

# 9/11 Truth: The Mysterious Collapse of WTC Seven

Why NIST's Final 9/11 Report is Unscientific and False

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*At 5:21 in the afternoon of 9/11, almost seven hours after the Twin Towers had come down, Building 7 of the World Trade Center also came down. The collapse of this building was from the beginning considered a mystery. [1]*

*The same should have been true, to be sure, of the collapse of the Twin Towers. But they had been hit by planes, which had ignited big fires in them, and many people assumed this combination of causes to be sufficient to explain why they came down.*

But WTC 7 had not been hit by a plane, so it was apparently the first steel-framed high-rise building in the known universe to have collapsed because of fire alone. New York Times writer James Glanz quoted a structural engineer as saying: “[W]ithin the structural engineering community, [WTC 7] is considered to be much more important to understand [than the Twin Towers],” because engineers had no answer to the question, “why did 7 come down?” [2]

From a purely scientific perspective, of course, there would have been an obvious answer. Scientists, presupposing the regularity of nature, operate on the principle that like effects generally imply like causes. Scientists are, therefore, loathe to posit unprecedented causes for common phenomena. By 9/11, the collapse of steel-framed high-rises had become a rather common phenomenon, which most Americans had seen on television. And in every one of these cases, the building had been brought down by explosives in the process known as controlled demolition. From a scientific perspective, therefore, the obvious assumption would have been that WTC 7 came down because explosives had been used to remove its steel supports.

However, the public discussion of the destruction of the World Trade Center did not occur in a scientific context, but in a highly charged political context.

America had just been attacked, it was almost universally believed, by foreign terrorists who had flown hijacked planes into the Twin Towers, and in response the Bush administration had launched a “war on terror.” The idea that even one of the buildings had been brought down by explosives would have implied that the attacks had not been a surprise, so this idea could not be entertained by many minds in private, let alone in public.

This meant that people had to believe, or at least pretend to believe, that Building 7 had been brought down by fire, even though, as Glanz wrote: “[E]xperts said no building like it, a modern, steel-reinforced high-rise, had ever collapsed because of an uncontrolled fire.” [3]

And so, this building's collapse had to be considered a mystery - insofar as it was considered at all.

But this was not much. Although WTC 7 was a 47-story building, which in most places would have been the tallest building in the city, if not the state, it was dwarfed by the 110-story Twin Towers. It was also dwarfed by them in the ensuing media coverage. And so, Glanz wrote, the collapse of Building 7 was "a mystery that . . . would probably have captured the attention of the city and the world," if the Twin Towers had not also come down. [4] As it was, however, the mystery of Building 7's collapse was seldom discussed.

For those few people who were paying attention, the mysteriousness of this collapse was not lessened by the first official report about it, which was issued by FEMA in 2002. This report put forward what it called its "best hypothesis" as to why the building collapsed, but then added that this hypothesis had "only a low probability of occurrence." [5]

This FEMA report, in fact, increased the mystery, thanks to an appendix written by three professors at Worcester Polytechnic Institute. This appendix reported that a piece of steel from WTC 7 had melted so severely that it had gaping holes in it, making it look like a piece of Swiss cheese. [6] James Glanz, pointing out that the fires in the building could not have been hot enough to melt steel, referred to this discovery as "the deepest mystery uncovered in the investigation." [7]

The task of providing the definitive explanation of the collapse of WTC 7 was given to NIST, the National Institute of Standards and Technology. Although NIST had been expected to issue its report on this building along with its report on the Twin Towers, which came out in 2005, it did not. NIST then continued to delay this report until August of 2008, at which time it issued a Draft for Public Comment.

## 1. NIST's Denial of Evidence for Explosives

At a press briefing, Shyam Sunder, NIST's lead investigator, declared that "the reason for the collapse of World Trade Center 7 is no longer a mystery." Also, announcing that NIST "did not find any evidence that explosives were used to bring the building down," [8] he said: "[S]cience is really behind what we have said." [9] In the remainder of this lecture, I will show that both of those statements were false.

### NIST and Scientific Fraud

With regard to the question of science: Far from being supported by good science, NIST's report repeatedly makes its case by resorting to scientific fraud.

Before going into details, let me point out that, if NIST did engage in fraudulent science, this would not be particularly surprising. NIST is an agency of the US Department of Commerce. During the years it was writing its World Trade Center reports, therefore, it was an agency of the Bush-Cheney administration. In 2004, the Union of Concerned Scientists put out a document charging this administration with "distortion of scientific knowledge for partisan political ends." By the end of the Bush administration, this document had been signed by over 15,000 scientists, including 52 Nobel Laureates and 63 recipients of the National Medal of Science. [10]

Moreover, a scientist who formerly worked for NIST has reported that it has been "fully hijacked from the scientific into the political realm," with the result that scientists working

for NIST “lost [their] scientific independence, and became little more than ‘hired guns.’”<sup>11</sup> Referring in particular to NIST’s work on the World Trade Center, he said everything had to be approved by the Department of Commerce, the National Security Agency, and the Office of Management and Budget—“an arm of the Executive Office of the President,” which “had a policy person specifically delegated to provide oversight on [NIST’s] work.” [12]

One of the general principles of scientific work is that its conclusions must not be dictated by nonscientific concerns - in other words, by any concern other than that of discovering the truth. This former NIST employee’s statement gives us reason to suspect that NIST, while preparing its report on WTC 7, would have been functioning as a political, not a scientific, agency. The amount of fraud in this report suggests that this was indeed the case.

