

**Skype Conversation between FEMA Investigator and WPI Professor
Jonathan Barnett and Researcher David Cole March 2013 to January 2014**

*Provided by David Cole on September 6, 2020.

SKYPE—Wed March 20, 2013

[11:32:01 AM] David Cole: Hello. I would like to continue my study. I can send you numerous photos of the column that sample #2 came from. It looks like NIST sampled the column at least six times, with two coming from the heavily eroded area. There are many before and after sampling photos.

[11:32:18 AM] David Cole: Shall I begin sending them?

[11:33:06 AM] Jonathan Barnett: I still don't know much about you

[11:33:14 AM] Jonathan Barnett: do you have a cv you can send me

[11:33:38 AM] David Cole: CV?

[11:35:07 AM] Jonathan Barnett: resume

[11:35:29 AM] David Cole: I have no resume. I am a layman

[11:35:39 AM] Jonathan Barnett: oh

[11:35:40 AM] Jonathan Barnett: ok

[11:36:16 AM] Jonathan Barnett: why don't we cut to the chase then, what do you think you've found that is exciting

[11:37:30 AM] David Cole: NIST concluded that the 700-800C temperature identified by WPI was "much higher". But they did not specify what that means.

[11:38:16 AM] David Cole: I am interested to take this to the next level and determine what produced the extreme temperatures.

[11:38:42 AM] Jonathan Barnett: well, I'd expect temperatures around 100 C

[11:38:47 AM] Jonathan Barnett: 1000 c

[11:39:12 AM] Jonathan Barnett: this is consistent with other underground fires

[11:39:22 AM] Jonathan Barnett: which is what we had after the towers collapsed

[11:41:24 AM] David Cole: Why is it still a mystery then? Can you comment on why NIST wasn't ready to say with certainty what caused it?

[11:42:22 AM] Jonathan Barnett: Caused what? Sorry....I'm confused. they said what caused the collapse of 7 to a reasonable degree of certainty (life is never 100 % certain in the world of science or engineering)

[11:43:14 AM] Jonathan Barnett: I used to work for an engineering company that did computer modeling of 7 for NIST. The models all predicted what occurred

[11:43:39 AM] David Cole: The erosion of these two pieces (and others) didn't contribute to the collapse of WTC7 did it?

[11:43:44 AM] Jonathan Barnett: no

[11:43:52 AM] Jonathan Barnett: they happened in the ground

[11:44:15 AM] Jonathan Barnett: they were buried....and there were very slow burning underground fires...that baked them

[11:44:29 AM] Jonathan Barnett: they were exposed to debris and dust

[11:44:40 AM] Jonathan Barnett: much of which had sulphur

[11:44:57 AM] David Cole: Has it ever been duplicated by experiment? To A36 and HSLA steel?

[11:45:33 AM] Jonathan Barnett: for A36 steel, its a known phenomena
[11:46:05 AM] Jonathan Barnett: blacksmiths use it routinely to weld two pieces of steel together at temps no more than 1000 C
[11:46:11 AM] Jonathan Barnett: they can't get their forge hotter
[11:46:25 AM] David Cole: The source of the sulfur was determined with certainty?
[11:46:37 AM] Jonathan Barnett: no
[11:46:47 AM] Jonathan Barnett: no one took samples of the debris
[11:46:54 AM] Jonathan Barnett: just the steel
[11:47:06 AM] Jonathan Barnett: so it could have been acid rain I guess when the buildings were built
[11:47:21 AM] Jonathan Barnett: it could have been the fire proofing material
[11:47:33 AM] Jonathan Barnett: I think it was most likely the sheetrock
[11:53:33 AM] David Cole: I am not a chemist. I have to rely on articles written about this. Some chemists say you can't create sulfur from calcium sulfate. How could sulfur be created in an environment of mixed debris, concrete, mineral fibre, plastics, paper, glass etc?
[11:54:52 AM] David Cole: Seems like the concrete dust alone would contaminate the mix, since there was so much of it. The photos of the WTC7 pile looked like a beach.
[11:55:44 AM] Jonathan Barnett: sheetrock has various amounts of it...its a contaminate often found in sheetrock. Whne you have too much, it causes all sort of problems. there's a big lawsuit involving chinese made sheetrock...google it...you'll see sulfer can be a big problem
[11:56:03 AM] Jonathan Barnett: there was also a lot of concrete dust, there was dust everywhere
[11:57:25 AM] David Cole: I have heard about this chinese sheetrock.
[11:58:05 AM] David Cole: Can I read about steel being eroded similarly?
[11:58:28 AM] David Cole: It sounded like in 2002 it was unheard of
[11:59:03 AM] Jonathan Barnett: its a very common phenomenon...as I said, blacksmiths use it to forge two pieces of steel together.
[11:59:16 AM] Jonathan Barnett: the sulfer causes the melting point of the steel to drop
[11:59:42 AM] Jonathan Barnett: so a blacksmith rubs the two pieces of steel into the coal of his forge
[11:59:48 AM] Jonathan Barnett: then they can be beat together
[11:59:56 AM] Jonathan Barnett: welded
[12:00:00 PM] Jonathan Barnett: its pretty cool
[12:00:20 PM] David Cole: From high sulfur coal used in the forge? I have seen this demonstrated at Williamsburg
[12:00:59 PM] Jonathan Barnett: its the same phenomenon
[12:01:12 PM] David Cole: The K-16 wasted away over a large area, with 1-3/4" flanges reduced by half.
[12:01:33 PM] Jonathan Barnett: the SEM pictures show that at a microscopic level

