

Wednesday, April 30, 1997 (afternoon)

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Criminal Action No. 96-CR-68

UNITED STATES OF AMERICA,

Plaintiff,

vs.

TIMOTHY JAMES McVEIGH,

Defendant.

REPORTER'S TRANSCRIPT
(Trial to Jury - Volume 71)

Proceedings before the HONORABLE RICHARD P. MATSCH,
Judge, United States District Court for the District of
Colorado, commencing at 1:30 p.m., on the 30th day of April,
1997, in Courtroom C-204, United States Courthouse, Denver,
Colorado.

Proceeding Recorded by Mechanical Stenography, Transcription
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APPEARANCES

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PROCEEDINGS

(Reconvened at 1:30 p.m.)

THE COURT: Be seated, please.

(Jury in at 1:30 p.m.)

(Lori Fortier was recalled to the stand.)

THE COURT: Take the stand, please.

Mr. Jones, you may continue.

MR. JONES: Thank you, your Honor.

CROSS-EXAMINATION CONTINUED

BY MR. JONES:

Q. Mrs. Fortier, on August the 11th, 1955, did you advise FBI Special Agents James T. Volz and Floyd M. Zimms that when you stayed in Prescott when Michael Fortier was in the VA Hospital,

you stayed under your mother's name or your maiden name?

A. I may have had that confused with an occasion when my dad was in the hospital in Prescott, and we stayed that time with my mother under her name because she rented the room.

Q. Well, this says that when you were there to see Michael --

MR. HARTZLER: Objection, your Honor.

BY MR. JONES:

Q. -- you stayed under your mother's name, doesn't it?

MR. JONES: I'm sorry. I'll withdraw it.

THE COURT: All right.

BY MR. JONES:

Q. Let me make sure I understand you. Did you on August the 11th, 1995, advise two agents of the FBI that when Mr. Fortier was in the VA Hospital in Prescott, you stayed under your mother's name or your maiden name?

A. I'm not sure if I said that to them that time or not, or if we were talking about both occasions and they got it mixed up or I got it mixed up.

Lori Fortier - Cross

Q. Let me ask it again. When your husband was in Prescott, did you stay there under your mother's name or your maiden name?

A. No, I did not.

Q. Now, you indicated this morning that during the period of time that you were working at the tanning studio, that you used speed?

A. Yes.

Q. Did you snort that?

A. Yes.

Q. Now, you have met most, if not all, of the prosecutors in this case; is that correct? You mentioned Mr. Hartzler and Mr. Goelman. You met Arlene Joplin down in Oklahoma City?

A. Uh-huh.

Q. You know Mr. Ryan?

A. Yes.
Q. Mr. Mackey?
A. Yes.
Q. You know Ms. Wilkinson?
A. Yes.
Q. The Government paid for your -- because you're a witness in these proceedings, for your airline fare here?
A. Actually, I drove here.
Q. You drove. Your mileage?
A. Yes.

Lori Fortier - Cross

Q. And your hotel accommodations?
A. Yes.

Q. Food?
A. Yes.
Q. Did they lend you anything else for your testimony here today?
A. No.
Q. Now, you indicated yesterday that Mr. McVeigh had used your typewriter?
A. Yes.
Q. And had returned the typewriter to you?
A. Yes.
Q. And that there came a time when you took the ribbon of the typewriter out and disposed of it?
A. Yes.
Q. When did you do that?
A. After I heard that it was a bomb that was contained in a truck.
Q. So that would be, what, April 24, 25?
A. Before that.
Q. Oh, even before that?
A. Yes.
Q. So sometime between the 19th and the 25th?
A. Yes.
Q. Okay. You also indicated yesterday that you looked at the

Lori Fortier - Cross

ribbon?
A. Yes.
Q. And what did you see?
A. The name Robert Kling.
Q. Well, if you don't know that the Ryder truck was rented under the name of Robert Kling until late May, why were you concerned about destroying a typewriter ribbon that had the name Robert Kling on it as soon as you knew it was a Ryder truck?
A. Because I tied together the driver's license with him even renting a truck at that time.
Q. So even though you didn't hear the name Robert Kling from the press, you assumed, as I understand it, that this driver's

the press, you assumed, as I understand it, that this driver's license in the name of Robert Kling had been used to rent the truck?

A. Yes.

Q. Well, you and your husband had a conversation with FBI agents, Special Agent Keith Williams and Bradford Petrie, about articles which appeared in The Arizona Republic on April 23; is that correct?

A. Yes.

Q. That is, the paper was on April 23?

A. Yes.

MR. JONES: And I'll ask if we can put that exhibit, which is P1 --

Lori Fortier - Cross

BY MR. JONES:

Q. Do you have that in front of you?

A. Yes, I do.

Q. All right.

MR. JONES: If I may have just a moment, your Honor?

THE COURT: Yes.

MR. JONES: This is a full copy of the newspaper.

BY MR. JONES:

Q. Exhibit P1 is The Arizona Republic article dated April 23, 1995, that you and your husband discussed with the two agents on the 24th?

A. Yes.

Q. All right.

MR. JONES: I move the admission of P1.

MR. HARTZLER: Objection. Newspaper article?

THE COURT: Yes.

MR. HARTZLER: I object to introduction of a newspaper article.

THE COURT: What's the purpose of it?

BY MR. JONES:

Q. Well, this is the newspaper that your husband wrote material on when he was discussing with the FBI that he took exception to; is that correct?

A. I'm not positive. Can I look through it?

Q. Sure.

Lori Fortier - Cross

A. Where there's stuff written on it?

Okay.

Q. How many sheets of paper do you have in front of you, Mrs. Fortier?

A. A lot. I think I found a spot that has writing on it.

Q. There's several pages, isn't there?

A. Yeah.

Q. Is that correct?

A. That there's several pages?

Q. Yes.

A. Yes.

Q. With writing on them?

A. Yeah.

Q. Beg your pardon?

A. Yes.

Q. And this is your husband's writing?

A. It appears to be.

Q. And it's this article that you went and talked to with the FBI; is that correct?

A. Yes.

MR. JONES: Now, your Honor, I move the admission of P1.

THE COURT: Well, how many pages -- I'm very confused about what this exhibit is.

MR. JONES: It's about seven pages, your Honor.

Lori Fortier - Cross

THE COURT: Well, I've got something here that's many more pages than that. I don't understand what I have.

MR. JONES: We're offering the whole thing, but I'm only going to ask her about certain pages where Mr. Fortier's handwriting appears.

THE COURT: Well, since there's an objection, what is it that you're offering it for?

MR. JONES: Well, let me withdraw it and do it this way. Maybe this will be quicker.

BY MR. JONES:

Q. Did you read this article?

A. I'm not sure if I did or not.

Q. You're not sure. Well, clearly your husband read it?

A. Yes.

Q. Okay. And this is The Arizona Republic for Sunday, April 23?

A. Yes.

Q. 1995?

A. Yes.

Q. And it was this article that your husband made all these comments on and then you all went down and talked to the FBI about it because you were angry?

A. Yes.

Q. So you read The Arizona Republic, or at least your husband did?

Lori Fortier - Cross

MR. HARTZLER: Objection to compound question.

THE COURT: Sustained.

BY MR. JONES:

Q. Your husband read The Arizona Republic for April 23?

A. Yes.

Q. Did you read it for April 23?

A. Not that I remember.

Q. Was it The Arizona Republic for April 22 that had the article about Mr. Kling?

A. I don't know.

Q. You indicated a moment ago to the jury that you became concerned about the typewriter ribbon shortly before April 24 and 25?

A. Right after the bombing, right after I found out it was in a Ryde -- it was in a truck.

Q. And your statement today is that you did not read The Arizona Republic article about Mr. Kling on the 22d?

A. Not that I'm aware of, no.

Q. Mrs. Fortier, when you went to Kingman -- or when you were in Kingman and you went to Manhattan or Fort Riley, did you travel interstate -- I'm sorry, not interstate -- Highway 77 in Kansas?

A. I don't -- no.

Q. You did not?

A. No.

Lori Fortier - Cross

Q. That's the road down south connects up.

A. I'm not familiar with that road.

Q. Let me put it this way. Did you go through Herington?

A. No.

Q. Don't remember that?

A. No.

Q. Did you go down I-70 to I-35?

A. I'm not familiar with that. I remember traveling on 54.

Q. 54. U.S. 54?

A. Yes.

Q. Did you go through Junction City?

A. I think so.

Q. And you of course lived in Manhattan?

A. Yes.

Q. Did you ever go by the airport?

A. Yes.

Q. And on your way back to Kingman, did you travel through Oklahoma City?

A. When we were returning?

Q. Well, at any time from Kingman to Manhattan or Fort Riley and back.

A. No. No.

Q. No? How did you go from Kingman to Fort Riley?

A. On 54.

Q. The whole way?

Lori Fortier - Cross

A. No. 54 to I-40.

Q. And where did you join up with I-40?

A. I believe it's somewhere in Texas.

Q. All right.

* Q. On New Mexico. Right by the border of Texas.

A. Or New Mexico. Right by the border of Texas.
Q. And then what highway did you take north?
A. 54.
Q. No, I mean north out of Texas from Interstate 40.
A. I don't understand.
Q. When you were on -- Interstate 40 is a east/west highway, isn't it?
A. Yes.
Q. Fort Riley is located north of Interstate 40, isn't it?
A. Yes.
Q. Is that the Highway 54 you're talking about, or did you take some other highway?
A. That's the Highway 54.
Q. All right. And you remember where you joined Highway 54?
A. Right outside of Texas. Still in New Mexico. I'm not sure of the city.
Q. All right. Now, you indicated in response to questions from Mr. Hartzler, if I understood it, that Mr. McVeigh's motive for the bombing, as he discussed with you, was political in nature?
A. Yes.

Lori Fortier - Cross

Q. He was mad at the federal government.
A. Yes.
Q. And specifically because of Waco and other things.
A. Yes.
Q. Now, did Mr. McVeigh also talk to you that he believed in decentralized government?
A. I'm not sure what you mean by that.
Q. Well, in other words, government down on the state and local or county level as opposed to the federal government.
A. Yes.
Q. All right. Did you and your husband believe in that concept?
A. Yes, somewhat.
Q. Mr. McVeigh believe that the federal government had too much power and had encroached upon the citizens' rights?
A. Yes, he did.
Q. And he explained that to you?
A. Yes.
Q. And was that also your belief?
A. Somewhat.
Q. And did you and your husband read and possess literature that advocated that idea, that the government was too forceful and too strong?
A. Yes, we did.
Q. And Mr. McVeigh gave you some of that literature, didn't

Lori Fortier - Cross

he?
A. Yes. a lot of it.

... 100, a 100 or 100.

Q. Did you read it?

A. Sometimes.

Q. You and your husband possessed a document entitled The Liberty Lobby Citizens' Rule Book, didn't you?

A. Yes.

Q. And do you have Exhibit P40 in front of you?

A. This one here?

Q. Please.

THE COURT: Are you withdrawing the offer of P1?

MR. JONES: Yes. Yes, sir.

THE WITNESS: Yes.

BY MR. JONES:

Q. Do you have that in front of you?

A. Yes, I do.

Q. And this is a document similar to the one you possessed or the one you possessed?

A. I really don't remember what it looked like.

Q. You just know that you had it?

A. Yes. Because it was on the search, the sheet they gave us after they searched, and they said they had taken it.

Q. It was one of the things they took during the search?

A. Yes, but I'm not sure what it looked like.

Q. Are you aware of anything that prohibits you from having

Lori Fortier - Cross

such a book?

A. No.

Q. Now, you and your husband also subscribed, I think you indicated earlier, to the Patriot Report?

A. Yes.

Q. And would you please look at Exhibit P41.

It's P42.

A. Okay.

Q. Now, that's a copy of the Patriot Report that was taken from your house, wasn't it?

A. Yes, it appears to be.

Q. Well, if I could -- doesn't it say there --

A. Yes, it does.

Q. And this is a document that you and your husband subscribe to and read?

A. Yes.

MR. JONES: Move the admission of P42.

MR. HARTZLER: Object, your Honor.

THE COURT: What's the objection?

MR. HARTZLER: Well, it's a lengthy newspaper-type report. If there's some relevance to any particular issue --

THE COURT: Well, it's as relevant as the things out of Mr. McVeigh's car, isn't it? Objection's overruled.

BY MR. JONES:

Q. This has various articles critical of the federal

Lori Fortier - Cross

government, including the FBI and other agencies, President Clinton?

A. Yes.

Q. You and your husband receive this on a regular basis?

A. Yes.

Q. You were receiving that publication in March of 1995, weren't you?

A. Yes.

Q. Did you and your husband consider yourself patriots?

A. No. What do you mean by a patriot?

Q. I'll withdraw the question.

Now, on April the 21st, 1955 (sic), you had the first interview with special agents of the FBI concerning the Oklahoma City bombing; is that correct?

A. 1955?

Q. I'm sorry, 1995.

A. Yes.

Q. And on that day, did you give an oral statement to Special Agent Ruben Martinez?

A. I'm sure I did.

Q. Sure. Well, I mean you gave it to some agent of the FBI; you may not recall their name?

A. Yes.

Q. And in that interview, did you tell the special agents of the FBI that your only contact with Mr. McVeigh is when he

Lori Fortier - Cross

would periodically show up at your residence?

A. Yes.

Q. Did you tell the FBI agent at that time that you did not socialize with him and that you knew little about his background?

A. Yes. I lied.

Q. I didn't ask you if you lied; I just asked you if you said that. And you say you did?

A. Yes, I did say that.

Q. And did you also tell him, based upon what you did know about Mr. McVeigh, you seriously doubted that he would be involved in the Oklahoma City bombing?

A. Yes, I did say that.

Q. And did you also tell him that the only knowledge you had about the bombing was what you had seen on television and read in the newspapers? Correct?

A. Yes.

Q. Then on April 23, 1995, you and your husband traveled to the Mojave County Sheriff's Department; is that correct?

A. Yes.

Q. And while you were there, you were interviewed by another special agent of the FBI; is that correct?

A. That's correct.

Q. And at that time you told the agents that you did not know whether or not Mr. McVeigh had placed long distance telephone

Lori Fortier - Cross

calls on your phone because your husband paid the phone bills.

A. Yes, I did say that.

Q. And did you tell the agents at that time that you had never heard Mr. McVeigh talk about explosives or bombs?

A. Yes.

Q. Did you tell the agents that there was nothing which would lead you to believe that Mr. McVeigh would be capable of carrying out the bombing in Oklahoma City?

A. Yes.

Q. Did you tell the agents that you did not know why Mr. McVeigh went to Kansas in December of 195- -- 1994?

A. Yes.

Q. Did you tell the agents that Mr. Fortier did not special -- did not specify to you when he was going in Kansas and you did not know how he got there or how he got back?

A. Yes.

Q. Did you tell the agents that you had cleaned the house and that you had had access to the bedroom in the house where Mr. McVeigh stayed?

A. Yes.

Q. Did you tell the agents that you never saw anything unusual which would lead you to believe that Mr. McVeigh was a member of a violent group?

A. Yes.

Q. Did you tell the agents that you never heard Mr. McVeigh

Lori Fortier - Cross

talk about explosives or bombs?

A. Yes.

Q. Did you tell the agents that nothing led you to believe that Mr. McVeigh would be capable of carrying out the bombing in Oklahoma City?

A. Yes.

Q. Did you accompany your husband on his trip to make statements to the FBI on May 17 in Oklahoma City?

A. Yes.

Q. Okay. And were you present for all of his statements to the FBI?

A. Yes.

Q. Did you know what he was going to say to the FBI there?

A. He was going to tell the truth.

Q. All the truth and nothing but the truth.

A. Yes.

Q. Up until May 17, 1995, did both you and your husband deny any knowledge of the Oklahoma City bombing?

A. Yes, we did.

Q. On May 17, while you were in Oklahoma City, did you stay at

the Motel 6?

A. Yes.

Q. And did you and your husband telephone the FBI?

A. Yes.

Q. When the FBI agents arrived, did you and your husband have

Q. When the FBI agents arrived, did you and your husband have

Lori Fortier - Cross

a discussion about who would change their statements first?

A. Yes.

Q. Beg your pardon?

A. Yes.

Q. And in fact, during the course of that meeting, did you suggest to your husband that he change his statements first?

A. Yes, I did.

Q. Did the FBI agents leave the room for about an hour so that

you could confer with your husband?

A. They left the room.

Q. Was it about an hour they were gone?

A. Yes.

Q. During the course of that hour, did you talk to your husband about what you would say to the FBI?

A. No.

Q. Did he talk to you about what he would say?

A. No.

Q. During the course of that hour, did you and your husband attempt to make sure that you would tell them the same thing?

A. No.

Q. Prior to May 17, had you had a discussion with your husband which the FBI recorded in your home in which the two of you talked about getting stories straight and the necessary to correspond?

A. I'm not sure what you're referring to.

Lori Fortier - Cross

Q. You are not sure, or you don't remember?

A. I'm not sure what you're referring to.

Q. All right. Were you present, then, during everything that your husband said to the FBI on May 17?

A. Yes.

Q. Did the agents that were present inform you about the federal witness protection program?

A. Yes.

Q. Did you or your husband tell the agents that Mr. Nichols had a brown or tan pickup truck?

A. I think I did.

Q. Did you tell the agents anything about Mr. McVeigh demonstrating the configuration of a bomb with soup cans on May 17?

