The Short Reign of Ryan Mackey

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Just before the sixth anniversary of 9/11, Ryan Mackey, a new defender of the Bush Administration's conspiracy theory, posted a 200-page paper that attempts to critique the NIST chapter of David Ray Griffin's book, *Debunking 9/11 Debunking*. Having heard from at least one full-grown, educated person that Mackey's paper looked like a sensible review, I thought it might be worth a response. But for reasons that may shortly become obvious to the reader, a point-by-point rebuttal of Mackey's lengthy paper is not necessary.[1]

Mr. Mackey refers to himself as a US government scientist, whose work includes the production of "strike aircraft weapon systems." This means that his involvement in the discussion of the truth about 9/11 should be taken with the understanding that the official story of 9/11 supports an historic increase in military spending, and therefore benefits people who work for the military-industrial complex.

Introducing himself, Mackey declares his allegiance to the James Randi Educational Foundation (JREF), an online forum that represents itself as "a nonprofit organization dedicated to raising public awareness of paranormal and pseudoscientific fraud." James Randi is apparently a magician, and a leading member of the "Skeptics Society", whose founder I recently debated on the issue of 9/11.[2]

A brief visit to Randi's forum indicates that the participants are largely anonymous, and somewhat emotional, defenders of the official conspiracy theory. Most of their efforts appear to be focused on smearing those questioning the government's version of 9/11, or defending that version with imaginative claims that even the government wouldn't support. With this in mind, it's not difficult to predict that this new work from the scientific hero of the JREF crowd is not particularly useful or informative.

Fifteen rounds from a shotgun

In his review of Griffin's chapter, Mackey correctly refers to my own description of NIST's sole test for fireproofing loss. This test was never referred to in the draft reports, and involved shooting a total of fifteen rounds from a shotgun at non-representative samples in a plywood box Flat

steel plates were used instead of column samples. In September of 2005, NIST slipped a twelve-page appendix C into their sub-report NCSTAR 1-6A, describing this shotgun test. Unfortunately for NIST, those test results ultimately disproved the claim that fireproofing could have been "widely dislodged".

In an unsubstantiated defense of NIST, Mackey claims that this test was never inserted into draft reports because it "was not yet complete". If this new claim from Mackey is true, it would be very surprising considering not only how humble these tests were, but how important such results are to NIST's explanation for "collapse".

In its WTC report, NIST made the startling claim that –

> *"The WTC towers would likely not have collapsed under the combined effects of aircraft impact and the extensive, multifloor fires if the thermal insulation had not been widely dislodged or had been only minimally dislodged by aircraft impact."*

Considering that fireproofing loss by aircraft impact was an essential component of NIST's hypothesis, the lack of physical tests to support this contention was, as of August 2005, a glaring omission.

Mackey suggests that this late addition to NCSTAR 1-6A, describing the plywood box shotgun test, was *"in no way hidden from view."* But to be clear, in June of 2005, NIST finally released their final draft report, including sub-report NCSTAR 1-6A which had two appendices. In September of 2005, they made two additions to that report. One was the third (shotgun) appendix to NCSTAR 1-6A, which was probably a result of the criticism they were getting from myself and others for not having provided any test results to prove fireproofing loss. The other late change to NIST's report was one brief comment that they had found no evidence to support the demolition hypothesis. But as Dr. Griffin has made clear, one rarely finds what one will not look for.

Frankly, NIST might have done itself a favor by keeping that third shotgun appendix hidden. That's due to the fact that those tests, intended to support such a critical part of the story, were fully described in only a twelve-page appendix to this 10,000 page report (0.1% of the report) and therefore could be seen as only a trivial afterthought by NIST.

In defending the weak shotgun test, Mackey says –

> *"The shotgun test appears to have been brought in to provide additional testing in response to criticism that the industry standard tests were a poor fit to the aircraft debris impact. In other words, what Dr. Griffin and Ryan are criticizing is, in fact, NIST going above and beyond to provide additional, innovative, and more realistic testing."*

With the words *"additional, innovative and more realistic",* Mackey appears to mean "minimal, hurried, and unrealistic". And when he refers to extensive *"industry standard tests"*, what he is actually referring to is a chain of failed preliminary attempts by NIST management to support their pre-determined conclusions. Throughout these failed attempts, NIST management was not sure if they were looking to prove fireproofing loss by forces of vibration, by forces of shearing, or simply through force of verbiage.