[12:02:30 PM] David Cole: You can understand why this is hard for laypersons to grasp.

[12:03:18 PM] David Cole: You mentioned the modeling.

[12:03:56 PM] David Cole: Would it be possible to see the input data for the col 79 connection alone?

[12:04:12 PM] Jonathan Barnett: the metallurgy is hard for me to understand, I've only had one course in uni so I depend on the professors who do research on this

[12:04:33 PM] Jonathan Barnett: I think the input is in the NIST report....I'd have to look

[12:04:52 PM] Jonathan Barnett: the connection was a bracket (like a shelf bracket)

[12:05:00 PM] Jonathan Barnett: but I don't recall the details

[12:05:10 PM] Jonathan Barnett: it was held in place by only a couple of bolts

[12:05:11 PM] David Cole: I know this connection pretty well.

[12:05:31 PM] David Cole: I was the one who discovered a missing structural element.

[12:06:03 PM] Jonathan Barnett: I think its all in the nist report

[12:06:09 PM] Jonathan Barnett: but if its not, let me know

[12:06:11 PM] Jonathan Barnett: i can find out for you

[12:07:05 PM] David Cole: I'd like to know what value you used for the seat

[12:07:17 PM] David Cole: NIST has since corrected this

[12:07:35 PM] Jonathan Barnett: what do you mean value?

[12:07:42 PM] Jonathan Barnett: these things are modelled as springs

[12:07:51 PM] Jonathan Barnett: they make a special model for each connection

[12:08:23 PM] David Cole: In the model did the girder have any supplemental support?

[12:09:35 PM] Jonathan Barnett: the hard thing to model was the shear studs in the concrete

[12:10:13 PM] David Cole: The value for the seat: Was it 11"?

[12:11:47 PM] Jonathan Barnett: I didn't do the modeling...my colleagues did. but as I said, there were other complications like the shear studs

[12:12:50 PM] David Cole: I am familiar with the studs. The girder was devoid of studs, but the beams had them

[12:14:00 PM] David Cole: The end of the girder is important to understand. Can you verify if it was without supplemental supports in the model?

[12:15:47 PM] Jonathan Barnett: I have no idea

[12:15:56 PM] Jonathan Barnett: it should all be in the nist report

[12:16:06 PM] Jonathan Barnett: the studs on the beams affect how the girder responds

[12:16:10 PM] Jonathan Barnett: they're all interconnected

[12:16:19 PM] Jonathan Barnett: that's why its so complicated

[12:16:27 PM] Jonathan Barnett: the systems are stronger than one thinks

[12:16:44 PM] David Cole: It isn't. Can you check your notes, please?

[12:17:54 PM] David Cole: NIST said the beams expanded 5.5" at 600C. First they said the beams buckled and rocked the girder off the seat. Then they offered that it was pushed off to the west.

[12:18:45 PM] David Cole: Did NIST model the girder with and without shear studs?

[12:19:09 PM] Jonathan Barnett: I don't know the details....