According to the National Science Foundation, the major types of scientific fraud are fabrication, falsification, and plagiarism. There is no sign that NIST is guilty of plagiarism, but it is certainly guilty of fabrication, which can be defined as “making up results,” and falsification, which means either “changing or omitting data.” [13]

The omission of evidence by NIST is so massive, in fact, that I treat it as a distinct type of scientific fraud. As philosopher Alfred North Whitehead said in his 1925 book, *Science and the Modern World*: “It is easy enough to find a [self-consistent] theory . . . , provided that you are content to disregard half your evidence.” The “moral temper required for the pursuit of truth,” he added, includes “[a]n unflinching determination to take the whole evidence into account.” [14]

NIST, however, seemed to manifest an unflinching determination to disregard half of the relevant evidence.

### Physical Evidence of Explosives

Some of the evidence ignored by NIST is physical evidence that explosives were used to bring down WTC 7.

Swiss-Cheese Steel: I will begin with the piece of steel from WTC 7 that had been melted so severely that it looked like Swiss cheese. Explaining why it called this “the deepest mystery uncovered in the investigation,” James Glanz wrote: “The steel apparently melted away, but no fire in any of the buildings was believed to be hot enough to melt steel outright.” [15] Glanz’s statement was, in fact, quite an understatement. The full truth is that the fires in the building could not have brought the steel anywhere close to the temperature - about 1,482°C (2,700°F) - needed for it to melt. [16]

The professors who reported this piece of steel in the appendix to the FEMA report said: “A detailed study into the mechanisms [that caused] this phenomenon is needed.” [17] Arden Bement, who was the director of NIST when it took on the WTC project, said that NIST’s report would address “all major recommendations contained in the [FEMA] report.” [18] But when NIST issued its report on WTC 7, it did not mention this piece of steel with the Swiss-cheese appearance. Indeed, NIST even claimed that not a single piece of steel from WTC 7 had been recovered. [19]

This piece of steel, moreover, was only a small portion of the evidence, ignored by NIST, that steel had melted.

Particles of Metal in the Dust: The Deutsche Bank building, which was right next to the Twin

Towers, was heavily contaminated by dust produced by their destruction. But Deutsche Bank's insurance company refused to pay for the clean-up, claiming that this dust had not resulted from the destruction of the WTC. So Deutsche Bank hired the RJ Lee Group to do a study, which showed that the dust in the Deutsche Bank was WTC dust, which had a unique signature. Part of this signature was "Spherical iron . . . particles." [20] This meant, the RJ Lee Group said, that iron had "melted during the WTC Event, producing spherical metallic particles." [21] The study even showed that, whereas iron particles constitute only 0.04 percent of normal building dust, they constituted almost 6 percent of WTC Dust - meaning almost 150 times as much as normal. [22]

The RJ Lee study also found that temperatures had been reached "at which lead would have undergone vaporization" [23] - meaning 1,749°C (3,180°F). [24]

Another study was carried out by the US Geological Survey, the purpose of which was to aid the "identification of WTC dust components." Besides also finding iron particles, the scientists involved in this study found that molybdenum had been melted. This finding was especially significant, because this metal does not melt until it reaches 2,623°C (4,753°F). [25]

NIST, however, did not mention either of these studies, even though the latter one was carried out by another US government agency.

NIST could not mention these studies because it was committed to the theory that the WTC buildings were brought down by fire, while these studies clearly showed that something other than fire was going on in those buildings.

Nanothermite Residue: What was that? A report by several scientists, including chemist Niels Harrit of the University of Copenhagen, showed that the WTC dust contained unreacted nanothermite, which - unlike ordinary thermite, which is an incendiary - is a high explosive. This report by Harrit and his colleagues, who included Steven Jones and Kevin Ryan, did not appear until 2009, [26] several months after the publication of NIST's final report in November 2008.

But NIST, as a matter of routine, should have tested the WTC dust for residue of explosives, such as nanothermite. The Guide for Fire and Explosion Investigations put out by the National Fire Protection Association says that a search for evidence for explosives should be undertaken whenever there has been "high-order damage." Leaving no doubt about the meaning of this term, the Guide says:

High-order damage is characterized by shattering of the structure, producing small, pulverized debris. Walls, roofs, and structural members are splintered or shattered, with the building completely demolished. [27]

That description applied to the destruction of the Twin Towers and WTC 7. The next sentence - "Debris is thrown great distances, possibly hundreds of feet" - applied to the destruction of the Twin Towers, a fact that NIST had to admit in order to explain how fires were started in WTC 7. [28] So NIST should have looked for signs of explosives, such as nanothermite.

But when asked whether it had, NIST said No. A reporter asked Michael Newman, a NIST spokesman, about this failure, saying: "[W]hat about that letter where NIST said it didn't

look for evidence of explosives?" Newman replied: "Right, because there was no evidence of that." "But," asked the reporter "how can you know there's no evidence if you don't look for it first?" Newman replied: "If you're looking for something that isn't there, you're wasting your time . . . and the taxpayers' money." [29] (You couldn't make this stuff up.)

When Shyam Sunder, who headed up NIST's investigation of the WTC buildings, gave his press conference in August of 2008 – at which he announced that "the reason for the collapse of World Trade Center 7 is no longer a mystery" – he began by saying:

Before I tell you what we found, I'd like to tell you what we did not find. We did not find any evidence that explosives were used to bring the building down. [30]

By making this point first, Sunder indicated that this was NIST's most important conclusion – just as it had been NIST's most important conclusion about the Twin Towers. However, although Sunder claimed that this conclusion was based on good science, a conclusion has no scientific validity if it can be reached only by ignoring half the evidence.

