PUBLIC COMMENT and SUPPLEMENTAL INFORMATION SUBMITTED BY

JERRY LEAPHART

Advisory Team Committee Meeting held on December 18, 2007
(12/18/07 Advisory Team Meeting)

Via email: cauffman@nist.gov

To: Stephen A. Cauffman, Deputy Chief
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Public Comment of Jerry Leaphart:

Yes, thank you. My name is Jerry Leaphart. I am an attorney. I also represent individuals who have presently pending Requests For Correction that are in various stages of processing as well as individuals who have presently pending lawsuits relating to the preparation of NCSTAR1 and together with the ongoing investigation of WTC 7. I concur, for the most part, with the comments made by the previous two speakers which do serve in the main to place NIST on notice that the lengthy and often delayed report on what caused the destruction of World Trade Center 7 is a matter of extreme importance to the public. We are somewhat perplexed by the repeated delays in the preparation in going forward with that report. We note that in the commentary on the status of the report that we have today, it quite frankly does not appear as if very much progress has been made and that the indications that certain parts of it will be ready for review as early as January with a complete draft done as early as July of 2008 seem no more realistic than any of the prior time estimates for conclusion of that report.

My particular comments will be supplemented with a mailing of the comments in to NIST as is permitted by regulations governing today's session. Those comments will, in the main, focus on the issue of how the investigation is framed. The investigation is framed as determining why and how World Trade Center building collapsed, but that is an incomplete statement. The World Trade Center building was collapsed or destroyed in a manner that resulted in a heap, that is to say, a pile of rubble that did not even spread across the adjoining street. It was a trapezoidal building that self-destructed in a matter of 6.6 seconds and came down into that heap on a symmetrical basis.

In addition, the remnants of that building included steel beams that were visibly transformed and virtually disintegrated. Accordingly, all of the discussion had today concerning temperature assumptions, concerning working hypotheses that have still, some six years later, have not yet resulted in yet even a leading hypothesis, and small wonder, all serve to demonstrate the investigation as to what caused the destruction of World Trade Center 7 is seriously off target and amiss and should probably be halted pending a determination of why the status of that investigation can get no further than that of a working hypothesis and this some six years later. Thank you.

Steve Kaufman: Paul, this is Steve Kaufman, if I could I would just ask our three presenters if they would be so kind as to submit their written comments to me so that they an be accurately reflected in the record. I would greatly appreciate that. Gentlemen, I believe you all have my email address.

Jerry Leaphart: Yes, I'd be happy to submit them.

Steven Kaufman: Great. Thank you very much.

Paul Fitzgerald: Thank you very much, gentlemen. We appreciate receiving them.

That concludes the formal part of the agenda. Is there anything else to come before the committee? Hearing nothing, I will accept a motion for adjournment.

Supplement to comments:

Supplement 1:

This supplement relates to the following aspect of the comment already placed in the record:

We note that in the commentary on the status of the report that we have today, it quite frankly does not appear as if very much progress has been made and that the indications that certain parts of it will be ready for review as early as January with a complete draft done as early as July of 2008 seem no more realistic than any of the prior time estimates for conclusion of that report.

The reason for that comment is that while there are two tracks in the investigation, one that is said to center on "normal building fires" and the other on "hypothetical blast events," next to nothing was said that would indicate either the status of or the outcome of the investigation done so far with respect to hypothetical blast events.

Moreover, it is to be noted that the discussion had that centered on “normal building fires” cannot possibly result in a “leading hypothesis” because the information revealed on December 18, 2007, quite clearly confirms that the fires did not burn long enough in any one place nor could they have reached a high enough temperature to result in the uniform, top to bottom, weakening of steel to such a degree that a 47-storey skyscraper could symmetrically disentegrate in 6.6 seconds into a heap.

