Controlled Demolition at the WTC: a Historical Examination of the Case Frank Legge (PhD Chem) May, 2009

Let me start by relating how I first came to be involved with 9/11. I had heard there was some doubt about how the towers and building 7 (WTC 7) came down but, like most people, did not pay this much attention. Then I heard reports that the buildings had come down too fast, close to free fall, and it struck me that this was something for which I did not have to rely on others, as I could check it myself. I got hold of some software, FrameShots, free on the internet, and examined the videos, frame by frame. There is better software available now, but I was able to confirm that the initial movement of all three buildings was suspiciously fast. The calculated downward acceleration was remarkably uniform and too close to free fall during the entire period while the roof was visible. I realized that it didn't matter that the final moments of the collapse could not be studied this way, being obscured by dust, as the physical action at the beginning was enough to reveal the character of the collapse.

In the case of WTC 7 the initial acceleration was so close to free fall that there could be no doubt that all the columns, or most of the columns, must have been severed simultaneously. I found this particularly compelling after noting that the north face had little fire while the south face, according to the proponents of the official explanation, had severe fire. We have clear photos and videos of the north face but not of the south face. It is inescapable that if one side of a tall steel structure is heated to the point of failure, while the other side is not, the structure must lean toward the heated side. WTC 7 did not lean however, it just came straight down, and there was so little hesitation at the beginning that it was almost undetectable. This is set out here: http://journalof911studies.com/volume/200611/911-Acceleration-Study-Proves-Explosive-Demolition.pdf and here: http://journalof911studies.com/volume/2007/LeggeVerticalCollapseWTC7_6.pdf

In 2008 the National Institute of Standards and Technology (NIST) produced a report which changed the official explanation for the collapse of WTC 7. Apparently they had realized that the failure of the building to lean to the south made their previous explanation look foolish. The new explanation was based on thermal expansion. They asserted that a section of floor on the east side had expanded enough to fracture its support at one end and the falling floor caused a domino effect on several floors, ultimately permitting a critical column to buckle due to lack of horizontal support. They say "progressive collapse" followed. They do not mention the awkward fact that this column would still have had horizontal support on the west side.

David Chandler, using a different video from the one used above, has done the analysis of the rate of fall more accurately recently. He shows that after the initial hesitation the roof drops with an acceleration which cannot be distinguished from free fall for several storeys. The acceleration then declines, indicating that the falling material has started to encounter resistance, as would be expected in a controlled demolition. Chandler's work is here:

http://www.youtube.com/watch?v=gC44L0-2zL8 http://www.youtube.com/watch?v=V0GHVEKrhng http://www.youtube.com/watch?v=XtKLtUiww80 You will see in these videos that NIST initially claimed that the fall took 40% longer than free fall during the visible part of the collapse. NIST asserted that it had to be substantially longer than free fall because the collapse, as they described it, was "progressive". They were forced by critics of their draft report to admit that free fall did occur. In their final report they try to get round this embarrassment by presenting a graph which shows a slow start, a short period of free fall, then a reduction in acceleration. Unfortunately for their credibility their graph does not look right. They must have hand-added a few data points to make the fall appear to start earlier than it did, which is fraudulent. Their simulations of the fall also do not look remotely like what we see in the videos. The simulations apparently do not contain a period in which free fall occurs, so we now know why NIST put up so much resistance to the free fall evidence. The simulations fail to show what really happened and their report is worthless, as Chandler explains.