Molten Metal: In addition to the ignored evidence already pointed out, NIST also, in its investigation of the WTC, ignored reports that the rubble contained lots of molten metal – which most people described as molten steel. For example, firefighter Philip Ruvolo, speaking of the Twin Towers, said: "You'd get down below and you'd see molten steel, molten steel, running down the channel rails, like you're in a foundry, like lava." [31]

Peter Tully, president of Tully Construction, which was involved in the clean-up operation, said that he saw pools of "literally molten steel." [32]

However, when John Gross, one of the main authors of NIST's reports, was asked about the molten steel, he said to the questioner: I challenge your "basic premise that there was a pool of molten steel," adding: "I know of absolutely no . . . eyewitness who has said so." [33]

However, in addition to Ruvolo and Tully, the eyewitnesses who said so included:

- Leslie Robertson, a member of the engineering firm that designed the Twin Towers. [34]
- Dr. Ronald Burger of the National Center for Environmental Health. [35]
- Dr. Alison Geyh of The Johns Hopkins School of Public Health, who headed up a scientific team that went to the site shortly after 9/11 at the request of the National Institute of Environmental Health Sciences. [36]
- Finally, the fact that "molten steel was also found at WTC 7" was added by Mark Loizeaux, president of Controlled Demolition, Inc., which was involved in the clean-up. [37]

And yet John Gross suggested that no credible witnesses had reported molten steel. That appears to have been a gross lie.

Testimonial Evidence for Explosives

Besides ignoring physical evidence that explosives had been used, NIST also ignored testimonial evidence.

NIST's Twin Towers Report: In its 2005 report on the Twin Towers, NIST ignored dozens of testimonies provided by reporters, police officers, and WTC employees, along with 118 testimonies provided by members of the Fire Department of New York. [38] NIST even explicitly denied the existence of these reports, saying that there "was no evidence (collected by . . . the Fire Department of New York) of any blast or explosions" that would have suggested that explosives were going off. [39]

However, when a group of scholars including scientists and a lawyer called NIST on this false statement, NIST refined its meaning, saying:

NIST reviewed all of the interviews conducted by the FDNY of firefighters (500 interviews). . . . Taken as a whole, the interviews did not support the contention that explosives played a role in the collapse of the WTC Towers. [40]

So, although NIST had said in its report that there was no testimonial evidence for explosives, it now seemed to be saying that, because only 118 out of 500 reported explosions, the testimonies, "taken as a whole," do not support the idea that explosions were going off, so that NIST had been justified in claiming that there was no testimonial evidence to support the idea that explosives had been used.

Imagine an investigation of a murder on the streets of San Francisco. Of the 100 people who were at the scene at the time, 25 of them reported seeing Pete Smith shoot the victim. But the police release Pete Smith, saying that, taken as a whole, the testimonies did not point to his guilt. That would be NIST-style forensic science.

Reports from People Outside WTC 7: NIST continued this approach in its WTC 7 report. There had been several credible reports of explosions. A reporter for the New York Daily News, said:

[T]here was a rumble. The building's top row of windows popped out. Then all the windows on the thirty-ninth floor popped out. Then the thirty-eighth floor. Pop! Pop! Pop! was all you heard until the building sunk into a rising cloud of gray. [41]

NYPD officer Craig Bartmer said:

I was real close to Building 7 when it fell down. . . . [A]ll of a sudden. . . I looked up, and . . . [t]he thing started peeling in on itself. . . . I started running . . . and the whole time you're hearing "boom, boom, boom, boom, boom." [42]

Reports from Hess and Jennings from Inside WTC 7: Besides ignoring these and other reports of explosions made by people outside Building 7, NIST distorted the testimony of two highly credible men who were inside: Michael Hess, who was New York City's corporation counsel, and Barry Jennings, the deputy director of the Emergency Services Department of the New York City Housing Authority.



Immediately after the North Tower was struck that morning, both men followed the instruction that, whenever there was an emergency, they were to meet Major Giuliani at his Emergency Management Center on the 23rd floor of Building 7. The North Tower was struck at 8:46, so they would have arrived at about 9:00. They found, however, that everyone had left. Calling to find out what they should do, Jennings was told to get out of the building immediately. So, finding that the elevator would not work (the electricity had evidently been knocked out at 9:03 by the airplane strike on the South Tower), they started running down the stairs. But when they got to the 6th floor, there was a huge explosion, which blew the landing out from under them and blocked their path. They went back up to the 8th floor, broke a window, and signaled for help.

Firemen came to rescue them, Jennings said, but then ran away. Coming back after a while, the firemen again started to rescue them, but then ran away again. They had to run away the first time, Jennings explained, because of the collapse of the South Tower, which occurred at 9:59, and the second time because of the North Tower collapse, which occurred at 10:28. On that basis, Jennings told Dylan Avery in an interview in 2007, he knew that, when that big explosion occurred, “both buildings were still standing.” Finally, when the firemen returned after the second tower collapsed, Hess and Jennings were rescued.

This must have been sometime between 11:00 and 11:30, because at 11:57, Hess gave an on-the-street interview several blocks away. Jennings also gave an on-the-street interview. Both men reported that they had been trapped for some time - Hess specified “about an hour and a half.”

This story obviously was very threatening to NIST. It was going to claim that, when Building 7 came down at 5:21 that afternoon, it did so solely because of fires. There were no explosives to help things along.

But here were two city officials reporting that a big explosion had gone off pretty early in the morning, evidently before 9:30. In his interview for Dylan Avery, moreover, Jennings said that the big explosion that trapped them was simply the first of many. He also said that when the firefighter took them down to the lobby, he saw that it had been totally destroyed - it was, he said, “total ruins, total ruins.” Jennings also that, when he and the firefighter were walking through this lobby, they were “stepping over people.” [43]

Jennings’s testimony contradicted the official story, according to which there were no explosions in WTC 7 and no one was killed in this building. What would NIST do?