Annexed hereto as Exhibit A is an article entitled **“The Deep Mystery of Melted Steel”**. The first sentence of the article states:

> **“There is no indication that any of the fires in the World Trade Center buildings were hot enough to melt the steel framework.”**

The accuracy and the efficacy (not to mention the common sense) of the quoted statement has now been confirmed by the following comments made at the 12/18/07 Advisory Team Meeting:

> “Dave Collins: Shyam, Dave Collins, you made a statement that the initial local failure was caused by normal building fires. What do you mean by normal building fires?
>
> Shyam Sunder: What we mean by normal building fires is building fires in spaces where the combustible was the normal building contents and the ventilation was the normal building ventilation, and there were no other kinds of combustibles such as, in this particular case, fuel, you know, the fuel that was in the… from the __?___tanks on every floor and the fuel in the large tanks in the bottom of the building that were actually powering the power generators in the building. So in this particular case, that’s what we mean. In the case of the Towers, of course, the jet fuel was the unique source of fuel but there again we talked about normal building fires that played a role, which is that jet fuel was burned within a matter of a few minutes but what burned over the next few hours or an hour and a half… was really fires where the combustible was typically the normal building contents plus the airplane contents.
>
> Dave Collins: But they were ventilated fires?
>
> Shyam Sunder: In the case of the towers, there was a lot of… in those cases the ventilation was probably somewhat limited, you know, in the case of the towers, the windows continued to break and therefore the oxygen continued to be supplied. In the case of 7, of course, we have information on window breakage, but it’s not as detailed as we had in the case of the towers.
>
> Dave Collins: Thank you.

> Shyam Sunder: O K, in terms of the overall schedule, our hope is that the analysis… you know… there are two kinds of analysis we are doing. One is the detailed thermal analysis using enhancements(?)which gives you the initiating event sequence. The second one is a global analysis which includes the vertical and horizontal progression of failures ... those steps of the process once the initiating even was specified and that is using _____. At this point, the analysis of the initiating event we expect will be completed in January of 2008, which is about a month, a month and a half from now. We expect to finish the global analysis of the initiating event by March and at that stage, we will then identify a leading collapse hypothesis, which will then lead to the drafting of our reports for internal review by the tactical team followed by a revised draft that is shared with the advisory committee – that's you folks -- as well as reviewed at NIST. We have a normal NIST quality control for all publications released by NIST. It's called the Editorial Review Board at NIST and all publications before they are released by NIST are reviewed by that independent body, and that will be done concurrently with the Advisory Committee review some time in June and we expect to release the report for public comment soon after that in July, and there will be a period of public comment similar to what we had for the Towers at the end of which we will then release the final reports. So that is really the overall schedule. If you have any questions, I'd be happy to answer. If there are none, we'll just move to Terri's presentation."

The quoted portion of the 12/18/07 Advisory Team Meeting is utterly incongruent. It does not address the nature of the destructive effects actually found to have occurred in and with respect to the steel that had comprised WTC 7. Moreover, by limiting the analysis to "normal building fires" it is clear that doing so sets the ongoing investigation onto an absurdly wrong approach to the facts of what occurred and to the circumstances of the actual destructive effects that are none to have occurred.

Continuation along that path, based on the knowing disregard of what actually happened to the steel, is and would be fraudulent.

While Exhibit A may not be specific to the steel remaining from WTC 7, annexed hereto as Exhibit B. is a summary entitled:

"An Initial Microstructural Analysis of A36 Steel from WTC Building 7"
J.R. Barnett, RR. Biederman and R.D. Sisson, Jr.

That study was based upon an actual analysis of remnant WTC 7 steel and cannot be ignored by a "normal building fires" hypothesis that would have to set aside completely and totally the actual destructive effects that are known to have occurred. The said study, Exhibit B., clearly articulates and demonstrates many effects that cannot have been caused by "normal building fires" including, by way

of merely one of the examples set out in Exhibit B that of “Oxidation and intergranular melting.” (See Exhibit B., figure 2.).

