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14 * * * * *

15 PROCEEDINGS

16 (In open court at 8:45 a.m.)

17 THE COURT: Be seated, please.

18 Good morning.

19 MR. TIGAR: Mr. Woods is interviewing the
witnesses

Nichols' 20 who are in custody this morning. And it is with Mr.

21 consent that he is not present for a portion of the
morning.

22 THE COURT: All right. Thank you. You wish
me to

23 advise the jury that he's going to be absent for a
while?

24 MR. TIGAR: I don't think it's necessary, your
Honor.

25 THE COURT: All right.

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1 MR. TIGAR: Unless that's your normal
practice.

2 THE COURT: I'll do whatever you prefer.

3 MR. TIGAR: No. I think we can just leave it.
He'll

4 be back.

5 THE COURT: Okay. Thank you. Let's bring in
the
6 jury.

7 (Jury in at 8:46 a.m.)

8 THE COURT: Members of the jury, good morning.
9 We're ready to proceed with the taking of
additional
10 testimony in this case and call for the next witness.

11 MR. TIGAR: Call Michael Abrams.

12 THE COURTROOM DEPUTY: Would you raise your
right
13 hand, please.

14 (Michael Abrams affirmed.)

15 THE COURTROOM DEPUTY: Would you have a seat,
please.

16 State your full name for the record and spell
your
17 last name.

18 THE WITNESS: Michael Abrams, M-A-B-R-A-M-S
(sic).

19 DIRECT EXAMINATION

20 BY MR. TIGAR:

21 Q. Dr. Abrams, I'm going to ask you some questions
about the
22 effect of methamphetamine on people, but first, I'd
like to
23 talk about your qualifications. Are you a medical
doctor?

24 A. Yes.

25 Q. Where did you graduate from medical school, sir?

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Michael Abrams – Direct

1 A. University of Iowa.

2 Q. When was that, sir?

3 A. 1967.

4 Q. When was the first time that you had an opportunity
to
5 treat people who had ingested or taken methamphetamine?

6 A. Probably early 70's.

7 Q. Where was that, sir?

8 A. At Broadlawns Medical Center.

9 Q. Now, what is your position today, sir?

10 A. My title is Director of Combined Medical
Specialties.

11 Q. And where is the Broadlawns Medical Center?

12 A. It's the public county hospital in Des Moines,
Iowa.

13 Q. Well, let me start then with your -- when you got
out of
14 medical school, did you practice -- have a family
medicine

15 practice?

16 A. I took a family prac -- a rotating internship at
University

17 of California--Sacramento and then went to Broadlawns
Medical

18 Center to complete a family practice training program.
19 Q. And did there come a time when you became Director
of
20 Emergency Medical Services?
21 A. That would be in August, 1972.
22 Q. And as Director of Emergency Medical Services, did
you
23 begin to acquire some experience in the treatment of
24 methamphetamine usage and addiction?
25 A. Yes.

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Michael Abrams - Direct

1 Q. Will you tell the jury what -- what that was.
2 A. Well, in -- in emergency medicine, patients are
brought
3 there who may be psychotic or overdosed or have bad
reactions
4 from a multiplicity of medications, any addictive
drugs.
5 Amphetamines were popular in those days, and we didn't
have the
6 drug screening to detect all drugs. But that was my
first
7 experience of treating overdoses was in the early 70's.
8 Q. And moving then to 1975, did you have some role
with
9 respect to setting up a program about the Polk County
Jail?

of
--
10 A. Yes. I was asked by the City Council and the Board
11 Supervisors Health Planning Council to devise a medical
12 medical psychiatric program for the Polk County Jail.

13 Q. Did there come a time, sir, when you became board
14 certified?

15 A. In what specialty?

16 Q. In addiction medicine.

17 A. Yes.

18 Q. And when was that?

19 A. That was in 1987.

20 Q. In order to become board certified in addiction
medicine,
21 what did you have to do?

22 A. You have to have at least five years of clinical
experience

23 in dealing with addicted patients, and then you have to
have

24 some continuing education hours of courses, and then
you have

25 to take an all-day-long board test.

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Michael Abrams - Direct

1 Q. And in 1990, did your responsibilities change?

2 A. In 1990, we were seeking -- the hospital was
seeking a -- a

3 physician who would direct the combined medical-
psychiatric
4 addiction services at Broadlawns, and I was part of
that
5 recruiting group. We didn't find anybody, so I was
asked if I
6 would take on that responsibility and give up the
emergency
7 medicine and which I did in 1992.

8 Q. And in 1992, did you then get the title Director of
9 Combined Medical Specialties?

10 A. Yes.

11 Q. And what are your responsibilities today as
Director of
12 Combined Medical Specialties at Broadlawns?

13 A. It's to direct patient care, evaluation and
diagnosis,
14 teaching, administration, and directing programs.

15 Q. In addition to your responsibilities in the care
and
16 treatment of patients and in diagnosis, have you done
teaching?

17 A. Yes.

18 Q. In what capacity or capacities have you done
teaching, sir?

19 A. Medical students, physicians, nurses, physician
assistants,
20 physician assistants students, nurses, nurses students
and
21 chemical dependency counselors and then for
communities.

22 Q. Do you see patients on a daily basis?

23 A. Yes.

24 Q. And if we were to ask you today about how many
patients you

25 have seen who you've treated for methamphetamine usage,
how

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Michael Abrams – Direct

1 many would that be, sir?

2 A. Which my direct responsibility would be between 2-
to 300

3 per year. Indirectly through the jail program, we have
about

4 2- to 3,000 that are admitted there per year which I
have

5 overall responsibility of directing protocols and care
through

6 the physician assistants that we have there. And then
in ICU

7 and the other med/surg services and the emergency
department, I

8 provide consultations for the physicians in directing
care for

9 those patients and other patients that need my
consultation.

10 Q. When, sir, do you -- let me ask you, do you
identify a

11 certain point in your treatment of patients, in seeing
patients

12 at which you observed an increase in the amount of
13 methamphetamine usage we are seeing?

14 A. In Iowa, we started seeing some numbers in the
early 90's,
15 and in '93, it got to an epidemic type of numbers where
we've
16 seen several per week, both in the jail setting and
emergency
17 setting on the inpatient unit.

18 Q. And based on that, did you do further reading and
study
19 about the effects of methamphetamine usage?

20 A. Yes.

21 Q. And are you prepared to tell us about that today?

22 A. Yes.

23 Q. I'd like to place up on the machine, but for your
eyes only
24 at the moment, what I've marked as Defendant's Exhibit
D6.
25 Would that drawing help you to explain the effect of

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Michael Abrams - Direct

1 methamphetamine on the brain and the central nervous
system?

2 A. Yes.

3 MR. TIGAR: We offer it for demonstrative
purposes.

4 MR. RYAN: No objection.

5 THE COURT: Received for that purpose. You
may show 6 it.

7 MR. TIGAR: All right. Show it.

8 BY MR. TIGAR:

9 Q. Doctor, the jurors are now looking at this diagram,
the
10 same one that you and I are. And it's got some
scientific
11 names of things. But can you tell us specifically what
this
12 brain reward circuit -- what is this showing us here?

13 A. This has come about -- just to give you some
background --
14 out of about 20 years of neuroscience research on both
animals,
15 rats, primates, monkeys, and trying to decide exactly
where
16 addictive drugs work in the brain. So this has been
many years
17 of neuroscience research out of NIDA and NIH and out
East.

18 Q. Doctor, before we continue, let me ask you, is it
possible,
19 in your view, to do a clinical trial of the effect of
20 methamphetamine where you'd use human subjects and see
what it
21 does to them?

22 A. No. That's not allowable. It's unethical at this
point
23 because methamphetamine is a dangerous drug and it's a

Schedule

24 2 drug, and we can't take a drug and give it to
patients that
25 are Schedule 2 at high doses.

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Michael Abrams – Direct

1 Q. Okay. So what we're seeing here, this is a cross
section
2 of the human brain; right?

3 A. Yes.

4 Q. Now, as human beings, do we have a mechanism that
tells us
5 that we should repeat certain kinds of behavior?

6 A. Yes.

7 Q. And for example, if -- if we eat food and we get
pleasure
8 from eating the food, do we have a mechanism that tells
us,
9 well, we should do that a certain number of times?

10 A. Yes. Yes.

11 Q. Now, can you -- can you identify using this and,
using the
12 example of eating food, how the human brain sends out
the
13 signal to us, well, time to eat again. That was a good
thing

14 for -- a healthy thing for the organism to be doing?

15 A. Yes.

16 Q. Would you please do that, sir?
17 A. Do I just point at this?
18 Q. Yes. You can just point at it, or using the pen
you have
19 there that has a wire on it, you can actually draw,
reach
20 underneath the glass and draw on the screen, whatever
you would
21 prefer to do.
22 A. This area in the middle part of the brain and down
through
23 here is what are called the mesolimbic system or the
survival
24 part of the brain. This -- areas right in through
here, these
25 red, green, and blue spots, these are the areas that
are the

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Michael Abrams - Direct

1 diet center, the water center, and the sexual drive
center.
2 Q. Okay. So the red one I'm pointing to with the pen
here,
3 the green is the little nubbin here, and the blue looks
-- it
4 looks like a little kidney bean in there.
5 A. Yes.
6 Q. Shaped thing. Okay.

our
spot here
rest of
here,
reinforcement

7 A. So these are the areas that monitor what goes into
8 body, what stimuli come in; and this -- if this red
9 is stimulated and we get a good feeling throughout the
10 the brain, then the rest of the brain tells this thing
11 This is good, repeat this behavior. So this is a
12 reward behavior.

should
of the
carries

13 Q. Okay. And should I -- should I leave this on, or
14 we -- do you have a diagram that shows the production
15 substance that spreads through the brain and -- and
16 that message?

is a --
cell

17 A. These -- the nerve cells don't have an electrical
18 connection between the cells themselves, so we -- there
19 a chemical called a neurotransmitter that goes from one
20 and talks to the other cell.

21 Q. Okay.
22 A. And the main -- and the main --
not
for
another,

23 Q. If I could stop you right there. So the cells are
24 hooked up so that electrical charges pass. In order
25 information or for a stimulus to go from one cell to

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Michael Abrams - Direct

1 there's something called a neurotransmitter?

2 A. Correct.

3 Q. And that's -- what is that? A chemical substance?

4 A. That's a chemical substance, yes.

5 Q. And are you able, through your research, to
identify what

6 that chemical substance is?

7 A. Yes.

8 Q. Okay. What is that chemical substance?

9 A. That is called dopamine.

10 Q. Dopamine, D-O-P-A-M-I-N-E?

11 A. Correct.

12 Q. Okay. Well -- let me put up again -- take this off
and put

13 up for your eyes only -- is this a chart that was
actually

14 taken from a popular magazine?

15 A. Yes.

16 Q. But does it accurately show the release of dopamine
and how

17 it spreads through the brain and what it does?

18 A. Yes.

19 MR. TIGAR: This is D12. We offer it for

20 demonstrative purposes.

21 MR. RYAN: No objection.

22 THE COURT: Received for that purpose.

23 BY MR. TIGAR:

24 Q. I'm going to show you the top portion here; and I
know the

25 printing is going to be too small to read on the
screen, but

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Michael Abrams - Direct

1 what are we -- what are we seeing here?

2 A. This is -- it just shows what the nerve
transmission is in

3 the brain. Take two cells out of the brain --

4 Q. Okay. These are these two cells here; right?

5 A. Right. There's an electrical transmission that
goes down

6 one cell. And then these little tentacles. When it
talks to

7 the other cell, then it's a chemical reaction. That's
what

8 these little -- this spot here is in this top cell.

9 Q. Okay.

10 A. This bottom part is this bottom cell, and this
little box

11 here is what this is over here. These little red dots,
those

12 are the neurochemicals that show the transmission goes

from one

13 cell to the other.

14 Q. Okay.

15 A. And this is at a rate like 270 miles an hour.
That's how

16 rapid that is.

17 Q. So let's -- let's back up a little bit. If the
body gets a

18 stimulus, such as eating food, dopamine is produced; is
that

19 right?

20 A. Yes.

21 Q. And that transmits the sensation to the receiver
cell?

22 A. Yes. Dopamine goes across that membrane and tells
that

23 other cell, This is a good feeling, tells the other
cells in

24 the brain, Reinforce this feeling.

25 Q. Okay. And -- now, does -- what happens then to
this

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Michael Abrams - Direct

1 dopamine that is released that tells the brain this is
a good

2 feeling?

3 A. The dopamine is then uptaken by this other cell and
tells

then 4 the cell what to do; and then whatever is left over,

So the 5 the -- the brain is a good utilization of chemicals.

again to 6 original cell where it came from, it soaks it back up
7 reuse it again.

8 Q. Okay. And is the dopamine reabsorbed?

breaks 9 A. That's part of it. And then there's an enzyme that

there's 10 down that dopamine. If there's too much excreted, then

11 an enzyme that breaks it down, also.

12 Q. What is that enzyme called that breaks it down?

enzyme. 13 A. Well, it's a fancy term, called monoamine oxidase

epinephrine, 14 I mean, it breaks down amines like dopamine,

15 adrenalin. Those sorts of neurochemicals.

16 Q. Okay. Can we call it MAO?

17 A. MAO would be fine.

18 Q. Okay. And that's the enzyme?

19 A. Yes.

happens if 20 Q. So let's -- let's go back to the dopamine. What

getting 21 this dopamine, this chemical in your brain, keeps on

22 produced, if there's too much of it?

overexcites 23 A. Then it overrides the cells here and excites --

what's 24 the brain tissue 100 plus times or more, depending on
25 stimulating it.

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Michael Abrams – Direct

if 1 Q. And what sorts of symptoms would you begin to see
2 somebody's got too much of this dopamine in their
brain?