[12:19:14 PM] Jonathan Barnett: it should be in a report

[12:19:18 PM] Jonathan Barnett: I can try to find out for you

[12:19:32 PM] Jonathan Barnett: if you type up a list of questions about the model, I'll try to get them answered

[12:19:40 PM] Jonathan Barnett: as I'm in Australia, its hard for me to do...

[12:19:43 PM] David Cole: It is a short list

[12:19:44 PM] Jonathan Barnett: but I'll do what I can

[12:19:50 PM] Jonathan Barnett: just email it to me

[12:19:52 PM] David Cole: 1. Studs on the girder

[12:20:07 PM] David Cole: 2. Supplemental supports on the girder

[12:20:27 PM] David Cole: 3. Seat width.

[12:20:53 PM] Jonathan Barnett: ok

[12:20:56 PM] Jonathan Barnett: but email it please

[12:21:01 PM] Jonathan Barnett: this is skype

[12:21:07 PM] Jonathan Barnett: i'm in a hotel room in bangkok

[12:21:11 PM] David Cole: I can email it, sure.

[12:21:13 PM] Jonathan Barnett: its almost midnight

[12:21:20 PM] Jonathan Barnett: I don't want to forget

[12:21:26 PM] David Cole: OK, better get some rest.

[12:21:30 PM] Jonathan Barnett: thanks mate

[12:21:33 PM] Jonathan Barnett: talk later

[12:21:47 PM] David Cole: Thank you for this very important information.

EMAIL 3/20/13

I would very much appreciate learning about the modeling of the Column 79, girder connection.

1. Were shear studs ever modeled on the girder?
2. Were supplemental supports ever modeled on the girder?
3. Was the seat width 11"?
4. Was the column modeled as a box?
5. Which drawing numbers were utilized for modeling this particular connection?
6. Were there preliminary models created that were then amended for different scenarios?
7. Can you share the details about the scenarios that ended up on the cutting room floor?

SKYPE—Fri May 31, 2013

[5/31/2013 5:48:45 PM] David Cole: I've been more than patient. Do you intend to answer the questions I posed some time ago?

[5/31/2013 5:49:32 PM] Jonathan Barnett: I have been unable to get the answers you asked for

[5/31/2013 5:51:47 PM] David Cole: You no longer have the scrap yard photos?

[5/31/2013 5:53:01 PM] David Cole: The beam was not measured before the sample was removed?

[5/31/2013 5:54:02 PM] David Cole: The beam wasn't included in the Appendix D. No wonder people question what happened.

[5/31/2013 6:55:33 PM] Jonathan Barnett: The report has all of the info that exists

[5/31/2013 6:59:46 PM] David Cole: Appendix D does not contain your piece. The report doesn't have information. That is the point.

[5/31/2013 7:00:18 PM] David Cole: Your scrap yard photos are missing. May I see them?

[5/31/2013 7:01:43 PM] David Cole: What's the big secret Dr. Barnett? Both Leslie Robertson and John Gross are seen with your beam.

[5/31/2013 7:01:51 PM] Jonathan Barnett: I'll email you what I have

[5/31/2013 7:01:59 PM] Jonathan Barnett: What address?

[5/31/2013 7:02:25 PM] David Cole: kawika7777@hotmail.com

[5/31/2013 7:03:40 PM] David Cole: Did you folks measure the beam before you took the sample off? I'd like to know them.

[5/31/2013 7:10:01 PM] David Cole: Emailing photos may be problematic. 25MB limit. Skype handles large files much better.

[5/31/2013 8:20:52 PM] Jonathan Barnett: I don't have the original notes

[5/31/2013 8:22:35 PM] David Cole: Audrey Massa was the one responsible for documenting the scrap. Maybe she has some dimensions to share of the beam that got sampled.

[5/31/2013 8:23:08 PM] Jonathan Barnett: I dont know

[5/31/2013 8:23:40 PM] Jonathan Barnett: Who is she

[5/31/2013 8:24:23 PM] David Cole: Appendix D, FEMA 403. Still works for FEMA.

[5/31/2013 8:25:18 PM] Jonathan Barnett: Oh, I doubt know who was there when the samples were taken

[5/31/2013 8:26:07 PM] Jonathan Barnett: I only have the one sample we talked about, don't even know where the second one is

[5/31/2013 8:27:07 PM] David Cole: Was it on top of the pile when you sampled it? I presume one of the workers cut it with a torch.