Based upon the information revealed at the 12/18/07 Advisory Team Meeting, it is clear that the ongoing investigation into what caused the destruction of WTC 7 is seriously flawed to the point of being a fraudulent endeavor. It is respectfully submitted that the said investigation should be halted pending a more thorough review of the circumstances that have forced the investigation onto a path of flawed reasoning and improper analysis.

It is my understanding that Dr. Judy Wood may submit additional information concerning the issues raised by the outcome of the 12/18/07 Advisory Team Meeting and the documents, including the those offered for presentation purposes by Drs. Shyam Sunder and Theresa McAllister, respectively at that meeting.

Respectfully submitted,

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Exhibit A.

Spring 2002
The "Deep Mystery" of Melted Steel

There is no indication that any of the fires in the World Trade Center buildings were hot enough to melt the steel framework. Jonathan Barnett, professor of fire protection engineering, has repeatedly reminded the public that steel--which has a melting point of 2,800 degrees Fahrenheit--may weaken and bend, but does not melt during an ordinary office fire. Yet metallurgical studies on WTC steel brought back to WPI reveal that a novel phenomenon--called a eutectic reaction--occurred at the surface, causing intergranular melting capable of turning a solid steel girder into Swiss cheese.

Materials science professors **Ronald R. Biederman** and **Richard D. Sisson Jr.** confirmed the presence of eutectic formations by examining steel samples under optical and scanning electron microscopes. A preliminary report was published in *JOM*, the journal of the Minerals, Metals & Materials Society. A more detailed analysis comprises Appendix C of the FEMA report. *The New York Times* called these findings "perhaps the deepest mystery uncovered in the investigation."

The significance of the work on a sample from Building 7 and a structural column from one of the twin towers becomes apparent only when one sees these heavy chunks of damaged metal.

A one-inch column has been reduced to half-inch thickness. Its edges--which are curled like a paper scroll--have been thinned to almost razor sharpness. Gaping holes--some larger than a silver dollar--let light shine through a formerly solid steel flange. This Swiss cheese appearance shocked all of the fire-wise professors, who expected to see distortion and bending--but not holes.

A eutectic compound is a mixture of two or more substances that melts at the lowest temperature of any mixture of its components. Blacksmiths took advantage of this property by welding over fires of sulfur-rich charcoal, which lowers the melting point of iron. In the World Trade Center fire, the presence of oxygen, sulfur and heat caused iron oxide and iron sulfide to form at the surface of structural steel members. This liquid slag corroded through intergranular channels into the body of the metal, causing severe erosion and a loss of structural integrity.

"The important questions," says Biederman, "are how much sulfur do you need, and where did it come from? The answer could be as simple--and this is scary- as acid rain."

Have environmental pollutants increased the potential for eutectic reactions? "We may have just the inherent conditions in the atmosphere so that a lot of water on a burning building will form sulfuric acid, hydrogen sulfide or hydroxides, and start the eutectic process as the steel heats up," Biederman says. He notes that the sulfur could also have come from contents of the burning buildings, such as rubber or

plastics. Another possible culprit is ocean salts, such as sodium sulfate, which is known to catalyze sulfidation reactions on turbine blades of jet engines. "All of these things have to be explored," he says.

From a building-safety point of view, the critical question is: Did the eutectic mixture form before the buildings collapsed, or later, as the remains smoldered on the ground. "We have no idea," admits Sisson. "To answer that, we would need to recreate those fires in the FPE labs, and burn fresh steel of known composition for the right time period, with the right environment." He hopes to have the opportunity to collaborate on thermodynamically controlled studies, and to observe the effects of adding sulfur, copper and other elements. The most important lesson, Sisson and Biederman stress, is that fail-safe sprinkler systems are essential to prevent steel from reaching even 1,000 degrees Fahrenheit, because phase changes at the 1,300-degree mark compromise a structure's load-bearing capacity.