NIST’s Treatment of the Hess-Jennings Testimony: NIST simply ignored Jennings’ report about the lobby and, with regard to the time that Hess and Jennings got trapped, followed the line that had taken by Rudy Giuliani in a 2002 book, according to which the event that Hess and Jennings took to be an explosion within WTC 7 was simply the impact of debris from the collapse of the North Tower.

But that collapse did not occur until 10:28, whereas the event described by Hess and Jennings had occurred at least an hour earlier.

Also, Jennings said that the South Tower as well as the North Tower was still standing when the event he called an explosion occurred, and that is surely what he told NIST when it interviewed him (as well as Hess) in the Spring of 2004.

Another problem was that Hess had said that they had been trapped for “about an hour and a half.” If the event that trapped them did not happen until almost 10:30, as NIST claims, then they would not have been rescued before noon. And sure enough, in an Interim Report on WTC 7 put out by NIST in 2004, it claimed that Hess and Jennings had been rescued “[a]t 12:10 to 12:15 PM.” But that is clearly false, given the fact that Hess was being interviewed several blocks away before noon. [44]

NIST would, of course, deny that it had distorted Jennings’ testimony. But when we sent a Freedom of Information Act request to NIST to obtain a copy of the Hess and Jennings interviews, NIST declined on the basis of a provision allowing for exemption from FOIA disclosure if the information is “not directly related to the building failure.” [45] NIST thereby suggested that a report of a massive explosion within the building would be irrelevant to determining the cause of its failure. Using such an obviously phony reason seemed to be NIST’s way of saying: There’s no way we’re going to release those interviews.

The BBC Helps Out: In any case, NIST’s attempt to neutralize the testimony of Barry Jennings was aided by the BBC, which interviewed Jennings and then, obviously, changed the timeline, so that the narrator, with her reassuring voice, could say:

“At 10:28, the North Tower collapses. . . . This time, Tower 7 takes a direct hit from the collapsing building. . . . Early evidence of explosives were just debris from a falling skyscraper.” [46]

Mike Rudin, who produced this BBC program, recently telephoned me to discuss the possibility of interviewing me about my little book, *Osama bin Laden: Dead or Alive?* [47] I told him that I had a book coming out shortly about WTC 7 and that, after seeing it, he probably would not want to interview me. When he asked why, I said because I pointed out that he had obviously distorted the timeline of Jennings’s account. When he denied this, I said, OK, show me the uncut, unedited interview. If this interview had showed that Rudin had not distorted the timeline, I would have told the world. Rudin, however, declined to allow me to see the unedited interview. [48]

This BBC program had appeared in July of 2008. The first version of NIST’s final report – its Draft for Public Comment – was to be released at a press briefing on August 21, at which time Sunder would announce that the mystery of the collapse of WTC 7 had been solved.

The Death of Barry Jennings: Two days prior to that, Barry Jennings died – and died very mysteriously. No one has been willing to provide any information as to how or why this 53-year-old man had died. Dylan Avery, trying to find out something, hired a private investigator – reputed to be one of the best in the state of New York – to find out what she could. He used his credit card to pay her a considerable fee. Within 24 hours, however, Avery received a message from her, saying:

Due to some of the information I have uncovered, I have determined that this is a job for the police. I have refunded your credit card. Please do not contact me again about this individual.

This is not the response one would expect, Avery observed, if she had merely found that Jennings had passed away “innocently in a hospital.” [49] The dedication page on my book



says: "To the memory of Barry Jennings, whose truth-telling may have cost him his life."

Be that as it may, his death was very convenient for NIST, which now did not need to fear that Jennings might hold his own press conference to say that NIST had lied about his testimony.

The BBC Helps Out Again: The death of Jennings was also convenient for the BBC, which could now put out a second version of its program on WTC 7, this time including Michael Hess.

In the first version, the BBC had pretended that Jennings had been in the building all by himself. Even though Jennings would say, "We did this, and then We did that," the BBC spoke only of Jennings, never mentioning the fact that Hess was with him.

But in the new version, which was aired at the end of October 2008, Hess was the star. While admitting that, back on 9/11, he had "assumed that there had been an explosion in the basement," he said: "I know now this was caused by the northern half of Number 1 [the North Tower] falling on the southern half of our building," exactly what Giuliani had said in his book. It is no surprise that Hess supported Giuliani's account, given the fact that since 2002 Hess has been Giuliani's business partner.

In spite of the fact that Hess could in no way be considered an impartial witness, Mike Rudin portrayed him as such. On his BBC blog, Rudin said that some "self-styled truthers" had charged that the BBC, in presenting Barry Jennings' testimony, had "misrepresented the chronology." But, Rudin said triumphantly, Michael Hess, "In his first interview since 9/11 . . . confirms our timeline."

But Hess's account could be said to "confirm" the BBC timeline only if it were a credible account. In my book, however, I show that it is riddled with problems, so that anyone can easily see that he was lying. [50]

## 2. NIST's Own Theory of WTC 7's Collapse

Thus far, I have spoken about the first half of my book, which deals with NIST's negative claim, namely, that it had found no evidence that explosives were used to bring down WTC 7. NIST could make this argument, I have pointed out, only by committing two kinds of scientific fraud: Ignoring relevant evidence and falsifying evidence - in this case, the testimony of Barry Jennings.

The second half of my book deals with NIST's own theory as to how fire brought the building down. To develop such a theory, NIST had to falsify and fabricate data on a possibly unprecedented scale. And yet, after all of that, it had to violate one of the basic principles of science: Thou shalt not affirm miracles.

You perhaps know the cartoon about this. A physics professor has filled several boards with mathematical equations, at the bottom of which we read: "Then a miracle happens." In science, you cannot appeal to miracles, whether explicitly, or only implicitly - by implying that some basic principle of physics has been violated. And yet that is what NIST does.