A. I don't know if I did on May 17 or not.

Q. Do you have in front of you the report of the FBI interview

with you and your husband?

A. Yes.

Q. Okay. Would you just take a moment, please -- I know it's a little long, but not terribly long -- and just read it to

yourself so you're generally familiar with it.

A. Okay.

Q. Now, today's not the first time that you read that, is it?

A. No.

Q. You've seen it before?

Lori Fortier - Cross

A. Yes, I have.

Q. On several occasions?

A. On a couple occasions, yes.

Q. All right. Now, did you read anything in there about telling the agents that day, you or your husband, that Mr. McVeigh demonstrated the configuration of the bomb with soup cans?

A. No. But the interview was cut short.

Q. Well, I'm just asking you about the part that lasted. How many pages is that document?

A. I believe it's nine.

Q. Nine typewritten, single-spaced pages?

A. Yes.

Q. Now, had anybody ever gotten down on your kitchen floor before and demonstrated a bomb with soup cans?

A. No.

Q. That's a fairly dramatic event, isn't it?

A. Yes, it is.

Q. Now, is there anything in that interview that you told them about the package of blasting caps that you wrapped up in Christmas wrapping paper on December the 14th?

A. No, Michael was doing most of the talking on this.

Q. Well, Michael was with you when they were wrapped?

A. Yes.

Q. At the hotel, according to your testimony?

Lori Fortier - Cross

A. Yes.

Q. And he didn't tell them?

A. No.

Q. Now, that's the trip where you all went out to, according to you, the Wal-Mart and got boxes and wrapping paper and so forth?

A. We got tape and wrapping paper, yes.

Q. Tape and wrapping paper, all right.

And then went to the motel?

A. Yes.

Q. Have you ever wrapped up in Christmas wrapping, blasting caps before?

A. No, I have not.

Q. Would you say that's a fairly dramatic event?

A. Yes, it is.

Q. Now, did you or your husband tell the FBI that day anything about a burglary of a quarry in Marion County, Kansas, that Mr. McVeigh was alleged to have been involved in?

A. No.

Q. That's certainly an unusual event, for friends of yours that stay in your house to tell you about stealing explosives from a quarry under cover of darkness, isn't it?

A. Yes, it is.

Q. Did you and your husband tell the agents anything about a robbery from Bob in Arkansas?

Lori Fortier - Cross

A. No.

Q. Now, in that case, Mr. McVeigh had told you about the robbery and your husband had gone all the way up to Manhattan in a car and stopped and gotten those guns and brought them back.

A. Yes.

Q. Had he ever done anything like that before?

A. No.

Q. But neither he or you did tell the agents about that this afternoon?

A. We did somewhat.

Q. Did you tell the agents anything about making a false driver's license for Mr. McVeigh in the name of Robert Kling?

A. I didn't make a false driver's license for Tim.

Q. I'm sorry, laminate one for him, laminate a false driver's license?

A. No, I did not tell them about that.

Q. Well, Robert Kling was certainly a name you knew, because that's the name that you had seen on the typewriter that had caused you to throw out the ribbon?

A. Yes.

Q. And I believe you said just a moment ago that according to you, when you saw that, that's how you figured out the Ryder truck had been rented?

A. Yes, when I heard that it was a truck, I immediately

Lori Fortier - Cross

connected it with Tim.

Q. But you didn't immediately tell the agents about it on the 17th, did you?

A. No.

Q. In fact, you didn't tell them about it at all.

A. In this occasion?

Q. Yes.

A. No, not on this occasion.

Q. Now, did you tell the agents anything about exploding pipe bombs in the desert on this May 17 meeting?

A. I believe we did.

Q. What did you tell them about that?

A. Just a second, please.

It says that -- well, Michael told them.

Q. Okay.

A. It says, "Fortier stated McVeigh --"

Q. Don't read from it. Just tell me what Michael told them

Q. Don't read from it. Just tell me what Michael told them, if you don't mind.

A. Okay. That we had went into the desert around Kingman and Tim had showed us how to make a pipe bomb and blow it up.

Q. So you told them about this incident?

A. Yes.

Q. But that incident, though, isn't related to the Oklahoma City bombing, was it? This was months before Tim mentions that to you, isn't it?

Lori Fortier - Cross

A. It's not directly related.

Q. Well, didn't it happen in the summer?

A. Yes.

Q. And the first conversation that Mr. McVeigh had with you and your husband about the bombing, according to you, was in September.

A. Yes.

Q. Okay. Now, on April the 19th, you and your husband had a flag that flew outside your house that had a cobra and the motto "Don't Tread On Me," didn't you?

A. Yes.

Q. And how long had you had such a flag?

A. I'm not really sure.

Q. And do you know what that flag comes from?

A. No.

Q. Where did you obtain it?

A. Tim and Michael bought it.

Q. Well, Tim and Michael bought it?

A. Yes.

Q. When did Tim and Michael buy it?

A. On one of the occasions we went to Las Vegas.

Q. So you --

A. I believe it was --

Q. I'm sorry?

A. I believe it was in the summer of '94, right around the

Lori Fortier - Cross

time we got married.

Q. All right. So you think that Tim and Michael bought it in Las Vegas about the time you got married?

A. Yes, they did.

Q. Now, do you recognize or do you know now that that's a flag that symbolizes the Revolutionary War motto?

A. Is that -- no, I don't know that, either.

Q. How long did this flag that you don't know what it means fly outside your house?

A. Approximately eight months, nine months.

Q. Now, you were familiar with the events at Mt. Carmel outside of Waco, were you not?

A. Yes.

Q. Did you follow the events?

A. Somewhat.

Q. And you were certainly familiar with those events before Mr. McVeigh visited your house in 1993?

A. I had heard about it on the news, like everyone had.

Q. So the answer is yes, you were familiar with it?

A. Yes.

Q. Okay. So when he showed up, you weren't hearing it for the first time?

A. No.

Q. And were you yourself outraged about what you perceived to be wrong federal conduct at Mt. Carmel?

Lori Fortier - Cross

A. No.

Q. But you watched the two or three videotapes that Mr. McVeigh left?

A. Yes. I thought it needed to be investigated further.

Q. All right. So you didn't think that the investigations which had occurred up to that time were sufficient?

A. That's fair.

Q. Well, there's a lot of people in and around the Kingman area at that time that had that opinion, didn't they?

MR. HARTZLER: Objection.

THE COURT: Overruled.

THE WITNESS: Not that I know.

BY MR. JONES:

Q. You didn't ever discuss it with any of your friends?

A. Sometimes we did.

Q. Okay. And was their opinion somewhat similar to you?

A. Some were, some weren't.

Q. From the reading of The Liberty Lobby and the Patriot Reports and other newspapers you had, did you form the opinion that many people formed opinion that the government had used force excessively?

MR. HARTZLER: Objection.

THE COURT: Overruled.

THE WITNESS: What?

BY MR. JONES:

Lori Fortier - Cross

Q. And you believe that as of this date, didn't you?

A. What's the question? Excuse me.

Q. That the government may have used excessive military force in Mt. Carmel.

A. They may have.

Q. You still hold that belief?

A. Somewhat, yes. I don't feel that the people were murdered.

Q. Which people? The ATF agents?

A. No, the people inside the compound.

Q. Oh, the people inside the compound. All right.

Now, even though you were critical of -- somewhat, of the government actions at Waco and you subscribe to The

Liberty

Lobby and the Patriot Report and so forth, you didn't bomb the Murrah Building, did you?

A. No, I did not.

Q. And as far as you knew, there were a number of other people

from what you said that shared the same beliefs that you did?

A. Yes.

Q. And you don't have any reason to believe that they bombed the Murrah Building, do you?

A. No.

Q. Now, at the time that the FBI searched your home on May 1, you've told us that you had five weapons there; is that correct?

A. Approximately.

Lori Fortier - Cross

Q. Right. And in addition to that, your husband had in his possession one box of Du Pont blasting caps containing 51 nonelectric blasting caps; is that correct?

A. They weren't directly in his possession. They were at his brother's house.

Q. That's because he had moved them?

A. Yes.

Q. They had been in his possession?

A. Yes.

Q. And he had moved them over there to get them out of the house?

A. Yes.

Q. And on May 30, 1995, your brother -- I'm sorry, your husband met the agents of the FBI at your brother's house?

A. Yes.

Q. And that purpose was to recover all the things that your husband had moved out of your house that was in there to his brother's house; is that right?

A. Yes. It was to turn them over to the FBI.

Q. Right. And that included five tubes of Kinestik binary explosive; correct?

A. Yes.

Q. And it also was one 35-millimeter film container containing ammonium powder?

A. I'm not familiar with that.

Lori Fortier - Cross

Q. All right. Did it also contain one plastic bag containing green cannon fuse?

A. It may have.

Q. Did it contain four one-pound cans of FFG black powder?

A. Probably.

Q. Was there a roll of speaker wire with alligator clips?

A. I don't know.

Q. Do you know whether those can be used to initiate electric

blasting caps?

A. No, I don't.

Q. Did it also include four nonelectric blasting caps?

A. I don't know.

Q. I'm sorry?

A. I don't know.

Q. Well, do you know whether it included two electric matches?

A. Yes, I believe it did.

Q. And did it also contain five sealed cardboard tubes with cannon fuse?

A. Yes.

Q. And did it also contain five plastic containers of Kinepack or Kinepack liquid binary explosives?

A. In addition to the five you already mentioned?

Q. I believe so, yes.

A. I don't know.

Q. But you know there was at least one?

Lori Fortier - Cross

A. I knew there was some in there, yes.

Q. Did it contain one plastic bag containing 30 nonelectric blasting caps?

A. I don't know.

Q. Did it contain one plastic bag containing 16 nonelectric blasting caps?

A. I don't know.

Q. Did it contain one plastic bag containing four electric blasting caps with yellow and turquoise wire wrapped and shunted?

A. Yes.

Q. Did it contain one nonelectric blasting cap?

A. I don't know.

Q. Did it contain one electric cap with yellow and turquoise wires?

A. I'm not sure.

Q. Did it contain four electric blasting caps with red and yellow wires?

A. I'm not sure.

Q. Did it contain three 60-foot coils of Primadet delay detonators?

A. I don't know.

Q. Did it contain one mercury switch?

A. I don't know.

Q. Did it contain one 12-inch tube wrapped in aluminum foil

Lori Fortier - Cross

with an electric match inserted at one end?

A. I don't know.

Q. Now, some of those you don't recall, but some you do?

A. Yes, I'd seen it once. That's it.

Q. All right. Now, these things that you do recall, can they

Q. All right. Now, these things that you do recall, can they be used in making explosives?

A. Probably, yes.

Q. Did you and your husband, leaving aside Mr. McVeigh, ever make pop-bottle bombs or other type of small detonating devices and set them off in the desert?

A. Michael did.

Q. All right. And as far as you knew, there wasn't anything wrong with that?

A. I don't know.

Q. Did you ever go with him?

A. Not that I remember.

Q. Well, certainly none of this was used to blow up the federal building in Oklahoma City, was it?

A. No.

Q. And yet you and your husband were sufficiently concerned about having it in your house that you moved it out of your house over to John's house?

A. Rick's house.

Q. I'm sorry, Rick's house. Is that correct?

A. Can you repeat the beginning of the question?

Lori Fortier - Cross

Q. Yes. You were sufficiently concerned about having it in your house, that your husband moved it over to his brother's house.

A. Yes, because they were stolen explosives that Tim had given.

Q. Beg your pardon?

A. They were explosives that Tim had given us.

Q. All of this Mr. McVeigh gave you?

A. Most of it, yes.

Q. Most of it?

A. Yes.

Q. Why did he give it to you?

A. I don't know.

Q. Did you ask him?

A. No. He didn't give it to me, he gave it to Michael.

Q. What did you ask Michael?

A. I didn't ask him about it.

Q. Not ever?

A. I didn't ask him why Tim gave it to him.

Q. My question was ever? You mean you never asked him?

A. Ask him in what sense? Like why did you have it?

Q. Yeah.

A. Yes.

Q. And what did he say?

A. Tim gave it to me.

Lori Fortier - Cross

Q. Did he say why he had kept it?

A. No.

Q. Do you know why he kept it?
A. No.
Q. Now, you knew that some of these materials were present in your house.
A. Yes.
Q. And you knew, according to you, that Mr. McVeigh had brought them into the house.
A. Yes.
Q. You didn't refuse to allow him to bring them into the house, did you?
A. I didn't know until after it happened.
Q. You didn't know he brought it into the house?
A. Not until after Michael had showed me them.
Q. When did he show them to you?
A. I don't know.
Q. Was it before or after the bombing?
A. It was before.
Q. And what was the occasion that he showed them to you?
A. He showed them to me right before he was going to bring them over to his brother's house.
Q. And that was before April 19?
A. No, it wasn't.
Q. It was after April 19?

Lori Fortier - Cross

A. Yes.
Q. He showed them to you after April 19?
A. Yes, I believe so.
Q. Did you know they were there before April 19?
A. I'm not sure. I don't think I did.
Q. Well, you had a --
A. Michael might have told me that he had some stuff, but I never really investigated it.
Q. Okay. Well, how large is your house? How many square feet?
A. I don't know how many square feet. We have three bedrooms and two bathrooms.
Q. It's a trailer home, though?
A. Yes.
Q. One trailer or two trailers?
A. One.
Q. So it's no larger than a good one trailer?
A. Yes.
Q. And you never saw this?
A. No, I did not. It was in our spare room.
Q. When you were meeting with the agents on the 17th, did Mr. Fortier in your presence tell the agents he could not recall when Tim McVeigh began to recruit him?
A. I believe he did say that.
Q. Do you recall it?

Lori Fortier - Cross

A. I recall him recruiting him like on one occasion, but I don't know if he did it before.

Q. And when occasion is it that you recall?

A. In the spring of '95.

Q. Spring of '95?

A. Yes.

Q. That's to help with the bombing?

A. Yes. Well, it's to assist him like in getting out there.

Q. Right. So you didn't consider these efforts back in September and October and December of '94 to be recruiting efforts to help with the bombing?

A. No. Tim was just telling us what he was planning on doing.

Q. Did he ever tell you why he would just tell you and your husband that he was planning on blowing up a federal building?

A. No, he did not.

Q. Now, you had indicated that Tim told you and your husband that he was going to steal these weapons from Bob in Arkansas because he used to live with him and he had a falling out with him?

A. Yes, and he needed money for a fund-raiser.

Q. Well, did he say what this fund-raiser was?

A. Not really. Not in so many words, no.

Q. All right. Well, now, after your husband came back with the guns, it was around that time that he ceased being employed, wasn't it?

Lori Fortier - Cross

A. Yes.

Q. And it was around the same time you ceased being employed?

A. No.

Q. You continued to be employed for a little bit of time?

A. No, I wasn't employed then.

Q. You were not employed, anyway?

A. No.

Q. I'm sorry?

A. I quit my job in August of '94.

Q. So you were already unemployed?

A. Yes.

Q. All right. Now, did you hear your husband tell the agents on the 17th that he could not recall when Mr. McVeigh first talked about bombing the federal building in Oklahoma City?

A. Yes, it's in the 302.

Q. Was that what he said?

A. Yeah.

Q. Okay. Were you present when your husband told the agents that Mr. McVeigh selected Oklahoma City only because it was easy?

A. Yes.

Q. Was there any mention at that time about people being there associated with the ATF action at Mt. Carmel?

A. Not at that time.

Q. In fact, on May 17, what your husband said was he selected

Lori Fortier - Cross

Oklahoma City because it was easy?

A. Yes.

Q. Didn't mention ATF or Waco, did he?

A. That's what Michael said, yes.

Q. And your husband also told the agents at that time that he and you intended to cooperate.

A. Yes.

Q. But even though he told the agents that you and he intended to cooperate, you did not tell them at that time anything about the burglary in Marion County, Kansas.

A. No, we did not.

Q. And even though your husband expressed cooperation, he didn't tell them anything about observing explosives in Mr. McVeigh's possession?

A. No, because the interview was cut short.

Q. This interview that lasted nine and a half pages?

A. Yes.

Q. Did the FBI find a pipe bomb at your house that -- or that had been in your house?

A. Not that I know of.

Q. Now, when you were meeting with the FBI agents on the 17th, did you or your husband tell them anything about Mr. McVeigh drawing a diagram of a bomb on a piece of paper?

A. No.

Q. Did your husband tell the FBI agents that if they would

Lori Fortier - Cross

give him immunity, he would give them McVeigh?

A. Yes.

Q. And by immunity, you understood that to mean no prosecution?

A. Yes.

Q. And the agents told him that they couldn't promise that?

A. Yes, they did.

Q. But that's what you and your husband wanted, isn't it?

A. Immunity?

Q. Uh-huh.

A. We wanted to come forward and tell the truth, also.

Q. Well, you also wanted immunity.

A. Yes.

Q. Did your agents -- I'm sorry. Did your husband tell the agents that Mr. McVeigh had given him a rifle that looked like a M-16 in exchange for his Mini-14 stock?

A. Yes.

Q. So he told them about that?

A. Yes.

Q. And that happened at the same time that you were wrapping the blasting caps?

A. Yes.

Q. Now, your husband also told them on that day that he had traveled to Kansas with Mr. McVeigh and that he had traveled through Oklahoma City.

Lori Fortier - Cross

A. Yes.

Q. Did he say anything about stopping and looking at the building at that time?

A. I'm not sure if he did or not.

Q. Now, Mr. McVeigh came home at Thanksgiving back in, when was it, 1988?

A. Yes.

Q. With your husband.

When your husband was at Fort Riley, did he make trips back and forth to Kingman?