The FEMA report calls for further metallurgic investigations, and Barnett, Biederman and Sisson hope that WPI will obtain NIST funding and access to more samples. They are continuing their microscopic studies on the samples prepared by graduate student Jeremy Bernier and Marco Fontecchio, the 2001–02 Helen E. Stoddard Materials Science and Engineering Fellow. (Next year's Stoddard Fellow, Erin Sullivan, will take up this work as part of her graduate studies.) Publication of their results may clear up some mysteries that have confounded the scientific community.

http://www.wpi.edu/News/Transformations/2002Spring/steel.html

Exhibit B

An Initial Microstructural Analysis of A36 Steel from WTC Building 7
J.R. Barnett, R.R. Biederman, and R.D. Sisson, Jr.
The following article appears in the journal *JOM*, 53 (12) (2001), pp. 18.
http://www.tms.org/pubs/journals/JOM/0112/Biederman/Biederman-0112.html

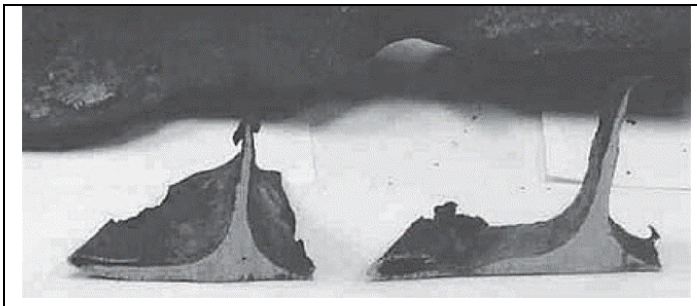

Figure 1. Severely eroded I beam cross sections, nominal composition (%) of A36 steel plate is: (0.29C max, 0.80–1.2Mn, 0.04P, 0.05S, 0.15–0.3Si bal Fe).
Source:
http://www.tms.org/pubs/journals/JOM/0112/Biederman/fig1.gif

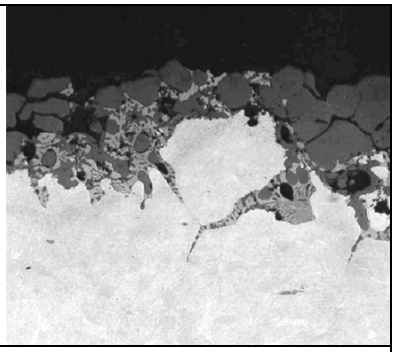

Figure 1. Oxidation and intergranular melting; unetched.

Source:
http://www.tms.org/pubs/journals/JOM/0112/Biederman/fig3.gif

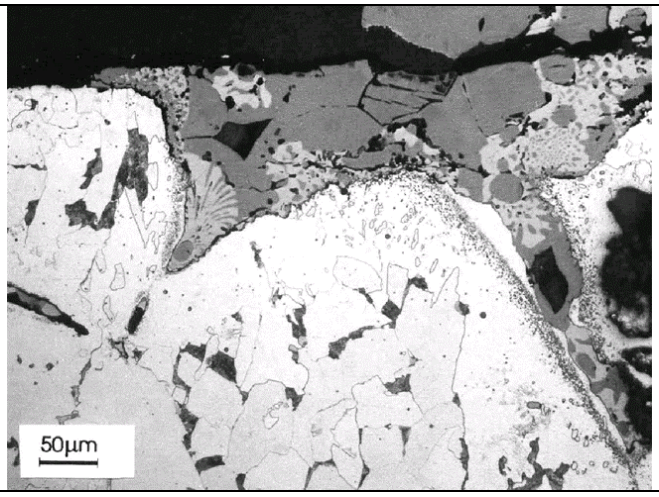

Figure 3. Eutectic formation (iron oxide-iron sulfide), etched 4% natal.
Source:
http://www.tms.org/pubs/journals/JOM/0112/Biederman/fig5.gif