3 A. One of the first signs you would see, you would
start to 4 talk fast and blah, blah, blah, blah, real quickly, and
then I

5 would start to move quicker. I would be faster,
responding to 6 things around me. I would move quickly. I would try
to do a

7 lot of things in a hurry. And the dopamine increases
your 8 sensitivity to your muscle cells, your other brain
cells, makes

9 you things do (sic) a lot more rapidly than normal.

10 Q. And what happens then if the MAO, the enzyme that's
11 supposed to break it down and make it goes (sic) away
-- if you

12 inhibit that, if you stop that from breaking it down?

13 A. That would be another reason to increase the
dopamine; and

14 also, it makes people feel good. If you feel good just
after a

really -- 15 meal, then if you increase the dopamine, then you
thoughts. 16 later. You have no depression, you have no negative
People 17 Everything is wonderful. The world is wonderful.
feeling 18 around you are wonderful. So there's also an emotional
19 besides the motor activity.
part of 20 Q. Okay. Now, I'm going to come down to the bottom
dopamine, just 21 this chart, and let's see what cigarettes do to
happens 22 to use a drug that some people know about. What
23 with -- with cigarettes?
stimulating 24 A. Nicotine is a drug that does have activity and
being, 25 dopamine and serotonin and increases the sense of well-

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Michael Abrams - Direct

them 1 increases one's mood, makes them feel better. It gives
2 some stimulation.
before and 3 Q. And would that -- if a person has never smoked
feeling 4 they light up a cigarette, would that account for that

5 of light-headedness or giddiness?

6 A. That would be some of the effects, yes.

7 Q. Okay. Now, I'd like to put up -- let's look at the
cocaine

8 effect. What does cocaine do to you in terms of this
dopamine?

9 A. Cocaine increases the dopamine across this membrane
by

10 blocking the re-uptake after it goes into the cell. It
blocks

11 this uptake into the cell, so it increases more
dopamine across

12 this membrane here.

13 Q. And that -- does that account for the cocaine high?

14 A. Yes. It also increases norepinephrine and dopamine
and

15 serotonin. But dopamine is the main drug it increases
and

16 gives the euphoria, the high feeling.

17 Q. Okay. Now I'm going to move over to amphetamines.
See if

18 I can put this up here. Now, what -- do amphetamines
operate

19 the same as cocaine?

20 A. They have the same impact, increasing dopamine, but
they do

21 it by different mechanisms.

22 Q. All right. What's the mechanism by which
methamphetamine

23 operates on this hypothetical brain or this model of a
brain

24 cell here?

25 A. Dopamine -- methamphetamine works on this part of
the nerve

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Michael Abrams - Direct

1 cell to increase these dopamine vacuoles directly. It
is

2 thought to increase the synthesis. It also tends to
block this

3 MAO enzyme that we talked about earlier. It damages
the cell

4 membrane here to release more. More dopamine. And if
you have

5 so much dopamine in the system, then it stops re-
uptake, just

6 the fact there's so much. It overrides the cell and
goes out

7 into the other parts of the brain tissue.

8 Q. Now, sir, what kind of a dosage of cocaine does --
does it

9 take for a person to get that cocaine high?

10 A. It depends on how many times they use it and what
their

11 genetics are. But if an individual would take maybe
that

12 30 milligrams of cocaine, the first time, they would
get a

13 feeling of high or euphoria like if someone smoked a
couple

14 cigarettes, the first time, they might feel giddy and

high.

15 Q. All right. And what is the difference in terms of
effect

16 between cocaine and methamphetamine?

17 A. The cocaine isn't as potent a stimulator of the
dopamine as

18 the methamphetamine. The -- if you call it
equivalents, then

19 methamphetamine may be 10 to 20 times more potent per
dose to

20 increase the dopamine chemical in the brain cells.

21 Q. And in terms of -- is -- is methamphetamine
addictive, in

22 your opinion?

23 A. Yes. These are -- "addictive" is an old term. We
-- with

24 this new research, we're looking at terms like
"reinforcement

25 reward system." When these drugs are put into the
brain and

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Michael Abrams - Direct

1 these -- the cells want this drug back so we call it
"reward

2 reinforcement circuitry system." In the old
terminology, that

3 would be an addiction terminology; that this drug will
addict

4 the brain. It addicts each individual cell in that red
spot

5 that we talked about earlier.

6 Q. Do you do teaching of law enforcement people and
family
7 members, other people, about what the symptoms are of
this
8 methamphetamine usage?

9 A. Yes.

10 Q. And have you prepared a chart about the effects of
11 methamphetamine usage?

12 A. Yes.

13 Q. All right. I'm going to show you what -- first for
your --
14 only. What we've marked as Defendant's Exhibit D10.
Is that
15 the chart that you prepared?

16 A. Yes. This is one of the charts.

17 MR. TIGAR: Okay. And we offer that for
demonstrative
18 purposes.

19 MR. RYAN: No objection.

20 THE COURT: Received.

21 BY MR. TIGAR:

22 Q. Now, Doctor, what we are seeing on the screen,
you've
23 titled "Malignant Methamphetamine Addiction Syndrome,"
and
24 could you go through the parts of this and explain to
the jury
25 what is this green arrow here?

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Michael Abrams – Direct

1 A. When we talk about addicting drugs and causing a
rush, when
2 a person takes a -- smokes a drug that's addictive,
like
3 methamphetamine or cocaine, if they inject it, they get
a rush.
4 They may get increased blood pressure, pulse. They
feel high.
5 It may last anywhere from 8 to 10 minutes to an hour or
two.
6 It's a real high, intense feeling; and that feeling
kind of
7 levels off and they feel euphoric and good, and that's
what
8 these signs and symptoms on the left side is. And this
is the
9 dopamine levels in the brain. As the dopamine levels
go up,
10 then these signs and symptoms go up in that individual.
11 Q. Now, how -- how do people take methamphetamine?
What do
12 they -- how do the users put it in their body?
13 A. They put it in different methods. Eating it,
drinking it,
14 snorting it, smoking it, injecting it.
15 Q. Okay. Now, in this chart -- so this line across
here,

16 that's the normal level of dopamine; right?

17 A. That would be --

18 Q. Is that what it is?

19 A. The normal background that we all would have.

20 Q. Right. And that's as -- as you explained, that's
part of

21 our -- the body telling us what kind of behavior we
ought to

22 engage in in order to procreate, keep ourselves fit,
keep

23 enough water in the system and so on?

24 A. That would be correct.

25 Q. Okay. Now, as a person ingests on this up level
here, you

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Michael Abrams - Direct

1 have the word "paranoid." What does that mean?

2 A. That's an effect on the brain where people get
3 hypervigilant, hypersensitive and they see things that
aren't

4 there or they feel they are being followed. And it's a
very

5 pervasive symptom because it disturbs the person's
life, every

6 minute of the day. And they usually seek medical or
7 psychiatric attention for that symptom if it's that
bothersome,

8 but it's usually they see things that really aren't

there, but

9 the brain perceives them as they are really there.

10 Q. And you've got a list of things here. Can you just
read

11 those off and tell us what those mean, going up the
chart,

12 starting with "increased energy."

13 A. Well, as we increase the dopamine levels small
amounts at a

14 time, we have increased energy and this euphoria, this
good

15 feeling. You may not sleep for a day or two.
Hyperkinetic is

16 motor activity where the arms and the legs and the
tongue and

17 everything is -- moves quicker and faster.

18 As you move up beyond that, what we call the
-- the

19 preaddictive level, then you can get into the danger,
malignant

20 part of methamphetamine. And this is indeed malignant
because

21 this is where people kill themselves, they kill other
people,

22 there's domestic violence. They will do very strange
and weird

23 things and -- and my terminology, people get killed or
hurt in

24 this phase; and this is -- this is malignant phase.

25 Q. Now, that -- you've then -- you have your green
arrow that

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Michael Abrams - Direct

And the 1 goes up, and then you have this red jagged line here.
2 green arrow, is that the rush, the quick high?
3 A. That's the quick high.
does 4 Q. Okay. And then the red, you say "tweaking." What
5 that mean?
"Tweaking" 6 A. This is just a -- it's not a medical term.
7 means the people are amped like an amplifier. You
tweak an 8 amplifier, you turn it up and it's very intense. And
the 9 individual may run out that dose of methamphetamine,
for 4 to 10 12 to 36 hours; and their mood may go up and down, and
they may 11 want to crave more drug. They may have a mood change,
all 12 within this tweaking period. And different times and
different 13 people tweak in different ways, depending on how long
they have 14 been on the drug and how much dose they have taken.
dose takes 15 Q. Let me stop here for a minute. You say that the
smokes a 16 a certain amount of time. For comparison, if somebody

17 cigarette, a person that doesn't smoke very much, how
long does
18 the dopamine cycle that a cigarette produces last?
19 A. It may last three or four hours, two to four hours.
20 Q. And how about if a person ingests cocaine? How
long does
21 that effect last?
22 A. That may last eight to ten minutes.
23 Q. Okay. And how about a person who ingests
methamphetamine?
24 A. That may last four to 24 hours.
25 Q. Now, is methamphetamine a more economical drug for
the

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Michael Abrams - Direct

1 abuser than cocaine?
2 A. By economics, you mean how much they spend?
3 Q. How much they spend for it.
4 A. The current pay for a gram of cocaine and gram of
5 methamphetamine is like \$100. And that would be like
three
6 Tylenol tablets, so this is part of the reason why the
am --
7 methamphetamine is increased. It is "economical,"
quote,
8 unquote, and they can buy a gram of methamphetamine
that may
9 last them all week. If one buys a gram of cocaine, it

may last

10 them just a few hours.

11 Q. And is it possible to make methamphetamine in a --
in a

12 fairly unsophisticated laboratory?

13 A. Yes.

14 Q. And cocaine is derived, though, from a plant, isn't
it?

15 A. Yes.

16 Q. And that -- that's a plant that's grown mostly
outside the

17 United States?

18 A. Yes.

19 Q. Now looking at this red line here, what does that
describe,

20 this jagged, red line?

21 A. The amounts of dopamine are still fluctuating on --
because

22 there's still meth effect in the brain. It's not --
there's

23 not a real smooth effect. Like you might see from a

24 high-blood-pressure pill, there might be a smooth
effect. With

25 methamphetamine, your mood usually goes up and down.
Again,

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Michael Abrams - Direct

1 this is based on patient behavior, not on patient drug

study in

2 the brain. So the -- the -- they become what we call
3 cyclothymic. They become moody, and they may feel good
and
4 depressed all within a few hours. They may have mood
swings.

5 So this is what this line is trying to show that
individuals

6 when they're -- when they're coming off the meth and
when they

7 are high and coming off, that these levels are moving
up and

8 down. It's not a nice, steady flow or nice, steady
feeling.

9 Q. Okay. And then you've got a blue arrow; and that
-- you

10 say the crash. Is that what happens if you don't get
any more?

11 A. If -- if the individual has burned themselves out
taking

12 methamphetamine, they have depleted their dopamine and
they

13 can't get another source of medication or source of

14 methamphetamine and they have been on -- a run for
several days

15 or several weeks, we call that a crash, meaning that
the

16 individual just slows down and sleeps and then wants to
eat a

17 lot of food and maybe a little bit irritable, but they
feel

18 like they have got ten cases of the flu. There's all
different

off the 19 kinds of descriptions of how people feel when they come
dopamine 20 methamphetamine, and those symptoms are due to the
21 depletion in the brain.

22 Q. And the green line is what, starting over again?

or 23 A. Yes. No one wants to feel that way, anxious, sad,
starts up 24 depressed, so they -- that is the reward cycle. That
cycle 25 the -- to take the drug again. And then this repeated

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Michael Abrams - Direct

addiction 1 over many times, then that's what we say starts the
2 component of the brain change.

for your 3 Q. Sir, I'm going to show you another chart -- again

Defendant's 4 eyes only -- that I've marked -- we've marked as

that a 5 Exhibit D5. Now, it's kind of hard to read, but is
6 chart that you prepared?

7 A. Yes.

for a 8 Q. And is this -- have you been working on this chart
9 long time?

or four 10 A. About three or four years. I update it every three
11 months.

right? 12 Q. So it's gone through a number of drafts; is that

13 A. Yes.

14 Q. Is this your latest draft of your chart?

15 A. This is my latest one.

on the 16 Q. Would that help to illustrate the process of effect
17 brain of continuous methamphetamine usage?

disease 18 A. Yes. This is to depict the natural history of the
19 process from the beginning to the end of
methamphetamine.

20 MR. TIGAR: We offer it for demonstrative
purposes.

21 MR. RYAN: No objection, your Honor.

22 THE COURT: Received for that purpose.

23 BY MR. TIGAR:

looking 24 Q. Now, I'm going to zoom in on parts of it. But

sort of 25 here, we've got a yellow, a green, a magenta, and a

12985

Michael Abrams - Direct

what 1 burnt orange here and then an upward arrow. What --

2 generally does this represent?

3 A. As physicians, we like to categorize disease
processes to

4 simplify for patients where they are at in that
process, and it

5 also is used as a diagnostic tool with patients so you
can show

6 them the graph and you ask them where you're at on this
disease

7 process.

8 This helps in making the diagnosis, patient
education,

9 and then for treatment process. Somebody in this
stage,

10 obviously, is -- Stage 1 -- is not going to have as
much

11 difficulty as the person in Stage 4 in treatment.

12 Q. Right. Now, Stage 1 of methamphetamine usage, we
see some

13 things like stronger, alert, high energy, increased

14 socialization. Those don't look all bad.

15 A. No. This is the honeymoon phase of
methamphetamine. This

16 is the feel-good phase.

17 Q. Now, what -- a person in this phase, would they be
able

18 to -- would they be able to go to work and work in a
job?

