building, this passport would have had to stay intact throughout the crash event and then withstand the blast from the fuel fire and the ensuing fires fed by office furnishings (and thermitic materials). The rest of the spectacularly improbable path of the passport is not entirely clear, as the first reports said that it was found "in the rubble" but, later, 9/11 Commission staff member Susan Ginsberg testified that "A passerby picked it up and gave it to a NYPD detective shortly before the World Trade Center towers collapsed." ⁵⁸ (Susan Ginsberg testimony to National COMmission on Terrorist Attacks Upon the United States, Public Hearing, Monday, January 26, 2004.) In other words, the passport was delivered through Bernard Kerik's department.

During the five-month cleanup effort, there were unprecedented measures taken to control access to the site. The site was restricted, and photographs were banned, by order of Rudy Giuliani. ⁵⁹ (Jim Hoffman, Access Restrictions: The Closure of Ground Zero to Investigators, 911research.wtc7.net) Anthony Mann of E.J. Electric, one of the contractors for the WTC towers, said that "Security is unbelievable. It's really on a need-to-be-down-there basis." ⁶⁰ (Amy Florence Fischbach, CEE News, September 20, 2001.)

Several people were reported to be in charge of the cleanup operation at Ground Zero. It was said that OEM was in charge, and that Richard Sheirer was the point person for the cleanup efforts. Others believed that Mike Burton, the executive deputy commissioner of the New York City Department of Design and Construction (DDC), was in charge. [begin page 253] Although Burton managed some of the demolition and cleanup operations, he later testified that "Everything was coordinated through his boss Holden, deputy mayors and the mayor." ⁶¹ (Wayne Barrett and Dan Collins, [Grand Illusion](#), Harper Collins, 2009, p. 257)

After his WTC work was done, DDC's Burton was hired as Senior Vice President of URS Corporation. URS is the same company that bought The Washington Group (i.e. Morrison-Knudsen), the south tower tenant that, in the preceding years, had been hired by the Army Corps of Engineers to demolish over 200 buildings. ⁶² (Mark MacIntyre, Bunker Hill: light at the end of the tunnel, The Seattle Daily Journal of Commerce, Aug. 20, 1998.)

At Ground Zero, DDC handed over the most important of its decision-making responsibility to LZA/Thornton-Tomasetti, whose leaders were Charles Thornton, later a member of the advisory board for the NIST WTC investigation, and Richard Tomasetti. The importance of LZA/Thornton-Tomasetti became clear when someone needed to take responsibility for the decision to recycle all the steel evidence. It was finally said that Richard Tomasetti made that decision, despite the outrage from the public, fire engineering experts and the victims' family members. When asked why he did it, Tomasetti claimed that "had he known the direction that investigations into the collapses would take, he would have taken a different stand." ⁶³

(History Commons Complete 9/11 Timeline: [Profile for Richard Tomasetti](#))

The recycling of the most important steel evidence was done in a hurry, as indicated by the U.S. House Committee on Science report mentioned earlier. It was done so fast, in fact, that the City took much less than market value for the scrap metal. At the time, steel scrap was selling for \$150 per ton, but those in charge of the WTC cleanup took just \$120 per ton for the WTC steel. ⁶⁴ (China.org.cn, Baosteel Will Recycle World Trade Center Debris, <http://china.org.cn/english/2002/Jan/25776.htm>) It's not difficult to see that the \$9 million lost in that transaction would have been useful to the many 9/11 first responders who became gravely ill from their exposure to toxins at Ground Zero.

Tomasetti's extremely unpopular, and possibly criminal, decision was supported by the new mayor of NYC, Michael Bloomberg. Using a strange, diversionary excuse, Bloomberg said: "If you want to take a look at the construction methods and the design, that's in this day and age what computers do. Just looking at a piece of metal generally doesn't tell you anything." Bloomberg's claim was not at all true, as forensic investigators will confirm. [begin page 254]

Other than the supervisory firm LZA/Thornton-Tomasetti, the City also hired five construction companies to handle the majority of the debris removal, and the site was divided up among them. These five companies were AMEC Construction Management, Bovis Lend Lease, Turner Construction, Tully Construction and Tishman Construction. Charlie Vitchers, who worked for Bovis, said the site was then broken up "into basically five segments. Building 7 debris was given to Tishman. The northwest corner of the site was given to AMEC. The northeast section of the site was given to Tully. And the southwest corner of the site and Tower 2 debris removal was given to Bovis." ⁶⁵ (PBS, [Interview with Charlie Vitchers](#) for the film "America Rebuilds: A Year at Ground Zero") Turner Construction was assigned to a central location between building 5 and building 6.