[5/31/2013 8:28:32 PM] Jonathan Barnett: Yes

[5/31/2013 8:29:48 PM] Jonathan Barnett: But remember the steel was in the process of being cut up and disposed of

[5/31/2013 8:30:24 PM] Jonathan Barnett: This was a piece that caught our eyes . There was no careful study

[5/31/2013 8:30:40 PM] Jonathan Barnett: That decided what to take

[5/31/2013 8:31:18 PM] David Cole: So the 18" was sliced off and the rest of the beam left on top of the pile? I think you said before that the balance of the beam was discarded.

[5/31/2013 8:31:34 PM] Jonathan Barnett: That's right

[5/31/2013 8:31:51 PM] Jonathan Barnett: Anything left was then discarded

[5/31/2013 8:32:18 PM] David Cole: No measurements were taken before the cut was made?

[5/31/2013 8:32:31 PM] Jonathan Barnett: I don't remember

[5/31/2013 8:33:10 PM] David Cole: I'd like to know if it was 36" tall or 30" how thick the web and flange were. You know basic stuff.

[5/31/2013 8:33:50 PM] David Cole: The undamaged portion. Otherwise how could you tell how much was eroded away?

[5/31/2013 8:34:56 PM] Jonathan Barnett: I don't know if we had anything to measure with us....basically we were walking through acres of debris in different sites in NJ. We saw something unusual and asked for it. If we had waited and tried to come back for it all would have been gone

[5/31/2013 8:35:33 PM] Jonathan Barnett: There were teams of engineers being more methodical

[5/31/2013 8:35:46 PM] Jonathan Barnett: Under out direction

[5/31/2013 8:35:52 PM] Jonathan Barnett: Our

[5/31/2013 8:36:06 PM] David Cole: You were the first team in?

[5/31/2013 8:36:16 PM] Jonathan Barnett: But we were trying to come to grips with this

[5/31/2013 8:36:34 PM] Jonathan Barnett: We were the first official team in

[5/31/2013 8:36:54 PM] Jonathan Barnett: There were private investigators in before us

[5/31/2013 8:37:24 PM] David Cole: But the sample was taken on a different trip than the first one?

[5/31/2013 8:38:08 PM] Jonathan Barnett: I don't remember the date

[5/31/2013 8:38:24 PM] Jonathan Barnett: Our first trip lasted a week

[5/31/2013 8:38:46 PM] Jonathan Barnett: Then we came and went for several weeks

[5/31/2013 8:38:56 PM] David Cole: The week of OCT 8th, perhaps. Columbus day was Monday

[5/31/2013 8:39:25 PM] David Cole: I still don't understand when you took the sample away

[5/31/2013 8:39:46 PM] Jonathan Barnett: The sample was taken one if those trips

[5/31/2013 8:40:51 PM] David Cole: The same day you first saw it, or another day? Surely you would remember such an important event.

[5/31/2013 8:41:04 PM] Jonathan Barnett: The same day it was cut

[5/31/2013 8:42:01 PM] Jonathan Barnett: There were some samples that were left in NY for a few days after they were cut

[5/31/2013 8:42:10 PM] Jonathan Barnett: Then retrieved

[5/31/2013 8:42:27 PM] Jonathan Barnett: But I don't remember which we're which

[5/31/2013 8:43:03 PM] Jonathan Barnett: I can say that the ones tested by me were removed and brought back to WPI the same trip

[5/31/2013 8:43:28 PM] Jonathan Barnett: Most likely that first trip as I had my car

[5/31/2013 8:47:08 PM] *** David Cole sent Beam_1.jpg ***

[5/31/2013 8:47:20 PM] David Cole: Let me see if I can get this straight. I want to be accurate when I tell the story of the discovery of the piece known as sample #1, the WTC7 steel beam. You discovered it on top of the pile, as shown in the photo.

[5/31/2013 8:49:30 PM] David Cole: It was early October, most likely during the week of OCT 8th. You directed a worker to cut off the damaged 18" portion and the rest was discarded. No measurements were taken by you or your team.