19 A. Yes. This would be a housewife who wants to get
everything

20 done and go to three or four meetings and be home at
night when

house is 21 the husband gets home and everything looks fine, the
hours or 22 cleaned up, the truck driver that may want to go extra
this 23 the double-shift person that wants to work longer. In
24 phase, it increases their total performance.
office? 25 Q. How about somebody that worked in a store or an

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Michael Abrams - Direct

stage? 1 What would their employer notice about them in this
morning. 2 A. They would maybe get to work earlier in the
be 3 They would get organized and get their work done. They may
looking 4 would get organized and get their work done. They may
get a lot 5 losing weight and people around them would say, you're
this 6 much better. You're -- you're trimming up. And you
-- the 7 of social reinforcement in this phase.
delusions, 8 Q. All right. Let's turn over now to Stage 2. Across
Within 9 whole process -- that is to say, from a Stage 1 to the
10 symptoms that you've talked about before such as
hallucinations -- how long does that take? Or can it?

any 11 a range? Because I understand we're not talking about
12 particular person here. Just in your experience.
13 A. In this area here, small doses, they usually do not
have 14 hallucinosis and paranoia. Again, depending on the
genetics of 15 that individual and what other addictions or what other
16 illnesses they have, they can just be "normal," quote,
unquote.
17 They may get delusional on a first dose. Usually,
though, that 18 is not true. The delusions and paranoia usually start
in the 19 Stage 2, to 3, to when they get their doses up to a
gram or 2 20 grams a week.
21 Q. You talked about genetics and age. Are there
certain ages 22 at which one is more susceptible to these adverse
effects such 23 as delusions, hallucinations and so on?
24 A. The most vulnerable time, adolescence when the
brain is 25 trying to differentiate who it is and who the person
is. And

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Michael Abrams – Direct

1 if they take medicator -- or methamphetamine during

these

2 times, small doses can make adolescents more delusional
than,

3 say, a 35-year-old adult.

4 Q. What do you identify as the adolescent period in
terms of

5 age?

6 A. 12, 13, to 17 to 18.

7 Q. Okay. And what about people in the 20's -- in
their 20's?

8 A. They may be able to tolerate a little bit more drug
because

9 the brain has more maturation after age 21.

10 Q. And does methamphetamine interact with other things
like

11 painkillers?

12 A. Yes. They would -- painkillers also enhance
dopamine. So

13 methamphetamine would enhance -- they would enhance
each other.

14 Q. So if a person were taking painkillers for some
chronic

15 condition, that interaction might occur?

16 A. That would occur, yes.

17 Q. Would occur. All right. Let's go back in to Stage
2.

18 Just would you go down these symptoms. Positive
reinforcement

19 of meth. Is that what you were talking about before;
that is,

20 you -- the honeymoon period?

21 A. Yeah. They -- they really got a tremendous impact
on those
22 smaller doses, so if -- part of it is if the smaller
doses
23 really made me feel this good, then I would want to
take a lot
24 more so I could feel much better. Part of that process
-- this
25 is where the addiction phase starts, in this green
area, in

12988

Michael Abrams - Direct

1 that the brain is trying to shut down the dopamine so
the
2 person has to take more methamphetamine to get more
dopamine to
3 get that original euphoria.

4 Q. Now, the next one you have down is stay awake for
days.

5 Assume that -- well, I don't assume. At some point, if
you had
6 an all-night methamphetamine situation, does the body
crave
7 sleep?

8 A. If you're on the methamphetamine, the dopamine is
going,
9 they wouldn't crave sleep. The dopamine is -- is
running the
10 person.

would 11 Q. And if the -- the level of dopamine then decreases,

12 the body crave sleep?

would want 13 A. Yeah. As the dopamine goes down, yes, the body

14 to sleep, its normal circle.

the 15 Q. During the time that your -- that the body is under

events that 16 influence of this drug, what happens to memory of

17 you saw during that time?

involved. 18 A. There is a -- several cognitive factors that are

19 Q. You say cognitive factors?

20 A. Cognitive or intellectual thinking --

21 Q. Okay.

may be 22 A. -- higher-brain centers or aptitude, performance,

they did 23 blurry in that they may not be able to do the things

aptitude 24 yesterday, remember what they did yesterday. Their

three weeks 25 may not be as good as it was, say, two weeks ago or

12989

Michael Abrams - Direct

1 ago when they get into a higher use of methamphetamine.

2 Q. Now, when a person -- if a person is off the

memory, 3 methamphetamine and finds that there are holes in their
4 does that happen?
and 5 A. Yeah. And in alcoholics, we call those blackouts,
happens like 6 methamphetamine, we call them whiteouts. And what
the 7 with alcohol and other addicting drugs and with meth,
middle part 8 higher brain centers aren't being contacted by this
by a PET 9 of the brain. Now, this is not scientifically proved
to 10 scan. It's just by clinical experience. You will talk
say all 11 these individuals in this area here and the family will
they 12 these things are happening, and the individual says no,
that 13 are not, they are not happening. I'm not having any of
were over 14 activity. So they may not remember events that you
this and 15 to my house two weeks ago or you did this and this and
didn't 16 they say, no, I didn't do that, I wasn't there or you
actually 17 see me do that. When this is -- this is when they are
what we 18 tweaking or high on the methamphetamine. So this is
blackout. 19 mean by a whiteout. In alcoholism, that would be a

or less 20 Q. And is a person who has had such an experience more
21 subject to suggestion to fill in the gaps?
That if 22 A. I'm not sure I understand that -- the question.
him that 23 the relatives would have to fill in what happened to
24 night?
25 Q. Yes, sir.

12990

Michael Abrams - Direct

what 1 A. That's -- when we do commitments, this is usually
place and 2 happens. The relatives will say these things took
somebody 3 the person doesn't remember it. They might have hit
afraid of 4 or choked somebody, and the family members are very
person 5 this individual and they would do a commitment on this
them and 6 to get them into treatment because they try to talk to
-- you 7 the person says, I didn't do all those things. You're
may commit 8 know, you've got a problem. I don't. So the family
process, and 9 those individuals. So -- by going through that
10 the family members would have to fill in some of those

gaps

11 that they -- they didn't remember a couple weeks ago.

12 Q. So we have -- in this then, increased performance,
longer

13 working shifts, loss of weight, hyperactive, neglects
certain

14 duties, change of friends, obsessing, lying, memory
loss;

15 correct?

16 A. This is -- as you go from this Stage 1 into Stage
2, then

17 it starts increasing and it goes on to Stage 3. So
this is

18 where the brain starts losing function. There is some
cellular

19 chemical damage by the methamphetamine. So now we're
getting

20 into the stage where the chemistry is now changed in
the brain

21 so the individual now is -- is presenting with signs
and

22 symptoms of methamphetamine brain effect. And this is
a

23 chemical change. This can revert back to normal when
they stop

24 the drug. The brain can heal. This is still a
reversible

25 stage of methamphetamine.

12991

Michael Abrams - Direct

list of
tempered,
physical
antisocial
just
happens to the
that's in
area. It's
areas in
these are
come in
and
And
cellular

1 Q. Now, move on to Stage 3. And you've got another
2 symptoms: obsessive, irritable, argumentative, short
3 paranoia, suspicious, impaired work performance,
4 health changes, denial, making excuses, impulsive,
5 behavior, easily aggravated. Now, I'm going to ask you
6 about some of those. What, in your observation,
7 vocabulary of the -- working vocabulary of a person
8 this methamphetamine cycle?
9 A. This area is what we call the brain dysfunction
10 separated from these previous two areas. Now a lot of
11 their life are troubled. And when they have these --
12 not all of them. These are the main ones that people
13 or families bring them in, they have the multiple signs
14 symptoms; and this is the most common ones they have.
15 this, again, is a -- this is an area where there is
16 damage. It may or may not be reversible at this point.
17 Q. Okay. But I was asking, you sir, what happens to
18 vocabulary. How -- how do people start to talk?

because 19 A. The vocabulary would get more narrow perspective,
clinical 20 what is thought with PET scans -- and there are some
on 21 work with cognitive and memory when -- when people are
all 22 addictive drugs, it kind of bicircuits the cortex where
the -- 23 your vocabulary and a lot of your memory are, that now,
goes to 24 the meth and addictive drug works in the brain stem and
of these 25 the frontal part of the lobe and kind of bypasses some

12992

Michael Abrams - Direct

symptoms 1 other areas. And these are the kinds of signs and
all -- 2 they have, so their language gets pretty narrow into
methamphetamine takes 3 where all these areas are. The -- as the
family, job, 4 over the brain function, they lose their social,
narrow. 5 vocabulary, aptitude, intelligence, and they get pretty
drug in 6 And what their world revolves around is getting the
7 their life on a daily basis.
8 Q. And by you saying "narrowing the vocabulary," what

kinds of

9 vocabulary are you likely to hear then?

10 A. Well, there's -- I guess in American language, you
get more

11 little four letter words or swear words, easier to come
out.

12 When we see them in the hospital, they -- they will
swear at me

13 or call me names. They may not be able to carry a -- a

14 conversation about, you know, what they were doing two
years

15 ago if they were in a job or school. They may not be
able to

16 carry a good conversation about what they do, how they
did it,

17 about finances, so they are -- in my impression, their
language

18 gets very narrow, to short sentences, not long
elaborate

19 sentences, and to what our clinical knowledge of this
is that

20 it impairs the cortical thinking process.

21 Q. And what happens to their lifestyle, their house,
their

22 dress, their appearance?

23 A. All these become not important as begin --
remember, we

24 talked about the brain wants the drug, so that's the
priority

25 when they get up. And what we -- we've done videotapes
of

12993

Michael Abrams - Direct

-- their
the
It may
floors.
they think
disconnect tubes
them,
parts of
wintertime, and
up the
-- when
through
children when
neglect of

1 houses where people run methamphetamine, and they have
2 boundaries become less in the household. They don't do
3 normal things around the house. It may be neglected.
4 not be clean. They may tear out cupboards and tear out
5 They may tear receptacles out of the sockets because
6 they are bugged or they're paranoid. They may
7 from the furnace because they think there's people in
8 watching them. They may stack their clothes different
9 the house. They don't use dressers.
10 There may be broken windows and it's
11 there's heat going out the window. And they just turn
12 furnace. They don't fix the window. There's what we
13 we do these videotapes or take pictures -- this is like
14 child protective services, because there may be
15 you have to prove to DHS that there's a danger and

both be 16 children in these houses when the mother and father may
17 on methamphetamine.

18 Q. And in your experience, has the -- have you been
contacted
19 by the federal government, by the United States, to
share your
20 experience with methamphetamine addiction?

21 A. Yes.

22 Q. In what -- when was that and what did you do?

23 A. The earliest thing was a year ago, March, I got a
phone
24 call from Janet Reno's staff who went over for like an
hour,
25 hour and a half, some of the methamphetamine issues in
Iowa.

12994

Michael Abrams - Direct

1 And then I got a call from Senator Grassley, who's a
senator
2 from Iowa; and in that same summer, we did a -- with
the staff,
3 we did a whole book on methamphetamine for Iowans.

4 This past spring, I talked with -- McCaffrey,
the Drug
5 Czar, came to Des Moines. We had a session there. He
gave a
6 talk. I was asked by his staff to present -- I have
about a

are 7 60-page document on methamphetamine, and some of these
training 8 these handouts to send to their office to disperse for
9 throughout the United States.

20's, how 10 Q. Now, in a -- in an average young person in their
this 11 long do you expect to see it to take to get from, say,
the 12 first stage, the honeymoon period, into the Stage 3,
13 magenta, with these symptoms? About how long a time?

what other 14 A. That's again -- that varies on the genetics and
But 15 addictions and what other diseases that individual has.

months. 16 that may take just months, two to three months to six
17 Again, that's -- there's no clinical studies that say
exactly.

depending on 18 But the shortest I've seen was a couple months,
19 the doses they were taking.

drug, 20 Q. And is it possible, if you can get somebody off the
it? 21 to put them back on the path of -- you know, not using

short-term 22 A. Yes. In those -- those individuals that have
23 use, the brain cells are reversible. They may not have
24 permanent damage.

25 Now, if they have delusions and

hallucinations,

12995

Michael Abrams – Direct

1 usually, that means there has been some chemical damage
to the
2 cells, so that person then may -- even though they are
off the
3 drug for four or five years, they may get a stress in
the
4 future. If they've got a lot of stress in their life,
they may
5 have a flashback of that paranoid feeling, so there is
some
6 mild damage; but that's not going to impair their life.
They
7 should be able to come back and function fairly well.

8 Q. And if a person was having a perception of the
world during
9 the time that they were high on meth and an intense
user, how
10 does the brain store that perception? Is there a
device in the
11 brain to get back an accurate view, or is that
perception just
12 always going to be that way?

13 A. That's never been clinical studied with
methamphetamine at
14 this time. In normal studies, it is very difficult to
study
15 where memory is stored; but the new neurobiology of

memory,

16 that there's about six places or seven places in the
brain that
17 help store memory. And depending on if there's damage
to any
18 of those areas, then memory may not come back at all,
or may be
19 dissociated.

20 MR. TIGAR: May I have a moment, your Honor?

21 THE COURT: Yes.

22 BY MR. TIGAR:

23 Q. And one final area, sir. If -- if a user, along
this cycle
24 we've seen, begins to deal the drug, either to sell it
or to
25 give it away, is -- is that an important fact in your

12996

Michael Abrams - Direct

1 evaluation of an individual?

2 A. Yes. This -- this means that the person is more
desperate
3 and has now lost maybe their ability to stay on a job
or stay
4 at work or be with working friends or partners at work;
that
5 they are usually fired -- they don't -- usually, they
aren't
6 fired. They just leave their job because they know
they are

7 not getting to work on time, their performance isn't
good, so
8 they usually don't stay on a job. So to make ends
meet, then
9 they usually become not a big dealer, but they do deal
the drug
10 because they need money and they need the drug; but
also, they
11 develop a new set of friends. And usually, those
friends are
12 drug-addicted friends; so they set up a new social
13 relationship. They lose all their non-drug-using
friends, so
14 part of that morality of that group is to trade the
drug and
15 sell back and forth and any other goods that may go
along with
16 the drug. There may be sexual activities that are sold
or
17 traded with the methamphetamine, HIV, pornography. All
these
18 things can go on with the methamphetamine drug-selling
trade to
19 make money.