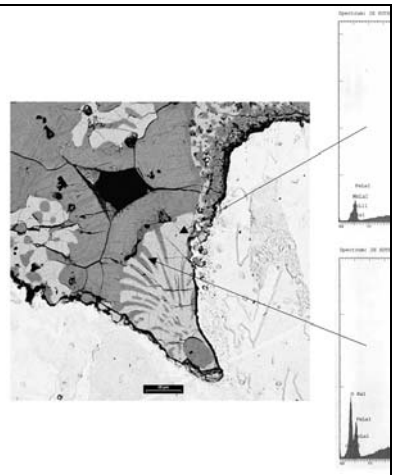

Figure 4. An EDX Analysis of eutectic region.
Source:
http://www.tms.org/pubs/journals/JOM/0112/Biederman/fig4.gif

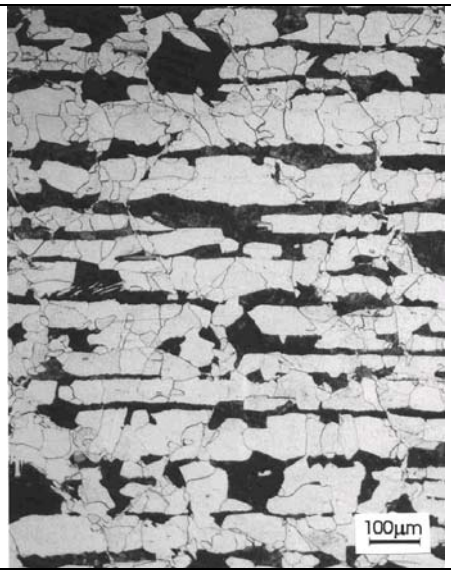

Figure 5
(?/?/?) Source:
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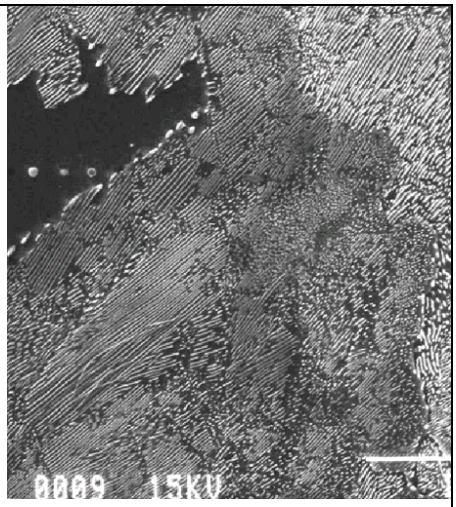


Figure 6. fig2b.gif
(?/?/?) Source:
http://www.tms.org/pubs/journals/JOM/0112/Biederman/fig2b.gif