Other sub-contractors were hired to complete most of the actual debris removal. Most of those companies were suspected of being associated with organized crime. Some sub-contractors were reportedly linked to the Colombo crime family, including Civetta Cousins and Yonkers Contracting. Others were associated with the Luchese crime family.

A contractor with a big presence at Ground Zero was Seasons Contracting, owned by Salvatore Carucci, a reputed Luchese associate. "We were called in by AMEC, one of the team of general contractors managing the cleanup," said Bill Singley, a Seasons project manager. AMEC also hired Big Apple Wrecking, owned by Harold Greenberg, a reputed mob associate whose firm was barred from government work because of his convictions in bid-rigging and bribery conspiracies. Another firm allegedly controlled by Greenberg, Safeway Environmental, was also hired to work at Ground Zero.

One of the first debris removal companies on the scene was Mazzocchi Wrecking, brought in by the New York City Housing Preservation Department, but then hired by AMEC. A few months after 9/11, the N.J. Division of Gaming Enforcement "charged that three members of the DeCavalcante crime family worked for Mazzocchi." ⁶⁶ (New York Daily News, Exposed: Map of Ground Zero spoils: Where the money went to clear Trade Center debris, cached at AsthmaMoms 9/11 WTC Environmental Health News, <http://www.asthamamoms.com/>)

worldtradecenter2005.htm [dead link]) Another member of the DeCavalcante family, Thomas Vastola, was known to be an associate of a BCCI-backed arms dealer. ⁶⁷ (Peter Truell and Larry Gurwin, *False Profits: The Inside Story of BCCI, The World's Most Corrupt Financial Empire*, Houghton Mifflin, 1992, p. 181.)

Other AMEC contractors that were linked to the mob were Peter Scalamandre & Sons, and Breeze National, both linked to the Luchese [begin page 255] crime family. AMEC's lead person on the ground was Vice President DiRubbo, a reputed associate of the Luchese crime family. Another company that was "all over ground zero" was Laquila Construction, run by mob boss Dino Tomassetti. ⁶⁸ (Charles V. Bagli, *US: At Ground Zero, Builder Is Barred but Not His Kin*, *The New York Times*, July 21st, 2006, accessed at [CorpWatch](#))

These companies all made a lot of money at the WTC site. Of the \$458 million in federal 9/11 aid spent on debris removal, AMEC took \$65.8 million, Bovis hauled in \$277.2 million, Tully got \$76 million and Turner got \$39 million. Subcontractors Breeze National, Peter Scalamandre & Sons, Civetta Cousins, Safeway Environmental and Yonkers Contracting made millions of dollars from their work at the site. Subcontractors Mazzocchi Wrecking and Seasons Contracting made tens of millions of dollars.

Turner Construction, one of the primary contractors at Ground Zero, occupied the 38th floor of the north tower, and was involved in performing the fireproofing upgrades in the towers. It has been noted that these upgrades were completed, in the three years before 9/11, on floors that match up almost identically to the floors of impact and failure on 9/11. ⁶⁹ (Kevin R. Ryan, [Another amazing coincidence related to the WTC](#), 911Blogger, January 6, 2008.) In any case, since 1999 Turner has been a wholly owned subsidiary of Hochtief AG, and its CEO is Thomas Leppert, who later became mayor of Dallas. President George W. Bush appointed Mayor Leppert to the President's Commission on White House Fellows, and Bush now lives in Dallas, about a mile away from Leppert. ⁷⁰ (Aidan Monaghan, *Pre-9/11 WTC Steel Fireproofing/Post-9/11 Ground Zero Clean-Up Contractor, Planned 2000 Seattle Kingdome Demolition*, [911Blogger.com](#), March 4, 2009.)

Of the other primary contractors, Tishman Construction oversaw the construction of the new WTC 7, as well as the "Freedom Tower," designed to replace the north tower. Tully Construction retained Controlled Demolition Inc. (CDI), a company that had been involved in the demolition of the bombed Murrah Building in Oklahoma in 1995. CDI was led by Mark Loizeaux, who later became a major defender of the government's story about 9/11. Like some other experts with large government contracts, Loizeaux was at first uncertain about what had happened at the WTC, then he changed his opinion, apparently in order to harmonize with the official story. ⁷¹ (Jim Hoffman, *Notable Retractions: Experts Change Their Tune to Harmonize with the Official Story*, [911research.wtc7.net](#)) [begin page 256]

Once the cleanup was fully coordinated, the operations were consolidated under the control of two of the five primary contractors: AMEC Construction Management and Bovis Lend Lease. These are the two companies that were originally assigned the areas of Ground Zero that included the north tower (AMEC) and the south tower (Bovis).