20 MR. TIGAR: Thank you very much for coming
today.

21 Pass the witness.

22 THE COURT: Mr. Ryan.

23 MR. RYAN: Excuse me just a moment, your
Honor.

24 THE COURT: All right.

12997

Michael Abrams - Cross

1 BY MR. RYAN:

I'm the

2 Q. Good morning, Dr. Abrams. My name is Pat Ryan.

3 U.S. Attorney in Oklahoma City. How are you?

4 A. Just fine.

5 Q. We've not spoken.

6 A. No.

medical

7 Q. And if I were to research your writings in the

medical

8 literature under Medline Search or some other form of

9 research, would I find any?

10 A. No. I've not published anything on peer journal.

11 Q. Have you written anything on the subject of
12 methamphetamine?

13 A. Yes. Just locally.

14 Q. And what have you written on the subject of
15 methamphetamine?

that --

16 A. Just some of the general effects of methamphetamine

have you

17 Q. I'm sorry. Excuse me. I mean what publications
18 written in.

19 A. Just the local Polk County Medical Society.
20 Q. And when did you write such an article?
21 A. That was last year or two. I'm not sure what year
it was.
22 Q. Can you give me a year?
23 A. I would say '95, '96.
24 Q. And what was the subject of your article?
25 A. Methamphetamine, malignant methamphetamine
syndrome. That

12998

Michael Abrams - Cross

1 should be on a web page at Polk County Medical Society.
2 Q. What is the main town in Polk County?
3 A. The main --
4 Q. The city or town.
5 A. Des Moines.
6 Q. Des Moines. Now, you've told us that one of the
appeals of
7 methamphetamine is that it causes, in some people, a
sense of
8 euphoria.
9 A. Yes.
10 Q. And an increased alertness?
11 A. Yes.
12 Q. And you've told us that many truck drivers use
13 methamphetamines; is that true?

14 A. Yes.

like 15 Q. And they don't move on to these Stages 2, 3, and 4

16 you've told us about, do they?

17 A. Some do, yes.

18 Q. But many don't; is that right?

19 A. That's true, yes.

20 Q. I mean, it's highly variable?

21 A. Yes.

moving -- 22 Q. And so when you were answering questions about it

Stage 3 23 you know, it takes three months to go from Stage 1 to

24 or Stage 2 to Stage 4, you're talking about in some

people?

25 A. Correct.

12999

Michael Abrams - Cross

1 Q. Not in all people?

2 A. Depending on what dose they stay on.

3 Q. Because it's highly variable?

4 A. Yes.

small 5 Q. In fact, wouldn't you agree that a very few -- very

6 percentage of people move to this Stage 4 that you

spoke to us

7 about?

8 A. All the people I see are in this stage.

9 Q. I appreciate that. You're in a different setting.
You're

10 in a jail setting frequently where people are in the
court

11 system because of their meth use. I'm talking among
all users

12 of meth: Wouldn't you agree that a relatively small
percentage

13 reach this Stage 4 that you spoke of?

14 MR. TIGAR: Object to "small percentage."

15 THE WITNESS: I don't know if I can answer
that. I

16 don't know that answer.

17 THE COURT: Just a moment. We have people
talking

18 here --

19 MR. TIGAR: Objection to "relatively small
20 percentage," your Honor. The question is vague.

21 THE COURT: Overruled. You may answer.

22 THE WITNESS: The question once again?

23 BY MR. RYAN:

24 Q. My question simply was: Would you not agree that a
25 relatively small percentage of people ever reach that
Stage 4

Michael Abrams – Cross

1 that you spoke to us about?

2 A. It's in the -- it's in the thousands in the United
States,
3 or more that I know of.

4 Q. I understand, sir. We have 260 million people
living in
5 America. My question simply is: Would you agree that
among
6 the people that ever used meth, a relatively small
percentage
7 reach this Stage 4 that you've spoken to us about?

8 A. If we say that there's probably 4 million people
that we
9 know are on the drug and maybe 10 to 20 percent of
those are
10 Stage 3 and 4, that would be a correct answer.

11 Q. All right. That's -- that's all I was asking
about. 10 to
12 20 percent are in Stage 3 or 4. Now, what part of that
13 percentage is in 4, as opposed to 3?

14 A. I would not have -- there's not been a clinical
study that
15 I -- that I know of.

16 Q. It's certainly smaller than 10 or 20 percent?

17 A. Yeah. It would be a smaller amount than 20
percent,
18 definitely.

19 Q. You've also told us, I believe -- you've said that
-- did

20 you say that methamphetamine was addictive?

21 A. Yes. By the reinforcement system.

22 Q. Now, it's not physically addictive, is it?

23 A. Physically is -- "physically" and "psychologically"
are

24 older terms, and the newer terms are trying to -- any
drug that

25 reinforces in the brain is a -- a drug that the brain
wants

13001

Michael Abrams - Cross

1 back again.

2 Q. Is methamphetamine physically addictive?

3 A. You'd have to define what that means.

4 Q. You're not familiar with that term?

5 A. I don't use that term anymore. That was an older
medical

6 term.

7 Q. It is a current medical term, though? It's used
every day,

8 is it not?

9 A. Usually, it's a term that means with people with
narcotic

10 addiction or alcohol, that they would have a seizure
when they

11 come off the drug.

12 Q. All right. And using that definition, is
methamphetamine

13 physically addictive?

14 A. Not usually for that drug.

15 Q. And you've also told us that adolescents are most
16 vulnerable; correct?

17 A. Correct.

18 Q. Now, you've told us that low-intensity -- or have
you --

19 low-intensity abusers or users of methamphetamine, they
20 frequently swallow it or snort it? Is that what you

said?

21 A. That's one way they can take it, yes.

22 Q. And that's the lower end of the abuse cycle; is
that

23 correct?

24 A. Those individuals in the low end probably would
just snort

25 it or take it by mouth.

13002

Michael Abrams - Cross

1 Q. I mean, the higher users would more likely inject
it than a

2 low user?

3 A. Smoking and injecting are probably the two best
ways to get

4 higher amounts of it in the body the quickest.

5 Q. So you would typically find with the high user
injecting or

range; 6 smoking and the low user would be more in the snorting

7 is that correct?

smoking 8 A. The trend now is for smoking, for kids to start off

9 now.

10 Q. So you would not agree with what I just said?

available 11 A. Yeah. Just in the last year or two, there's more

12 drug to smoke and it's easier to smoke it.

the 13 Q. Have you -- you were telling us about the fact that

ever been 14 Department of Justice had once called you. Have you

Department of 15 listed as a reference for any publication by the

16 Justice?

17 A. Not that I know of, no.

18 Q. Or by any publication by the Drug Czar?

19 A. Other than just the work that we did, no.

20 Q. Excuse me?

wanted. 21 A. Other than just sending the materials that they

would we 22 Q. But if we had the Drug Czar's publications here,

23 find your name?

24 A. I don't know if it would be on there or not for --

25 Q. Have you ever met the Drug Czar?

Michael Abrams - Cross

1 A. It was in Des Moines. We were at a conference and
we ate

2 breakfast with him.

3 Q. You met him at a breakfast?

4 A. Yes.

5 Q. Have you ever been a paid consultant of the Drug
Czar?

6 A. Not a paid consultant, no.

7 Q. Now, you talked briefly about blackouts. And
you've used

8 the term, Well, with drugs like methamphetamine, it's a
9 "whiteout." What you're really talking about is a loss
of

10 consciousness; right?

11 A. It's a loss of memory.

12 Q. For that period.

13 A. They --

14 Q. For the period that they are unconscious?

15 A. No. It's -- it's a loss of memory. They are not
16 unconscious. They may be doing things and acting
things and

17 normal activity, but they don't remember what they have
done.

18 Q. All right. So it's just a forgetting for a period
of time?

19 A. Right.

the
20 Q. All right. Now, I think you've also told us that
21 effect of this drug differs widely with the person.
22 A. Yes.
into
23 Q. The genetics enter into that, family history enters
24 it?
25 A. Yes.

13004

Michael Abrams - Cross

it;
1 Q. Most clearly, the dose that they take enters into
2 correct?
3 A. Yes. Yes.
not
4 Q. But without knowing all of those factors, one could
5 make any supposition about what it might do to a given
person;
6 fair?
7 A. On low doses.
know
8 Q. I mean, if you don't know their genetics, you don't
are
9 the family history, you don't know the amount that they
effect will
10 taking, there's no way to generalize as to what the
11 be on a given person?

12 A. I think I understand your question.
13 Q. Is that fair, sir?
14 A. Yes.
15 Q. There have been very few studies, I gather, to
determine
16 these effects?
17 A. Correct.
18 Q. And you talked about a psychosis that sometimes
develops,
19 but you would agree with me that at least 96 percent of
the
20 time, this psychosis would clear up in a -- in a matter
of days
21 or a couple weeks?
22 A. Yes.
23 Q. Now, you spoke of -- when were you first employed
in this
24 case?
25 A. I -- it was last year sometime. I don't know the
exact

13005

Michael Abrams - Cross

1 date.
2 Q. I'm sorry. I couldn't hear what you said.
3 A. Last year sometime. I don't know the exact date.
4 Q. Last year being 1996?
5 A. No. It would -- it would be '97.

I

6 Q. Can you help us with a month?

7 A. I -- I have so many things going like in practice,

8 wouldn't -- I can't give you an exact time.

9 Q. I'm not asking for a precise date.

10 A. Summer of '97.

about

11 Q. Summer. And what were you asked to do? To talk

12 methamphetamine?

13 A. Yes.

the bat

14 Q. Okay. And one of the things that you did right off

that fair?

15 was you contacted an expert in methamphetamine. Is

16 A. Yes. I do that on a regular basis.

17 Q. All right. But you're not a psychiatrist; correct?

18 A. No.

19 Q. You don't -- you're not a neurologist?

20 A. No.

21 Q. You're -- your training is in family practice?

22 A. Family practice and emergency medicine.

23 Q. And you contacted a Dr. Ellenwood; is that correct?

24 A. Yes.

25 Q. And that was on September 16 of 1997?

Michael Abrams – Cross

1 A. Right.

2 Q. And who is Dr. Ellenwood?

3 A. He's a physician.

4 Q. He's a psychiatrist?

5 A. Yes. Right.

6 Q. And where does he practice?

7 A. I think in North Carolina.

8 Q. At Duke University?

9 A. Yes.

10 Q. You called him?

11 A. Yes.

12 Q. Because you wanted to know more about what Dr.
Ellenwood

13 thought about the effects of methamphetamine?

14 A. Yes. I've seen what clinical studies he had done.

15 Q. Who else did you call?

16 A. At NIDA. I have -- my name is at NIDA. I have
talked with

17 Jerry Frankenheim in the last couple of years, trying
to find

18 people in the United States that are doing PET scanning
on

19 people on methamphetamine. So what I was trying to
find is the

20 actual research with PET scanning and how much had been
done in

21 the United States and Japan.

22 Q. You said something, I believe, in your direct
testimony
23 about methamphetamine affecting memory. Did I hear you
24 correctly?
25 A. Yes.

13007

Michael Abrams - Cross

1 Q. Can you cite me to any study that says anything
about
2 methamphetamine affecting memory?

3 A. There's only -- there's one article recently in the
Journal
4 of Pediatrics that talks about memory in the last
couple
5 months.

6 Q. Do you have that with you?

7 A. Not right here, no.

8 Q. Dr. Ellenwood, who you called, you consider an
expert;
9 correct?

10 A. Yes.

11 Q. Do you agree with the statement of Dr. Ellenwood to
the --
12 is as follows: "In spite of great individual
variability,

13 amphetamine psychosis usually produces --"

14 THE COURT: Just a moment.

15 MR. TIGAR: If this is a learned-treatise
exception,

16 no objection. Is that what this is?

17 MR. RYAN: Yes, of course.

18 THE COURT: All right. Go ahead.

19 BY MR. RYAN:

20 Q. "In spite of great individual variability,
amphetamine

21 psychosis usually produces a fairly distinct syndrome

22 characterized by delusions of persecution, ideas of
reference,

23 visual and auditory hallucinations, changes in body
image, and

24 hyperactivity and excitation -- ex -- e-x-i-c-a-t-i-o-n
-- but

25 disorientation and clouding of memory are not part of
the

13008

Michael Abrams - Cross

1 picture."

2 A. That was amphetamine. That's not methamphetamine.

3 Q. They are the same family, aren't they, Doctor?

4 A. They are different on how they affect the brain
cell.

5 Q. Have you done any research on either amphetamine or
6 methamphetamine?

7 A. Not bioscience research, no.

correct? 8 Q. You -- you haven't done any bioscience research;

9 A. No.

10 Q. You haven't done any animal studies?

11 A. No.

12 Q. There are no human studies?

13 A. No.

except in 14 Q. And you haven't written anything on this subject

15 the Polk County Society; correct?

16 A. And the document I have.

17 Q. Well, Dr. Ellenwood spoke to you. He told you,

didn't he,

18 that there were no memory problems?

19 A. I don't recall he said that. We were -- he wanted

me to

20 send him the cases that I had. Maybe joint-publish

something.

21 Q. Did you do that?

22 A. I haven't done that yet, no.

23 Q. Now, you also told us that you were board certified

in

24 addictive medicine; is that correct?