For a thorough demolition of the new NIST explanation of the collapse of WTC 7 see this paper by Kevin Ryan:

http://www.911review.com/articles/ryan/NIST WTC7.html

In the case of the twin towers the collapse rate is slower but still too fast to be accounted for without explosives. Gordon Ross showed that even if the Bazant/NIST theory of collapse initiation is correct, and rapid failure of a section occurs in the plane and fire damaged region, the impact of the falling top block would be absorbed and the collapse would come to a halt.

http://journalof911studies.com/articles/Journal 5 PTransferRoss.pdf

This is a complex paper and luckily there are easier ways to show that explosives were used. Firstly there is NIST's own work which finds no evidence that the steel was hot enough at the time of collapse and their simulation of the fires shows temperatures too low for collapse.

http://journalof911studies.com/articles/Article_6_Pancake_theory_false_by_NIST_WorldTradeCenter.pdf

Then there is the fact that, even if the steel did get hot enough for collapse to start, the manner of collapse could only be explained by explosives. This proof rests on the fact that steel hardens as it distorts thus the initial movement must be slow as extra heat has to be supplied to overcome the hardening. No such slow initial movement can be seen. This has been set out in a paper by Szamboti and Legge:

http://journalof911studies.com/volume/200703/Sudden_collapse_initiation_impossible_pdf

MacQeen and Szamboti recently produced a compelling paper, "The Missing Jolt" in which they examine the theory which Bazant presented, and which NIST relied upon, as the mechanism for the destruction of the towers. This theory states that, for both towers, a portion of the heated, damaged tower suddenly gave way and the section above fell as a rigid body. They say the kinetic energy of the falling rigid top block destroyed the lower unheated, undamaged portion of the tower through the release of energy in the resulting impact. When a moving body provides impact energy it must lose velocity. The Missing Jolt paper shows that no such impact can be detected: the roof accelerates smoothly through the period when the falling block should be hitting

the lower section. Only explosives can account for the lack of effective resistance. Either the top, the bottom, or both, must be disintegrating as the top falls. Videos show that it is the top which disintegrates first - the roof is seen to drop a considerable distance before the lower section starts to give way. Clearly both the top and bottom are destroyed by explosives.

http://journalof911studies.com/volume/2008/TheMissingJolt7.pdf

David Chandler is writing a paper in which he considers the observed smooth downward acceleration of the roof. The net force on a body can be deduced from its acceleration. Chandler shows that the supporting force the bottom is exerting on the falling top is about one third that of gravitational force. Given that the tower was designed to be over three times as strong as needed to stand up against gravity, this shows that the lower section was exerting only about 10% of its design strength. Clearly this is impossible unless something is destroying its strength. The uniformity of acceleration suggests the use of precisely timed explosives. It is reasonable to believe that the timing of the sequence was chosen to produce a decent rate a little slower than free fall so that the falling debris would screen the demolition charges. This was effective for most of the collapse. Expect Chandler's paper to come out shortly. He has summarized the argument in this short video:

http://www.youtube.com/watch?v=xG2y50Wyys4

There is also the question of what can be discovered by examination of the dust which spread out from the collapsing towers. The "High Temperature" paper by Professor Steven Jones *et al.* shows that small metallic spheres, mainly iron, are present. http://journalof911studies.com/articles/WTCHighTemp2.pdf

The fact that the spheres are small and spherical shows that the iron must once have been molten and that it was subjected to something violent to scatter it in the air, where it solidified. Temperatures sufficient to melt steel or iron are far higher than possible from fires of office materials or jet fuel. The USGS and the RJ Lee Group have also reported these spheres. The latter group reported that these spheres provided characteristic identification of WTC dust. Analysis shows that most of these metallic spheres contain aluminium and silicon. These elements are not found in structural steel but are found in the residue from the ignition of commercial thermite. If thermite is made from nano particles and includes gas-generating components it can be explosive. http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=15007525
http://www.mrs.org/s_mrs/sec_subscribe.asp?CID=2642&DID=115879&action=detail

It has been reported that by varying the ingredients of nanothermite "... a high degree of tailorability with regard to energy release and impulse management" can be achieved. It is reasonable to believe that a material could be devised, for use with a shaped charge, having a flame front sufficiently fast to cut through a steel column in any direction in a fraction of a second yet lacking the loud, sharp crack usually associated with common demolition explosives.