[5/31/2013 8:50:47 PM] Jonathan Barnett: I don't recall if we measured it

[5/31/2013 8:51:04 PM] Jonathan Barnett: If we did I no longer have those notes

[5/31/2013 8:52:47 PM] Jonathan Barnett: The pics in app d were not of us they were the teams of engineers collecting samples at pur request

[5/31/2013 8:53:27 PM] David Cole: The engineers took notes and measurements

[5/31/2013 8:53:41 PM] David Cole: Any idea why they missed your piece?

[5/31/2013 8:54:12 PM] Jonathan Barnett: We were there first

[5/31/2013 8:54:29 PM] David Cole: They just took measurements of the pieces they found interesting?

[5/31/2013 8:55:20 PM] Jonathan Barnett: We told them what to look for

[5/31/2013 9:01:47 PM] David Cole: The photo of the beam is obviously the one sample #1 came from. I can see many similarities comparing it to the photos taken in the lab.

[5/31/2013 9:02:21 PM] David Cole: But the FEMA team must have been there before you sampled it.

[5/31/2013 9:04:51 PM] Jonathan Barnett: There were list of people that could have been there

The pic did not make it to me by the way

[5/31/2013 9:06:45 PM] David Cole: Shall I try again, or by email?

[5/31/2013 9:07:01 PM] David Cole: It's the same photo I shared with you some months ago

[5/31/2013 9:08:48 PM] Jonathan Barnett: Try again

[5/31/2013 9:09:32 PM] *** David Cole sent Beam_1.jpg ***

[5/31/2013 9:10:53 PM] Jonathan Barnett: Yeah

[5/31/2013 9:11:00 PM] Jonathan Barnett: That's the piece

[5/31/2013 9:11:37 PM] Jonathan Barnett: Note it's size

[5/31/2013 9:11:53 PM] Jonathan Barnett: That's how you can tell it was from tower 7

[5/31/2013 9:12:54 PM] David Cole: You mean the thinness

[5/31/2013 9:13:14 PM] Jonathan Barnett: No the depth of the web

[5/31/2013 9:15:08 PM] David Cole: Depth of web was ~36". I'd sure like to know the thickness of the flange and web. I don't like speculating about these details.

[5/31/2013 9:16:51 PM] Jonathan Barnett: I can't help you there

[5/31/2013 9:20:25 PM] Jonathan Barnett: It's important to understand from my perspective the interesting building is tower 5. This also had fire induced collapse

[5/31/2013 9:20:46 PM] Jonathan Barnett: Quite unexpected

[5/31/2013 9:21:09 PM] Jonathan Barnett: Traditional construction

[5/31/2013 9:21:38 PM] Jonathan Barnett: Tower 7 is interesting because of the collapse mechanism

[5/31/2013 9:22:04 PM] Jonathan Barnett: But the progression was due to the connection detail

[5/31/2013 9:22:18 PM] Jonathan Barnett: Again very interesting

[5/31/2013 9:22:19 PM] David Cole: You found eroded steel at WTC5?

[5/31/2013 9:22:38 PM] Jonathan Barnett: But nothing to do with eroded steel

[5/31/2013 9:22:45 PM] Jonathan Barnett: No eroded steel at 5

[5/31/2013 9:22:53 PM] Jonathan Barnett: But major collapse

[5/31/2013 9:25:15 PM] Jonathan Barnett: The eroded steel was not interesting to me as it had nothing to do with the collapse. This is why I have no details

[5/31/2013 9:25:54 PM] David Cole: So the connection failure was more interesting

[5/31/2013 9:26:39 PM] Jonathan Barnett: That failure can happen in any building and demonstrates a weakness in our building codes

[5/31/2013 9:27:21 PM] David Cole: You mentioned you worked for the modeling company

[5/31/2013 9:27:45 PM] David Cole: Have the codes been upgraded/amended since?