25 A. Yes.

13009

Michael Abrams - Cross

1 Q. Now, many of us are familiar with the term "board

2 certification." We know doctors who are board
certified in
3 obstetrics and gynecology. I'm sure you do.
4 A. Yes.
5 Q. They are board certified in neurology; right? You
know
6 people like that?
7 A. Yes.
8 Q. Board certified in psychiatry or neurology?
9 A. Yes.
10 Q. And that is -- that's the kind of certification
that we
11 know of as board certification -- is done by who?
12 A. By the American Board.
13 Q. Excuse me?
14 A. The American Board Association. It certifies
individuals.
15 Q. American Board of Medical Specialities, isn't it?
16 A. Yes.
17 Q. Now, is that what you're talking about when you say
you're
18 board certified?
19 A. I'm -- the board certification is different with
addiction
20 medicine, in that it doesn't have a residency.
21 Q. And you're not sort of -- there's no such
designation by
22 the American Board of Medical Specialities, is there?

23 A. We -- to my knowledge, the Addiction Medicine
Society is

24 aiming toward that goal.

25 Q. But there's not one currently, is there?

13010

Michael Abrams - Cross

1 A. Right.

2 Q. Now, I looked through your resumÇ that was -- Mr.
Tigar was

3 kind enough to provide; and it does talk about a Polk
County

4 Medical Society bulletin of April '96, styled,
"Malignant

5 Methamphetamine Addiction Syndrome."

6 A. Yes.

7 Q. Now, is that the article you were telling me about
earlier?

8 A. Right.

9 Q. Now, you didn't write that article, though, did
you,

10 Doctor?

11 A. Yes.

12 MR. RYAN: Well, may I approach the witness,
your

13 Honor?

14 THE COURT: Yes.

15 BY MR. RYAN:

1996." 16 Q. Let me show you. It's styled, "The Bulletin, April

17 A. Yes.

18 Q. And is that the article you're speaking of?

19 A. Yeah.

20 Q. Okay. This is an article about you, isn't it?

21 A. Some of it, yes.

in the 22 Q. Did you write the article about you that appeared

23 Polk County bulletin?

in this 24 A. Well, they asked me to fill in what I've been doing

25 area.

13011

Michael Abrams - Cross

1 Q. This is certainly not a research article?

to bring 2 A. No. This is just a news article on the syndrome,

3 it to attention of the Society and the physicians.

4 Q. Now, you used the terms -- just a moment.

5 You used the term, "Malignant methamphetamine
6 addiction syndrome. Did I hear you correctly?

7 A. Yes.

me, 8 Q. Well, I brought a copy of a medical dictionary with

9 Dorland's Illustrated Medical Dictionary.

10 A. Yes.

11 Q. You're familiar with that, aren't you?

12 A. Yes.

13 Q. Would I find that term, "malignant methamphetamine
14 addiction syndrome," in this dictionary?

15 A. No.

16 Q. Would I find that term in any of the materials by
the Drug
17 Czar?

18 A. Not by the Drug Czar. The stuff that I sent them,
it would
19 be in there.

20 Q. Excuse me?

21 A. The stuff that I sent them, it was in there.

22 Q. That's your terminology that you've coined?

23 A. Yes. Yes.

24 Q. That's not terminology that's used by the Office of
the
25 National Drug Policy?

13012

Michael Abrams - Cross

1 A. Not to my knowledge, no.

2 Q. Or by the Drug Czar?

3 A. Right.

4 Q. Or by Dorland's Medical Dictionary?

5 A. Right.

6 Q. Excuse me. You've also used a number of other
terms:
7 progressive methamphetamine addiction syndrome. Did I
hear
8 that correctly?

9 A. Yes.

10 Q. I wouldn't find that in here, either, would I?

11 A. No.

12 Q. In the Dorland's?

13 "Methamphetamine frontal limbic psychosis."
That's
14 another term you use?

15 A. Right.

16 Q. I wouldn't find that in here?

17 A. That's not in a dictionary.

18 Q. Progressive violethal syndrome?

19 A. Yes.

20 Q. I wouldn't find that in Dorland's.

21 A. No.

22 Q. But you are -- are you not, Doctor, familiar with
the
23 DSM-IV?

24 A. Yes.

25 Q. Tell us what the DSM-IV is.

Michael Abrams – Cross

and by
different
that
history
individual.

1 A. It's a coding for psychiatrists to list behaviors
2 going over thousands of different patients with
3 diseases, to codify them into a diagnostic terminology
4 physicians can make history and physical exam or mostly
5 and behaviors and then put a diagnosis on that

6 Q. It is the authoritative source, is it not, for the
7 diagnosis of psychiatric conditions?

8 A. Yes.

substance-

9 Q. And it has a section in here that deals with
10 related disorders?

11 A. Yes.

12 Q. Is that correct?

13 A. Yes.

14 Q. And it has a section in here on amphetamine-related
15 disorders?

16 A. Yes.

17 Q. You're familiar with this document, aren't you?

18 A. Yes.

19 Q. Most physicians are?

20 A. Yes.

21 Q. And none of the terms that you've used here are in

this

22 DSM-IV, are they?

23 A. No.

these

24 Q. There's no such disease described in the DSM-IV of

about?

25 amphetamine-induced disorders that you've told us

13014

Michael Abrams - Cross

1 A. There is amphetamine disorders listed in that book.

2 Q. Not the ones you're talking about?

3 A. Not methamphetamine, no.

loss

4 Q. There's nothing in here that talks about memory

there,

5 associated with amphetamine or methamphetamine use, is

6 Doctor?

see some

7 A. I would have to look under the memory section to

8 of those defects. But no, I don't believe
methamphetamine is

old.

9 listed in that -- in that document. That's three years

10 MR. RYAN: May I approach, your Honor?

11 THE COURT: Yes.

12 BY MR. RYAN:

the

13 Q. There's a listing of symptomatology on page 312 of

there's 14 DSM-IV. Would you like to review that to see if
15 anything in there about memory loss?
would be 16 A. I would comment that from my understanding, there
17 not anything listed in this textbook at this age on
18 methamphetamine.
current 19 Q. When you say, "this age," now, this is the -- the
20 DSM-IV, is it not?
21 A. That's for psychiatry.
22 Q. Yes. It's the current -- it's not just for
psychiatrists.
mental 23 It's for anybody who is in the business of diagnosing
24 disorders?
25 A. Right.

13015

Michael Abrams - Cross

correct? 1 Q. And this is the current version of that book;
2 A. Yes.
has been 3 Q. DSM-IV. And you told us that methamphetamine use
you told 4 around -- you saw it back in the early 70's, I think
5 us.

6 A. Yes. It's been around several years, yes.

7 MR. RYAN: That's all I have, your Honor.

8 THE COURT: Mr. Tigar. Redirect.

9 MR. RYAN: Just a moment.

10 REDIRECT EXAMINATION

11 BY MR. TIGAR:

12 Q. I'm going to place on the monitor here for your
eyes only

13 what I've marked as Defendant's Exhibit D13. Now, is
that a

14 study of the United States Department of Justice
National Drug

15 Intelligence Center?

16 A. Yes. This is a document that they publish.

17 Q. Okay. And when would -- from December 1996?

18 A. Yes. Correct.

19 MR. TIGAR: We offer it, your Honor.

20 MR. RYAN: We object, your Honor. If it's
used as a

21 treatise of some type, he may refer to it. I object to
its

22 use --

23 MR. TIGAR: 803(8)(c), your Honor.

24 THE COURT: As an admission?

25 MR. TIGAR: No. As a study pursuant to
authority

Michael Abrams – Redirect

1 granted by law. I can show the Court the exhibit.

it.

2 THE COURT: All right. I'll take a look at

3 MR. TIGAR: The italicized words.

used, of

4 THE COURT: Objection sustained. It may be

5 course.

Honor,

6 MR. TIGAR: May I inquire about it, your

--

7 admitting it under the learned treatise exception for

8 THE COURT: Using it, but not admitting.

your

9 MR. TIGAR: To use it, but not admit it, yes,

10 Honor, thank you.

11 BY MR. TIGAR:

United

12 Q. Are you familiar, sir, with this 1996 study by the

13 States Department of Justice?

14 A. Yes.

of

15 Q. And did the Department of Justice consult a number

effects of

16 physicians and law enforcement officers about the

17 something called D-methamphetamine?

18 A. Yes.

1996?

19 Q. And that was the results published in December

20 A. Yes.

21 Q. Now, will you tell the jury, please, what is the
difference

22 between amphetamine and D-methamphetamine or meth.

23 A. Methamphetamine means -- the methyl part means that
there's

24 another molecule that's hooked on to the amphetamine.
It's a

25 methyl group like one carbon and three hydrogen ions --
or

13017

Michael Abrams - Redirect

1 atoms.

2 Q. Okay. How does that change what it does to your
brain?

3 A. One of the key things is that it makes it get into
the

4 blood-brain barrier. Goes across the blood-brain
barrier much

5 more readily than the amphetamine does. The brain
soaks up a

6 lot more methamphetamine, as opposed to amphetamine.
So the

7 amphetamine works more peripherally in the body, and
the

8 methamphetamine at a normal dose works better in the
brain than

9 on the body, because it -- the methyl group makes it
cross what

10 we call the "blood-brain barrier" easier.

concerned 11 Q. And does your work -- you said you began to be
that? 12 about methamphetamine in 1992 and '93. Do you remember

13 A. Yes.

thousands 14 Q. And why is it that you have, based on your seeing
found 15 of patients, developed a vocabulary and description of
16 methamphetamine usage that is different from what you
17 when you looked in the DSM, the -- whatever that's --
18 Diagnostic and Statistical Manual?

seeing 19 A. There wasn't anything that described what we were
symptoms 20 clinically. The terms didn't fit. The signs and
and 21 weren't all laid out nicely like it is for amphetamine
22 cocaine. So the -- the methamphetamine, because of the
Iowa, I 23 literally hundreds and thousands that we were seeing in
going on; 24 was being called from multiple areas to say what's
codify 25 and I had to do as much reading as I could and try to

13018

Michael Abrams - Redirect

what 1 what methamphetamine was doing to people as opposed to

2 amphetamine did back in the 60's and the 70's.

3 Q. Now, did -- in this study, do you agree with this
4 statement: "Adverse psychological consequences of
5 D-methamphetamine abuse can include a prolonged
psychosis.

6 This psychosis called amphetamine delusional disorder
or

7 amphetamine psychosis adds to the extreme paranoia,
both visual

8 and auditory hallucinations and often ends in
hysteria"? Do

9 you agree with that statement?

10 A. Yes. That's a correct statement.

11 Q. And do you agree with the statement that "high
doses or

12 chronic use of D-methamphetamine increases nervousness,
13 irritability and paranoia"?

14 A. Yes.

15 Q. And do you agree with the statement that is quoted
in here,

16 "Ronald K. Siegel in his book, Whispers: The Voice of
Paranoia

17 details seemingly bizarre ceremony -- scenarios --
excuse me --

18 in which methamphetamine users believe they are being
followed

19 by the police, the Federal Bureau of Investigation, the
Central

20 Intelligence Agency and even the Mafia. However, these

21 scenarios are not unusual when dealing with

methamphetamine

22 abusers"?

23 A. Yes.

24 Q. Do you agree with that?

25 A. Yes.

13019

Michael Abrams – Redirect

1 Q. Now, in this study that the Department of Justice
did, did

2 the study focus on particular places where abuser
populations

3 were high?

4 A. I believe so, yes.

5 Q. And did the Department of Justice study describe
the

6 phenomena of tweaking -- the binge, the tweaking and
the crash?

7 A. Yes. I think this was the first publication --
medical

8 publication from -- from the Justice Department that
talked

9 about tweaking. Tweaking and methamphetamine psychosis
was a

10 common thing that police were seeing like in L.A. and
San

11 Diego, Arizona, certainly in Des Moines, Iowa; but
there wasn't

12 any government document up until this time that I'm
aware of

that 13 that published what tweaking as a methamphetamine --
that
deal with 14 officers need to be trained so they would be able to
15 this type of patient on methamphetamine.

Center of 16 Q. And the -- what is the National Drug Intelligence
study on the 17 the U.S. Department of Justice that published this
18 effects of D-methamphetamine?

19 A. What is that department?

Center? 20 Q. Yes. What is the National Drug Intelligence

get 21 A. I'm not sure what it is or where it's at. I'm -- I
22 publications from them.

on your 23 Q. All right. And, Doctor, if we were going to, based
to go out 24 clinical experience, look at -- is a part of your job
these 25 and talk to people who are skeptical about whether

13020

Michael Abrams - Redirect

1 effects that you've described are really happening?

They see 2 A. I -- none of the people I talk to are skeptical.

to deal 3 it in their communities, and they want information how

4 with it.

you about

5 Q. And when -- do people come to you and -- and ask

abusing

6 symptoms or signs that might show that someone was

7 methamphetamine?

8 A. Yes.

9 Q. And is staying up all night more times than you can

10 remember such a sign?

11 A. That's one of the common signs, yes.

with an

12 Q. Is quitting a job suddenly over a minor dispute

13 employer such a sign?

14 A. Yes.

15 Q. Is lying to --

this

16 MR. RYAN: Your Honor, excuse me. I object to

17 line of questioning.

18 THE COURT: Overruled.

19 BY MR. TIGAR:

take time

20 Q. Is lying to your employer about why you want to

21 off such a sign?

all kinds

22 A. Well, they -- the employers usually say they make

23 of excuses.

have

24 MR. TIGAR: Thank you very much, Doctor. I

25 nothing further.

13021

1 THE COURT: Any recross?

2 MR. RYAN: Sure, your Honor.

3 RE-CROSS-EXAMINATION

4 BY MR. RYAN:

5 Q. Doctor, earlier, on the -- when I was speaking with
you,

6 you told us that DSM manual did not include disorders
related

7 to methamphetamine. Do you recall that testimony?

8 A. Yeah. May not relate what -- what I was talking
about.

9 Q. But methamphetamine is certainly included within
the

10 DSM-IV?

11 A. They are listed. Some -- some of the signs and
symptoms

12 are listed.

13 Q. Well, DSM-IV sets forth the signs and symptoms that
are

14 medically recognized by the -- by the Psychiatric
Association

15 for these various substances; correct?