http://www.p2pays.org/ref/34/33115.pdf

Professor Niels Harrit *et al.* have now published a paper providing thorough analysis of the small fragments of red material that have been found in the dust. This material has been shown to be highly energetic and, after ignition, analysis of the product

corresponds with analysis of the small metal spheres found in the dust, already described. It appears that this material is unreacted nano-thermite. http://www.bentham-

open.org/pages/content.php?TOCPJ/2009/0000002/00000001/7TOCPJ.SGM

Jim Hoffman has provided an analysis of this paper for the layperson. http://911research.wtc7.net/essays/thermite/explosive_residues.html

It is important to realize that nano-thermite is a very high-tech material and is not commercially available. It is in the hands of research laboratories in the US, and the army, and apparently nowhere else. This obviously has profound implications in regard to who was involved.

In reviewing this evidence we note that it is all based on the physical properties of materials. The videos reveal the way the buildings moved and how the structural material behaved in relation to Newton's laws of gravity and motion. Analysis of the dust reveals what was physically present. The important thing to note is that these sources of evidence are in public hands. They cannot now be taken away or hidden, as occurred with so much other evidence, such as the videos of what hit the Pentagon. Any further examination of the videos and dust will necessarily produce the same results. The evidence is not, as is often claimed, speculative.

In this way the explosive demolition theory contrasts with the NIST report on the collapse of the towers. The NIST report fails to find forensic evidence for the very high temperatures required to cause a collapse of the steel structures. It fails to show how sagging floors pulled in the walls and thus induced column collapse, as their furnace tests of floor trusses did not produce the required sagging. For their simulations they started off with three sets of parameters having low, intermediate and severe levels of stress. They say they chose the severe case simply because the intermediate case did not result in collapse. They therefore assumed what their simulation should have set out to prove, thus their argument is circular. If they had behaved in an ethical, scientific manner they would have stressed the fact that two out of three of their simulations failed to produce collapse and that they therefore would seek a cause other than plane damage and fire for comparison, but they did not.

Finally they stopped their simulation at the "point of collapse", thus they did not simulate the actual collapse at all. This will be a surprise to many. It is likely that they attempted to do so but found that they could not get collapse to occur even with their "severe" case, as Gordon Ross found, so had to remain silent on this essential component of their task if they were to support the desired conclusion. This may be easier to understand when one notices that NIST is not a free scientific body but operates under the Department of Commerce.

Some argue that NIST failed to look for evidence of explosives simply because they were ignorant of such matters. This is clearly not the case as Kevin Ryan shows: http://journalof911studies.com/volume/2008/Ryan_NIST_and_Nano-1.pdf

Here is a summary which compares the official theory with the alternative explosive demolition theory in terms of their relative probability: http://journalof911studies.com/volume/2008/911andProbabilityTheory17Legge.pdf

It provides links to scientific papers which support all the claims within it.

This note is not intended to provide a full discourse on the case that 9/11 was a false flag operation. It is merely a stepwise short walk through some of the evidence for controlled demolition in a more or less chronological fashion as it was presented by scientific investigators. There is much more to be found at the Journal of 9/11 Studies, where all the papers are peer reviewed. http://journalof911studies.com/

There are also a number of websites that are publicizing this work: Scholars for 9/11 Truth and Justice, http://www.stj911.org/index.html Architects and Engineers for 9/11 Truth, http://www.ae911truth.org/ Firefighters for 9/11 Truth, http://firefightersfor911truth.org/ Lawyers for 9/11 Truth, http://rl911truth.org/index.php Medical Professionals for 9/11 Truth, http://mp911truth.org./

It is important to realize that there is another vital aspect to this investigation which has to do with assembling the evidence for improper actions on the part of various bodies and individuals. For this aspect the work of David Ray Griffin in his book: "The New Pearl Harbor Revisited: 9/11, the Cover-up and the Expose" is detailed and effective. This book overcomes some of the deficiencies in his earlier work, as he explains, and also lists new evidence which has come to light recently. The amount of evidence for a cover-up is extraordinarily large.