### Fabrication of Evidence

But before describing its miracle story, I will point out three especially obvious examples of

scientific fraud committed by NIST before it resorted to this desperate expedient. These examples all involve fabrication.

No Girder Shear Studs: NIST's explanation as to how fire caused Building 7 to collapse starts with thermal expansion, meaning that the fire heated up the steel, thereby causing it to expand.

A steel beam on the 13th floor, NIST claims, caused a steel girder attached to Column 79 to break loose. Having lost its support, Column 79 failed, and this failure started a chain reaction, in which all 82 of the building's steel columns failed. [51]

Without getting into the question of whether this is even remotely plausible, let us just focus on the question: Why did that girder fail?

It failed, NIST said, because it was not connected to the floor slab with sheer studs. NIST wrote:

In WTC 7, no studs were installed on the girders.

Floor beams . . . had shear studs, but the girders that supported the floor beams did not have shear studs.

This point was crucial to NIST's answer to a commonly asked question: Why did fire cause WTC 7 to collapse, when fire had never before brought down steel-framed high-rise buildings, some of which had had much bigger and longer-lasting fires? NIST's answer was: differences in design.

One of those crucial differences, NIST stated repeatedly, was "the absence of [girder] shear studs that would have provided lateral restraint."

But this was a fabrication on NIST's part. How can we know this? All we need to do is to look at NIST's Interim Report on WTC 7, which it had published back in 2004, before it had developed its theory of girder failure.

This report stated that girders as well as the beams had been attached to the floor by means of shear studs. [52]

We have here as clear a case of fabrication as one will see, with NIST simply making up a fact in order to meet the needs of its new theory.

The Raging Fire on Floor 12 at 5:00 PM: NIST also contradicted its "interim report" in telling a lie about the fire in the building. NIST claims that there were very big, very hot fires covering much of the north face of the 12th floor at 5:00 PM. This claim is essential to NIST's explanation as to why the building collapsed 21 minutes later. However, if you look back at NIST's interim report, published before it had developed its theory, you will find this statement:

Around 4:45 PM, a photograph showed fires on Floors 7, 8, 9, and 11 near the middle of the north face; Floor 12 was burned out by this time.

Other photographs even show that the 12th floor fire had virtually burned out by 4:00. And

yet NIST now claims that fires were still going strong at 5:00 PM. [53] We have here another clear case of fabrication.

Shear Stud Failure: A third case of fabrication involves shear studs again – this time the shear studs that connected to the steel beams to the floor slab.

NIST claims that, due to the failure of that crucial girder discussed earlier, the floor beams were able to expand without constraint. But each of these beams was connected to the floor slab by 28 high-strength shear studs. These studs should have provided plenty of restraint.

They would have, except for the fact, NIST tells us, that they all broke.

Why did they break? Because of what NIST calls “differential thermal expansion,” which is simply a technical way of saying that, in response to the heat from the fires, the steel beams expanded more than the floor slabs did.

But why would that have been the case? Steel and concrete have virtually the same “coefficient of thermal expansion,” meaning that they expand virtually the same amount in response to heat. If that were not the case, reinforced concrete – that is, concrete reinforced with steel – would break up when the weather got very hot or very cold. NIST itself points out that “steel and concrete have similar coefficients of thermal expansion.”

So why does NIST claim that the shear studs broke because of differential thermal expansion?

To understand this point, you need to understand that NIST’s theory is an almost totally computer-based theory. NIST fed various variables into a computer program, which then supposedly told it how WTC 7 would have reacted to its fires. So, what did NIST feed into its computer that caused it to say that the steel would have expanded so much more than the concrete slab that all of the shear studs would have broken? The answer is given in this bland statement:

No thermal expansion or material degradation was considered for the concrete slab, as the slab was not heated in this analysis.

When I first read this statement, I had to rub my eyes. Surely, I thought, I have mis-read the statement, because a few pages earlier, NIST had said: “differential thermal expansion occurred between the steel floor beams and concrete slab when the composite floor was subjected to fire.” The “composite floor,” by definition, is the steel beams made composite with the floor slab by means of the shear studs. So NIST had clearly said, in stating that the composite floor had been subjected to fire, that both the steel beams and the concrete slab had been heated.

But then in the eye-rubbing passage, NIST said: When doing its computer simulation, it told the computer that only the steel beams had been heated; the concrete floor slab was not. [54]

So of course the steel beams would have expanded, while the floor slabs stayed stationary, thereby causing the shear studs to break, after which the steel beams could expand like crazy and bump into Column 79, which then causes the whole building to come down.

A comic book version of the official story of 9/11 has been published. [55] This was an exercise in redundancy, because the official reports already are the comic book version of what happened on 9/11. In any case, I come now to NIST's miracle.

### NIST's Miracle

Members of the 9/11 Truth Movement had almost from the first been pointing out that WTC 7 came down at the same rate as a free-falling object, at least virtually so.

NIST'S Denial of Free Fall: In NIST's Draft for Public Comment, it denied this, saying that the time for the upper 18 floors to collapse "was approximately 40 percent longer than the computed free fall time and was consistent with physical principles."

Implicit in this statement is that any assertion that the building did come down in free fall would not be consistent with physical principles - that is, the principles of physics.

Explaining why not, Shyam Sunder said at a technical briefing:

[A] free fall time would be [the fall time of] an object that has no structural components below it. . . . [T]he . . . time that it took . . . for those 17 floors to disappear [was roughly 40 percent [longer than free fall]. And that is not at all unusual, because there was structural resistance that was provided in this particular case. And you had a sequence of structural failures that had to take place. Everything was not instantaneous.