A. Occasionally.

Q. And did you accompany him?

A. Yes.

Q. Now, this morning you identified two statements that you had written out for possible use with the media; is that correct?

A. Yes.

Q. Now, in addition to that, you and your husband decided that

he would grant an interview, television interview to CNN.

A. Yes.

Q. To a reporter named Sean Calebs?

A. I don't know his name.

Q. All right. And did that occur on or about April 27?

A. Around there.

Q. And you and your husband traveled to a park near your home?

Lori Fortier - Cross

A. Yes.

Q. And that's where the interview took place?

A. Yes.

Q. And did he give a detailed interview to Sean Calebs?

A. Yes.

Q. And this interview would have been approximately eight days after the bombing and six days after Mr. McVeigh had been arrested?

A. Yes.

Q. So it wasn't immediate?

A. No.

Q. Is that right?

A. No, it wasn't immediately.

Q. You and your husband had almost a full week to follow what was happening on the media, the television, the radios, to talk among yourselves and with your friends about the investigation and the arrest of Mr. McVeigh; is that correct?

A. Yes.

Q. And you had done that?

A. What, talked about everything?

Q. You had discussed it with your mom and dad and friends and

read it on television and radio -- or not radio, newspapers?

A. Yes, it was all over.

Q. Okay. Now, your husband didn't have to meet with CNN, did he?

Lori Fortier - Cross

A. No, he did not.

Q. And they didn't pay him anything?

A. No.

Q. It was voluntary on his part?

A. Yes.

Q. And was this a conscious decision on his part?

A. Yes, he made the decision to meet with them.

Q. And did you participate in making the decision?

A. Yes, somewhat.

Q. Somewhat?

A. Yes, he asked me my opinion, and I told him if he wanted to.

Q. If he wanted to make it, he should?

A. Yes.

Q. Okay. Were there any FBI agents there when you did the interview?

A. Not that I know of.

Q. But you were present?

A. Yes.

Q. Now, in this interview, your husband did not tell the world that Mr. McVeigh was guilty, did he?

A. No, he did not.

Q. He did not tell the world that you and he were afraid of him?

A. No, he did not.

Lori Fortier - Cross

Q. He did not say that he had heard his car drive by your house one night?

A. No.

Q. He did not say that he had taken a gun to the motel?

A. No.

Q. And all of these other things you've talked about, the wrapping paper, the explosive caps, and the bomb and the armed robbery and the burglary of Marion County and all of that, none of that was mentioned. Did he?

A. No.

Q. Did you listen to what he said?

A. Yes.

Q. In fact, your husband chastised people for saying that Mr. McVeigh was guilty, didn't he?

A. Yes.

Q. Did you hear him say, "People cannot make their judgment on his guilt by what they have read in the paper and by what I see on TV"?

A. Yes.

A. Yes.

Q. Did he say, "People are calling for his blood to hang him in the streets and whatnot"?

A. Yes.

Q. Did he say, "And in America, we believe that people are innocent until proven guilty in the courts, not in the street"?

A. Yes.

Lori Fortier - Cross

Q. And that everybody must remember that.

A. Yes.

Q. Now, I understand that at this time you're saying that on that date when he was speaking those words, he knew Tim McVeigh was guilty.

A. Yes.

Q. And in fact, your husband went so far as to say that those people that say "Let's just hang him now" are not Americans.

A. Yes.

Q. Did your husband say, in your presence, "I'd like to say something about these militias. Everybody's making them sound like they're anti-government; that is a false phrase"?

A. Yes.

Q. Did your husband say, "I believe they are pro Constitution"?

A. Yes.

Q. Did he say, "They believe in the framework of our government. They may have disagreements with who is elected and what our Congress may be doing"?

A. Yes.

Q. But did he say we, "I'm not part of a militia, but people who are patriots are not anti-government"?

A. Yes.

Q. And did he say, "We support our government"?

A. Yes.

Lori Fortier - Cross

Q. He also went on to say that he thought the FBI was modifying the sketch of John Doe 2 to resemble him.

A. Yes.

Q. Did you hear that?

A. Yes.

Q. In fact, he went on to say it was happening right then -- or actually, right now.

A. Yes.

Q. Talked about Mr. McVeigh's face being on the cover of Time magazine, face of terror, and said, "That's not my friend."

A. Yes.

Q. Now, neither you nor your husband are, to use an expression, shrinking violets, are you? That is to say, you stand up for what you believe in?

A. Somewhat, yes.

Q. You were angry at what the media was saying, and you

2. You were angry at what the media was saying, and you called

them to account; isn't that true?

A. I don't understand your question.

Q. Well, you were unhappy with the media portrayal of Mr. McVeigh.

A. No.

Q. No?

A. No. We said we were.

Q. You said you were. That was a lie, too.

A. Yes.

Lori Fortier - Cross

Q. All right. Well, why was it necessary to lie to CNN?

A. Because we wanted to distance ourself from Tim.

Q. By embracing Mr. McVeigh, you distanced yourself from him?

A. Well, by saying he's not guilty, people would stop harassing us.

Q. By saying that Mr. McVeigh was not guilty, people would stop harassing you?

A. Yes.

Q. I see. All right. Well, now, in your home when you were discussing the matter with your husband and with your parents, did there come a time when you and your husband became concerned about what was happening to Terry Nichols?

A. I don't recall what you're talking about.

Q. Do you remember a time when your husband said, "That dude Terry is in fucking deep shit"?

A. Yes.

Q. That was another friend of Mr. McVeigh's --

A. Yes.

Q. -- wasn't it? Mr. Nichols.

A. Yes.

Q. And were you present when your husband said, "Why, I don't believe Tim would ever do something like this. I know it looks real bad, I know it does, but I don't believe he'd do it"?

Was

that on the same occasion?

Well, do you remember it?

Lori Fortier - Cross

A. No, I don't.

Q. In addition to talking about Mr. McVeigh, you and your husband proclaimed -- or strike "proclaimed" -- you and your husband asserted that you were innocent.

A. Yes.

Q. Meaning both of you.

A. Yes.

Q. And did you hear your husband say, "I don't have nothing involved, but everybody knows how people get caught up into things like this, you know, him just being there for all that time"?

A. Yes.

Q. "Yeah, the feds, they come, I know something. I don't know jack." Did your husband say that?

A. That don't sound familiar, but I'm sure he could have.

Q. I'm sorry?

A. I'm sure he could have said.

Q. It was certainly how he felt, isn't it?

A. I don't understand that question.

Q. Now, in addition to opinions of Mr. McVeigh's innocence, you and your husband also had opinions which you expressed of the Federal Bureau of Investigation.

A. I don't know what you're -- what are you referring to?

Q. Well, let me rephrase it.

You have indicated to the ladies and gentlemen of the

Lori Fortier - Cross

jury and to Mr. Hartzler and myself that you believe that your house was bugged; correct?

A. Yes.

Q. And your phone conversations were taped.

A. Yes.

Q. So if during that period of time you were critical of the FBI, you believe they were listening to what you said.

A. Yes.

Q. And you didn't fear them hearing that.

A. Not really.

Q. Not really.

A. Not at the time.

Q. In fact, your husband, on one of the recordings, called them Gestapo, didn't he?

A. I don't recall that.

Q. You don't recall that?

A. No.

Q. Do you recall him saying that "I've got a lot to say about how they operate, and you know none of it's bullshit. They have lied and intimidated and told games"? Did you hear your husband describe the FBI that way?

A. I don't remember that.

Q. Did you hear your husband say, "You should have seen me, dude. They harassed the fuck out of me"?

A. I don't recall that. I mean he could have possibly said

Lori Fortier - Cross

that stuff, but I don't recall that.

Q. Did he say in your presence, "The FBI wants me to go into a

motel room with this specialist from Washington just to talk with him, go inside that room and talk"?

A. That sounds kind of familiar.

Q. Did you hear him say to his friend Glen, "The FBI's going to try to do something"?

A. No.

Q. Did you hear your husband say one day in your presence,

"God, all those people are going to start hating me, man, because I brought the heat to town"?

A. Yes.

Q. And is that the way he felt?

A. I don't know.

Q. Well, is it accurate to say, then, that during this period of time, before you began to talk with the FBI on the 17th, that in your home and on the phone, you were very critical of the FBI?

A. Yes.

Q. For the way they were treating you and your husband and your family?

A. Yes.

Q. Now, under the terms of the immunity grant that you have received from the court, you are required to come in and testify; is that correct?

Lori Fortier - Cross

A. Yes.

Q. And you have provided testimony against Mr. McVeigh.

A. Yes.

Q. And presumably your husband may do the same thing.

A. Yes.

Q. You have avoided all federal charges which could have been brought against you; is that correct?

A. Yes. I have immunity.

Q. Even charges that could have ended in your execution if convicted.

A. I'm not sure what you're referring.

Q. Well, you were certainly scared about the death penalty when Janet Reno was talking about it, weren't you?

A. Yes.

Q. And avoided any possibility of that by your immunity, haven't you?

A. I still don't understand your question.

Q. Well, you heard Janet Reno say that she would seek the death penalty in this case?

A. Yes, I did.

Q. And that scared you?

A. It scared me then.

Q. It scared you.

A. Yes.

Q. You have also, by your agreement with the Government,

Lori Fortier - Cross

avoided charges in the state of Oklahoma?

A. Yes.

Q. You understand that murder charges could be filed there?

MR. HARTZLER: I object.

BY MR. JONES:

Q. Or do you understand it?

A. I don't know.

Q. You have avoided by your immunity prison terms for

Q. You have avoided by your immunity prison terms for activities totally unrelated to the Oklahoma City bombing, including possession and use of methamphetamines, false statements to the ATF, and state or federal charges for possession and distribution of marijuana; is that correct?

A. Can you repeat that?

Q. Sure. You have avoided all state drug charges.

A. I don't know.

Q. Well, didn't you tell me earlier this morning you had?

A. I don't know if I've avoided all state charges. I don't know if they could like prosecute me for drugs or not. That's not really a worry of mine.

Q. It's not?

A. No.

Q. Do you know what the federal penalties are for possession and use of methamphetamines?

A. No, I don't.

Q. What the penalty is for each individual separate use?

Lori Fortier - Cross

A. No, I don't.

Q. Well, in any event, no charges have been filed against you by Arizona or Oklahoma, have they?

A. No.

Q. Or anywhere else.

A. No.

Q. And your husband has not been charged as a participant in this crime; is that correct?

A. That's correct.

Q. And his sentencing still pends?

A. Yes.

Q. And you have avoided any jail sentence.

A. Yes.

Q. You have avoided any forfeiture of your home or car; is that correct?

A. Yes.

MR. HARTZLER: I object, your Honor: Calls for --

THE COURT: What's the objection?

MR. HARTZLER: He's calling for a legal conclusion as to what she's avoiding. I'm not sure --

THE COURT: He's not asking her opinion about the law.

THE WITNESS: What was the question?

BY MR. JONES:

Q. You have avoided forfeiture of your home and your car to the federal government?

Lori Fortier - Cross

A. I guess. I don't know.

Q. You still have them, don't you?

A. Actually, I'm living with my parents.

Q. Well, the federal government doesn't have them, do they?

A. No.

Q. And when this is over with, you will leave the stand and return home to your children; is that correct?

A. Yes.

MR. JONES: No further questions.

Just a moment.

THE COURT: Mr. Hartzler, do you have any redirect?

MR. HARTZLER: Thank you, your Honor.

Thank you, your Honor. May I proceed?

THE COURT: Yes.

REDIRECT EXAMINATION

BY MR. HARTZLER:

Q. Miss Fortier, Mr. Jones asked you about the interview you had with two FBI agents in the motel room in Oklahoma City on May 17.

A. Yes.

Q. And you were going to explain why that was, to use your phrase, "cut short." Could you do that?

A. Yes. Because I talked, I referred -- I talked with my attorney, and then we decided to meet with them later.

Q. And after that meeting with the agents, you did meet with

Lori Fortier - Redirect

your attorney, I believe you said, the next morning?

A. Yes, the next morning.

Q. Following your meeting with the -- with your attorney, did you and he then meet with federal prosecutors and FBI agents?

A. I didn't hear your question. I'm sorry.

Q. After you met with your attorney, did you and he then have a meeting with federal prosecutors and FBI agents?

A. Yes.

Q. That was in Oklahoma City?

A. Yes.

Q. Do you recall approximately how soon after May 17 that meeting occurred, the first meeting?

A. Probably May 19.

Q. At the meeting on May 17 with the agents, you told Mr. Jones you did not say anything or refer to the incident with the soup cans; is that right?

A. Yes.

Q. Did you tell federal prosecutors about that incident?

A. Yes.

Q. Did you tell federal prosecutors about laminating the Robert Kling driver's license?

A. Yes, I did.

Q. Did you tell the federal prosecutors about wrapping the blasting caps in Christmas paper?

A. Yes.

Lori Fortier - Redirect

Q. Mr. Jones asked you about knowledge and information you acquired from newspaper articles and information you heard from friends. You recall that series of questions?

A. Yes.

Q. Do you have any difficulty, as you testified here today, and yesterday, distinguishing between what you heard and read and what you know from your own firsthand information?

A. No.

Q. What you testified to was based on what you know from your own information, or what McVeigh or your husband told you?

A. Yes.

Q. Prior to your disclosure of the soup-can incident to federal agents and prosecutors, had you read anything about that or heard anything about that from friends or in the news?

A. No.

Q. Prior to your disclosure that McVeigh described the bomb as a shape charge, had you heard that phrase from any friends or read anything about that phrase in the newspaper?

A. No.

Q. Prior to your disclosure to federal prosecutors and federal agents about the letter that you and your husband received saying McVeigh was prepared to take action, had you heard anything or read anything in the news about a "take action" letter?

A. No.

Lori Fortier - Redirect

Q. Prior to your disclosure to federal agents and prosecutors that McVeigh had said he would use sausage explosives inside the barrels, had you heard anything or read anything in the news about sausage explosives?

A. No.

Q. Prior to your disclosure about wrapping blasting caps in Christmas paper, had you heard or read anything in the news about wrapping blasting caps in Christmas paper?

A. No.

Q. Prior to your disclosure to federal agents about the pipe bomb incident in the summer of 1994, had you read anything or heard any news about a pipe bomb incident involving McVeigh?

A. No.

Q. Prior to your disclosure to federal officials about the use of racing fuel, had you read anything in the newspaper or heard any news about the use of racing fuel in the Oklahoma City bombing?

A. No.

Q. Prior to your disclosure to federal officials about the use of anhydrous hydrazine, had you read anything in the newspaper or heard any news about McVeigh's use of anhydrous hydrazine?

A. No.

Q. And prior to your disclosure to federal officers about the quarry burglary, had you read anything in the newspaper or heard anything in the news about McVeigh's involvement in a

Lori Fortier - Redirect

burglary of a quarry?

A. No.

Q. Prior to your disclosure to federal officials about McVeigh's being in your living room and diagramming a bomb that he would use in Oklahoma City, had you read anything or heard any news about McVeigh diagramming a bomb?

A. No.

Q. Mr. Jones asked you about a number of meetings we've had; and indeed, we've met a number of times --

A. Yes.

Q. -- is that not true? Spent many hours together going through questions?

A. Yes.

Q. Is there one thing that I have told you to do, one directive I've given you at every meeting we've had?

A. Yes.

Q. Tell the jury.

A. Always tell the truth.

MR. HARTZLER: Nothing further.

THE COURT: Any recross?

MR. JONES: Yes, sir.

RE-CROSS-EXAMINATION

BY MR. JONES:

Q. Would you agree with me that the decision on whether you have told the truth or whether your husband has told the truth

Lori Fortier - Recross

rests initially with the Government?

A. I don't understand your question.

Q. I don't have the power to prosecute, do I?

A. No.

Q. I'm not the prosecutor of Mr. McVeigh, am I?

A. No.

Q. Your agreement or your husband's agreement calls for him to speak the truth, didn't it?

A. Yes.

Q. Okay. And the Government's version of what the indictment is is what he's going to testify to, isn't it?

A. Yes.

Q. And it's what you've testified to?

A. Yes.

Q. And it's the Government's truth, isn't it?

A. I don't understand that.

Q. You don't?

A. No.

Q. Well, what day did you tell the Government about the racing fuel incident?

A. One of the first meetings we had.

Q. Do you recall which one?

A. Probably the very first.

Q. Are you guessing, or do you know?

A. I know.

Lori Fortier - Recross

Q. You know. So it was the first one.

A. Yes.

Q. And at which one did you tell them about the anhydrous

hydrazine?

A. First or second.

Q. First or second. Are you guessing, or do you know?

A. I know.

Q. And which one did you tell them about the Christmas wrapping?

A. The first occasion.

Q. The first occasion. And which one did you tell them about the quarry burglary?

A. The first occasion.

Q. And which one did you tell them about the pipe bomb?

A. The first or second occasion.

Q. And which one about diagramming Oklahoma City, the bomb?

A. The first occasion.

Q. First occasion. All right.

Now, you just told Mr. Hartzler that you didn't read any of that in the newspaper or hear it on television.

A. Yes.

Q. Leaving aside those incidents in which you claim that only you and Mr. McVeigh were present -- leaving aside those, isn't it true that all the rest of those incidents had been in the paper, the television, the radio, and around the world?