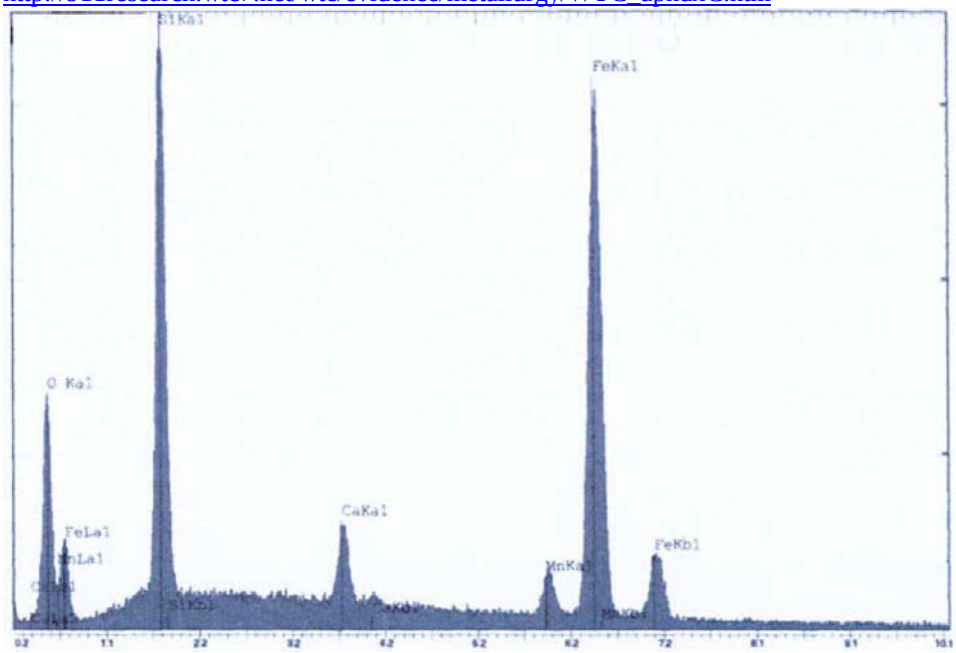
The microstructure of unaffected A36 steel: (Figure **Error! Reference source not found.**) white-ferrite, dark-pearlite and (Figure **Error! Reference source not found.**) pearlite region. Pearlite forms in bands due to manganese segregation and prior hot working.

See: http://www.fema.gov/pdf/library/fema403_apc.pdf
See: http://www.tms.org/pubs/journals/JOM/0112/Biederman/Biederman-0112.html

Consistent with Transmutation

From the FEMA appendix C

http://911research.wtc7.net/wtc/evidence/metallurgy/WTC_apndxC.htm



WTC_apndxC_img_13.jpg

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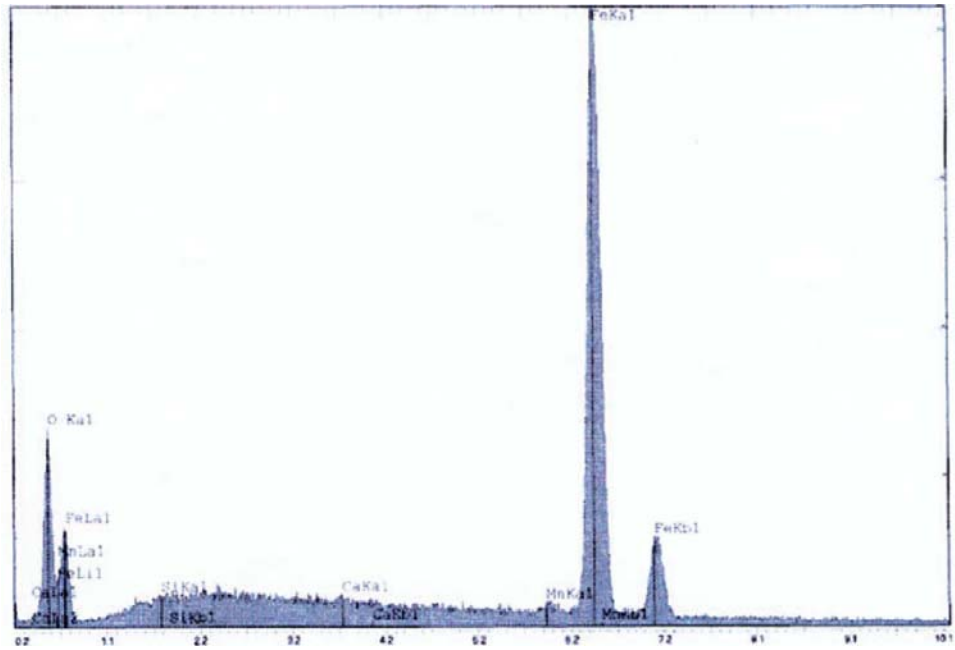

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http://911research.wtc7.net/wtc/evidence/metallurgy/images/WTC_apndxC_img_14.jpg