At Ground Zero AMEC was led by its Vice Chairman, John Cavanagh, who had previously

been the President and COO of Morse Diesel International, the predecessor to AMEC. Morse Diesel had also retrofitted WTC building 7 for Salomon Brothers in 1989. But at the time of the 9/11 attacks, Cavanagh reported to Peter Janson, the CEO of AMEC Construction and long-time business associate of Donald Rumsfeld. Under Janson's leadership, AMEC had just completed a \$258 million refurbishment of Wedge 1 of the Pentagon, exactly where American Airlines Flight 77 impacted the building. ⁷² (U.S. Department of Defense, [News Transcript](#), Mr. Lee Evey, Pentagon Renovation Manager, September 15, 2001.)

Bovis Lend Lease was another British construction giant founded by Sir Frank Lampl, a Czech holocaust survivor who worked in the Middle East in the 1970s. ⁷³ (Wikipedia page for [Frank Lampl](#)) The company built the Abu Dhabi Chamber of Commerce and the Riyadh Olympic stadium in Saudi Arabia.

Years later, Bovis project leader Jim Abadie was also in charge of the Deutsche Bank demolition and the September 11th memorial. This was before he resigned in the midst of an investigation into billing and payroll practices at five Bovis projects in New York, including the memorial and Deutsche Bank. ⁷⁴ (Douglas Feiden and Greg B. Smith, James Abadie, executive at Bovis Lend Lease in charge of Sept. 11 Memorial, resigns amid probe, New York Daily News, June 15th 2009) For the Deutsche Bank demolition, in 2004, Abadie hired a previously non-existent company called John Galt Construction. ⁷⁵ (Charles V. Bagli, David W. Dunlap and William K. Rashbaum, Obscure Company Is Behind 9/11 Demolition Work, The New York Times, August 23, 2007.) After the deaths of two firefighters during the demolition project, John Galt was found to be in the middle of a multi-million dollar "check-cashing" scandal led by two characters named Riad Khalil and Neil Goldstein. ⁷⁶ (Colin Moynihan, 2 Charged in Check Scheme Uncovered After Bank Fire, The New York Times, July 28, 2009)

Also involved in the Deutsche Bank demolition was Charles Schwab, an associate of Harold Greenberg who "once controlled seven banks, a casino in Reno and a big chunk of Hilton Head Island [and] the largest demolition company in the country." ⁷⁷ (William K. Rashbaum and Charles V. Bagli, Demolition Man, The New York Times, July 31, 2009) Schwab was also associated ^[begin page 257] with Phoenix Wrecking, a demolition and abatement company. It's not clear if this is the same company as the Phoenix Fireproofing listed in FOIA-obtained documents related to the WTC fireproofing upgrades. ⁷⁸ (See WTC Fireproofing Documents obtained by James Gourley via FOIA, 911blogger.com, February 2, 2009) But it is clear that mayor Bloomberg's office and the Lower Manhattan Development Corporation (LMDC) were aware of the suspicious companies involved in the Deutsche Bank fiasco. ⁷⁹ (Charles V. Bagli and William K. Rashbaum, Questions on City's Role in Demolition Near 9/11 Site, The New York Times, August 29, 2007)

LMDC was mandated to "alleviate existing conditions that pose a serious and immediate threat to the health or welfare of New York City or meet community development needs resulting from Sept. 11, 2001." In practice, this meant that LMDC made a lot of the decisions about what happened at Ground Zero after the cleanup and perhaps even before it was completed. LMDC was created by Governor Pataki and Mayor Giuliani without approval from the state legislature, in November 2001. ⁸⁰ (The New York Times Investigative Team: Russ Beuttner, Heidi Evans, Robert Gearty, Brian Kates, Greg B. Smith and Assistant Managing Editor Richard T. Pienciak, Ground Zero: \$2.7B money pot, December 6, 2005,

<http://listserv.fsl.com/pipermail/wtcrc/2005-December/000032.html>)

The federal government promised \$21.4 billion in aid in order to rebuild Manhattan, and LMDC was in charge of spending a great deal of that money. Unfortunately, much of it was doled out in pork projects that benefited friends of LMDC.

A good friend of George W. Bush was a director of LMDC. This was Roland Betts, who once owned the Texas Rangers with Bush and Bush's relative, Marsh & McClennan's Craig Stapleton. Betts was also a "heavy contributor to the Bush election campaign in 2000."⁸¹ (Wikipedia page for [Roland Betts](#)) Another LMDC director was Frank Zarb, who was one of the first U.S. Energy Czars, appointed by President Ford.⁸² (The initial directors of LMDC are listed in documents obtained via FOIA request by Cryptome, <http://cryptome.org/wtc-foia.htm>)