The first of these attempts was what Mackey calls the "*pull-off*" test, otherwise known as ASTM C1583-04, a standard test method that evaluates the tensile strength of concrete surfaces and overlay materials. This is not an industry standard test for the removal of SFRM from steel building components by any means, and was never intended for SFRM testing at all, let alone to estimate losses of fireproofing due to shear forces. There is, however, an industry standard test that might have been used to provide some useful information, and that is ASTM E 736, *Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members*.

Unfortunately, instead of performing that relevant test, NIST performed the other, non-relevant test, a modified version of ASTM C1583. Exactly why they did this is not clear, but the report suggests this non-standard test would do a better job of estimating the adhesive and cohesive strength of the SFRM than would the standard test designed for that very purpose. The surprising result NIST found was that the average results from the modified non-standard test, for the adhesive and cohesive strengths of the SFRM, were…

> *"…considerably greater than the manufacturer's published strength of 295 psf obtained using the [correct] ASTM E736 method under laboratory conditions."*

Seeing those results, NIST management decided to fall back on a "*Simplified Approach to Predict Dislodging of SFRM*." This purely mathematical evaluation was intended to estimate accelerations that would contribute to losses of fireproofing through forces of vibration. But NIST finally admitted that they could not "*establish robust criteria*" to support vibration-induced dislodging, and gave up the entire effort.

What people need to understand here is that the NIST investigation involved a number of honest scientists performing good work at the lower levels. Unfortunately for them, in most cases the results of the tests either failed to support the pre-determined conclusions promoted by the higher-ups, or directly contradicted those pre-determined conclusions. NIST management responded by abandoning such results in favor of either another approach, or a final generalized assumption that could be used to support their conclusions.

But with regard to the last minute shotgun test, Mackey claims that Griffin and I "*err*" in an energy argument in which I point out that there was no kinetic energy remaining from the aircraft impacts to affect fireproofing loss. Mackey says this is a *"mystification of the NIST summary of findings",* when, in fact, my point that no energy was available was not taken from NIST at all, but from calculations done by Tomasz Wierzbicki and other engineers at MIT.[3] These calculations show that all of the kinetic energy available from the impact of the aircraft was consumed in the crushing of the floors and columns in the WTC towers, and in destruction of the aircraft itself. Mackey would have known this if he had referred to the references of the book he was criticizing. For his future reference, hopefully to be read before another 200 page paper is produced, he can find other details at the Journal of 9/11 Studies.[4]

Mackey suggests that I *"disingenuously used the upper end"* of the scale of energies supplied by NIST. In fact, in tables C-2 and C-3 of the shotgun appendix, the energies are estimated for each of the shotgun blasts, with more than half of these values at 0.9 MJ/m^2 and with a top end value of 1.2 MJ/m^2. So when I used 1 MJ/m^2, I was not at the upper end at all and was, in fact, representing NIST's given energies very well. Apparently Mr. Mackey is not capable of reading these simple tables, or is, himself, being disingenuous.

Mackey then goes on to refer to what might be called his new Zero Energy Ricochet (ZERO) hypothesis. He implies that the crushed fuselage and

wings of the aircraft would somehow be converted into tiny, shotgun-like Aluminum projectiles, but he doesn't tell us exactly how this might have occurred, and then speculates that the…

> *"…projectiles would retain most of their energy, either ricocheting or smashing the formerly fireproofed building contents out of the way. The SFRM absorbs only a tiny fraction of this energy, leaving the rest to break loose other SFRM or damage the building structure."*

Therefore, starting with zero available energy, Mackey simply assumes that a large aircraft would somehow be converted into many thousands of shotgun blasts, that would then ricochet around the building in every direction until all the fireproofing was removed from the Twin Towers. For the areas in question, NIST and Mackey agree that the…

> *"…energy of the debris impacting the SFRM [would need to be] distributed through a debris area that was about five floors high (60 ft or 18 m) and 150 ft (45 m) wide."*

With core columns, floor decking (not including bar joists), and exterior columns considered, the surface area involved in this estimate would be over 10,000 m^2. By way of the energies estimated in the shotgun tests, 1 MJ/m^2 would be needed to generate the required shotgun blasts. Even if we allowed that half the energy of each blast remained after the initial impact, to form a now widely scattered ricochet pattern (which would probably not be very effective at removing fireproofing) we would still need to start with at least 5,000 MJ of energy. And this amount exceeds the total kinetic energy available from aircraft impact in either tower, as stated by NIST.