[5/31/2013 9:27:47 PM] Jonathan Barnett: It shows we should be taking a more careful approach to fire engineering design for structural frames

[5/31/2013 9:31:53 PM] Jonathan Barnett: The codes have been slightly modified

[5/31/2013 9:32:20 PM] Jonathan Barnett: But structural engineers still don't understand fire

[5/31/2013 9:32:35 PM] Jonathan Barnett: And don't care

[5/31/2013 9:32:47 PM] Jonathan Barnett: They do more in Europe

[5/31/2013 9:33:32 PM] Jonathan Barnett: In Australia things aren't much better, but it's a smaller country so it's easier to cause change

[5/31/2013 9:33:45 PM] Jonathan Barnett: I work as a fire engineer

[5/31/2013 9:33:52 PM] Jonathan Barnett: In Melbourne

[5/31/2013 9:34:56 PM] David Cole: Perhaps the insurance agencies don't want to acknowledge weaknesses in existing structures

[5/31/2013 9:35:47 PM] Jonathan Barnett: They set their rates for the anticipated loss, so they focus on predicting failure not reducing it

[5/31/2013 9:39:09 PM] David Cole: Back to the beam photos. There were many photos taken of it while it was on top of the pile

[5/31/2013 9:39:35 PM] Jonathan Barnett: I can't find those pics

[5/31/2013 9:39:53 PM] Jonathan Barnett: I'm wondering what I did with them

[5/31/2013 9:40:16 PM] Jonathan Barnett: They must be on a cd somewhere

[5/31/2013 9:40:18 PM] David Cole: You never took any pictures of it in the scrap yard?

[5/31/2013 9:40:48 PM] Jonathan Barnett: I just looked on my computer and don't have most of those pics

[5/31/2013 9:40:56 PM] David Cole: They were probably given to FEMA.

[5/31/2013 9:41:30 PM] Jonathan Barnett: They were on 3-1/2 floppies but I transferred those to CDs but not sure where they sre

[5/31/2013 9:41:45 PM] Jonathan Barnett: They could be in storage

[5/31/2013 9:41:47 PM] Jonathan Barnett: I hope

[5/31/2013 9:42:11 PM] David Cole: I'd like to see them. Photos are very instructive

[5/31/2013 9:42:49 PM] David Cole: The imagery was heavily relied upon by FEMA and NIST

[5/31/2013 9:43:13 PM] Jonathan Barnett: Yes

[5/31/2013 9:43:30 PM] David Cole: The quality is not up to professional standards though

[5/31/2013 9:43:40 PM] Jonathan Barnett: We looked at 1000s of pics

[5/31/2013 9:45:01 PM] David Cole: I have looked at 1000's myself.

[5/31/2013 9:47:17 PM] David Cole: I am curious how NIST fit into this in the early days. They did not receive funding until OCT 2002.

[5/31/2013 9:48:41 PM] David Cole: What role did Mr. Gross play in the early stages?

[5/31/2013 9:48:58 PM] Jonathan Barnett: He was a member of the team with me

[5/31/2013 9:49:09 PM] Jonathan Barnett: Quite minor actually

[5/31/2013 9:49:40 PM] Jonathan Barnett: He was not one of the core group

[5/31/2013 9:50:40 PM] David Cole: Was he on your team when you discovered the beam?

[5/31/2013 9:50:50 PM] Jonathan Barnett: Don't recall

[5/31/2013 9:50:59 PM] Jonathan Barnett: Probably not

[5/31/2013 9:51:15 PM] Jonathan Barnett: He didn't hang out with me

[5/31/2013 9:51:42 PM] Jonathan Barnett: There were about 25 of us with 5 core memvers

[5/31/2013 9:52:45 PM] David Cole: There are photos of Mr. Gross surveying many different pieces, taking measurements and his own photos.

[5/31/2013 9:53:33 PM] Jonathan Barnett: And you won't find any of me

[5/31/2013 9:54:01 PM] David Cole: I have not seen any of you, no.

[5/31/2013 9:55:56 PM] Jonathan Barnett: You can see me testifying. With gene Corley before congress

[5/31/2013 9:56:49 PM] Jonathan Barnett: And look at the FEMA report, the. Head authors appear as the first name in each chapter

[5/31/2013 9:57:55 PM] David Cole: Would you be surprised to see a photo of Mr. Gross with your beam?

[5/31/2013 9:59:18 PM] Jonathan Barnett: Lol

[5/31/2013 9:59:47 PM] Jonathan Barnett: He liked to be photographed

[5/31/2013 10:00:07 PM] Jonathan Barnett: He didn't bother to examine it in detail

[5/31/2013 10:01:02 PM] David Cole: You mean after the sample was taken, right?