Lori Fortier - Recross

A. No.

MR. HARTZLER: I object, your Honor.

BY MR. JONES:

Q. You don't know that?

A. No.

Q. How do you know? How can you say "no," if you didn't read --

MR. HARTZLER: Pardon me. That's exactly my objection.

THE COURT: Your objection is overruled.

BY MR. JONES:

Q. If you didn't read it, how do you know they weren't there?

A. I don't know if they were or not.

Q. Each and every one of those appeared in your local newspaper and The Arizona Republic, didn't it?

A. No.

Q. And on the national network?

A. No.

Q. And CNN?

A. Nothing that I saw.

MR. JONES: Nothing further.

THE COURT: Any other questions?

MR. HARTZLER: May she be excused, your Honor?

THE COURT: I don't know.

Do you wish to have her excused?

MR. JONES: I'd like to have her available for recall,

your Honor; but I certainly think she can go back home. I think Mr. Mack Martin will produce her, if we need her.

THE COURT: You're not excused as a witness. You can leave, and you'll be notified if you're going to return.

THE WITNESS: Thank you.

THE COURT: Next witness.

MR. HARTZLER: Government calls Paul Rydlund.

THE COURT: All right.

MS. WILKINSON: Before we bring out the witness, we need a side bar.

THE COURT: The motion in limine with respect to this witness is denied. With respect to the defense motion in limine, we'll take it up as they come.

In denying the motion in limine, I intend to restrict the questioning, however, to what affects this witness and is known to him.

MR. TRITICO: Yes, sir.

THE COURT: Swear the witness.

THE COURTROOM DEPUTY: Raise your right hand.

(Paul Rydlund affirmed.)

THE COURTROOM DEPUTY: Have a seat, please.

Would you state your full name for the record and spell your last name.

THE WITNESS: Paul Harris Rydlund, R-Y-D-L-U-N-D.

THE COURTROOM DEPUTY: Thank you.

THE COURT: Ms. Wilkinson . . .

MS. WILKINSON: Thank you, your Honor.

DIRECT EXAMINATION

BY MS. WILKINSON:

Q. Good afternoon, Mr. Rydlund.

A. Afternoon.

Q. Could you tell the jury where you live?

A. St. Louis, Missouri.

Q. How old are you?

A. 58 years old.

Q. What is your profession?

A. I'm a mining engineer.

Q. What has been the focus of your professional employment?

A. I've been involved in the use of ammonium nitrate in commercial explosives.

Q. For how long?

A. 33 years.

Q. Where do you currently work?

A. St. Louis, Missouri, El Dorado Chemical Company.

Q. What is your title?

A. Vice president of industrial products.

Q. Tell us what you do as a vice president of industrial products.

A. I direct the marketing and sales of industrial acids and of

industrial explosives.

Q. What are industrial acids?

A. Industrial acids are sulfuric acid, weak nitric acid, and strong nitric acid.

Q. And what are the industrial explosives that you're responsible for as the vice president?

A. Ammonium nitrate, ammonium nitrate fuel oil mixtures, initiating systems, high explosives.

Q. Is all of this one business at El Dorado?

A. There are three distinct businesses at El Dorado.

Q. What are the three?

A. Agricultural ammonium nitrate, industrial acids, and industrial explosives.

Q. Could you briefly tell us about your educational background.

A. I have a bachelor of science and a master of science in mining engineering from the University of Missouri at Rolla.

Q. If you need some water, there's a pitcher right there.

A. Thank you.

Q. You can pour yourself some.

A. Thank you.

Q. Are you all right?

A. Okay.

Q. You told us you have a bachelor's and a master's in mining engineering; correct?

Paul Rydlund - Direct

A. Yes.

Q. When did you obtain those degrees?

A. I obtained them in 1963 and 1965.

Q. Did you concentrate on explosives at any time during your education?

A. During my graduate work at the University of Missouri at Rolla, I concentrated on ammonium nitrate and its use as an explosive. I was a -- worked on a project for the Monsanto Company, which sponsored a project at the school, and so my graduate work involved the study of ammonium nitrate.

Q. What was that project?

A. The project was to determine what means ammonium nitrate could be used in the commercial explosive business.

Q. How long did you work on that project?

A. I worked on it for the duration of my -- not only my graduate work, but after I left school, I went to work directly for Monsanto Company and worked for Monsanto Company, took a position in research, and worked in research for over five years on the same project.

Q. So you went to work for the company that had paid for your --

A. That had given the grant to the school. Yes, I did.

Q. Tell us briefly what your responsibilities were when you worked in research at Monsanto for five years.

A. My responsibilities were to design and test, to evaluate

Paul Rydlund - Direct

the ability of ammonium nitrate and the characteristics of ammonium nitrate in explosives, to evaluate the use of ammonium nitrate as an explosive.

Q. During your tenure in that research capacity, did you become familiar with the chemical properties and the explosive capabilities of ammonium nitrate?

A. Yes, I did.

Q. What did you do after you completed your five-year research assignment?

A. I went into the distribution, operations, and sales of ammonium nitrate-based explosives, as well as other industrial explosives.

Q. How long did you do that for?

A. I did that for -- with Monsanto Company, I did that for another 14 years.

Q. During that time, did you become familiar with the distribution processes used by the explosives -- industrial explosives industry?

A. Yes, I did.

Q. And did you become familiar with the other common practices of packaging and marketing industrial explosives and fertilizer-grade ammonium nitrate?

A. Yes, I did.

Q. After a time in distribution and operations with Monsanto, what did you do?

Paul Rydlund - Direct

A. Well, as I mentioned, I became involved in the sales, which involved the use of the product in the field.

Q. How long did you work for Monsanto?

A. I worked for Monsanto Company for 19 years.

Q. Then what did you do?

A. In 1983, El Dorado Chemical Company purchased the nitrogen business of Monsanto Company; and I went to work for El Dorado Chemical Company as a director of the industrial explosives group.

Q. And that's the same company you told us that you work for currently?

A. That is the company that I work for today.

Q. And how long were you the director of industrial explosives group?

A. I was the director of the industrial explosives group until 1991.

Q. What did you do in that capacity? What were your responsibilities?

A. In that capacity, I directed the marketing and sales of our industrial explosives business.

Q. Did you become familiar with the demand trends of your customers throughout the United States and Canada?

A. Yes, I did.

Q. Specifically, did you focus on sales and marketing of

ammonium nitrate and fuel oil?

Paul Rydlund - Direct

A. Yes, I did.

Q. When did you move to your current position?

A. In 1991.

Q. Can you tell the jury the type of explosives that you manufacture and sell at El Dorado?

A. The type of explosives are ammonium nitrate fuel oil mixtures, ANFO; that is a predominant product that we manufacture and sell. We also resell high-explosive boosters, such as dynamites, water gels, initiation systems for detonating the high-explosive boosters as well.

Q. You refer to ANFO. Is that the abbreviation for ammonium nitrate and fuel oil?

A. Yes, it is.

Q. Is that commonly used throughout the industry?

A. It is generically used in the industry.

Q. During your 33 years in the explosive business, have you been involved with any professional societies?

A. Yes, I have.

Q. Tell us about that.

A. I am a member of the Society of Mining Engineers, which is a professional society for mining engineers. I am a member of the International Society of Explosive Engineers.

Q. How long have you been a member of the international association?

A. For 15 years.

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Q. Are you a member of any safety associations?

A. I am currently serving as chairman of the board of governors of the Institute of Makers of Explosives, which is a safety organization for the commercial explosive industry.

Q. Tell us a little bit about what that group does.

A. That group basically recommends regulations and practices as to the safe use, handling, transportation, and storage of industrial explosives.

Q. Do you -- did you ever during your membership with this Institute of Makers of Explosives have any specific responsibilities for safety standards?

A. Yes, I did. For two years I served as chairman of the technical committee, where the basic function of the technical committee was to develop safety standards, again for the safe use of explosives.

Q. Let's turn to your field experience, if we could. Could you tell the jury a little bit about what you've done out in the field in connection with explosives?

A. In the field, I have designed blasts, I have loaded blasts, and I have evaluated blasts, production blasts, in the mining business.

Q. Have you observed the detonation of ammonium nitrate and

fuel oil?

A. Yes, I have.

Q. On approximately how many occasions?

Paul Rydlund - Direct

A. Well over a hundred times.

Q. What is the largest ammonium nitrate and fuel oil explosion you've ever observed?

A. In the neighborhood of about 35 tons.

Q. In what context?

A. And that was a context in a blast up in the Minnesota Iron Range.

Q. Out in the field, have you ever mixed explosives?

A. Yes, I have.

Q. What have you done?

A. I have mixed them at the bore hole, I have mixed them on the site, in storage bins, and I have mixed them in fixed facilities. "Mixed" is probably not the word, but I have combined them.

Q. And what type of explosives have you combined?

A. Ammonium nitrate and fuel oil, combined water gels, emulsions, and then mixtures of ammonium nitrate fuel oil, water gels, and emulsions.

Q. Do you also, or have you also, reviewed literature to keep current in your field?

A. I do.

Q. What have you done in that regard?

A. I keep current through the two professional organizations that I belong to, as well as my association in the Institute of Makers of Explosives, and I review a number of publications as

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well.

Q. Over your tenure in the commercial explosives field, have you visited other manufacturing plants for explosives?

A. I have.

Q. Tell us which plants you've visited.

A. I have visited the ammonium nitrate manufacturing facilities at Joplin, Missouri.

Q. Who owns that facility?

A. ICI.

Q. What do they do?

A. They manufacture ammonium nitrate and industrial explosives.

Q. What other manufacturing plants have you visited?

A. Dyno, D-Y-N-O. They manufacture ammonium nitrate at Louisiana, Missouri, and Donora, Pennsylvania.

Q. Any other facilities?

A. And I have visited the industrial explosives manufacturing sites of Austin Powder in McArthur, Ohio.

Q. Are the companies that you just named that own those manufacturing facilities your major competitors in the ammonium nitrate business?

nitrate business:

A. They are our major competitors in the ammonium nitrate fuel oil business, yes.

Q. Okay. You've told us that over the past 33 years that you've focused on ammonium nitrate and ANFO; is that correct?

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A. That's correct.

Q. Can you tell us what ammonium nitrate is?

A. Ammonium nitrate is a mixture of ammonia and nitric acid.

Q. And is it an explosive itself?

A. No. Ammonium nitrate is not an explosive. Ammonium nitrate is an oxidizer.

Q. What is an oxidizer?

A. An oxidizer is a product that when decomposed will readily release oxygen, release its own oxygen.

Q. Is all ammonium nitrate the same?

A. Chemically, yes. Physically, no.

Q. Can you explain the difference, please.

A. Chemically, it's all made from ammonia and nitric acid.

But physically, the particles, the ammonium nitrate solid particles are different. They can be very dense, or they can be not so dense.

Q. What do you mean by that? What's the difference in density?

A. In one case, one is very heavy, or the particle is packed very tightly. In the case of the products that are not so dense, the particles are just particles not packed as tightly.

Q. And does this difference occur because -- or in the manufacturing process?

A. It occurs because of the manufacturing process.

Q. Can you tell us in what form ammonium nitrate is usually

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manufactured?

A. It's usually manufactured in solid form.

Q. Before coming to court today, did you prepare an exhibit which demonstrates the manufacturing process for a certain form of ammonium nitrate?

A. Yes, I did.

Q. What form of ammonium nitrate is that?

A. For the lower density form of ammonium nitrate.

Q. And in what shape is the ammonium nitrate?

A. It's in a spherical shape, commonly referred to as a prill, a low-density prill.

MS. WILKINSON: I'm going to try the computer, your Honor.

THE COURT: All right.

BY MS. WILKINSON:

Q. Mr. Rydlund, can you see Government's Exhibit 674 on your screen?

A. Yes, I can.

Q. Is that the chart that you prepared prior to coming to

court today?

A. Yes, it is.

MS. WILKINSON: Government offers 674, your Honor.

MR. TRITICO: I will object for the same reason we have in an earlier motion. It's not relevant.

THE COURT: Overruled. 674 is received.

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You may display it.

MS. WILKINSON: Thank you.

BY MS. WILKINSON:

Q. Now, Mr. Rydlund, you told us that this chart shows the low-density ammonium nitrate processing; is that correct?

A. That is correct.

Q. Could you explain for us how it works? And if you could use your light pen as you go along.

A. Ammonia and nitric acid are combined in a reactor to form liquid ammonium nitrate solution, which consists of 90 parts ammonium nitrate and ten parts of water. The material is pumped to a storage tank. From the storage tank, the material is pumped to an evaporator; and in the evaporator, seven additional parts of the water is removed. From here, the solution is pumped to the top of the shot tower.

Now, a shot tower is like a big silo. It's about 200 feet high. And at the top of the shot tower is a series of spray nozzles or shower heads.

And so the liquid ammonium nitrate is pumped through this series of shower heads, and it comes out as a liquid droplet. And as the droplet falls down the shot tower, ammonium nitrate crystals, solid ammonium nitrate crystals form within the droplet, so that by the time we get down to the bottom of the shot tower, we don't have a liquid droplet anymore; we have a spherical particle that resembles like a

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miniature snowball, and we call this a prill.

Now, at this point, the prill still has about three parts of water in it, almost three parts of water. And it's hot and it's not very strong, and we need to make it stronger for handling and storage, particularly if we're going to do that over long periods of time.

So this material is then placed on a conveyor belt; and from the conveyor belt, it's fed into a series of dryers and a cooler which gradually remove the moisture and cool the product.

Q. And what do you have at the end of that process right there?

A. At the end of that process, we have a very hard ammonium nitrate prill. However, ammonium nitrate is very soluble in water.

Q. Explain what you mean by soluble in water.

A. That means it dissolves in water very readily. For instance, 250 parts of ammonium nitrate are soluble in a hundred parts of water. And as an example, if you took table salt, like about 320 parts of table salt are soluble in a hundred parts of water. So that's an idea of the solubility.

And because of this solubility, it's affected by moisture. So it would be affected by moisture in the air, by the humidity.

So in order to protect this over periods of time that we

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want to store the material, we put the material in a coater where a coating is applied that is resistant to the moisture in the air that lets us store the material.

From there, we screen off any broken pieces that may have occurred during the process; and we take the material to the warehouse for loading in bulk or to be packaged and shipped.

Q. What kind of materials are used to coat the prill?

A. Basically, they are surfactants.

Q. Wait, stop right there. What's a surfactant?

A. I'm sorry. A surfactant is a material basically has a surface tension to it that resists the water from coming through.

And it's a little bit of -- it's a little bit of a coating of the surfactant; and then we use talc on the outside to coat the prill.

Q. Now, before you came to court, did you put together a sample of low-density prills that are manufactured by your company?

A. Yes, I did.

MS. WILKINSON: Government -- your Honor, Government would offer Exhibit 675.

MR. TRITICO: May I take a moment to review it?

THE COURT: Yes, you may.

MR. TRITICO: No objection, your Honor.

THE COURT: 675 is received.

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BY MS. WILKINSON:

Q. Now, looking at Government's Exhibit 675, can you tell us about the shapes and sizes of the prills that are manufactured in the low-density process?

A. These are the low-density ammonium nitrate prills. They are slightly off-white in color. About 1 millimeter in diameter, and to me resemble a miniature snowball. If you look at them, you'll see they are not all exactly spherical. And they are -- every prill is not completely uniform and is of the same size. And this is okay, because that is not required for the storage, handling, and blasting characteristics that we need.

Q. So the exact shape doesn't make any difference in turning

into a blasting agent?

A. Yeah, they do not have to be exactly uniform, and they do not have to be exactly spherical.

Q. You told us that once these prills are coated, you can put those in storage; is that right?

A. That's correct.

Q. What else do you do with those prills once they're manufactured?

A. They can also be bagged or packaged.

Q. What types of bags do you use to store those ammonium nitrate prills?

A. We can use plastic bags, polyethylene bags, or they can be

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stored in multi-walled paper bags that have an inner polyethylene lining.

MS. WILKINSON: Your Honor, may I have the clerk take this?

BY MS. WILKINSON:

Q. Mr. Rydlund, I'm showing you Government's Exhibit 69. Did you review that prior to coming to trial?

A. Yes, I did.

Q. What is it?

A. It is a multi-walled paper bag used to store ammonium nitrate, used to store ammonium nitrate prills.

MS. WILKINSON: Government offers Exhibit 69, your Honor.

MR. TRITICO: Your Honor, may I take a moment to look at it?

THE COURT: Yes.

MR. TRITICO: Closely?

THE COURT: To examine it, yes.

MR. TRITICO: Thank you.

I have no objection.

THE COURT: 69's received.

BY MS. WILKINSON:

Q. Sir, you mentioned that there were two types of bags the industry normally uses to store these low-density ammonium nitrate prills; is that right?

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A. That's correct.

Q. Which type of bag is Government's Exhibit 69?

A. This is a multi-wall paper bag.

Q. And what is the purpose of a multi-wall paper bag?

A. To store the product and to provide -- to store the product and to provide some moisture resistance.

Q. Okay. Could you take the bag, Government's Exhibit 69, out of the protective bag.

And if you could hold it up for the jury and explain what's indicated on Government's Exhibit 69, starting at the top.

... .