That simple fact seems to put this new ZERO hypothesis to bed. But it is possible that Mr. Mackey has not yet fully explained how those multi-directional, perfectly symmetrical ricochets could have so efficiently removed all the fireproofing from five floors of the towers (that's what NIST means by widely-dislodged) without the need for any energy.

Furthermore, Mackey suggests that I "*err*" yet again by stating that the objects impacted by the shotgun blasts were not representative of the WTC tower building assemblies. Ignoring the fact that even NIST's steel test projectiles were clearly non-representative the Aluminum aircraft materials, he states that –

"bars were also tested, sized and coated to be accurate representations of the floor truss materials."

And he adds that –

"The flat steel plates are meant to represent floor decking material rather than column sides – columns were not the subject of this test, because the columns were fireproofed with gypsum board, and this test only applies to the SFRM (sprayed-on fire resistant material)."

But straight bars are not "floor trusses", and do not accurately represent the floor assemblies used in the WTC. The joists from the WTC floor assemblies, both primary and bridging, were assemblies of steel rods, curving into and around top and bottom steel chord frames. The few shotgun blasts to establish fireproofing loss from these straight bars, shot directly at them from a distance of six meters, could have at least been aimed at representative WTC floor assemblies, if not from a more realistic angle and distance. If NIST had performed the test in that slightly more realistic manner, at least Mackey's speculative ricochets could have been evaluated for their own ability to go "*above and beyond.*"

Additionally, the floor decks of the floor assemblies used in the WTC towers were in no way "flat plates", but were, like all other such floor decking, exactly the opposite of flat, being quite jagged and non-uniform. See the image at the link below for an idea of how the WTC floors were assembled (#23 points to the steel floor decking).
http://www.indybay.org/uploads/2006/04/10/truss-assembly.jpg

Finally, as if Mr. Mackey had not "erred" enough on this subject, he says that the WTC columns were only covered with gypsum board. In fact, most column surfaces in the WTC towers were covered with SFRM, although some core column surfaces were covered with 2 inch thick gypsum planking.[5] Note that no tests were performed by NIST to prove loss of gypsum planking by shotgun or otherwise, and in any case, Mackey's argument here is in direct opposition to his purpose, because the gypsum planking would likely be harder to blast off.

Mackey goes on to infer much from his string of errors about the shotgun tests, but there is no need to evaluate such unsubstantiated speculation.

UL and the fire resistance of the WTC towers

Despite Mr. Mackey's obfuscation of the issue, the fact that UL was deeply involved in the fire resistance plan for the WTC towers is not really a matter of dispute. In fact, UL is the expert when it comes to the fire-induced collapse hypothesis, and was an integral part of the NIST WTC investigation. One of my recent essays summarizes the growing knowledge about UL's involvement in establishing the original fire resistance plan for the WTC towers.[6]

When speaking of the fire resistance testing of the WTC floor assemblies, Mackey says –

> *"The test conducted here is precisely the test that would have been conducted (except perhaps larger in scale), possibly by UL, prior to the Towers' construction."*

In fact, UL did test floor assemblies in 1970, that were "similar" to those used in the WTC towers, but this fact has not been repeated by NIST since their progress report of May 2003.[7] The results of those early tests were interesting, considering that they showed the "*floor assembly sagged 3 inches… at 120 minutes*", which correlates with the August 2004 floor tests done by UL as part of the NIST investigation. Of course, 120 minutes is much longer than the fire times in the failure zones of either tower.