16 A. That would be correct, yes.

17 Q. And among those are not included any of this
business about

18 lying or memory disorders, is it?

19 A. Not at this time, no.

20 Q. And there's not a word in this government
publication that

21 Mr. Tigar was talking to you about about anyone lying
or having

22 memory problems, is there?

23 A. Not in that document, no.

24 Q. And this document doesn't include any of your terms
that

25 you've told us about today, either, does it?

13022

Michael Abrams – Recross

1 A. No.

2 MR. RYAN: That's all I have, your Honor.

3 MR. TIGAR: May I?

4 THE COURT: All right.

5 REDIRECT EXAMINATION

6 BY MR. TIGAR:

7 Q. Doctor, in this article from the United States
Department

8 of Justice, do you remember reading the following case
study:

9 "For example, at a Narcotic Enforcement Conference in
Oregon,

10 Lieutenant Ed Mayer of the Jackson County Narcotic
Enforcement

11 Team described an encounter he had with a
methamphetamine

12 abuser who called Mayer's office from a cellular
telephone.

13 The drug abuser --"

14 MR. RYAN: Excuse me. Excuse me. I object to
this

15 line.

16 THE COURT: It's in the publication. It came
from the

17 Department of Justice.

18 MR. RYAN: Well, there's no question about
that, your

19 Honor --

20 THE COURT: Well, he can read from it then.

21 MR. RYAN: All right.

22 BY MR. TIGAR:

23 Q. "The drug abuser was driving on Interstate 5 and
sounded

24 quite rational, and he said he wanted to file a
compliant about

25 one of Mayer's narcotic enforcement officers who was
following

13023

Michael Abrams - Redirect

1 him everywhere he went. Slowly, the drug abuser's
voice began

2 to sound panicky and he begged Mayer to tell his

officer to get

3 off the car roof. Mayer could hear the driver swerving
on the

4 road and slamming on his brakes, trying to shake the
imaginary

5 officer from the car roof."

6 Was that in that Department of Justice study?

7 A. I remember that, yes.

8 MR. TIGAR: No further questions.

9 MR. RYAN: Nothing further, your Honor.

10 THE COURT: All right. Is the witness
excuses?

11 MR. TIGAR: Yes. He's excused.

12 THE COURT: You may step down. You're
excused.

13 We'll take our morning recess at this time,
members of

14 the jury. Again, one of the things, when -- I might
simply

15 advise you of here so that you can understand a little
bit

16 about the law of evidence, I'm not going to instruct
you on the

17 law of evidence or try to make lawyers out of you; but,
you

18 know, when we have used the hearsay rule at times in
this case

19 and prevented witnesses from, over proper objection --
from

20 testifying by what somebody else told them, which is
sort of

rule as 21 classic hearsay. There are as many exceptions to the
comes to 22 you can imagine. And one of those is that when it
specialized 23 opinion witnesses, people who, because of some
24 knowledge or training or experience, can testify about
discipline 25 opinions, if it is consistent with the practice, the

13024

talk to 1 about -- that the witness follows to look at books,
that can be 2 other people in the field, that sort of thing, then
that 3 received as the bases for the opinion. It doesn't mean
It's 4 the things that were consulted are themselves evidence.
of 5 just that when a person expresses opinions in a field
that he or 6 expertise, that person can testify about the things
7 she relied on in forming opinions.

for 8 So that's why, in the case of this witness,
to; and 9 example, things that are not in evidence were referred
evidence but 10 again, what he said about them is not part of the

11 a part of the bases of his opinions. So I just wanted
to
12 explain that to you so you don't wonder why sometimes
people
13 talk about things that were conversations with others
or that
14 are in documents that are not in evidence. And when
there's
15 the reference here to treatises or learned treatises,
the law
16 says that to the extent used or recognized by the
witness, then
17 they can be read -- those things can be read in
evidence, but
18 they don't become a part of the evidence.

19 That is the document themselves. The document
itself
20 does not come into evidence, or the book or whatever.

21 So we're now going to take a 20-minute recess;
and of
22 course, a part of the law of evidence is that you have
to --
23 and the law, the procedural rules of the court are that
you
24 must not discuss the case now. Wait till it's
completed and
25 you've heard it all. And of course, continue to avoid
anything

1 that is not in evidence that could influence you in the
case.

2 So you're excused now. 20 minutes.

3 (Jury out at 10:09 a.m.)

4 THE COURT: Okay. 10:30.

5 (Recess at 10:10 a.m.)

6 (Reconvened at 10:30 a.m.)

7 THE COURT: Be seated, please.

8 May I have counsel for a moment.

9 (At the bench:)

10 (Bench Conference 112B1 is not herein transcribed
by court

11 order. It is transcribed as a separate sealed
transcript.)

12

13

14

15

16

17

18

19

20

21

22

23

24

13029

1 (In open court:)

2 (Jury in at 10:32 a.m.)

3 MR. TIGAR: Call Jeffery Hayes.

4 THE COURT: Thank you.

5 THE COURTROOM DEPUTY: Would you raise your
right
6 hand, please.

7 (Jeffery Hayes affirmed.)

8 THE COURTROOM DEPUTY: Would you have a seat,
please.

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

11 THE WITNESS: Jeffery C. Hayes, H-A-Y-E-S.

12 THE COURTROOM DEPUTY: Thank you.

13 DIRECT EXAMINATION

14 BY MR. TIGAR:

15 Q. Mr. Hayes, you are a special agent of the FBI?

16 A. Yes, sir.

17 Q. How long have you been?

18 A. 17 1/2 years.

19 Q. What was your education before coming to the FBI?

20 A. I have an undergraduate degree in social justice.

21 Q. From?

22 A. Lewis University.

23 Q. Where is that, sir?

24 A. Lockport, Illinois.

25 Q. Directing your attention to 1995, April, were you
assigned

13030

Jeffery Hayes – Direct

1 to the OKBOMB Task Force?

2 A. Yes, I was.

3 Q. Did there come a time when you were assigned to a
study of

4 fragments of plastic?

5 A. Yes, sir.

6 Q. When was that?

7 A. It would have been in January of this year.

8 Q. January of 1997?

9 A. Yes, sir.

10 Q. Have you -- and in that assignment, did you talk to
a

11 Mr. Theodore Udell?

12 A. Yes, sir.

13 Q. And who gave you the assignment?

14 A. Scott Mendeloff.

15 Q. He was a member of the prosecution team, a lawyer?

16 A. Yes, sir.

17 Q. What were you assigned to do?

18 A. I was to contact high-density-polyethylene drum

19 manufacturers in an effort to determine whether or not
the

20 chemical composition of Smurfit barrels was unique to

that

21 particular product.

22 Q. Well, let's take that one item at a time. You had

some

23 fragments of plastic. Correct?

24 A. Correct.

25 Q. How many fragments of plastic did you have?

13031

Jeffery Hayes - Direct

1 A. I have no idea.

2 Q. Were the fragments of plastic in your custody? Did

you

3 have them with you?

4 A. No.

5 Q. Well, were there more than 100 fragments that you

were

6 concerned with?

7 A. I can't give you an exact number.

8 Q. At any rate, you were not present at a time when

FBI

9 Agent -- or someone in the FBI laid out a bunch of
plastic
10 fragments on a table for Mr. Udell to look at; correct?
11 A. I was present when that happened on more than one
occasion.
12 Q. And when was the first time you were present when a
bunch
13 of fragments were laid out on a table for Mr. Udell to
look at?
14 A. Early summer of this year, I believe.
15 Q. And how many fragments were there laid out on the
table?
16 A. There were -- again, I can't give you an exact
number.
17 There were three bags containing multiple pieces.
18 Q. Were you ever present at a time when dozens and
dozens of
19 plastic fragment pieces were laid out on a table?
20 A. No.
21 Q. Okay. Was it your understanding that the pieces
that were
22 laid out there to look at, the three bags, all
contained
23 Smurfit plastic?
24 A. Yes.
25 Q. So your job was to call up some drum manufacturers
and see

13032

Jeffery Hayes - Direct

correct? 1 about whether the Smurfit plastic package was unique;

2 A. Yes.

were some 3 Q. You were never assigned to look and see if there

else's 4 other fragments also recovered -- might match somebody

5 drums; is that right?

6 A. That's correct.

7 Q. Just Smurfit?

8 A. Just Smurfit.

9 Q. And specifically not Van Leer?

10 A. Specifically, yes.

only 11 Q. Now, what was your understanding as to why you were

12 selecting drum manufacturers?

that was 13 A. Well, initially that's all we concentrated on; but

14 expanded later on in the study.

in 15 Q. All right. Now, how many people did you interview

16 connection with this activity?

17 A. Well over 50.

FD302 is; is 18 Q. Did you make -- you know what an FBI -- a Form

19 that right, sir?

20 A. Yes, sir.

21 Q. How many FD302's did you make, reports of
interview, of

22 these interviews?

23 A. None.

24 Q. Did anyone tell you why you should not make any
FD302

25 reports of interviews of the 50 interviews that you
conducted

13033

Jeffery Hayes - Direct

1 in this connection?

2 A. I asked Mr. Mendeloff how he wanted me to report
the

3 information that I was gleaning from the conversations
I had

4 with these manufacturers. He told me to put it in a
chart

5 form, not to provide any FD302's.

6 Q. Now, was Mr. Mendeloff present during any of your
7 interviews?

8 A. No.

9 Q. These interviews were conducted in person, or by
telephone?

10 A. Telephonically.

11 Q. You're aware that telephone interviews in this case
are

12 often reduced to FBI 302's, are you not?

13 A. Yes, sir.

14 Q. And how many FBI FD302's and inserts have been
generated in
15 conjunction with this investigation?
16 A. Thousands.
17 Q. About 30,000?
18 A. Approximately.
19 Q. And do you know how many times the FBI FD302 has
been used
20 to memorialize or to reflect a telephone interview?
21 A. No, I don't.
22 Q. A couple? Do you know within -- I mean is it a
couple
23 thousand or however many?
24 A. It would just be speculation on my part.
25 Q. Now, would there be a practice -- that is, could we
go into

13034

Jeffery Hayes - Direct

1 the database and if we put in the word
"telephonically," would
2 we then retrieve FBI 302's that were conducted of
telephone
3 interviews?
4 A. It's possible.
5 Q. Now, you say that you started out looking at drum
6 manufacturers. Right?

7 A. Yes, sir.

8 Q. Now, did Mr. Mendeloff give you any explanation as
to why

9 you were not to do FD302's?

10 A. No.

11 Q. Of these interviews?

12 A. No.

13 Q. And did you question his decision?

14 A. No, I didn't.

15 Q. Were you aware at that time that FBI 302's would be
turned

16 over to the defense?

17 A. Oh, yes.

18 Q. So that by not making them, you were not generating
any

19 records that would in the normal course be turned over
to the

20 defense; is that correct?

21 A. No, sir, that's not correct.

22 Q. What is correct, then? What's wrong with it?

23 A. I'm assuming that you have copies of the chart that
I

24 produced for Mr. Udell to utilize in contacting the
various

25 manufacturers that I contacted.

13035

Jeffery Hayes - Direct

the
1 Q. And do you know when -- you're assuming that that's
2 case. Do you have any knowledge, sir, as to when the
3 Government turned over your chart to the defense?
4 A. No, I don't.

turned
5 Q. Was it your expectation that your chart would be
6 over to the defense before Mr. Udell and Mr. Tikuisis
7 testified?
8 A. I would assume.

discovery,
9 Q. And why did you assume that to be the case?
10 A. I would just assume that you were provided
11 everything that we had.

or not
12 Q. Did you participate in any decisions as to whether
13 we were going to get it and when we were going to get
it?
14 A. No.

correct?
15 Q. So if we didn't get it, that wasn't your doing;
16 A. Correct.

chemical
17 Q. Are you a plastics expert, sir?
18 A. Far from it, sir.
19 Q. And so you didn't have any experience with the
20 composition of plastics; correct?
21 A. Correct.

drum 22 Q. Now, in your study, you say you began by studying
23 manufacturers; correct?
24 A. By contacting them, yes. Those that produced
25 natural-colored, high-density-polyethylene --

13036

Jeffery Hayes - Direct

1 Q. Right.
2 A. -- drums.
3 Q. Because you had some natural-color polyethylene
drums that
4 had been recovered from Mr. Nichols' house; correct?
5 A. Yes.
6 Q. You had two made by Smurfit?
7 A. Yes.
8 Q. And two made by Van Leer?
9 A. Correct.
10 Q. Were you aware that the FBI also sent agents out
into the
11 field to see if drums like this could be bought in the
open
12 market?
13 A. Subsequent to my involvement in this, yes.
14 Q. Did you participate in that process?
15 A. No, I didn't.
16 Q. All right. Did you have any knowledge as to

whether

17 recycled drums of this kind could be just bought at a
recycling

18 center?

19 A. No.

20 Q. Now, were you aware at the time you started the
study

21 that -- of the different kinds of high-density
polyethylene?

22 A. No.

23 Q. Well, how did you set up your study? What did you
decide

24 to do?

25 A. Well, I was given a list of ingredients that
Smurfit uses

13037

Jeffery Hayes - Direct

1 in their manufacturing process, specific range of melt-
flow

2 index, an antioxidant package, an ultraviolet
stabilizer

3 package; and apparently they use calcium carbonate as a
tracer

4 in their manufacturer process.

5 Q. So the four things you're worried about are melt
index --

6 correct?

7 A. Yes.

all 8 Q. High-density polyethylene, you understand comes in

9 sorts of melt index ranges; correct?

10 A. Correct.

point so 11 Q. Depending on the use, it has to melt at a certain

12 that it can be molded in certain ways; is that your

13 understanding?

14 A. I came to learn that, yes.

effects of 15 Q. And then the antioxidant: That's to prevent the

that are 16 oxygen on the process; correct? There are chemicals

17 used for that?