Chandler's Challenge: However, high-school physics teacher David Chandler challenged Sunder's denial at this briefing, pointing that Sunder's 40 percent claim contradicts "a publicly visible, easily measurable quantity."

The following week, Chandler placed a video on the Internet showing that, by measuring this publicly visible quantity, anyone knowing elementary physics could see that "for about two and a half seconds. . . , the acceleration of the building is indistinguishable from freefall."

Finally, Chandler wrote a comment to NIST, saying: "Acknowledgment of and accounting for an extended period of free fall in the collapse of WTC 7 must be a priority if the NIST is to be taken seriously."

NIST Admits Free Fall: Amazingly, NIST did acknowledge free fall in its final report. It tried to disguise it, but the admission is there on page 607. Dividing the building's descent into three stages, it describes the second phase as "a freefall descent over approximately eight stories at gravitational acceleration for approximately 2.25 s[econds]. "Gravitational acceleration" is a synonym for free fall acceleration.

So, after presenting 606 pages of descriptions, testimonies, photographs, graphs, analyses, explanations, and mathematical formulae, NIST on page 607 says, in effect: "Then a miracle happens."

Why this would be a miracle was explained by Chandler, who said: "Free fall can only be achieved if there is zero resistance to the motion."

The implication of Chandler's remark is that, by the principles of physics, the upper portion of Building 7 could have come down in free fall only if something had removed all the steel

and concrete in the lower part of the building, which would have otherwise provided resistance, and only explosives of some sort could have removed them.

If they had not been removed and the upper floors had come down in free fall anyway, even for only a second or two, a miracle would have happened.

That was what Sunder himself had explained the previous August, saying that a free-falling object would be one “that has no structural components below it” to offer resistance. Having stated in August that free fall could not have happened, NIST also stated that it did not happen, saying: “WTC 7 did not enter free fall.”

But then in November, while still defending the same theory, which rules out explosives and thereby rules out free fall, NIST admitted that, as an empirical fact, free fall happened. For a period of 2 and a fourth seconds, NIST admitted, the descent of WTC 7 was characterized by “gravitational acceleration (free fall).”

Knowing that it had thereby affirmed a miracle, meaning a violation of a law of physics, NIST no longer claimed that its analysis was consistent with the physical principles. In its Draft put out in August, NIST had repeatedly said that its analysis of the collapse was “consistent with physical principles.” One encountered this phrase time and time again. In its final report, however, this phrase is no more to be found.

NIST thereby admitted, for those with eyes to see, that its report on WTC 7, by admitting free fall while continuing to deny that explosives were used, is not consistent with the principles of physics. [56]

And yet the mainstream press will not report this admission. So the press continues to support the notion that anyone who questions the official reports on 9/11 is unfit for public service. [57]

## Conclusion

The 9/11 Truth Movement has long considered the collapse of Building 7 to be the Achilles’ heel of the official story about 9/11 – the part of this story that, by being most vulnerable, could be used to bring down the whole body of lies.

My latest book, *The Mysterious Collapse of World Trade Center 7: Why the Final Official Report about 9/11 Is Unscientific and False*, shows that the official account of this building is indeed extremely vulnerable to critique – so vulnerable that, to see the falsity of this account, you need only to read NIST’s attempt to defend it, noting the obvious lies in NIST’s report and its violations of basic principles of physics.

I hope that my book will indeed help bring down that body of lies that some of us call the Bush-Cheney conspiracy theory, according to which al-Qaeda hijackers, by flying planes into two buildings of the World Trade Center, brought down three of them – an obviously false conspiracy theory that is still being used, among other things, to kill women, children, and other innocent people in Afghanistan and Pakistan.

## Notes

1. This is a slightly revised version of a lecture presented at the 9/11 Film Festival at Grand Lake Theater, Oakland, California, September 10, 2009. It is based on David Ray Griffin, *The Mysterious*

Collapse of World Trade Center 7: Why the Final Official Report about 9/11 is Unscientific and False (Northampton, Mass., Olive Branch [Interlink Books], 2009).

2. James Glanz, "Engineers Suspect Diesel Fuel in Collapse of 7 World Trade Center," New York Times, November 29, 2001 (<http://www.nytimes.com/2001/11/29/nyregion/29TOWE.html>).

3. Ibid.

4. Ibid.

5. See FEMA, World Trade Center Building Performance Study ([http://www.fema.gov/pdf/library/fema403\\_ch5.pdf](http://www.fema.gov/pdf/library/fema403_ch5.pdf)), Ch. 5, Sect. 6.2, "Probable Collapse Sequence."

6. Jonathan Barnett, Ronald R. Biederman, and Richard D. Sisson, Jr., "Limited Metallurgical Examination," FEMA, World Trade Center Building Performance Study, May 2002, Appendix C ([http://wtc.nist.gov/media/AppendixC-fema403\\_apc.pdf](http://wtc.nist.gov/media/AppendixC-fema403_apc.pdf)).

7. James Glanz and Eric Lipton, "A Search for Clues in Towers' Collapse," New York Times, February 2, 2002 (<http://query.nytimes.com/gst/fullpage.html?res=9C04E0DE153DF931A35751C0A9649C8B63>).

8. Shyam Sunder, "Opening Statement," NIST Press Briefing, August 21, 2008 ([http://wtc.nist.gov/media/opening\\_remarks\\_082108.html](http://wtc.nist.gov/media/opening_remarks_082108.html)).

9. Quoted in "Report: Fire, Not Bombs, Leveled WTC 7 Building," USA Today, August 21, 2008 ([http://www.usatoday.com/news/nation/2008-08-21-wtc-nist\\_N.htm](http://www.usatoday.com/news/nation/2008-08-21-wtc-nist_N.htm)).