There are several other facts about UL's August 2004 floor model tests, performed as part of the NIST WTC investigation, that should be emphasized. These facts show that, even despite designing these tests in an intentionally deceptive way, the floor models still supported their loads in the furnace. Not only did UL and NIST add twice the known WTC load to the floor models, they also used far less fireproofing than was known to exist at the time. The tests performed by UL included two test specimens with "as built" fireproofing of 0.75 inches, one with "as specified" fireproofing" thickness of only 0.5 inches, and one with the "as specified" condition of essentially no fireproofing. None of the test specimens had fireproofing to represent the "as impacted" condition of 3.25 inches, reported in NCSTAR 1-6A, figure A-60.

After fully ignoring the deceptive design of the UL floor model tests, Mackey goes on to berate Dr. Griffin about the temperatures used in the ASTM E119 test, saying –

> *"The 2000 F temperature he cites refers to the maximum furnace temperature, not the temperature observed in the steel itself. As an example, Figure 6-1 shows the furnace temperature measurement against the ASTM E 119 standard, which only reaches 2000 F at the end of the test, over 200 minutes after test start."*

But again, to clarify, ASTM E119 is a test for fire resistance of building components in which 2000 F is an average temperature, not the maximum. Mr. Mackey would have known this if he had taken the time to inspect the time-temperature curve for ASTM E-119, which, despite his spurious claims, does not "end" at 2000 F or at 200 minutes.[8]

Due to NIST's avoidance of the issue of how the steel column assemblies in the towers were tested for fire resistance, we may never know the exact details of those tests unless UL begins to give honest answers to those questions. But we do know that, at the time the towers were designed, the NYC code called for three hours of fire resistance for the floor assemblies, and four hours of fire resistance for the columns. Those requirements changed to two hours and three hours, respectively, by the time the towers went up, but one thing is clear. The ASTM E-119 tests performed for the WTC building components would definitely have exceeded the fire times and temperatures seen in the WTC fires.

On the same topic, Mackey inadvertently stumbles upon an important fact that ultimately destroys all hope for the official story when he says –

> *"the temperature is an approximate maximum furnace temperature and has no direct relationship with the temperature reached by the steel".*

With this statement Mackey acknowledges that gas temperatures cannot be equated with steel temperatures. So when NIST, throughout their report, refers to gas temperatures of around 1000 °C, that they have no actual evidence for, they are simultaneously admitting to us that the actual steel temperatures were far lower than that. The steel temperatures that NIST can support through testing are far too low to have significantly affected the strength of the steel, at only about 250 ºC. These results were from the testing of WTC steel samples, taken from what NIST's May 2003 progress report called an "*enormous amount*" of steel and specifically from the fire zones in the towers.

Mackey makes the plea that NIST's steel temperature test results were not valid because –

> *"Hardly any of the steel from the impact areas, where the fire was the hottest, could be expected to survive the collapse in such good shape as to permit positive identification of the pieces"*

Apart from the circular logic applied in this statement, Mackey does not appear to be aware that the impact areas were not where the fires were hottest. In fact, NIST says it was the opposite side of the building in WTC 1, and the east wall of WTC 2, that were the hottest. No matter, it is doubtful that those supporting the NIST report care about those kinds of details anyway.

Throughout this paper, Mr. Mackey conveniently ignores the fact that all the tests NIST performed were ultimately useless. That is, none of the results produced can be traced to the final computer generated findings in a straightforward manner. In fact, for some of the tests performed, like those for the floor testing and the steel temperature estimates, NIST now simply admits that they did not use the results in any meaningful way. These admissions can be seen in NIST's response to a Request for Correction, filed by 9/11 families and concerned citizens, and in our recent appeal to that response.[9]

<u>UL Troubles</u>

Without a doubt, Mr. Mackey is being disingenuous when he says –

> *"A lengthy retelling of Ryan's legal troubles with UL is outside the scope of this paper, having nothing to do with the NIST report proper, and will be left to Appendix A."*

What Mr. Mackey surely meant to say is that UL has had legal troubles with me, not the other way around. Of course, with the critical thinking skills Mackey claims as a JREF member, it may not have occurred to him that, if I were having legal troubles with UL, I could just stop suing them. And, of course, a "*lengthy retelling*" of UL's legal troubles with me is not yet necessary, considering my first lawsuit against them lasted less than a year and our legal team has not yet submitted the next complaint. Despite this, Mr. Mackey devotes an entire appendix to UL's legal troubles with me.