A. This is the name of the company that manufactured the product. This is the name of the company, ICI Explosives, that acquired this company, Atlas Powder. This is the name of the product, ammonium nitrate fertilizer. There are three sets of numbers here. The first number stands for the element nitrogen. The second number stands for the element potassium. And the third number stands for the element phosphate. Phosphorous, excuse me. 34 percent nitrogen, 0 percent potassium, 0 percent phosphorous. Those numbers are important to the agricultural community because those elements represent -- those elements are proper in crops. And that's why those numbers are on there.

Prills, ammonium nitrate prills, 50 pounds net weight in the bag. This yellow label is a warning label. It's like a

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placard. The diamond indicates it's an oxidizer, and it says oxidizer. It indicates flame, which means if the material burns or if it decomposes, it will readily release its own oxygen. This says UN 1942; it is a UN classification number for ammonium nitrate prills.

This is a multi-wall paper bag. It has one, two, three layers of paper, and then it has one mil and a half, and this is a mil-and-a-half high-density polyethylene film liner that's used to provide moisture resistance.

Q. You can set that aside, Mr. Rydlund.

If ammonium nitrate prills are purchased in bags such as that 50-pound bag that you've just described and they're sealed, how long can those prills be stored?

A. They can normally be stored for two to three years.

Q. And they would have the same explosive capability or agricultural capability?

A. Yes, they would.

Q. All right. On that bag, Government's Exhibit 69, was ICI Explosives. Are you familiar with that corporation?

A. Yes, I am.

Q. You told us earlier that you've been to their manufacturing plant?

A. In Joplin, Missouri.

Q. And are you familiar with a practice in the industry of packaging explosive-grade ammonium nitrate prills but selling

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it as fertilizer?

A. Yes, I am.

Q. Tell us why that occurs in the industry.

A. In am --

MR. TRITICO: Excuse me, I'm going to object to this as hearsay, unless it's related to his company only.

THE COURT: Overruled.

This is industry practice you're asking?

MS. WILKINSON: Yes.

THE COURT: You may answer.

THE WITNESS: Okay. Ammonium nitrate, a large part of the cost of ammonium nitrate is freight or transportation costs exit the manufacturing facility. Therefore, we -- in a place, for instance, in Joplin, Missouri, they would have much higher costs to their product to sell in, let's say, West Virginia than they would if they sold it in southwestern Missouri, for instance.

Therefore, if there is a demand for agricultural ammonium nitrate, they can cost their ammonium nitrate, whether -- even though it's low-density ammonium nitrate, they could cost it into southwestern Missouri much less than they could cost ammonium nitrate into West Virginia.

BY MS. WILKINSON:

Q. So is it a common practice in the industry when there's a market demand in the agricultural side to use the low-density

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explosive-grade prills as fertilizer?

A. There is a --

MR. TRITICO: Same objection, your Honor.

THE COURT: Overruled.

THE WITNESS: There is a cost advantage to do so, and, yes, it is a practice.

BY MS. WILKINSON:

Q. Now, using that explosive grade of prill, does it affect the fertilizer or agriculture at all?

A. It still has 34 percent nitrogen in it.

Q. Now, can you tell me why the low-density prills are more advantageous for explosives than the high-density prill?

A. The low-density prills absorb fuels, like fuel oil, very readily because of their lower density. So they have innate ability to absorb fuel oil readily -- not only absorb it, but disperse it and retain it.

Q. Okay. Before coming to court today, did you photograph, using an electron scanning microscope, a low-density ammonium nitrate prill?

A. Yes, I did.

Q. Let me show you Government's 678. Do you see that on your screen?

A. Yes, I do.

Q. Is this the photograph that you caused to be taken?

A. Yes, it is.

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MS. WILKINSON: Government offers 678.

MR. TRITICO: Your Honor, may I have two- or three-question voir dire of witness?

THE COURT: You may, yes.

MR. TRITICO: Government's Exhibit 678, I believe was

the number.

MS. WILKINSON: That's right.

VOIR DIRE EXAMINATION

BY MR. TRITICO:

Q. 678: You took this with an electron microscope, yourself, or did somebody else take this?

A. It was taken in the presence of a person that operates an electron scanning microscope.

Q. So the answer is somebody else took the picture?

A. Somebody else took it while I stood and watched them take it.

Q. How many times have you viewed prior to this photograph a picture of a prill taken with an electron microscope?

A. I have viewed five times.

Q. Over what period of time?

A. Over a period of probably ten weeks.

Q. Was that in preparation for this case only?

A. No.

Q. Do you have a practice of photographing electron microscope prills?

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A. The first time I did this was to do it to show the advantage of our particular type of prills over competitors' prills in the low-density market.

Q. And that was ten weeks before you did this one or five weeks? I'm sorry, I forgot what you said.

A. Actually, I'm sorry -- and I apologize -- that actually was over a year before I did this one.

Q. All right. This one was done specifically for this case?

A. I had this picture taken specifically for this case; that's correct.

Q. Was this a prill manufactured by you or somebody else?

A. This was a prill manufactured by us.

MR. TRITICO: Thank you. I'll object: There's an improper foundation for introduction of this exhibit.

THE COURT: Overruled. Received.

MS. WILKINSON: May we publish it, your Honor?

THE COURT: Yes.

DIRECT EXAMINATION CONTINUED

BY MS. WILKINSON:

Q. Sir, tell us exactly what this photo shows.

A. This is a half section of a low-density ammonium nitrate prill, the surface of the prill. And here we can see the surface of the prill about here. Now, remember, this prill is about 1 millimeter in diameter actual size. So this is magnified well over a hundred times. But anyway, that was the

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surface.

The white and gray areas are the actual ammonium nitrate solid crystals that formed as they came down the shot tower. The black areas are the paths and valleys that

lower. The black areas are the paths and valleys that separate the crystals apart, and these are paths or valleys between the crystals. The paths and valleys are where the fuel oil readily enters the low-density ammonium nitrate prill, is dispersed, and retained.

Q. Now, once you add the fuel oil to the ammonium nitrate, what do you have?

A. You have an ammonium nitrate fuel oil mixture called ANFO.

Q. And can that be manufactured by your company and others in the industry?

A. Yes, it can.

Q. Can it be manufactured by individuals?

A. Yes, it can.

Q. Before coming to court today, did you get a sample of fuel oil ready for court exhibit?

A. Yes, I did.

MS. WILKINSON: Your Honor, may I hand up Government's Exhibit 681?

THE COURT: All right.

BY MS. WILKINSON:

Q. Mr. Rydlund, what is Government's Exhibit 681?

A. This is a small bottle, No. 2 diesel fuel oil, in which I

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added a red dye for illustrative purposes only.

Q. All right. Do you have Government's -- the sample of prills up there?

A. Yes, I do.

Q. What's the Government exhibit sticker on it?

A. 675.

Q. Okay. Tell us how you would combine the ammonium nitrate and the fuel oil to make ANFO.

A. Very simply, I would simply pour the fuel oil into the ammonium nitrate; and to make ANFO, I would pour 6 percent by weight of fuel oil into the container of ammonium nitrate.

Q. Now, can you use other types of fuel to mix with ammonium nitrate to make an explosive?

A. You could.

Q. What other type of fuels could you use?

A. You could use kerosene. You could use gasoline. You could use nitromethane. You could use ammonium paint if it had the

proper solvents in it.

Q. Now, prior to coming to court today, did you actually combine fuel oil with ammonium nitrate to show the porosity, or the absorbability of the prill?

A. Yes, I did.

THE COURT: Did we receive 681?

MS. WILKINSON: We could, your Honor. I'll offer it, 681.

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THE WITNESS: I'm sorry.

MS. WILKINSON: Thank you.

MR. TRITICO: Is that the fuel oil?

THE COURT: Yes.

THE WITNESS: This is the fuel oil.

MR. TRITICO: No objection.

THE COURT: 681 is received.

MS. WILKINSON: Thank you.

THE COURT: I think we'll recess at this point.

MS. WILKINSON: That's fine.

THE COURT: You can step out for 20 minutes. We're going to take a break.

THE WITNESS: 20 minutes.

THE COURT: Yes, we'll let you know.

Members of the jury, we'll recess as customarily for our midafternoon break; and of course continue to follow the cautions given at all earlier recesses, open minds and closed mouths.

You're excused. 20 minutes.

(Jury out at 3:15 p.m.)

THE COURT: Recess.

(Recess at 3:15 p.m.)

(Reconvened at 3:36 p.m.)

THE COURT: Be seated, please.

Bring in the jury.

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(Jury in at 3:36 p.m.)

THE COURT: Please resume the stand.

Ms. Wilkinson, you may continue.

MS. WILKINSON: Thank you, your Honor.

BY MS. WILKINSON:

Q. Mr. Rydlund, before we broke, you were looking at Government's Exhibit 682. Do you see it there on your monitor?

A. Yes, I do.

Q. Did you conduct the experiment depicted on this chart and photograph it before coming to court today?

A. Yes, I did.

MS. WILKINSON: Government offers 682, your Honor.

MR. TRITICO: No objection.

I didn't already make an objection to that? I'm sorry. Are we on the photograph?

THE COURT: 682.

MR. TRITICO: Okay. I'll stand on my previous objection.

THE COURT: Overruled.

You may exhibit it.

BY MS. WILKINSON:

Q. Tell the jury what they're seeing here and what you did.

A. On the left is a half section of an ammonium nitrate prill.

Again, just simply note -- notice the snowball effect of the

ammonium nitrate prill.

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On the right, over here, is a prill that has been mixed, combined with fuel oil; and then we took a half section of that prill and magnified it.

What's important here is that you notice how evenly the fuel oil dispersed, absorbed, and retained in the prill.

Q. Now, did you do anything to ensure that the prill absorbed the fuel oil?

A. All I did was combine the ammonium nitrate with the fuel oil, as I've previously demonstrated.

Q. Just poured it in?

A. Just poured it in.

Q. A group of prills.

Now, do you need a container to ensure that this combination occurs?

A. We need a container for simply the mixture so that the prills wouldn't, you know, spill out all over.

Q. What about the fuel oil?

A. And as far as the fuel oil; but the fuel oil, as soon as it

hits the prills, as I said before, will readily absorb into the prills.

Q. You told us earlier that there are different types of fuels you can mix with ammonium nitrate to make it an explosive material; is that correct?

A. That's correct.

Q. Are there commercial products that are composed of

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nitromethane, one of the fuels that you described, and ammonium nitrate?

MR. TRITICO: Your Honor, I'm going to object.

That's

not relevant to any issue.

THE COURT: Overruled. You may answer.

THE WITNESS: There is a commercial product that uses ammonium nitrate and nitromethane.

BY MS. WILKINSON:

Q. What is it called?

A. It is called -- that is called T100, and there is another commercial product called Kinepack.

Q. Can you explain to us how it works?

A. The products -- the nitromethane and the ammonium nitrate are packaged separately, both in plastic bottles. As an example, in the case of the T100, it is packaged in a plastic bottle about 2 inches in diameter and perhaps about 12 inches long.

The ammonium nitrate is cast in that bottle, and it's not completely filled with ammonium nitrate. There is some space at the top. And to make it a high explosive, you simply take the bottle of nitromethane, pour it into the bottle of the

take the bottle of nitromethane, pour it into the bottle of the cast ammonium nitrate, and the nitromethane immediately disperses into the -- into the ammonium nitrate.

Q. When you're using those commercial products, the Kinepack or the 2100, do you have to do anything other than pour the

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nitromethane into the ammonium nitrate to mix it?

A. No. The bottle of ammonium nitrate is not purposely filled

all the way, so you can, you know, throw the nitromethane in there; and then it just soaks right up.

Q. Now, why is it manufactured in two separate containers?

A. So that it can be shipped safely. If it was -- once the nitromethane is mixed with the ammonium nitrate, then it is a high explosive; and so there are shipping and storing restrictions on it. But by shipping it in two separate containers and then mixing it at the point of use, it is much easier to handle and store that way.

Q. Is there a term in the explosive industry for maintaining these two components separate before you combine them?

A. They call them binary explosives. They call them two-component explosives.

Q. Now, in the commercial explosive industry, how popular is the mixture of ammonium nitrate and fuel oil?

A. It's very popular.

MR. TRITICO: Excuse me, your Honor. Again, I'm going to object. This is not relevant.

THE COURT: Your objection is overruled.

Answer.

THE WITNESS: It's very popular, and it constitutes over 80 percent of the demand in the United States for all industrial explosives.

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BY MS. WILKINSON:

Q. Tell us why it's popular in the mining community and the rest of your customers.

A. Because of its ease of bulk handling.

Q. What do you mean by that?

A. That it can be handled in bulk, which means that it can be loaded through trucks, augered directly into blast holes, pumped directly into blast holes. This saves the packaging costs in that particular case; so the ease of bulk handling is very important.

Q. What else is important in --

A. It's very safe. Of all the explosive materials, it's the safest of all explosive materials.

Q. Why is it safe?

A. Because it requires a high explosive to detonate it; therefore, it will not -- it will not detonate or explode during normal methods of handling, transportation, or storage.

Q. So you're telling us if you put that fuel oil into that sample of ammonium nitrate prills and made an explosive, it would not detonate by itself. Is that what you're saying?

A. That's correct.

Q. Why else is ANFO popular?

A. Because of its economy. It is the least expensive of all commercial explosive materials.

Q. Did you create a chart before coming to court today

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depicting the demand trends of ammonium nitrate fuel oil in the United States and Canada?

A. Yes, I did.

Q. Can you look on your screen, and do you see Government's Exhibit 684?

A. Yes, I do.

Q. Is that the chart that you created?

A. It is.

MS. WILKINSON: Your Honor, the Government offers 684.

THE COURT: I don't understand this exhibit.

MS. WILKINSON: This is just to show, your Honor, that within the industry, ANFO is the most popular explosive, as Mr. Rydlund said.

THE COURT: What's the source of it?

MS. WILKINSON: From his -- well, I guess I should have Mr. Rydlund testify.

THE COURT: Well, yes. I don't understand the exhibit.

MS. WILKINSON: I'll lay foundation.

BY MS. WILKINSON:

Q. Mr. Rydlund, can you tell us where you got the data that you used to construct the chart?

A. The consumption of industrial explosives in the United States is collected every year formally by the Bureau of Mines and now by the U.S. Geological Survey and reported, and that's

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where these numbers came from. Every --

THE COURT: Well, what publication did they come from?

THE WITNESS: They came from -- these particular ones came from the U.S. Bureau of Mines Mineral Industries Survey.

BY MS. WILKINSON:

Q. Are all companies required to report this data?

A. They are.

THE COURT: Well, I'll sustain the objection.

MS. WILKINSON: Okay.

BY MS. WILKINSON:

Q. Once you combine the ammonium nitrate with the fuel oil, will the mixture detonate?

A. Not unless it is exploded with a high explosive -- with high-explosive booster.

Q. Let's go back to the word I just used. Could you explain to us what "detonation" means?

A. Detonation is a very violent chemical reaction within an explosive material. A tremendous amount of energy results, and it's produced because the volume of gases resulting from the explosion is so much greater than the volume of the explosive compound itself.

Q. Now, you were telling us that ammonium nitrate and fuel oil will not detonate by itself; right?

A. That's correct.

Q. Is there a term for that mixture that you make with

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ammonium nitrate --

A. It's called a blasting agent.

Q. What is a blasting agent?

A. A blasting agent is a material that requires a high-explosive booster to detonate it.

Q. Tell us what a high explosive is.

A. A high explosive is a material like dynamite, TNT, PETN composition being -- it requires -- that requires only an initiating system to explode it.

Q. Now, once you have an ANFO mixture and a high-explosive, could you then detonate or explode the material?

A. If you had initiation sys -- initiating system designed to detonate the high explosive, then that would in turn detonate the ANFO.

Q. You just described for us what detonation or explosion means. Did you review a photograph prior to coming to trial today that exhibits some of the characteristics of detonation?

A. Yes, I did.

Q. Could you look at your screen, at Government's Exhibit 692.

A. Yes.

Q. What does this photo show?

A. This photo exhibits detonation occurring in a stick of dynamite.

MS. WILKINSON: Government offers 692, your Honor.

MR. TRITICO: Your Honor, objection. It's not

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relevant to any issue in this cause of action what a stick of dynamite looks like.

THE COURT: I can't hear you.

MR. TRITICO: I object that this is not relevant to any issue in this cause of action. It's a stick of dynamite.

THE COURT: Overruled.

You're using this to simply illustrate detonation?

MS. WILKINSON: That's all, your Honor.

THE COURT: All right.

BY MS. WILKINSON:

Q. Sir, explain to the jury exactly what we're seeing here at this point in the photograph.

A. This is detonation occurring within a stick of dynamite. This photograph was taken by a very high-speed camera, because this happened so fast, you can't see it with the naked eye.

On the right-hand side, we have the unreacted stick of dynamite.

Q. Could you use your pen to demonstrate for the jury, please.

A. Oh. Right in here is the unreacted stick of dynamite.

Right here, right at this edge, is a very powerful shock front. And within the explosive itself is what we call a detonation front.

Now, this front moves very rapidly. It's moving very rapidly this way, in excess of 16,000 feet per second. And it will consume this 8-inch stick of dynamite in about 40

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microseconds. That's how fast this moves. Right behind the shock front, right in here, is what we call the chemical reaction zone. This is a very violent chemical-reaction zone. The pressures in this zone are over 1 million pounds per square inch; and the temperature in this zone is in excess of 6,000 degrees Fahrenheit.

This reaction zone supports the detonation front, is what makes it go.

Out here, we have the products of the reaction.

These

are the gases, the large volume of gases that results from the small volume of explosive that I talked about.