10. Union of Concerned Scientists, "Restoring Scientific Integrity in Federal Policymaking" ([www.ucsusa.org/scientific\\_integrity/abuses\\_of\\_science/scientists-sign-on-statement.html](http://www.ucsusa.org/scientific_integrity/abuses_of_science/scientists-sign-on-statement.html)).

11. "NIST Whistleblower," October 1, 2007 (<http://georgewashington.blogspot.com/2007/10/former-nist-employee-blows-whistle.html>).

12. Ibid.

13. "What is Research Misconduct?" National Science Foundation, Office of Inspector General, New Research Misconduct Policies (<http://www.nsf.gov/oig/session.pdf>). Although this document is undated, internal evidence suggests that it was written in 2001.

14. Alfred North Whitehead, *Science and the Modern World* (1925; New York: Free Press, 1967), 187.

15. Glanz and Lipton, "A Search for Clues in Towers' Collapse."

16. The melting point of iron is 1,538°C (2,800°F). Steel, as an alloy, comes in different grades, with a range of melting points, depending on the percent of carbon (which lowers the melting point), from 1,371°C (2,500°F) to 1,482°C (2,700° F); see "Melting Points of Metals" ([http://www.uniweld.com/catalog/alloys/alloys\\_melting.htm](http://www.uniweld.com/catalog/alloys/alloys_melting.htm)).

17. Barnett, Biederman, and Sisson, "Limited Metallurgical Examination," C-13.

18. Dr. Arden L. Bement, Jr., Testimony before the House Science Committee Hearing on "The



- Investigation of the World Trade Center Collapse,” May 1, 2002 (<http://911research.wtc7.net/cache/wtc/official/nist/bement.htm>). In the quoted statement, the name “FEMA” replaces “BPAT,” which is the abbreviation for “Building Performance Assessment Team,” the name of the ASCE team that prepared this report for FEMA.
19. “Questions and Answers about the NIST WTC 7 Investigation,” updated December 18, 2008 ([http://www.nist.gov/public\\_affairs/factsheet/wtc\\_qa\\_082108.html](http://www.nist.gov/public_affairs/factsheet/wtc_qa_082108.html)).
  20. RJ Lee Group, “WTC Dust Signature,” Expert Report, May 2004 ([http://www.nyenvirolaw.org/WTC/130%20Liberty%20Street/Mike%20Davis%20LMDC%20130%20Liberty%20Documents/Signature%20of%20WTC%20dust/WTC\\_Dust\\_Signature\\_Expert\\_Report.051304.1646.mp.pdf](http://www.nyenvirolaw.org/WTC/130%20Liberty%20Street/Mike%20Davis%20LMDC%20130%20Liberty%20Documents/Signature%20of%20WTC%20dust/WTC_Dust_Signature_Expert_Report.051304.1646.mp.pdf)), 11.
  21. RJ Lee Group, “WTC Dust Signature Study: Composition and Morphology,” 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>), 17. On the differences between the 2003 and 2004 studies, see my discussion in *The Mysterious Collapse of World Trade Center 7: Why the Final Official Report about 9/11 is Unscientific and False* (Northampton, Mass., Olive Branch (Interlink Books), 2009), 40-41.
  22. RJ Lee Group, “WTC Dust Signature Study” (2003), 24.
  23. *Ibid.*, 21.
  24. WebElements: The Periodic Table on the Web (<http://www.webelements.com/lead/physics.html>).
  25. WebElements: The Periodic Table on the Web (<http://www.webelements.com/molybdenum/physics.html>). Although the scientists involved with this USGS study discovered the molybdenum, they did not mention it in their report. Knowledge of their discovery was obtained only by means of a FOIA request. See *The Mysterious Collapse*, 44-45.
  26. Niels H. Harrit, Jeffrey Farrer, Steven E. Jones, Kevin R. Ryan, Frank M. Legge, Daniel Farnsworth, Gregg Roberts, James R. Gourley, and Bradley R. Larsen, “Active Thermitic Material Observed in Dust from the 9/11 World Trade Center Catastrophe,” *The Open Chemical Physics Journal*, 2009/2: 7-31 (<http://www.bentham.org/open/tocpj/openaccess2.htm>).
  27. National Fire Protection Association, *921 Guide for Fire and Explosion Investigations*, 1998 Edition ([http://www.interfire.org/res\\_file/92112m.asp](http://www.interfire.org/res_file/92112m.asp)), Section 18.3.2.
  28. See *The Mysterious Collapse*, 142-44.
  29. Jennifer Abel, “Theories of 9/11,” *Hartford Advocate*, January 29, 2008 (<http://www.hartfordadvocate.com/article.cfm?aid=5546>).
  30. Sunder, “Opening Statement.”
  31. Ruvolo is quoted in the DVD “Collateral Damages” (<http://www.allhandsfire.com/page/AHF/PROD/ISIS-COLL>). For just this segment plus discussion, see Steve Watson, “Firefighter Describes ‘Molten Metal’ at Ground Zero, Like a ‘Foundry,’” *Inforwars.net*, November 17, 2006 ([http://www.inforwars.com/articles/sept11/firefighter\\_describes\\_molten\\_metal\\_ground\\_zero\\_like\\_foun](http://www.inforwars.com/articles/sept11/firefighter_describes_molten_metal_ground_zero_like_foun)

[dry.htm](#)).

32. Quoted in Christopher Bollyn, "Professor Says 'Cutter Charges' Brought Down WTC Buildings," American Free Press.net, May 1 & 8, 2006  
([http://www.americanfreepress.net/html/cutter\\_charges\\_brought\\_down\\_wt.html](http://www.americanfreepress.net/html/cutter_charges_brought_down_wt.html)).