Debris Removal and Theft

The debris removed from Ground Zero was either hauled away on trucks or shipped away on barges. Despite the effort to rapidly dispose of the steel and sell it a bargain price, the WTC debris was considered highly sensitive. At first the trucks were tracked using a paper-based system, and later GPS devices were fixed to each truck with "antennas to monitor location, cellular wireless antennas to communicate, and multiple I/Os to track vehicle signals from engine systems."⁸³ (Jacquiline Emigh, GPS on the Job in Massive World Trade Center Clean-up, Access Control & Security Systems, Jul 1, 2002) Apparently it was important for officials to know not only where the trucks were at any given time, but also the status of the engine. As for [begin page 258] the barges, the process was setup "in record time," in order to "transport debris to the city's Fresh Kills landfill and to recycling sites, all scrutinized by the Corps of Engineers."⁸⁴ (Debra K. Rubin, Creating order from chaos in leading the public-private construction team that responded to the Sept. 11 devastation at Ground Zero, Engineering News-Record, April 22, 2002)

As the debris was received at Fresh Kills landfill, it was sorted carefully. This sorting process was supervised by federal agents, and described in this way: "Teams of officers and agents watch as the rubble is sifted down to a fine ashy silt that they then rake through by hand."⁸⁵ (NPR News, Sifting Through the WTC Rubble: 'Ground Zero' Effort Nears End, Search Continues at Fresh Kills, May 30, 2002)

More than a year later, honest FBI agents reported the theft of some of this debris at the Fresh Kills site. It was then discovered that Evidence Recovery Teams (ERTs) involved in the sorting process stole pieces of debris, and kept or disposed of them. This removal of debris was condoned and encouraged by the FBI agents in charge.

The final report on the debris theft concluded that "many FBI agents took rubble as souvenirs from Fresh Kills." An example given was that one Oklahoma City Emergency Response Team member took 80 pounds of various debris materials, including things like an "electrical outlet." More commonly, building pieces were taken, including "red granite building facade." The claim that these were merely souvenirs seemed unlikely considering the volume of materials stolen, and considering that WTC building 7 was the focus of much of the theft. In fact, pieces of the building "were stacked in a designated location of the Building 7 inspection area" in order for

Secret Service agents to retrieve. ⁸⁶ (Ibid.)

Pat D'Amuro, who was mentioned earlier as an employee of Giuliani Partners, was involved in the theft of WTC debris materials from the Fresh Kills site. D'Amuro had specifically requested that certain kinds of items be kept for his retrieval, ostensibly so that he could give them away as mementos to various dignitaries. What is odd about that is that D' Amuro was not in charge of the Fresh Kills operation, but he had been the counterterrorism chief in the FBI's New York City office since 1997, which meant that his responsibilities included oversight of the Joint Terrorism Task Force.

As the FBI's lead person in terms of investigating and preventing terrorist acts before 9/11, D' Amuro had also been appointed to lead ^[begin page 259] the investigations of the 1993 WTC bombing and other al Qaeda- attributed crimes. The 1993 bombing plot had been infiltrated by the FBI, which played a role in either trying to prevent that operation or allowing it to go forward, as described in Chapter 4. It was later claimed that the investigation of the bombing, led by D'Amuro, was fraudulent, Frederick Whitehurst, of the FBI crime laboratory, said that "attempts had been made to alter his lab reports to exclude scientific interpretations other than" the official explanation. Whitehurst went on claim that FBI leadership had been altering evidence and test results a number of years, in order to support pre-determined conclusions. ⁸⁷ (John Kelly and Phillip Wearne, *Tainting Evidence: Inside The Scandals At The FBI Crime Lab*, The Free Press, 1998, pp 162-167)

Despite failing to follow-up on any of the leads that could have prevented the attacks of 9/11, D' Amuro was placed in charge of the PENTTBOM investigation immediately after the attacks. ⁸⁸ (Federal Bureau of Investigation, [Bios of James T. Caruso and Pasquale J. D'Amuro](http://www.fbi.gov/pressrel/pressrel02/mueller013102.htm), January 31, 2002, <http://www.fbi.gov/pressrel/pressrel02/mueller013102.htm> [dead link]) PENTTBOM stood for Pentagon/Twin Towers Bombing and was notable for how quickly the case was solved. U.S. authorities claimed to have had little knowledge of or ability to stop the 9/11 attacks in advance yet, within 72 hours after the attacks, the FBI was able to identify all nineteen alleged hijackers. ⁸⁹ (Federal Bureau of Investigation, [FBI Announces List of 19 Hijackers](http://www.fbi.gov/pressrel/pressrel01/091401hj.htm), September 14, 2001, <http://www.fbi.gov/pressrel/pressrel01/091401hj.htm>)

[...]

End excerpt from Kevin Robert Ryan, [Another Nineteen: Investigating Legitimate 9/11 Suspects](#), Microbloom, 2013, pp. 251-259