These gases are very hot, and they are under considerable pressure, and they are expanding very rapidly; and as they release to the atmosphere, they actually create a shock front right about the edge of the material.

Q. Now, you mentioned that this detonation was occurring -- or this photograph shows the detonation occurring midstream. Is that right?

A. Correct.

Q. Are you familiar with the term called "velocity of detonation"?

A. Yes, I am.

Q. What does that mean?

A. The velocity of detonation is the rate at which this shock detonation front moves through the explosive; and that is what

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I expressed previously, in excess of 16,000 feet per second.

Q. Is that occurring inside the explosive?

A. It's occurring inside the explosive.

Q. Now, what is the velocity of detonation for ammonium nitrate and fuel oil?

A. The velocity of detonation for ammonium nitrate and fuel oil can range between 9,000 feet per second and 16,000 feet per

oil can range between 9,000 feet per second and 10,000 feet per second.

Q. And what causes the variance?

A. The variance is caused by the size of the charge and the type of high explosive used to initiate the ammonium nitrate fuel oil.

Q. Can you clean your screen for us?

A. I will.

Q. You've just described what occurs inside the actual explosive device. Can you now tell us about what occurs outside?

A. Outside of the explosive is very hot, rapidly expanding gases -- create this shock front. And the shock front moves out in all directions at a speed of about 13,000 miles per hour.

The pressure close to the point of detonation within the shock front is again over a million pounds per square inch.

Q. Sir, could you look at your screen and Government's Exhibit 691. Did you review this chart prior to coming to court today?

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THE COURTROOM DEPUTY: It's not up there.

MS. WILKINSON: It's not up there? I'm sorry.

Whoops. There.

BY MS. WILKINSON:

Q. Do you see it?

A. Yes, I do.

Q. Sorry about that.

What does this chart depict, briefly?

A. This chart depicts the high-pressure expanding gases that I just described and the shock front that is right through here.

Q. Hold on. It's not into evidence, so you can't mark it yet. The jury is not looking at it.

A. I'm sorry.

MS. WILKINSON: Your Honor, the Government offers 691 into evidence.

THE COURT: As illustrative of his testimony?

MR. TRITICO: No objection.

THE COURT: It's received for that purpose. 691.

MS. WILKINSON: Could you clear your --

BY MS. WILKINSON:

Q. All right. Using Government's Exhibit 691, can you explain to us the phenomenon of the shock wave and what occurs immediately after the detonation?

A. Again, the high-pressure expanding gases move into the atmosphere. The shock front is created at the leading edge of

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the high-pressure expanding gases. They move the air out in all directions; and again, this shock front is moving at 13,000 miles per hour and then will have pressures in it close -- close to the blast -- close to the explosion of over

a
million pounds per square inch.

These gases -- these high pressure gases are like a giant tidal wave that just -- it just goes out and moves everything out, and it smashes and shatters objects in its way. But like those tidal waves, the further away it gets from the point of the explosion, the lower power -- it has less power; and that's because it's using all its energy to move all of this air out of the way, so that at some point in time, the shock wave, at some great distance from the explosion, will just return to the normal pressure of the atmosphere.

Q. Now, have you created another shock -- another chart -- excuse me -- that depicts the phenomenon that you just described about the blast wave?

A. The phenomenon that I just described, which is the wave of pressure, is called the blast pressure wave; and yes, I have created another chart to illustrate that.

Q. Okay. Let me show you Government's Exhibit 693. Do you recognize that?

A. Yes, I do.

Q. That is the chart you were just referring to?

A. That is the chart I've just referred to.

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MS. WILKINSON: Government offers 693 for illustrative purposes, your Honor.

MR. TRITICO: No objection.

THE COURT: Received, 693, for that purpose.

THE WITNESS: This --

BY MS. WILKINSON:

Q. Mr. Rydlund, go ahead. Tell us what this chart shows. Go ahead.

A. This chart illustrates the strength, the pressure, and the time of the blast wave over time. On the vertical ordinate, we've depicted the pressure; and time is along this horizontal.

Immediately upon detonation, we form the shock front, right there. I can't get it. Right up there is the shock front.

Right behind it comes a very high-pressure compressive wave. That's this part right in here.

Now, the shock front, as it moves out at the speed we talked about -- it has a very striking or hammering effect on the objects in front of it, just strikes it like that.

The pressure wave -- the compressive pressure wave right behind it is like a real violent push, so you strike and you push with the pressure wave.

Now, as I said before, the further we may move away from the explosive, the less power the pressure wave has, because it's using its energy to move the air out.

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And so at some point in time, it returns to normal pressure. This period of time is just a fraction of a second; but not -- what's happened is that we've moved all this air out away from the explosion, and there is nothing in there. So now all this air that's been moved out is suddenly sucked back in towards the explosion; and so now, all of a sudden, it's like a vacuum. It's just sucked right back into that area.

And that's what we call the negative phase of the pressure wave, which is area in here, or sometimes referred to as the suction wave.

So now what an object has experienced is first it was hit with this shock wave, compressive pressure wave, and now all of a sudden we've created the suction wave. And the suction wave as it comes back -- whereas we pushed the objects before, now we're coming back and we're pulling on them, we're pulling on the objects in the way.

So what we have is a pretty dynamic, I guess, 1, 2 punch. I mean you go boom, you hit it like this, and then you come back and you pull -- you pull the material like this.

And it's in this phase of where we go through that we see windows shatter and walls topple.

Q. And this is what occurs when an ammonium nitrate and fuel oil device is exploded?

A. That's correct.

Q. Would this also occur when an ammonium nitrate and

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nitromethane and fuel oil device was detonated?

A. That's correct.

Q. In fact, is this what occurs when any high explosive is detonated?

A. That is correct.

Q. All right. Let's talk a bit about what you actually need to detonate or explode ammonium nitrate and fuel oil. Can you tell us what components are necessary generally?

A. We need to detonate an ammonium nitrate fuel oil charge -- we need a high-explosive booster to detonate the ammonium nitrate fuel oil charge, and then we need an initiating system to detonate or initiate the high-explosive charge.

Q. And did you construct a chart depicting that before coming to court today?

A. Yes, I did.

Q. Okay. Could you look at your screen at Government's Exhibit 689. Does that indicate four steps that you just described?

A. Yes, it does.

MS. WILKINSON: Your Honor, the Government offers 689 for the same purpose as the two previous exhibits.

MR. TRITICO: No objection.

THE COURT: Received, 689, to illustrate.

BY MS. WILKINSON:

Q. Now on this chart, sir, you have No. 4 is ANFO. Is that

Q. NOW, ON THIS CHART, SIR, YOU HAVE NO. 4 IS ANFO. IS THAT

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right?

A. That's correct.

Q. Could that be substituted with other similar blasting agents?

A. It could be.

Q. Like nitromethane and ammonium nitrate?

A. It could be.

Q. Okay. Could you explain here what is depicted in this chart?

A. Item No. 4 is ANFO. That is our main charge. Our objective is to explode -- to explode the ANFO, to explode the charge of ANFO.

To do that will require No. 3, which is what we call the high-explosive booster. To detonate the high-explosive booster, then we will need an initiation system, which consists of a detonator, or blasting cap, and a means of initiating and a means -- and a means of initiating the blasting cap.

The whole -- the concept is that what we have arranged

here is a series of -- a systematic series of explosions to start up and finally detonate the ANFO properly.

Q. Let's start at the beginning. You mentioned blasting caps; is that right?

A. Yes.

Q. Is blasting caps -- are they also referred to as detonators?

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A. Yes, they are.

Q. Let me show you what's been marked Government's Exhibit 685. What's depicted in this exhibit?

A. This -- this is an illustration of an electric blasting cap.

MS. WILKINSON: Government offers 685, your Honor.

MR. TRITICO: I have no objection, your Honor.

THE COURT: 685 received.

BY MS. WILKINSON:

Q. All right. Tell us how electric blasting caps work and what their purpose is.

A. The objective of the electric blasting cap is to detonate the base charge of the cap. And the base charge is a high explosive called PETN.

Q. What is PETN?

A. That is pentaerythritol tetranitrate.

Q. Okay. Let's stick with the abbreviation.

A. Thank you.

Q. Tell us what PETN is.

A. PETN is a high explosive.

Q. How does it work in the blasting cap?

A. How it works in the blasting cap is that it's designed to

be exploded by another charge; and then what the PETN will do -- the purpose of the PETN in the blasting cap, of course, is to explode and detonate the high-explosive booster.

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Q. Now, where would this electric blasting cap be in the four-train system you showed in the Government's earlier exhibit?

A. This is in the initiation system and detonator portion of the four-train system. And the way it works is that we take an electric power source -- and that's out here -- and then we introduce electricity through these leg wires, right through here; and the leg wires enter into the cap; and through a very thin, bare electric wire called a bridge wire, the heat buildup is substantial enough to ignite what we call an ignition charge, or a flash charge.

Now, this flash charge is very, very sensitive. It's sensitive to just the heat buildup of the electricity going through the very small wire.

The ignition charge in turn ignites a less sensitive but more powerful intermediate charge. And then the intermediate charge is strong enough to turn around and detonate our PETN base charge, which then explodes and sets off the high explosive.

Q. Tell us how you actually initiate this electric blasting cap. How do you get it to blow up?

A. Basically, it is initiated through the use of electricity, through a power source that's introduced through the leg wires.

Q. And do you have to have that power source or the person turning on that power source right next to the blasting cap to

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make it explode?

A. Oh, no. No.

Q. How would it work?

A. You can use any means of electrical current to use -- to get to the cap.

Q. And when you use it in the commercial industry, are people a safe distance away and have a way of detonating or start initiating the electric blasting cap?

A. Yes, they do.

Q. Are there other types of initiation systems that you use in a commercial industry?

A. Yes, there are. There are also nonelectric-initiation systems.

Q. All right. On your screen should be Government's Exhibit 686. Do you see that?

A. Yes, I do.

Q. Is this exhibit of the nonelectric blasting cap you just mentioned?

A. Yes, it is.

MS. WILKINSON: Government offers 686.

MR. TRITICO: I have no objection.

THE COURT: 686 received.

BY MS. WILKINSON:

Q. All right. Tell us how the nonelectric blasting cap works.

A. Again -- get out of there -- again, the purpose is to

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detonate this PETN base charge.

Q. Let me stop you right there for a moment, if I could, sir.

Do all blasting caps have PETN in them?

A. Yes, they do; and PETN is the base charge of all blasting caps.

Q. All right. Go ahead.

A. The object is to detonate the PETN base charge and to make the high explosive explode.

Okay. To do this, we insert a piece of safety -- we insert safety fuse through the open end of the cap, which is shown right in here. Okay.

Safety fuse is inserted in there. The spit of flame from the safety fuse ignites the ignition charge, which is a very sensitive flash charge, as we talked before. The ignition charge in turn ignites or initiates the less sensitive but more powerful intermediate charge, which in turn detonates the PETN base charge, which explodes into the high explosive.

Q. Is it fair to say these two types of blasting caps operate the same way, except for the method of initiation?

A. That is correct.

Q. All right. Let's talk about the safety fuse. Look at Government's Exhibit 687. This is a chart you reviewed prior to coming to trial?

A. Yes.

Q. Safety fuses?

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A. Yes, it is.

MS. WILKINSON: Government offers 687.

MR. TRITICO: I have no objection.

THE COURT: Received.

BY MS. WILKINSON:

Q. Tell the jury how a safety fuse works.

A. Safety fuse resembles a rope. It's sold in spools, found in spools of 500 feet up to 3,000 feet.

The safety fuse has an inner core of black powder. Black powder is about 1 1/2 grams per foot.

Now, the safety fuse -- the black powder is designed to be lit at one end of the safety fuse with a flame, even a match. Okay. And then the black powder burns at a controlled rate throughout the length of the safety fuse until it spits out a flame at the very end, which the nonelectric cap that I

just had on there is designed to accept.

Now, particular to safety fuse is that once you know the controlled burning rate of safety fuse and you know how long it would take you to retreat to a -- retreat to a safe place, distance, from the minute -- from the explosion, from the minute you light the safety fuse; so knowing how long it will take you to get to another place and knowing how fast the safety fuse burns, you can determine how long a safety fuse you want to use for this explosion.

Q. Now, referring to the commercial safety fuse that's

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depicted on Government's Exhibit 687, are you knowledgeable about the speed at which that type of fuse burns?

A. This type of safety fuse burns at 2 minutes for every 3 feet.

Q. So if you wanted to get away for 10 minutes?

A. Then you would need -- for 10 minutes, then you would need 15 feet of safety fuse.

Q. Now, are there any other -- I'm going to take this off.

Are there any other initiation mechanisms for explosions that you haven't yet described?

A. There is another nonelectric system.

Q. What is it?

A. It is called a shock-tube system. And the shock-tube system utilizes a blasting cap as well. Much as what we described in the fuse cap, a thin wall of plastic tubing is inserted into one end of the blasting cap.

Inside the thin wall of the plastic tubing is dusted with a very reactive material; and this is generally called HMX, which is a very high explosive. But it's just dusted inside the tube.

To give you an idea of what I'm saying by "dusted," that means one pound of HMX will be used in 100,000 feet of this thin-walled tubing. Okay.

Through heat or impact at the other end of the thin-walled tubing, generally through the use of like a shock-

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shell primer or a blank and a Styrys gun, we introduce a shock wave to the inside of the tubing; and then the shock wave travels down the tubing supported by this dusting of the reacting material inside it. It's just like a dust explosion.

And so the shock travels all the way through the tubing, enters the blasting cap, and ignites the intermediate charge.

Q. Is there a commercial product or name for this shock-tube initiation system?

A. Primadet is a commercial name.

Q. What does Primadet look like?

A. Primadet is a blasting cap to which is affixed a long length of this thin-walled tubing. In Primadet, the tubing is

length of this thin walled casing. In addition, the casing is colored orange and it's wrapped almost like you'd find an extension cord wrapped, in a coil, like you would see it in a store. It's wrapped like this.

Q. All right. Let's go back to the four-step train, if I could republish that. It's on the screen, which is Government's Exhibit 689.

You've just described for us Nos. 1 and 2 on this train. Is that right?

A. Yes, I have.

Q. Can you now tell us what a booster is?

A. A booster is a high-explosive material. It can be cast TNT --

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Q. Could you tell us what "cast" means?

A. Okay. "Cast" means that the solid material is melted and then poured or cast into a particular configuration. But it can be TNT; it can be Composition B; it can be Pentalite, which

is a mixture of PETN and TNT; it can be dynamite; it can be water gels, such as Slurrin, Tovex; it can be certain emulsions, and it can even be detonating cord, if properly configured.

Q. All of those can be used as a booster?

A. It can be, in the detonating cord, if properly configured, yes.

Q. Showing you Government's Exhibit 690, what is this?

A. This is a roll of -- this is a spool of detonating cord and a cross-section of its makeup.

MS. WILKINSON: Government offers 690.

MR. TRITICO: No objection.

THE COURT: Received.

BY MS. WILKINSON:

Q. You mentioned that detonating cord can be used as a booster for ANFO or other similar devices. Can you explain to us how detonating cord works?

A. I can. Detonating cord is unique, in that it can be configured to use as a booster. It is more generally used to initiate other high-explosive materials as well; so it kind of has a dual -- dual purpose in there.

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But detonating cord looks like a big old clothesline, is what it looks like; and it has an inner core of PETN. Okay.

Now, this is the same PETN that's in the blasting caps, and so it is a high explosive.

And what happens with detonating cord is you detonate the PETN at one end of the detonating cord with an initiation system, as we talked before, like an electric blasting cap, for instance. And then the PETN detonates and consumes the cord as

it detonates.

The PETN will detonate at 23,000 feet per second, consuming the cord as it goes along and providing the initiation -- initiating energy of a blasting cap in all its length along the cord.

This particular -- this particular illustration, again, identifies the PETN, which is -- nuts -- which is the explosive; and then there is a textile yarn wrapped about the PETN, a plastic jacket wrapped about the textile yarn, and then more textile yarns on the outside.

Q. In what form is the PETN and the detonating cord?

A. It's in a powdery form.

Q. And does all detonating cord contain PETN?

A. Yes, it does.

Excuse me.

Q. Go ahead.

A. There are two specialty types of detonating cord that are

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used for very special applications and not manufactured generally, and they may use HMX; but they -- they are used for very high-temperature oil well applications.

Q. So they're for specific applications in the commercial industry?

A. They're for specific applications manufactured only on special order and very rare.

Q. You told us about several different items that could be used as booster for an ANFO bomb. Is that right?

A. Correct.

Q. Can you use a combination of those materials as a booster?

A. Yes.

Q. And how would that work?

A. A combination of the different high-explosive materials for a booster?

Q. Yes.

A. You could use in the particular instance that I described -- you could use a combination of detonating cord and Tovex. You could use a combination of detonating cord and TNT. You could use a combination of detonating cord and dynamite.

Q. How would you actually put the device together? Is there --

A. If I used that combination?

Q. Yes. If you used a combination, would it matter -- my real question is would it matter where you placed the booster in the

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ammonium nitrate fuel oil?

A. The booster can be placed within or adjacent to the ammonium nitrate fuel oil mixture.

Q. What if you had ammonium nitrate and fuel oil in barrels

and you had several barrels? Would you have to boost each barrel to explode it?