33. "NIST Engineer, John Gross, Denies the Existence [sic] of Molten Steel"  
(<http://video.google.com/videoplay?docid=-7180303712325092501&hl=en>).

34. James Williams, "WTC a Structural Success," SEAU News: The Newsletter of the Structural Engineers Association of Utah, October 2001  
(<http://www.seau.org/SEAUnews-2001-10.pdf>).

35. Quoted in Francesca Lyman, "Messages in the Dust: What Are the Lessons of the Environmental Health Response to the Terrorist Attacks of September 11?" National Environmental Health Association, September 2003  
(<http://www.neha.org/9-11%20report/index-The.html>).

36. "Mobilizing Public Health: Turning Terror's Tide with Science," Magazine of Johns Hopkins Public Health, Late Fall 2001  
(<http://www.jhsph.edu/Publications/Special/Welch.htm>).

37. Quoted in Bollyn, "Professor Says 'Cutter Charges' Brought Down WTC Buildings."

38. For the FDNY testimonies, see Graeme MacQueen, "118 Witnesses: The Firefighters' Testimony to Explosions in the Twin Towers," Journal of 9/11 Studies, Vol. 2/August 2006  
([http://www.journalof911studies.com/articles/Article\\_5\\_118Witnesses\\_WorldTradeCenter.pdf](http://www.journalof911studies.com/articles/Article_5_118Witnesses_WorldTradeCenter.pdf)): 49-123. For a brief discussion of these and other testimonies, see The Mysterious Collapse, 75-82.

39. NIST, "Answers to Frequently Asked Questions," 2006  
([http://wtc.nist.gov/pubs/factsheets/faqs\\_8\\_2006.htm](http://wtc.nist.gov/pubs/factsheets/faqs_8_2006.htm)), Q. 2. For discussion, see The Mysterious Collapse, 77.

40. NIST, "Letter of Response to Request," September 27, 2007, published in Journal of 9/11 Studies, Vol. 17/November 2007  
(<http://www.journalof911studies.com/volume/2007/NISTresponseToRequestForCorrectionGourleyEtal2.pdf>).

41. This statement (by Peter Demarco) is quoted in Chris Bull and Sam Erman, eds., At Ground Zero: Young Reporters Who Were There Tell Their Stories (New York: Thunder's Mouth Press, 2002), 97.

42. Bartmer's statement is quoted in Paul Joseph Watson, "NYPD Officer Heard Building 7 Bombs," Prison Planet, February 10, 2007  
(<http://www.prisonplanet.com/articles/february2007/100207heardbombs.htm>).

43. For documentation of these points about the testimonies of Hess and Jennings, see The Mysterious Collapse, 84-92.

44. For discussion and documentation of NIST's treatment of the testimonies of Hess and Jennings, see The Mysterious Collapse, 92-94.

45. Letter of August 12, 2009, from Catherine S. Fletcher, Freedom of Information Act Officer, NIST, to a FOIA request of August 8, 2009, from Ms. Susan Peabody, for “[t]he complete texts of NIST’s 2004 interviews of Michael Hess and Barry Jennings, which are cited in NIST NCSTAR 1-8... , 109, n.380, as ‘WTC 7 Interviews 2041604 and 1041704.’”
46. For discussion and documentation of the BBC’s treatment of Hess and Jennings in the first version of its program, see *The Mysterious Collapse*, 95-99.
47. David Ray Griffin, *Osama bin Laden: Dead or Alive?* (Northampton: Olive Branch [Interlink Books], 2009).
48. Telephone conversation, September 1, 2001.
49. See *The Mysterious Collapse*, 98-99.
50. For documentation and discussion of the second version of the BBC’s show, including the problems in Hess’s testimony, see *The Mysterious Collapse*, 99-104.
51. See *The Mysterious Collapse*, 150-55.
52. For documentation and discussion of NIST’s claim about the lack of girder shear studs, see *The Mysterious Collapse*, 212-15.
53. See *The Mysterious Collapse*, 187-88.
54. For discussion and documentation of this point about failed shear studs, see *The Mysterious Collapse*, 217-21. As I point out in the book the contradictions between NIST’s final report and its 2004 interim report, involving the 4:45 fire and both claims about shear studs, were discovered by Chris Sarns.
55. Sid Jacobson and Ernie Colón, *The 9/11 Report: A Graphic Adaptation* (New York: Hill and Wang, 2006).
56. For documentation and discussion of this point about free fall, see *The Mysterious Collapse*, 231-41.
57. I am referring to the fact that Van Jones, who had been an Obama administration advisor on “green jobs,” felt compelled to resign due to the uproar evoked by the revelation that he had signed a petition questioning the official account of 9/11. The view that this act made him unworthy was perhaps articulated most clearly by Washington Post columnist Charles Krauthammer. After dismissing as irrelevant the other reasons that had been given for demanding Jones’s resignation, Krauthammer wrote: “He’s gone for one reason and one reason only. You can’t sign a petition demanding ... investigations of the charge that the Bush administration deliberately allowed Sept. 11, 2001 – i.e., collaborated in the worst massacre ever perpetrated on American soil – and be permitted in polite society, let alone have a high-level job in the White House. Unlike the other stuff ... , this is no trivial matter. It’s beyond radicalism, beyond partisanship. It takes us into the realm of political psychosis, a malignant paranoia that, unlike the Marxist posturing, is not amusing. It’s dangerous....You can no more have a truther in the White House than you can have a Holocaust denier – a person who creates a hallucinatory alternative reality in the service of a fathomless malice” (Charles Krauthammer, “The Van Jones Matter,” *Washington Post*, September 11, 2009 <http://www.washingtonpost.com/wpdyn/content/article/2009/09/10/AR2009091003408.html>)

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