[5/31/2013 10:01:19 PM] David Cole: In the lab
[5/31/2013 10:02:53 PM] Jonathan Barnett: Right
[5/31/2013 10:03:14 PM] Jonathan Barnett: NIST didn't express an interest
[5/31/2013 10:08:44 PM] David Cole: May I share a series of photos of your beam? You may have never seen these.
[5/31/2013 10:10:26 PM] Jonathan Barnett: Sure
[5/31/2013 10:12:23 PM] *** David Cole sent Gross Negligence.rar ***
[5/31/2013 10:17:00 PM] *** David Cole sent P1010076.JPG ***
[5/31/2013 10:17:08 PM] *** David Cole sent P1010075.JPG ***
[5/31/2013 10:17:15 PM] *** David Cole sent P1010074.JPG ***
[5/31/2013 10:17:26 PM] *** David Cole sent P1010073.JPG ***
[5/31/2013 10:17:38 PM] *** David Cole sent P1010072.JPG ***
[5/31/2013 10:17:46 PM] *** David Cole sent P1010071.JPG ***
[5/31/2013 10:22:42 PM] Jonathan Barnett: Certainly my beam :)
[5/31/2013 10:24:45 PM] Jonathan Barnett: I do wish NIST had done what I asked and studied this in detail
[5/31/2013 10:24:54 PM] David Cole: There are more.
[5/31/2013 10:25:21 PM] David Cole: Same photographer.
[5/31/2013 10:26:59 PM] *** David Cole sent P1010077.JPG ***
[5/31/2013 10:27:05 PM] *** David Cole sent P1010078.JPG ***
[5/31/2013 10:27:12 PM] *** David Cole sent P1010079.JPG ***
[5/31/2013 10:27:18 PM] *** David Cole sent P1010080.JPG ***
[5/31/2013 10:27:25 PM] *** David Cole sent P1010081.JPG ***
[5/31/2013 10:27:38 PM] *** David Cole sent P1010082.JPG ***
[5/31/2013 10:27:46 PM] *** David Cole sent P1010083.JPG ***
[5/31/2013 10:33:05 PM] David Cole: These are new to you?
[5/31/2013 10:36:21 PM] Jonathan Barnett: Some are
[5/31/2013 10:37:00 PM] Jonathan Barnett: I need to get going
[5/31/2013 10:37:06 PM] Jonathan Barnett: Lunch time
[5/31/2013 10:37:22 PM] Jonathan Barnett: Sorry I haven't been more help
[5/31/2013 10:38:43 PM] David Cole: Thank you. I have more to share. Next time

SKYPE--Fri June 28, 2013

[6/28/2013 11:20 AM]Hello, I'd appreciate some closure on this. It appears that Mr. Gross got to your beam before you did.

[6/28/2013 11:21:35 AM] *** David Cole sent DSCN0398.JPG ***

SKYPE--Sun June 30, 2013

[4:40:51 PM] Jonathan Barnett: Sorry, I've been on leave. Back now

[5:12:58 PM] *** David Cole sent DSCN0398.JPG ***

[5:18:09 PM] Jonathan Barnett: Nice picture

[5:18:25 PM] Jonathan Barnett: I don't recall if I was there

[5:19:19 PM] Jonathan Barnett: In any case, NIST didn't want to study it which gave me a chance to do so

[5:19:56 PM] Jonathan Barnett: Have you talked to John about it ?

[5:21:48 PM] David Cole: I'm confused. This is the beam you sampled.

[5:22:04 PM] Jonathan Barnett: It looks like it

[5:23:01 PM] David Cole: Right after Mr. Gross looked at it, it was taken down from the pile.

[5:23:49 PM] Jonathan Barnett: I just don't recall the details of taking the sample.

[5:24:00 PM] David Cole: You remembered taking the sample while it was on the pile, leaving the balance to be recycled.

[5:24:38 PM] Jonathan Barnett: I remember that's what was done. We worked as a team...everything was a collective decision

[5:25:40 PM] David Cole: So it was taken from the pile, looked over and then returned to the pile for your sampling

[5:25:47 PM] Jonathan Barnett: In hindsight I wish we had kept more samples from. 7

[5:26:15 PM] David Cole: Mr. Gross posed with it not fewer than three times.

[5:26:28 PM] David Cole: This photo is one of two

[5:26:58 PM] David Cole: A different camera took the third one.