A. No.

Q. How would you do it -- or how could you do it? Excuse me.

A. You could do it by placing the booster within just one barrel and then having the barrels adjacent.

You could do it by placing the high explosive adjacent, the one barrel, or maybe touching three barrels and do it that way; or again, you could place the high-explosive booster in each barrel.

Q. Is there any specific recipe for building an ammonium nitrate and fuel oil device to make it properly detonate?

A. The recipe for building the device would be that it has the

proper amount of fuel oil in the ammonium nitrate and the proper high-explosive booster is used and again, the proper initiation system.

Q. What if you had a device that had ammonium nitrate and nitromethane? Would you need any specific booster to detonate that?

A. Ammonium nitrate and nitromethane in itself properly put together is a high explosive; and so a high-explosive booster

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would not be necessary in the two-component products that I described previously. They only require an initiation system -- initiating system to properly detonate them.

Q. Could you make a combination in a device and detonate it properly if you had ammonium nitrate, fuel oil, and nitromethane?

A. Yes, you could.

Q. Are you familiar with a substance called anhydrous hydrazine?

A. Slightly familiar with it, yes.

Q. Could that substance be added to an ammonium nitrate and fuel oil device?

MR. TRITICO: Excuse me, Mr. Rydlund.

I'm going to object if the witness is going to speculate at this point.

THE COURT: Do you know enough about it to be able to answer that question?

THE WITNESS: I know that anhydrous hydrazine is very corrosive and very difficult to handle, and it's been probably impractical in the commercial business.

THE COURT: That's the answer you were looking for?

THE WITNESS: Oh, I'm sorry.

MS. WILKINSON: It worked.

BY MS. WILKINSON:

Q. When you say you wouldn't use it in the commercial

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business, does that mean it could not be used in an improvised ammonium nitrate and fuel oil device?

AMMONIUM NITRATE AND FUEL OIL DEVICE:

MR. TRITICO: Same objection, your Honor.

THE COURT: Overruled.

THE WITNESS: It could be used.

BY MS. WILKINSON:

Q. Could you use a combination of all these different fuels that I've described for you?

A. You could. Nitromethane and fuel oil are not incompatible; that is, I mean, they are compatible. So you could use combinations of fuel oil and nitromethane.

Q. I don't know if I asked you this earlier, but did you tell us what you mean by "fuel oil"?

A. Fuel oil is generally referred to as No. 2 diesel oil, the same diesel oil that would be used to run diesel engines.

Q. You've described for us different types of components that you need to detonate an ammonium nitrate fuel oil device.

Prior to coming to court today, did you review a chart that lists possible bomb components?

A. Yes, I did.

Q. Could you look at your screen, Government's Exhibit 1298. Is this the chart that you examined? Do you see it?

A. No.

Q. Sorry.

A. Yes. This is the chart that I examined.

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MS. WILKINSON: Government offers 1298, your Honor.

MR. TRITICO: No objection.

THE COURT: Received.

BY MS. WILKINSON:

Q. Okay. Starting at the top there, the first component is sensitizer. Can you tell us generally what that refers to?

A. The sensitizers are items that we talked about today like fuel oil. We talked a little bit about nitromethane. Those would be the sensitizers.

Q. And the detonators --

A. And the detonators --

Q. Or actuators?

A. They would be the nonelectric or the electric initiating systems that we talked about today.

Q. And lower down there, the oxidizers?

A. The oxidizers, which would be low-density ammonium nitrate.

Q. Boosters? I think you've already described that.

A. The boosters would be the dynamite, the TNT.

Q. What type of containers could you use?

A. Basically, you just need a container to develop the configuration you want and to be able to transport the material or handle it.

Q. And looking at all these possible components, can you tell the jury based on your knowledge and expertise in the explosives -- industrial explosives field the ease or

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difficulty in obtaining these components?

A. Well, they are easy to obtain.

Q. Tell me why.

A. Because most of them are -- for instance, in -- most of them are readily available at an explosives distributor's place of business as far as the boosters and the initiating systems go.

The oxidizers are available in a number of locations.

Q. Like what -- where would you buy the oxidizer, the ammonium nitrate?

A. For low-density ammonium nitrate, of course, you could buy it from an explosive distributor as well; and in some cases, you can purchase it from an agricultural outlet.

Q. What about the detonators, the blasting caps? What do you need to purchase those?

A. To purchase those, you can -- as long as they're being purchased in state, all you need is your driver's license and to be able to sign a sheet saying that this is your address, this is my driver's license.

Q. Now, let's go to sensitizers. Where would one obtain fuel oil, if you wanted to mix it with ammonium nitrate?

A. Well, you'd obtain fuel oil from an oil distributor.

Q. What about nitromethane?

A. Nitromethane -- nitromethane could be purchased, because it's used in -- as a fuel -- I'm sorry -- it is a fuel for

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racing, racing fuel. It could be purchased from outlets that sell racing fuel.

Q. Could you also purchase it from chemical companies?

A. Chemical companies generally -- a chemical company that manufactures it would sell it to distributors and be purchased from them.

Q. What about anhydrous hydrazine?

A. I can't speak to anhydrous hydrazine.

Q. Once you -- assuming someone had all of these components, how difficult would it be to actually construct an ammonium nitrate and fuel oil device that would explode?

A. It would not be difficult. It would be rather simple.

Q. Tell me why.

A. One person can do it. It's simply a method -- it's simply a means of combining the sensitizer and oxidizer, placing the booster into the -- into the ANFO charge or into the base charge that we talked about, and then inserting the initiator.

MS. WILKINSON: I have no further questions, your Honor.

THE COURT: Mr. Tritico?

MR. TRITICO: Yes, Judge.

CROSS-EXAMINATION

BY MR. TRITICO:

Q. How are you, Mr. Rydlund?

A. Fine, thank you.

Paul Rydlund - Cross

Q. My name is Christopher Tritico. You and I have never met before, have we?

A. No, we have not.

Q. I have not had the privilege of sitting down and speaking with you before now about your testimony today, have I?

A. No.

Q. I'm sorry. I couldn't hear you.

A. No.

Q. Okay. How many times have you met with Ms. Wilkinson?

A. I have met four times with Ms. Wilkinson.

Q. And when was the first time?

A. First time I met with her was in the -- last summer.

Q. In '96?

A. In '96, yes.

Q. And when was the -- how long was that meeting? How long was that meeting?

A. That meeting was probably about five hours total.

Q. Was that here, or at your office, or what?

A. No, that meeting was in Denver.

Q. In Denver? And when was the next meeting?

A. The next meeting was in late fall or almost winter of '96.

Q. And was that here in Denver?

A. That was here in Denver.

Q. And when was the next one?

A. The next one was last weekend.

Paul Rydlund - Cross

Q. That was here in Denver?

A. That was here in Denver.

Q. And then the last one would have been, I take it, last night, or today, or --

A. The day before.

Q. Okay. You've been dealing with ammonium nitrate for how many years now?

A. 33 years.

Q. One of the things that you found over the 33 years that you've been dealing with ammonium nitrate, whether or not it was fertilizer grade or an explosive grade, is that it creates dust, doesn't it? When you open a bag, pour it out, it creates dust, doesn't it?

A. Not particularly.

Q. Do you get the prills on you when you pour it out of the bag?

A. No, not particularly.

Q. Do you find prills sticking to the bag from time to time?

A. In some cases, yes.

Q. On the pallet, one breaks open, they stick to the other bags?

A. Yes, it can be.

Q. Those prills can be sticky, can't they?

A. They could be.

MR. TRITICO: Your Honor, I'd like to ask a couple of

Paul Rydlund - Cross

questions about Government's Exhibit 69, but I will need to do that from the witness stand, if I may, to point some things out. Would I be permitted to do that?

THE COURT: Yes.

BY MR. TRITICO:

Q. Now, Government's Exhibit 69 is the bag that you testified about earlier. Is that right?

A. That is correct.

Q. Did you bring this to Denver?

A. No, I did not.

Q. Why do you suppose it's in this plastic bag here?

A. I suppose as a means of transporting it, I guess.

Q. Now, let me show you here on the bottom of Government's Exhibit 69: What do you see stuck on the bottom of this bag?

A. Looks like -- it looks -- it is ammonium nitrate prills which have absorbed a tremendous amount of moisture.

Q. And does that appear to have dust on the bottom of it?

A. It appears to be -- it has a residue of solid ammonium nitrate which has dissolved.

Q. Is that another way of saying dust?

A. No.

Q. Okay. Now, if somebody were to pick this bag up full, this

ammonium nitrate would -- might come off on their clothes and their hands; right?

A. If there was ammonium nitrate on the outside of the bag.

Paul Rydlund - Cross

Q. Just like this one, I'm talking about.

A. The residue could, yes.

Q. And the prills could?

A. If there were prills on the outside of the bag, yes.

Q. If you picked up 40, 50 bags that had residue and ammonium nitrate prills on them, you might get a lot of ammonium nitrate residue on you. Do you agree with that?

A. Depending on the amount of residue and the ammonium nitrate on the outside.

Q. Sure. And if you got sweaty doing that and your arms were sweaty and your chest and your stomach was sweaty, that would attract that ammonium nitrate onto you, wouldn't it?

A. The prills would -- the prills would tend to stick to the sweat, rather than roll off.

Q. And since they absorb water as well as they do, like you said, they might dissolve onto you. Do you agree with that?

A. If you are in a big sweat, yes.

Q. Sure. Now, your company puts out material data sheets, do they not?

A. Yes, they do.

Q. Have you read those?

A. Yes, I have.

Q. One of the things that your company cautions against when

21 THE OF THE CHANGE THAT YOUR COMPANY CAUTIONS AGAINST WHEN
you're dealing with ammonium nitrate, whether or not it's a
fertilizer grade or an explosive grade, is not to inhale the

Paul Rydlund - Cross

dust. Isn't that right?

A. That's correct.

Q. And the reason that they tell you that is because when
you're pouring the bags out, there is dust created; right?

A. There is not always dust created when you're pouring the
bags out.

Q. Now, what they caution you about the dust is that by
inhaling a great portion of it, you can get your mucous
membranes inflamed; right?

A. That's right.

Q. And it might even cause a pulmonary edema; right?

A. That's correct. I believe so.

Q. Do you know what that is?

A. I really don't know what a pulmonary edema is, except that
I know that ammonium nitrate ingested can be poisonous, yes.

Q. Another thing that your company cautions in the material
data sheets about ammonium nitrate, whether or not it's a
fertilizer grade or an explosive grade, is that too much
contact with your skin might cause irritation; right?

A. That is correct.

Q. Now, when creating -- strike that. Let me back up just a
minute.

You testified earlier about the sales of ammonium
nitrate; that some people put, if I understood you correctly --
and please correct me if I'm wrong -- some people put the

Paul Rydlund - Cross

explosive grade into the bags for fertilizer. Is that right?

A. That's correct.

Q. You don't know that every company does that and when they
do it, do you?

A. No.

Q. Could be at any given time, a company is sending out the
regular fertilizer-grade ammonium nitrate in a fertilizer bag;
right?

A. Could be.

Q. Okay.

A. If they --

Q. I'm sorry?

A. Excuse me. If they make fertilizer grade.

Q. Sure. Now, when you're mixing -- and there is a lot of
people that mix ammonium nitrate fertilizer grade with fuel
oil, like farmers, to blow stumps up and things like that;
right? That's a pretty common thing? Are you aware of that?

A. I'm sorry. Would you repeat --

Q. My question may have been inartful.

A. Did you say ammonium nitrate -- are you referring to the
dense ammonium nitrate?

Q. Either.

A. Well, fuel oil will not absorb into dense ammonium nitrate, and so you can't use dense ammonium nitrate and fuel oil to blow up stumps. It wouldn't be -- it wouldn't function as a

Paul Rydlund - Cross

blasting agent.

Q. So if I go down to my local TruValue hardware and buy a bag of ammonium nitrate, could I put fuel oil in it and blow up a stump?

A. The fuel oil wouldn't absorb into the bag of ammonium nitrate you bought at the TruValue hardware store if it was high-density ammonium nitrate.

Q. I see. And you'd have to know that before you went into that process; right?

A. Yes, you would.

Q. And that's not something you can pick up the Farmer's Almanac and figure out, is it?

A. We'd have to determine from the place where you bought it, and then it would be -- and then you could determine, once you poured the fuel on -- you could see it wasn't absorbing -- that

you had the dense material.

Q. My question to you, sir, was that's not something that is information that is published on the little recipe cards that you get at the Kroger store, is it? You'd have to know where to get that information; right?

A. That's correct.

Q. All right. Now, you were discussing earlier about the ease of mixing ammonium nitrate and fuel oil. Do you recall that?

A. I think I said "combining."

Q. Okay. Is that the same thing to you?

Paul Rydlund - Cross

A. To me -- well, to me, "combining" is just adding to it.

Q. Okay. Then what you were saying is you add them at the same time. That's the way you do it?

A. Not necessarily. You can have one, and then add the other.

Q. Which one would you add first?

A. Probably you could add the ammonium nitrate first and then pour the fuel oil.

Q. Is it your belief, though, that it's better to add them both at the same time to get a better mix?

A. Frankly, it makes -- it makes very little difference.

Q. But is it your belief that you should? That was my question.

A. No, not particularly.

Q. Okay. Now, one of the things that you need to know if you're going to initiate an ammonium nitrate and fuel oil explosion is the amount of mixture, the rate of mixture that you should use; correct? In other words, 6 percent fuel oil to

the ammonium nitrate; right?

A. Correct. 6 percent fuel oil to -- and 94 pounds -- 6 percent and 94 percent, yes.

Q. Correct. And if you get more than 6 percent, that causes the detonation, if at all, to be weaker; correct?

A. That is correct.

Q. And if you get less than 6 percent, it causes the detonation, if any, to be weaker; correct?

Paul Rydlund - Cross

A. That is correct.

Q. That's not the kind of information you're going to get at the Kroger store off the recipe card, is it?

A. No, it is not.

Q. You've got to know that going in, don't you?

A. Yes, you do.

Q. And if you didn't take care of your ammonium nitrate, or the person you bought it from didn't take care of it, it might have absorbed some water prior to the time that you poured the fuel oil in; right?

A. Yes.

Q. That can be a problem with ANFO, can't it?

A. If the moisture -- if it absorbed a lot of moisture, it could be, yes.

Q. Because when the water gets in there, it fills up the crevices you were talking about over on the electron microscope photograph, and the fuel oil can't get in there and it won't blow up right; correct?

A. The fuel oil will won't displace the water; right.

Q. And if that happens (a) you may not get an explosion at all; correct?

A. Yes.

Q. Or (b) you might not propagate all of the ammonium nitrate that you've got in whatever container you're blowing up. Correct?

Paul Rydlund - Cross

A. That is correct.

Q. And when that happens, if it explodes at all, you get a lot

of prills blowing around everywhere. Is that correct?

A. That is correct.

Q. You've seen that before, haven't you?

A. I have.

Q. And there is other reasons other than water being in the ammonium nitrate -- there is other reasons that all the prills don't propagate or explode; and that could be that you didn't get your mixture right; correct?

A. Correct.

Q. You didn't get the prills coated with fuel oil completely; right?

A. If they weren't completely -- if there were prills that were not absorbed -- or prills that didn't absorb fuel oil.

were not absorbed -- of prills that didn't absorb fuel oil,
yes.

Q. Then they might not propagate. Right?

A. That is correct.

Q. Let me ask you this: Let's say you take a barrel,
55-gallon drum, and you've got that little hole -- I think they
call it a "bung hole," on the top. It's over off to the side.
You know what I'm talking about? You've seen that before?

Is that a yes?

A. On the --

Q. On the top of the barrel, yes, sir.

Paul Rydlund - Cross

A. Yes.

Q. Okay. And you pour some ammonium nitrate in there. Okay?
And you fill it up however full you're going to make it, and
then you proceed to pour your 6 percent fuel oil, assuming that
you know that, into the hole. Now, gravity is going to take
it

down; right? Do you agree with that?

A. The gravity will force the fuel oil to go down?

Q. Correct.

A. Gravity will force the fuel oil to go down, and it will
disperse into the prills.

Q. Into the prills. But let me ask you this, now: You've
got

the thing full of ammonium nitrate. You're pouring the fuel
oil in over here. These prills over here might not get any
fuel oil on them. Do you agree with that?

A. No.

Q. You don't agree with that at all?

A. No.

Q. 6 percent will in your opinion cover every one of those
prills?

A. It will absorb into the prills.

Q. Sure. Now, you talked about other -- other additives to
ammonium nitrate that would cause it to explode. Do you
recall

that? Other than fuel oil?

A. Yes.

Q. Nitromethane, anhydrous hydrazine. Sugar could be added to

Paul Rydlund - Cross

ammonium nitrate to cause it to explode?

A. That's correct.

Q. If you added sugar to ammonium nitrate, you really don't
have an ANFO bomb, do you?

A. Not generically, no, because -- it would not be called
ANFO.

Q. Now, you discussed earlier about the covering on the prill
to keep it -- help keep it from absorbing water; and I believe
you called that the surfactant?

A. Surfactant.

Q. Is that the covering? Is that the additive on the inside, or both?

A. The surfactant is added on the outside of a prill, and there is a surfactant that is added to the solution before it's prilled as well.

Q. What's the surfactant that's added into the solution before it's prilled?

A. That surfactant is used to modify the shape of the crystals

as they form the liquid droplet going down the --

Q. I'm sorry. My question may have been inartfully phrased. What is the surfactant that is added to the solution before it is prilled?