18 A. Yes.

19 Q. Then the UV thing -- that's to prevent damage from
20 ultraviolet light to the content or the plastic?

21 A. Correct.

call a 22 Q. Then you say calcium carbonate. That's what you

23 tracer or a filler. That's what you learned?

24 A. Yes, sir.

understand 25 Q. And the calcium carbonate is in there -- did you

13038

Jeffery Hayes - Direct

1 that it has the function of helping us to figure out

how much

It's 2 of the antioxidant UV package is present in the drum?

3 kind of a measuring stick?

4 A. That's my understanding, yes.

5 Q. Now, did you also understand that polyethylene --
6 besides high-density polyethylene is used for a lot of things

7 drums?

8 A. Yes, it is.

9 Q. Included in that are medical bins; correct?

10 A. Yes.

11 Q. There are certain products that are used in
connection with

12 horse stalls; correct?

13 A. Yes.

14 Q. There is pipe that carries gas; correct?

15 A. I don't know about that one. I don't recall
listing that

16 one.

17 Q. But you started to make telephone calls; correct?

18 A. Yes.

19 Q. How did you set up your data in order to know who
to call?

20 A. Well, initially I was provided with a list of
Smurfit

21 competitors -- that is, drum manufacturers that made a
similar

22 product -- and also a roster from the Plastic Drum

Institute

23 listening -- listing drum manufacturers.

24 Q. Now, the -- Smurfit gave you a list of their
competitors?

25 A. Yes.

13039

Jeffery Hayes - Direct

1 Q. And that was Mr. Udell that did that?

2 A. Well, actually, I got that from Scott Mendeloff.
I'm

3 assuming it came from Mr. Udell, but it was provided to
me --

4 Q. So you assume it came from Mr. Udell. You don't
know.

5 Some lawyer gave it to you. Correct?

6 A. A lawyer gave it to me, but it was a fax copy with
7 Smurfit's fax line on it.

8 Q. All right. And did you get a list of questions
from

9 Mr. Udell?

10 A. No.

11 Q. Do you have any knowledge of Mr. Udell providing a
list of

12 questions to the FBI?

13 A. Not that I recall.

14 Q. Okay. Well, with this -- the list that you got
that you

15 saw came from Smurfit was of manufacturers. Correct?

16 A. Yes.

17 Q. Did it already have some information on it, or was
that

18 just something you were to start with?

19 A. By "information," what do you mean?

20 Q. Information about the contents of these
competitors'

21 products.

22 A. Oh, no. There was no information regarding their
products.

23 Q. In what form was the list? Was it typed, or
printed, or

24 what?

25 A. One was handwritten or hand-printed, and one was
typed.

13040

Jeffery Hayes - Direct

1 Q. Okay. I'm going to show you now this document --

2 MR. TIGAR: If I may approach, your Honor?

3 THE COURT: Yes.

4 BY MR. TIGAR:

5 Q. -- and ask: Is that the list?

6 A. No. This is my handwriting.

7 MR. MEARNS: Okay. Mr. Tigar, may I have just
the

8 reference?

9 (Discussion off the record between Mr. Tigar and
10 Mr. Mearns.)
11 BY MR. TIGAR:
12 Q. Is that the list?
13 A. Um --
14 Q. Or part of it?
15 A. Yes, it is.
16 Q. So when you got something from Mr. Mendeloff, it
didn't
17 have any information on it about what was in these
drums or in
18 these plastics; correct?
19 A. Correct.
20 Q. So what's the next thing you do after you get the
list?
21 A. I started calling the companies on the list.
22 Q. And did you call an outfit called Florida Drum?
23 A. Yes, I did.
24 Q. Now, who did you speak to at Florida Drum?
25 A. I'd have to look at my notes to recall each
individual that

13041

Jeffery Hayes - Direct

1 I contacted, each point of contact.
2 Q. Which of your notes would you need to look at, sir?

3 A. Probably all of them, because there are a number of
lists
4 that I made that were initial contacts and then
subsequent
5 contacts.

6 Q. All right.

7 A. We can start with the list that you had from
Smurfit, if
8 you like.

9 Q. From Smurfit? All right.

10 A. Okay.

11 Q. Does that refresh your recollection?

12 A. Yes. I talked to Dave Miller, Production Manager.

13 Q. So you talked to somebody named Dave Miller, the
Production
14 Manager, and you just wrote "Dave Miller, Production
Manager,"
15 in the margin; correct?

16 A. Correct.

17 Q. Now, is it -- would you agree with me that you
didn't make
18 a note of the date on which you talked to this Dave
Miller?

19 A. I would agree with that.

20 Q. And do you remember the date on which you talked to
him?

21 A. Again, the project was started in late January and
22 continued on over several months.

23 Q. And you have -- within that several-month period,
you have

24 no idea when you talked to him; is that right?

25 A. Well, if that was the first list, I probably talked
to him

13042

Jeffery Hayes - Direct

1 on either the 31st of January or the 1st of February,
if those
2 were workdays.

3 Q. And you found out that Florida -- where is Florida
Drum
4 based?

5 A. I don't recall.

6 Q. Would it refresh your recollection if I said Pine
Bluff,
7 Arkansas?

8 A. Sounds right.

9 Q. Okay. Now, you found out they used calcium
carbonate in
10 their drums; correct?

11 A. I'd have to refer to the master list on that. I
talked to
12 so many people, I don't have total recall as to what
particular
13 chemical is in their particular products.

14 Q. Well, let's go on to the next. We'll get to the
list in a
15 while. You called a number of different people that
had been

16 listed; correct?

17 A. Yes, sir.

18 Q. Now, did you then wind up calling manufacturers of
the
19 actual resin?

20 A. Yes.

21 Q. You called -- did you call Nova Chemicals?

22 A. Yes, I did.

23 Q. And you received from them a list, did you not, of
people
24 to whom they supply materials and who make drums out of
them;
25 correct?

13043

Jeffery Hayes - Direct

1 A. That's correct.

2 Q. And you got that from those people up in chemical
-- Nova
3 Chemicals?

4 A. Yes, sir.

5 Q. Now, did you contact all of the people that make
drums with
6 Nova Chemical resin?

7 A. I believe I did.

8 Q. Did you contact anybody that makes anything else
out of

9 high-density polyethylene using Nova Chemical resin,
other than

10 drum manufacturers?

11 A. I believe I did.

12 Q. Now, how many people did they -- were on the list
that they

13 sent you from Nova Chemicals? Do you remember?

14 A. No, I don't.

15 Q. Well, do you remember how many people, customers of
Nova

16 Chemical, you contacted out of a list that they sent
you?

17 A. Not specifically. I would have contacted all of
them, but

18 I don't remember how many.

19 Q. Now, did you contact Mobil Chemicals?

20 A. Yes, sir.

21 Q. And are they a resin manufacturer?

22 A. Yes, sir.

23 Q. Did you contact all of the customers of Mobil
Chemicals?

24 A. As far as I know, I did.

25 Q. And did you contact Union Carbide?

13044

Jeffery Hayes - Direct

1 A. Yes, I did.

2 Q. Are they a resin manufacturer?

3 A. Yes, they are.

4 Q. Did you contact all of the customers of Union
Carbide?

5 A. Well, when you say "all of the customers," I'm sure
they

6 sell other products than natural resin. But the
natural-resin

7 customers, I contacted.

8 Q. And during what period of time did you ask Nova
Chemicals

9 to supply you their customer lists? For what period of
time?

10 A. During the time frame when they were manufacturing
that

11 specific resin, which would have been -- I think they
started

12 manufacturing that in December of 1991 up until the
date of the

13 bombing.

14 Q. Well, the specific resin involved: Isn't it a fact
that

15 that had to do with what Smurfit used to make barrels?

16 A. Yes.

17 Q. Well, the specific resin was one that was destined
for

18 Smurfit; correct?

19 A. Yes.

20 Q. Were you aware that the additives that were added
to that

21 resin had been in general use for many years prior to
1991?

22 A. No.

Tinuvin 23 Q. Did you know how long the ultraviolet additive,
24 622, had been in general use?

25 A. No.

13045

Jeffery Hayes - Direct

1 Q. Did you know how long a time a high-density-
polyethylene
2 item like a barrel or a milk crate or a stall liner or
a
3 Medibin or a pipe that carries natural gas or any of
that would
4 last in normal usage?

5 A. I have no idea.

6 Q. So you only asked Nova Resin for a list of their
customers
7 beginning in 1991; correct?

8 A. During the time frame for that particular type of
natural
9 resin.

10 Q. Whatever your understanding -- You say, "during the
time

11 frame for that particular type of natural resin."
What's the

12 basis for your information that that's the time frame?
Who

13 told you that?

recall 14 A. Could have been Mr. Udell or Mr. Tikuisis. I don't

15 which one.

so that 16 Q. So -- and you didn't make a note of your interviews

that told 17 you would be able to have some record of who it was

18 you that; correct?

19 A. Correct.

Carbide 20 Q. Now, during what period of time did you ask Union

21 for their customer list?

It could 22 A. I'm not certain. We went back quite a few years.

23 have been late 80's to present during the time.

sold resin 24 Q. Is it 1980 -- and did you find out that they had

25 to a number of people?

13046

Jeffery Hayes - Direct

1 A. Yes.

2 Q. All right. Did you call all those people?

3 A. I believe I did.

4 Q. And how many of them were there?

5 A. Again, I don't recall.

6 Q. More than a dozen?

7 A. Union Carbide, around a dozen, 10, 14, I don't
know.

8 Q. And how many customers did Mobil Chemical have?

9 A. They had a lot of customers, but I don't think a
lot of

10 them were using that particular type of resin.

11 Q. All right. How many customers were using that
particular

12 type of resin?

13 A. I don't recall.

14 Q. Okay. More than a dozen?

15 A. Perhaps.

16 Q. Now, there came a time, sir, you say when you made
a chart;

17 correct?

18 A. I actually made several charts. There were some
early

19 versions and then the subsequent one that Mr. Udell
used.

20 Q. And there came a point where you forwarded
something to

21 Mr. Udell?

22 A. Yes.

23 Q. And by the time you forwarded it to Mr. Udell, how
had you

24 sorted or classified or -- the information?

25 A. Well, as I said earlier, it was classified in four
parts:

Jeffery Hayes - Direct

1 the melt-flow index, the antioxidant package, the
ultraviolet

2 package, and whether or not the product contained a
3 calcium-carbonate tracer.

4 Q. And how many companies did you list on your list
that you
5 sent to Mr. Udell?

6 A. Over 40. I don't recall the exact number.

7 Q. Okay. Let me see if I can approach and refresh
your
8 recollection.

9 Sir, just to refresh your recollection, will
you look
10 at that and see if that's what you sent to Mr. Udell.

11 A. No. No. This was one of the earlier charts that I
had --
12 I think I did send him this.

13 I wouldn't have sent him this.

14 Q. So that's not what you sent him; correct?

15 A. No. This, I believe I sent him; but I don't -- I
did not
16 send him the other charts.

17 Q. Now, how did you select what charts you would put
18 information -- what information you would put on the
chart that

19 you sent to Mr. Udell?

20 A. The final chart?

21 Q. Yes.
22 A. Okay. That was -- if a company had a specific
antioxidant
23 package or UV package or whether or not they used
calcium
24 carbonate, we tried to eliminate that particular
manufacturer
25 based on one of those four issues.

13048

Jeffery Hayes - Direct

1 Q. Okay. Now, you say "we tried to eliminate"?
2 A. I tried to eliminate.
3 Q. You had a list of how many people that were making
things
4 out of polyethylene?
5 A. A long list.
6 Q. 100 names, maybe? How many?
7 A. Approximately.
8 Q. 100 names. Let's take 100. And you were calling
them up
9 and interviewing them; correct?
10 A. Yes.
11 Q. Not keeping any contemporaneous notes of who you
spoke to,
12 what you asked them, and so on; correct?
13 A. Well, I asked them all the same questions; so if I
didn't

unusual 14 note it on the note set I was taking . . . It wasn't

15 for me.

16 Q. So the answer to my question is you were not
keeping any

17 contemporaneous notes?

18 A. I was maintaining notes during the course of the
phone

19 call, but --

20 Q. But you didn't make any 302's; right? Correct.
Now, you

21 say then there came a time when you -- now, did you
ever talk

22 to a fellow at Plastic Color or Plastic Colour in
Canada?

23 A. Color additive company?

24 Q. Yes.

25 A. Sounds familiar.

13049

Jeffery Hayes - Direct

additive 1 Q. Were you trying to find out from them what their

2 package was?

3 A. Yes, I would have done that.

4 Q. Did they tell you?

5 A. I got full cooperation with everybody except one
company

6 initially, so I believe they did.

7 Q. Well, didn't -- let's just go through this one at a
time.

8 You started out; you had a membership roster of
plastics

9 companies; correct?

10 A. Yes.

11 Q. Then you were directed to call certain customers of
Nova

12 Corporation; correct?

13 A. Yes.

14 Q. Okay. And you found out that, from Nova Corp.
customers --

15 that there are certain applications such as horse-stall
liners

16 and hockey boards that were made with their plastics;
correct?

17 A. Yes.

18 Q. Did you ever call the horse-stall-liner companies
to see

19 what other farm-type products they made?

20 A. No.

21 Q. Why didn't you call them?

22 A. I was only concerned with the manufacturers.

23 Q. What manufacturers? The resin manufacturers, or
the

24 product manufacturers?

25 A. Both.

13050

Jeffery Hayes - Direct

and 1 Q. Well, what company was it that made hockey boards
2 horse-stall liners?

3 A. I don't recall the name right off.

name? 4 Q. And in fact, it's not in your notes, is it -- the

with the 5 A. Somewhere in my notes, this information is listed
6 company that I contacted.