[5:28:06 PM] Jonathan Barnett: Lol. Camera hog. Seriously, I imagine he thought it was really interesting; although not interesting enough for him to have NIST do the analysis. Maybe they didn't have the available resources

[5:28:59 PM] Jonathan Barnett: It is very unusual which is why I had the analysis done

[5:29:28 PM] David Cole: They analyzed the other sample WPI studied with similar erosion.

[5:30:19 PM] Jonathan Barnett: Only after much pushing by me. They really were mostly interested on 1 and 2 in those early days

[5:30:21 PM] David Cole: WPI called it Sample #2. They called in K-16

[5:30:45 PM] David Cole: I agree. They were focused on WTC1 and 2

[5:31:38 PM] Jonathan Barnett: And yet 5 & 7 were the interesting buildings from an engineering perspective. We just didn't realise it at first

[5:33:23 PM] David Cole: I'm still interested in seeing the entire photographic record.

[5:33:42 PM] David Cole: Your folders are incomplete on NIST's website

[5:33:56 PM] Jonathan Barnett: Only NIST has it

[5:34:17 PM] Jonathan Barnett: I don't think I have anything they don't have

[5:34:39 PM] David Cole: NIST got it from FEMA

[5:35:06 PM] Jonathan Barnett: I have one old backup drive I haven't looked at in a long time, I'll see if there's anything there.

[5:35:46 PM] Jonathan Barnett: The floppies no longer exist

[5:36:03 PM] Jonathan Barnett: I have to go, my flight home is boarding

SKYPE--Sun July 24, 2013

Hello. I have a quick question about the modeling. You mentioned that you worked for the modeling company that did the analysis for WTC7.

[7/24/2013 12:31:34 PM] *** David Cole sent Walk_monitored.jpg ***

Can you explain the part about axial control element?

[7/24/2013 12:33:37 PM] David Cole: NIST has since corrected the values, saying it was 5.5" axially, 6.25 laterally.

[7/24/2013 9:56:36 PM] Jonathan Barnett: I don't recall enough of the details to know the impact if any, of this difference

[7/24/2013 9:58:18 PM] David Cole: The numbers are not that important. I just wanted to let you know that the jpg is the old version of the NIST report.

[7/24/2013 9:59:02 PM] David Cole: I'm hoping to understand the axial control element

[7/24/2013 9:59:34 PM] David Cole: Take a look at the jpg

[7/24/2013 10:01:23 PM] Jonathan Barnett: Each type of connector had a different ABAQUS sub model. I don't know enough about this detail

[7/24/2013 10:06:53 PM] David Cole: Can you suggest who would be in a position to answer these few questions?

[7/24/2013 10:07:11 PM] David Cole: Or is there no way to check the math in these reports?

[7/24/2013 10:08:23 PM] Jonathan Barnett: There was an internal review but the sub models are the IP of the company so can't be checked externally

[7/24/2013 10:10:24 PM] David Cole: Can the internal review be shared?

[7/24/2013 10:12:16 PM] Jonathan Barnett: The reviews tend not to be written. A senior manager reads a report and then talks to the author about any issues; which are then resolved before a report is released

[7/24/2013 10:13:53 PM] Jonathan Barnett: In the case of WTC, NIST then went back with questions which were addressed before the Official report was accepted

[7/24/2013 10:20:31 PM] David Cole: Do you know which drawing was used to create figure 8-21, in the NCSTAR 1-9 report? Who is available to answer this question?

[7/24/2013 10:21:36 PM] David Cole: I asked similar questions about another figure and NIST realized there was an error, issued an Erratum in April 2012 to correct this problem

[7/24/2013 10:31:53 PM] David Cole: The answer was very specific, citing the actual drawing number.

SKYPE--Thu January 23, 2014

Hello Professor Barnett,

[1/23/2014 11:35:21 AM] David Cole: I was recently browsing through some old Youtube videos taken by David Sharp early in 2002 and was interested to see you appear there taking photographs of some steel pieces. (see @ mark 1:30) You are shown documenting the C-83 and C-86 pieces.

<http://www.youtube.com/watch?v=bOQOBHxNEE>

You may recall that some time ago you promised to share all your scrap yard photographs. They would be of great assistance in my research. Would you please dig them out and send them to me?

I believe that they are public property and that sending them to me will not be in breach of any copyright issues.