This is almost certainly due to the fact that the folks at JREF were simply giddy with excitement over the first case. Every document filed with the court was immediately posted at JREF, with many excited comments following each. When the federal judge assigned to the case finally ruled on UL's motion to dismiss, after nine months and just a few weeks before the anniversary of 9/11, the JREFers were ecstatic. One of the more articulate among the group recently prayed for court retribution against me by saying –

> *"[He] Could have walked away, now he'll hopefully lose everything he owns."*

But it doesn't take a US government scientist to know that suing for wrongful termination in Indiana is not a high probability venture. Couple this with the fact that suing UL in this case is really a matter of taking on the US government and the Bush Administration's entire power story, and we all know pretty much what to expect. That means my legal actions against UL are much like the fight for truth overall - it's not about a final reward, it's about discovery. Of course, anonymous government apologists are not likely to know much about that.

One last thing about this paper is worth noting, and that is Mackey's continual reference to the authorship by using the term "we". For example, he says -- "*we note with amusement*" the open letter Kevin Ryan sent to the President of Purdue University. It is not clear whether this use of "we" means that there was actually a group of authors involved, and only one was given credit, or if Mackey now believes himself to be something of a royal figure in the debunking effort. The gratuitous pretension of the piece suggests that the latter option is correct, but who knows.

In any case, "we" shall see what happens with UL, and their legal troubles with me. In the meantime, there will undoubtedly continue to be a few full-grown, educated people who are willing to listen to anyone who claims to provide support for the fire-induced collapse hypothesis, despite knowing that even NIST has finally admitted they could not make it work. Only one thing is certain at this point, and that is that the JREFers' Schadenfreude will not last forever.

And "*given the sheer number of errors*", as Mackey puts it, his paper is, at best, just a tiresome blunder. The author simply states the opposite of every point made in Griffin's chapter, and then supports that bizarre approach with

false claims and diversionary chatter. Of course, it's very possible that this 200-page anniversary surprise was just another well-timed attempt to distract those looking into the evidence for the alternative hypothesis of 9/11.

Good thing "we" didn't fall for it.

[1] Ryan Mackey, *On Debunking 9/11 Debunking: Examining Dr. David Ray Griffin's Latest Criticism of the NIST World Trade Center Investigation*, http://911guide.googlepages.com/ryanmackey
[2] K. Ryan, *9/11 and Skepticism*, American Buddhist Net, November 2007, http://www.americanbuddhist.net/9-11-and-skepticism
[3] Tomasz Wierzbicki, et al, *Aircraft Impact Damage*, MIT website, http://web.mit.edu/civenv/wtc/PDFfiles/Chapter%20IV%20Aircraft%20Impact.pdf
[4] K. Ryan, *What is 9/11 Truth? – The First Steps*, Journal of 9/11 Studies, August 2006, http://www.journalof911studies.com/articles/Article_1_Ryan5.pdf
[5] See Figure 3-4 of NCSTAR1-6A for an example of the SFRM applied to the perimeter columns. See this same report for extensive discussion of the application, re-application and measurement of the thickness of SFRM on the WTC core columns.
[6] K. Ryan, *Three Years Later: Another Look at Three Claims from UL*, originally published in the Visibility 9/11 Newsletter, by Michael Wolsey, and now found at 911Truth.org, http://www.911truth.org/article.php?story=20070919215921873
[7] NIST, *May 2003 Progress Report on the Federal Building and Fire Safety Investigation of the World Trade Center Disaster*, May 2003, http://wtc.nist.gov/pubs/MediaUpdate%20_FINAL_ProgressReport051303.pdf
[8] The time temperature curve for ASTM E119, carried out beyond the shortened time periods listed in the NIST examples, can be found here - http://www.bia.org/BIA/technotes/Image179.gif
[9] James Gourley, *Sept. 2007 Response to April 2007 RFC*, http://www.journalof911studies.com/volume/2007/NISTresponseToRequestForCorrectionGourleyEtal2.pdf , and *Appeal Filed with NIST, Persuant to Earlier Request for Correction*, Journal of 9/11 Studies, November 2007, http://www.journalof911studies.com/volume/2007/AppealLetterToNISTGourleyEtAl.pdf