A. It is a naphthalene sulfate.

Q. Is that a natural part of the ammonium nitrate? In other words, it doesn't generally bond with ammonium nitrate -- is

Paul Rydlund - Cross

that correct -- chemically? You have to chemically bond it to the ammonium nitrate?

A. It doesn't form a compound. It basically attaches -- the molecules attach to the ammonium nitrate crystals, but it doesn't -- it doesn't -- it's not a chemical reaction, is what I'm saying.

Q. So you have to do something to cause it to bond within the ammonium nitrate?

A. Just add it into the solution.

Q. And that surfactant can -- if too much is added, can cause the ammonium nitrate to be less explosive in an ANFO explosion; isn't that correct?

A. Well, you could add amounts -- you could add amounts of surfactant, yes, that would -- you could add amounts of surfactant that would cause the ammonium nitrate not to explode. In the process, however, if you added too much surfactant, you wouldn't be able to form -- on the internal, you wouldn't be able to form the prills.

Q. Now --

A. If you added -- I'm sorry.

Q. The surfactant on the outside is a different substance than what you talked about on the inside -- is that correct -- generally?

A. It's relatively close. It's a different type of naphthalene sulfate; and I'm not privileged to the exact

Paul Rydlund - Cross

chemical content, because it's proprietary.

Q. Sure. One of them is talc?

A. Well, the talc is not a surfactant.

Q. So we're talking about a third thing?

A. We're talking about, as I mentioned earlier -- we had a surfactant and a talc that were added to the outside.

Q. I see. Is talc just like the powder you put on your baby's

bottom?

A. Yes.

Q. Now, the talc is one of the agents that can cause the ammonium nitrate not to propagate or explode properly; right?

A. If there is too much talc, that is correct.

Q. And I guess you don't really know until you try to initiate

the explosion whether or not there is too much talc on the ammonium nitrate, do you?

A. If the ammonium nitrate meets the specifications of manufacture and it's routinely tested through the manufacturing process, you know whether it has too much talc or not.

Q. But you don't know till you try it, do you? You can't tell

by looking at it?

A. Until you test it?

Q. Sure.

A. Well, the only way -- no, you can't tell until you test it or until you tell how much talc you've used over a period of time.

Paul Rydlund - Cross

Q. Now, I want to show you what's already been introduced -- well, I don't need to show it to you.

Government's Exhibit 687. That was the safety fuse.

You recall that?

A. Yes.

Q. Safety fuse, if I understood you correctly, has a black powder filler?

A. Yes.

Q. And you light it and it burns?

A. Yes.

Q. This is like what we've all seen in the movies in the wild, wild West, when they light the fuse and it burns, except this has a coating on it; right?

A. Yes. It has a rayon extension on it. It has a fiber wrap on the top which has been dispersed in a wax bath, yes.

Q. Basically the same thing, though; right?

A. The burning idea is, yes.

Q. And the burning -- with the burning idea being the same, the one thing that we do know about safety fuse is when you light it, it creates a lot of smoke, doesn't it?

A. Actually, when you light safety fuse, you see very little smoke.

Q. Really?

A. Because most of it is contained within the core.

Q. That was -- I'm sorry. Go ahead -- I interrupted you.

Paul Rydlund - Cross

Please.

A. That's fine. I'm through.

Q. That was my next question, though, is that it's contained within the core. Does the rayon burn through?

within the core. Does the nylon burn through?

A. The nylon is scorched, or the fiber wrap on the outside is scorched. You can see where the wax is melted on the outside, and you can see a little scorching of it.

Q. But it stays roughly intact?

A. Yes, it does.

Q. And the smoke has got to go somewhere; right?

A. Again, I've never -- there is not much smoke from it.

Q. Well, whatever smoke there is is coming out the end; right?

A. Either that or retained -- retained within -- either that or retained within the wraps of the safety fuse.

Q. Now, this is creating heat as it's going along, burning along this line; right?

A. Yes, but not very much, because we only have about 1 1/2 grams per foot.

Q. It's creating heat; right?

A. It creates heat, yes.

Q. Is the heat great enough -- let's say you take that safety fuse: If -- in your opinion, if you take that safety fuse and you wrap it around in a coil like shown in the Government's exhibit and you light it and it's burning around in that coil on top of each other, could the heat start another section of

Paul Rydlund - Cross

it? Am I making sense?

A. I understand -- I understand what you're saying, and I'm going to try to answer the question this way: Normally, you don't light safety fuse in a coil. And the reason you don't is because it might have a chance where the heat would come and get into -- it could affect another piece of safety fuse; so normally, safety fuse when you use it, you don't light it while it's still coiled. It should be straightened out.

Q. One long line?

A. Well, you don't -- you don't want it in contact with another piece. I mean you could -- you know, do an L or this, but you don't want it tightly together.

Q. Exactly because of what I said: It might start another section, and then you don't get your full 10 minutes?

A. Well, that's correct.

Q. Okay. Now, you said something about buying boosters and blasting caps; and I thought I heard you say this state only requires you to give an address and a driver's license. Is that right?

A. I did.

Q. What state?

A. The sale, the commerce of commercial explosives is controlled by the Alcohol, Tobacco and Firearms division of the Treasury Department.

Q. Do you know if each state has its own other regulations

Paul Rydlund - Cross

that may exceed the ATF?

A. They all -- no, they don't. They don't. And what the ATF requires is that if explosive materials are to be purchased in-state, all that is necessary to be signed is a 4710 form, which states your name, address, show a driver's license, where you live. I think you have to declare that you haven't been convicted of a felony and don't use drugs.

MR. TRITICO: May I have just a moment, Judge?

THE COURT: Yes.

BY MR. TRITICO:

Q. Mr. Rydlund, you testified earlier on direct examination that ammonium nitrate and fuel oil mixed together is a very safe component if it doesn't have the blasting cap or anything else in it. Is that correct?

A. That's correct.

Q. Your company's material data sheets disagree with that, don't they?

A. They say that if -- if it undergoes fire or high flame and under confinement and the pressure can't be relieved that it could explode.

Q. It also says shock, doesn't it?

A. It says shock, if you could apply the proper amount of shock.

Q. Sure. And then it could propagate and explode on you?

MS. WILKINSON: Your Honor, I'm going to object.

He's

Paul Rydlund - Cross

constantly interrupting the witness.

THE COURT: Yes. Let him answer.

THE WITNESS: A shock could occur from an explosion, like a high explosive.

BY MR. TRITICO:

Q. Or a wreck? A car wreck? You're carrying it in your trunk: Hitting a big chuckhole in the highway could be enough?

A. No.

Q. Sure. And your own material data sheet also says that it might spontaneously combust; right?

A. It could spontaneously combust from heat in between -- yeah, if there was heat started in between and couldn't release, because it produces its own oxygen.

Q. Sure.

MR. TRITICO: I'll pass the witness.

THE COURT: Do you have redirect?

MS. WILKINSON: Yes, your Honor.

REDIRECT EXAMINATION

BY MS. WILKINSON:

Q. Mr. Rydlund, Mr. Tritico asked you about the likelihood of prills and the dust from prills getting on your clothing, if you were dealing with sacks of ammonium nitrate prills. Do you recall that?

A. Yes, I do.

Q. If those prills are properly stored and the bags are

Paul Rydlund - Redirect

sealed, would you expect there to be dust and prills on the outside of the bags?

A. No. No, I don't; and I believe I answered his questions saying if there were prills and dust on the outside.

Q. If one were to get ammonium nitrate prills on their skin or the dust on their skin, could it be washed off?

A. Yes.

Q. And would the water, because the prills are water soluble, be dissolved?

A. Yes.

Q. Mr. Tritico also asked you about your knowledge of the industry's practice of putting explosive-grade prills into fertilizer bags and selling them to farmers. Do you recall that?

A. Yes.

Q. And are you familiar with the Joplin, Missouri, plant of ICI?

A. Yes.

Q. Do they make high-density, or low-density ammonium nitrate prills at that plant?

A. They make low-density ammonium nitrate prills.

Q. Are those the only type of prills they make at that plant?

A. That is correct.

Q. You were also asked whether someone would know the mixture of ammonium nitrate and fuel oil that you would need to make a

Paul Rydlund - Redirect

proper explosive. Is that right?

A. Yes.

Q. Are you familiar with this book Explosives and Rock Blasting?

A. Yes, I am.

Q. Does this book have the proper mixtures that you would need for ammonium nitrate and fuel oil?

A. Yes, it does.

Q. Is this book available in libraries?

A. Yes.

Q. Are there other books you're familiar with, such as a book called Homemade C4, which gives the ratios necessary for ammonium nitrate and fuel oil?

MR. TRITICO: Objection. Leading.

THE COURT: Sustained as to leading.

BY MS. WILKINSON:

Q. What other books are you familiar with that give the mixture of ammonium nitrate and fuel oil?

A. Du Pont Blaster's Handbook; the Industrial Explosives annual -- ANFO Manual that I prepared; the new sequel to the Explosives Engineer's Handbook, which I prepared. There are a number of other publications authored by Melvin Cook, such as

The Science of High Explosives, The Science of Industrial Explosives, Explosives for North American Engineers, a number of textbooks in colleges where -- for mining engineers

Paul Rydlund - Redirect

particularly.

There is a great deal of literature out there.

Q. Do you publish a short paperback publication on your company?

A. Yes.

Q. El Dorado?

A. Yes.

Q. Do you have the combination or the percentages that you need to mix ammonium nitrate and fuel oil in that publication?

A. We show the percentages, and we also show -- and on that same chart we also show the decrease in detonation efficiency when you vary from 6 percent.

Q. Is that publication available to the general public?

A. Yes, it is. It's available to the public.

Q. You were asked whether other components could be mixed with

ammonium nitrate to create an explosive, and one that was suggested to you was sugar. Do you recall that?

A. Yes.

Q. If you were going to mix ammonium nitrate with sugar, what would you have to do to the ammonium nitrate to make it a blasting agent?

A. You would probably -- you would have to crush the ammonium nitrate and then intimately mix it, because they're both solids, to make sure you had contact.

Q. What would you need to grind or crush the ammonium nitrate?

Paul Rydlund - Redirect

A. Oh, in this particular case, you could use a hammer mill for big amount. You could use a rolling pin for a small amount of it.

Q. Why is it that you would have to crush --

A. Because you have to get the sugar intimately next to the ammonium nitrate crystals.

In the case of fuel oil, because it was a liquid, it floated in there; and as I showed in the one photograph, it was

pink. So now you have to try to do the same with sugar.

Q. When the ammonium nitrate prills are manufactured, you described a coating that is on the outside. Is that right?

A. Yes.

Q. And you mentioned to Mr. Tritico that that was proprietary information?

A. The surfactant was proprietary information by the manufacturer, the exact chemical content.

Q. Are you aware of the common practice in the industry in

Q. Are you aware of the common practices in the industry in terms of what additives are used for prills manufactured by each company?

A. Many of the companies use different additives. The additive I talked about was one used by our company.

Q. And is that information usually proprietary information for each corporation?

A. I think it -- in some case it's known in the industry which additives they use.

Paul Rydlund - Redirect

Q. Finally, you were discussing with Mr. Tritico whether ammonium nitrate and fuel oil was safe to transport. Do you recall that?

A. Yes.

Q. And are you required by the ATF and others to issue the MSDSs that Mr. Tritico referred to, giving the warnings about your products?

A. Yes.

Q. And are those warnings designed to give the worst-case scenario about your products?

MR. TRITICO: Objection. Leading.

MS. WILKINSON: I can rephrase it.

BY MS. WILKINSON:

Q. What are the purposes of providing those warnings?

A. To provide the user, or in the case of transport that -- the potential hazards that can occur.

Q. One last thing: Can you tell me what the cost of a bag of ammonium nitrate prills is?

A. A bag -- a 50-pound bag of ammonium nitrate prills would sell for \$5.

Q. And what is the going rate in your industry for a gallon of diesel fuel oil?

A. Kind of -- it's probably today -- let's see -- it's probably selling about \$1 a gallon.

MS. WILKINSON: No further questions.

Paul Rydlund - Redirect

MR. TRITICO: I have just a few, Judge.

THE COURT: All right.

RE-CROSS-EXAMINATION

BY MR. TRITICO:

Q. Now, Ms. Wilkinson was asking you about the safety to travel with the ammonium nitrate. Do you recall that?

A. Yes, I do.

Q. Do you know whether the IRA -- do you know what the Irish Republican Army -- ever heard of them?

A. Yes, I have.

Q. Do you know whether they ever use ANFO bombs or not?

A. I have read some literature and have heard some comments from people who have investigated that, so my knowledge is secondhand.

Q. Do you know how many IRA people are killed every year carrying ANFO bombs before they reach their target?

MS. WILKINSON: Objection.

THE COURT: Sustained.

BY MR. TRITICO:

Q. Now, with respect to using ammonium nitrate, Ms. Wilkinson was asking you about this MSDS sheet; and if I understand you correctly, you put this out to tell everybody about the potential hazards -- right -- of using this product?

A. That's correct.

Q. And you put out one for ammonium nitrate fertilizer and one

Paul Rydlund - Recross

out for ANFO?

A. And one out for low-density ammonium nitrate for industrial purposes, yes.

Q. Sure. Among the other things that we've already discussed, your data sheet tells people to use ammonium nitrate fertilizer or ANFO in a well-ventilated area; right?

A. That is correct.

Q. Don't pour the bags out when you don't have sufficient ventilation; right?

A. That is correct.

Q. And that way, you ensure that you don't get the skin rash and the mucous membrane infection and the pulmonary edema; right? Or you help ensure that?

A. Well, obviously a well-ventilated area, yes.

Q. And one of the other things your data sheet warns against and why they tell you to use a well-ventilated area is because your using ammonium nitrate in a non-ventilated area will cause dizziness and giddiness and might even cause you to pass out; right?

A. If you take -- if the ammonium nitrate gets -- gets into you, I mean through -- enters through your skin or you breathe -- or you breathe vapors of ammonium nitrate or you swallow ammonium nitrate, yes.

Q. You breathe too much of the vapors in, you might pass out; right?

Paul Rydlund - Recross

A. Well, there wouldn't be the vapors; but in case you got particles inside, yes.

MR. TRITICO: Okay. Thank you, sir.

Pass the witness.

MS. WILKINSON: No redirect.

THE COURT: Are you going to excuse this witness?

MS. WILKINSON: Yes, we are.

THE COURT: Is that agreed? Mr. Tritico?

MR. TRITICO: No. He can be released.

THE COURT: Released? Okay. You may step down. You're also excused now. You don't have to come back.

And I don't think we'll get very far with the next witness, so we will also excuse the jury for the day.

And of course, members of the jury, you've heard a good bit of evidence in the case; but you know, we have a ways to go. You'll hear a lot more; so of course, during the time of this recess as with all other recesses, please continue to keep open minds and continue to be very careful, not discussing anything about this trial or anything connected with the issues in this case with any other persons and to avoid anything in any form of publication or communications that could relate to the case.

Now, I want to make it clear to you that I'm not just talking about reportage of this trial. As we go along, you'll be getting more information about a number of things, just as we have heard here from this last witness about matters that, you know, may or may not directly relate to the case; but I don't want any of you to feel in your enthusiasm for your work on this jury that you'd like to add to your knowledge about explosive devices, and so forth, by going on the Internet or some other wonderful communication system to, you know, learn more about it. You're going to be restricted, you understand, to what you hear here, what you're told here about all these things that may come together and be involved in the issues.

So I do want to make that clear to you: that my instructions include staying away from anything you even hear about in connection with the testimony being presented to you in the course of this trial.

So with that, members of the jury, you're excused till 9:00 tomorrow morning. We hope you have a pleasant evening.

(Jury out at 5:00 p.m.)

I'm a little confused about the witness list as to what we have here coming up. We have from the 4-29 list some leftovers? Do we? I just would like to know who you're calling.

MR. HARTZLER: Do you want me to announce the names?

THE COURT: Yes. That would be helpful.

MR. HARTZLER: Let me just confer one quick second.

THE COURT: Sure.

MR. HARTZLER: Our order of witnesses, Gregory Pfaff will be next -- Gregory Pfaff -- Carol Swanson, Dana Rogus, Kyle Kraus, David Darlak.

THE COURT: Okay. So we're combining the 4-29 and the 4-30; and then will the others be in the order in which they're listed? I have this list dated 4-30.

MR. HARTZLER: Gary Mussatto.

THE COURT: Yes.

MR. HARTZLER: And Glynn Tipton. That's the order, unless something should change; but that's our intent.

THE COURT: I understand. I just wanted to get an idea here so that we can be prepared to move along with it.

Good. All right. Recess.

(Recess at 5:02 p.m.)

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PLAINTIFF'S EXHIBITS

Exhibit	Offered	Received	Refused	Reserved	Withdrawn
69	6031	6031			
674	6026	6026			
675	6029	6029			
678	6036	6037			
681	6039	6040			
682	6041	6041			
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Exhibit	Offered	Received	Refused	Reserved	Withdrawn
687	6062	6062			
689	6056	6056			
690	6065	6065			
691	6052	6052			
692	6048	6049			
693	6054	6054			
1298	6071	6071			

DEFENDANT'S EXHIBITS

Exhibit	Offered	Received	Refused	Reserved	Withdrawn
P1					
P1	5961				
P42	5968	5968			

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REPORTERS' CERTIFICATE

We certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter. Dated at Denver, Colorado, this 30th day of April, 1997.

Paul Zuckerman

Kara Spitler