7 Q. Okay. We'll get to it.

additive in 8 Now, what did you understand to be the

9 Smurfit plastic?

10 A. The antioxidant package, or UV stabilizer package?

11 Q. The whole thing.

blend of 12 A. Something called Irganox 168 or Irgafos 168 as an
13 antioxidant. Irganox 1010 and a Weston 399, kind of a
14 those chemicals.

they 15 The UV stabilizer package was Tinuvin 622, and
16 used calcium carbonate as a tracer.

notes. 17 Q. All right. I'm going to show you a page from your

Smurfit 18 What does that reflect about what's in the

19 plastic? Was that somebody telling you something

different?

20 A. No. That was a question that I had for Mr. Udell.

21 Q. And it says "Ciba 225," doesn't it?

22 A. Yes, it does.

Ciba 23 Q. Is that Mr. Udell telling you that something called

24 225 is in their plastic?

25 A. No.

13051

Jeffery Hayes - Direct

1 Q. Why did then -- what does that reflect?

Weston 2 A. That was a question that I had whether or not the

I was 3 399 blend was similar to the Ciba 225 blend, something

that they 4 trying to resolve. Some of the companies were saying

it was. 5 used Ciba 225 in their product, and I didn't know what

"Ciba 225 6 Q. All right. And you wrote your -- your note says,

7 is Smurfit additive"; correct?

8 A. I believe there is a question mark behind it. No?

9 No.

10 Q. No?

11 A. No.

12 Q. So it says without a question mark "Ciba 225 is

Smurfit

13 additive"; correct?

14 A. Well, it says that.

15 Q. Are you telling us now that that should have a
question

16 mark on it?

17 A. Yes.

18 Q. So -- but this is your note; correct?

19 A. It is.

20 Q. And if -- once again, if we were to look for some
302

21 report of this interview, we wouldn't find it; correct?

22 A. Correct.

23 Q. Now, did you attempt to determine how long a time
the

24 additive package or the UV additive package would stay
visible

25 or detectable by chemical processes?

13052

Jeffery Hayes - Direct

1 A. No.

2 Q. Do you remember calling an outfit called Zarn,
Inc.?

3 A. Yes.

4 Q. Did you communicate with Mr. Udell and let him know
what

5 you had found out from Zarn, Inc.?

chart. 6 A. Only from the standpoint of providing him with a

just at 7 Q. Now, you said that at one time you began by looking

8 barrels and then you started to look at other products;
9 correct?

10 A. Yes.

11 Q. Tell us what -- how that process worked.

12 A. The reason for it?

13 Q. Yes.

recovered 14 A. There was some concern that the plastic that was

products other 15 during the crime-scene search may have come from

16 than high-density-polyethylene, natural-resin barrels.

17 Q. And you wanted to investigate that; correct?

18 A. Yes.

manufacture -- 19 Q. Now, how many people in the United States

polyethylene? 20 how many companies manufacture high-density

21 A. I have no idea.

did you 22 Q. How many manufacturers of high-density polyethylene

23 contact?

24 A. Dozens.

25 Q. You contacted Mobil; right?

13053

Jeffery Hayes - Direct

1 A. Well, they're a resin supplier, not a manufacturer.

2 Q. That's what I'm talking about, people who make the
resin.

3 How many resin makers are there?

4 A. Well, let's see. There is Conoco, Mobil, Union
Carbide,

5 Nova -- four or five.

6 Q. Well, are those the only resin manufacturers that
you

7 contacted?

8 A. Yes.

9 Q. The ones you've listed? All right.

10 A. Correct.

11 Q. Is that right?

12 A. Yes, sir.

13 Q. Are you aware that high-density polyethylene is a
14 by-product of petroleum production?

15 A. I understand that's correct.

16 Q. And you didn't contact any other of the major
petroleum

17 companies in the United States other than the ones
you've

18 listed; right?

19 A. That's correct.

20 Q. So -- and on your list, the only majors are Mobil
and

21 Conoco; right?

22 A. I don't know what their volume is, sir.

23 Q. I'm talking about majors in terms of petroleum.
You didn't

24 contact Royal Dutch Shell?

25 A. Right.

13054

Jeffery Hayes - Direct

1 Q. Didn't contact BP?

2 A. Correct.

3 Q. Didn't contact Chevron?

4 A. Correct.

5 Q. Didn't contact Standard or Exxon?

6 A. Correct.

7 Q. Or by inference, any others?

8 A. Correct.

9 Q. So are you able, sir, to tell this jury that you
have

10 accounted in your survey for all of the high-density-

11 polyethylene resin produced in the United States from
1980 to

12 1994, '95?

13 A. I contacted all the manufacturers that I was aware
of.

14 Q. When you say "manufacturers" --

15 A. The resin manufacturers and the companies that use
that

16 resin.

17 Q. And again, when you say that you were aware of,
these are

18 lists that other people provided to you; correct?

19 A. Yes.

20 Q. Okay. And in addition to those in the United
States,

21 you're aware that at least one search scene here, a
recycled

22 barrel from Argentina was found. Did you know that?

23 A. No.

24 MR. MEARNS: Objection.

25 THE COURT: Sustained.

13055

Jeffery Hayes - Direct

1 BY MR. TIGAR:

2 Q. Now, throughout your -- in your notes, did from
time to

3 time you mark and just put the name "Udell" indicating
that you

4 wanted Mr. Udell to contact the people?

5 A. Well, Mr. Udell contacted everybody that I
contacted.

6 Q. Oh, he went and recontacted them?

7 A. I asked the companies to cooperate with him so that
he

8 could go through the elimination chart, contact those
companies

9 in preparation for his testimony in this matter.

10 Q. Oh. So -- so you helped -- you did some research;
correct?

11 A. Yes, sir.

12 Q. Then you called all the companies and said, "A Mr.
Udell

13 will be calling you. I'm Agent Hayes of the FBI.
Please

14 cooperate with him and tell him what he wants to know";
15 correct?

16 A. Correct.

17 Q. Now, did you contact an outfit called Air Lock
Plastics?

18 A. Is that in Tonawanda, New York?

19 Q. Yes, sir.

20 A. Yes, I did.

21 Q. And you're smiling -- the record doesn't reflect
it.

22 Who -- who did you speak to there?

23 A. I couldn't get past the switchboard operator
initially.

24 Q. And your notes say, "Two calls -- WCB." What does
that

25 mean? Will call back?

Jeffery Hayes - Direct

1 A. Yes.

2 Q. And that "per snotty operator": Did you write
that?

3 A. Yes, I did.

4 Q. And so given the fact that you couldn't get past
the

5 switchboard at Air Lock, being -- how did the FBI
decide to get

6 information from Air Lock Plastics?

7 A. We sent an agent out to the business.

8 Q. And did the agent do an interview at Air Lock
Plastics?

9 A. I presume that he did.

10 Q. Did that result in a 302 that you have seen?

11 A. Not that I've seen.

12 Q. Would in the normal course, you know, of business a
302, if

13 it had been made, come back to you?

14 A. Yes.

15 Q. Well, did you tell him not to do a 302?

16 A. No.

17 Q. Were you the one that instructed the agent to go
see him?

18 A. I sent the teletype directing an agent from the
Buffalo

19 office to go out there and ascertain the information
that we

20 needed to know.

21 Q. Okay. Now, you also contacted an outfit called

22 "Rubbermaid." Correct?

23 A. Yes.

24 Q. They're the maker of many specialty products;
correct?

25 A. Correct.

13057

Jeffery Hayes - Direct

1 Q. And did you receive from them any literature about
all the

2 different products that Rubbermaid makes?

3 A. No.

4 Q. Do you have any idea how many products Rubbermaid
makes

5 that are made of high-density polyethylene?

6 A. No.

7 Q. Did they ever send you a recipe for their
polyethylene?

8 A. Not that I recall.

9 As I recall, they didn't make any high-
density-

10 polyethylene, natural-resin products.

11 Q. Well, that's what you're telling us, sir, today.
My

12 question is did they ever send you a catalogue? Did
you ever

13 ask them to send you a recipe?

14 A. They never sent me a catalogue.
15 By "recipe," do you mean the ingredients they
used in
16 that particular product?

17 Q. Yes. Did they ever send you a recipe?

18 A. Not that I recall.

19 Q. Now, who did you speak to -- you talked to an
outfit called

20 National Plastics Color, Inc.; do you remember that?

21 A. I don't recall that specifically, no.

22 Q. Do you recall that you talked to somebody who makes
the
23 additive package for Florida Drum Company?

24 A. That could be, yes.

25 Q. And you found out that they do use calcium
carbonate;

13058

Jeffery Hayes - Direct

1 correct?

2 A. There were a few companies that used it as a
tracer. I

3 don't recall that specifically, but there were a few.

4 Q. So calcium carbonate, you found out, is not at all
unique

5 to Smurfit; correct?

6 A. Well, there is only a few companies that use it; so
in

7 terms of being unique, I guess not.

8 Q. No. Not unique. Correct. And did you find out
whether

9 Tinuvin 622 is marketed under any other names than
Tinuvin 622?

10 A. No.

11 Q. And we've already established that you didn't know
what --

12 whether or not it was under patent at that time.
Correct?

13 A. I don't believe you've asked that question.

14 Q. Oh. Do you know whether Tinuvin 622 was under
patent in

15 1993-94?

16 A. No.

17 Q. Now, you found out that Union Carbide had used the
Irganox

18 1010 and Irgafos 168 during a certain time period;
correct?

19 A. Yes, sir.

20 Q. Now -- and you remember they sent you a letter
about that?

21 Do you recall that?

22 A. I believe they faxed me some information on it. I
don't

23 know if they sent a letter or not.

24 Looks like they sent me a letter.

25 Q. Well, they sent you a letter and they told you
about

13059

Jeffery Hayes - Direct

1995. 1 additive packages between January, 1993, and April,

2 Correct?

3 A. Yes.

them? 4 Q. Well, is that the information you had asked from

each of 5 A. I asked them to go back until the -- well, I asked

not have 6 the companies to go back into the late 80's. They may

just be 7 been making that specific product back then. It may

that 8 that they were only making that particular resin during

9 time frame.

about this 10 Q. In terms of may have been, I just want to talk

certain 11 letter. What they told you was that they used a

1995; 12 additive package between January, 1993, and April,

13 correct?

14 A. Correct.

additive 15 Q. So based on this letter, you wouldn't know their

16 package from anytime prior to April, 1993; correct?

them 17 A. Not for those specific resins, if they were making

18 back then.

19 Q. And we've established that you didn't know how long
these

20 barrels would last in normal use; correct?

21 A. Correct.

22 Q. Now, did you find while you were doing your
investigation

23 that similar information with respect to some of these
things

24 has been -- had been furnished to Mr. Buechele?

25 A. No.

13060

Jeffery Hayes - Direct

1 Q. Well, sir, didn't Mr. Farmer of Van Leer tell you
that

2 they'd sent it to Mr. Buechele?

3 A. That's what it says here.

4 Q. Now, when you got that, do you know who Mr.
Buechele is?

5 A. I do now.

6 Q. Pardon?

7 A. Yes, I do.

8 Q. Well, you say you do now. When is the first time
you

9 became aware of who Mr. R. Buechele is?

10 A. Sometime during the -- my inquiries regarding this
project.

special 11 Q. And did you call -- you understand him to be a

12 agent of the FBI?

13 A. Yes.

done? 14 Q. Did you call him to ask him what research he had

15 A. No.

16 Q. Why not?

17 A. Didn't think it was necessary.

that he had 18 Q. So you never found out what investigation or --

19 done; correct?

20 A. Correct.

to write 21 Q. Well, can you tell us what occasion, then, you had

22 Mr. Buechele's and Ms. Knuckles' name on your notes.

names 23 A. Well, I was talking to somebody obviously, and the

information 24 either came up or I just jotted it down as -- as

25 for myself to perhaps contact at a later date.

13061

Jeffery Hayes - Direct

how it is 1 Q. As you sit there today, do you have any memory of

2 that you came to write the names of Mr. Buechele and

3 Ms. Knuckles on your notes?

4 A. No.

5 Q. Now, earlier we were talking about an outfit called
Plastic

6 Color; and do you remember talking to them?

7 A. Not specifically.

8 Q. Okay. Let me show you something, see if it
refreshes your

9 recollection. See the name there?

10 A. Yes, sir.

11 Q. Does that refresh your recollection you talked to
them?

12 A. I don't know if I got this from them, or I got it
from one

13 of the resin -- either producers or manufacturers. I'm
not

14 sure where that came from.

15 Q. All right. And this is part of the material you
had;

16 correct?

17 A. Yes.

18 Q. And you notice that here the material safety data
sheet --

19 their -- one is asked for the chemical name and family
for

20 certain additives. Correct?

21 A. That's what it says.

22 Q. They say that's proprietary and they're not
telling;

23 correct?

24 A. It was all proprietary information.

not 25 Q. I understand. This specific document says they're

13062

Jeffery Hayes - Direct

sheet 1 telling; correct? They don't reveal it in their data

2 that was sent to you?

3 A. Oh.

4 Q. Is that right?

5 A. Could well be, yes.

sir, 6 Q. How long did this project take that you were doing,

ready for 7 before you sent the material off to Mr. Udell to get

8 his testimony?

four 9 A. I worked on it off and on for about three months,

10 months.

11 Q. And at what point did you send the material on to

12 Mr. Udell?

either 13 A. I can't give you a specific date. It was sometime

14 during the McVeigh trial or prior to it.

Udell? 15 Q. I just want to see: Is this what you sent to Mr.

16 Just leaf through it, if you will.

17 A. Yes. This is one of the charts that I sent to him.

18 Q. Well, is that everything in there that you sent to
19 Mr. Udell?

20 A. Yes. It appears that way.

21 MR. TIGAR: I'd like to just mark this for
22 identification, your Honor, so that we know what we're
23 referring to.

24 THE COURT: All right.

25 MR. TIGAR: We don't intend to offer it.

13063

Jeffery Hayes - Direct

I've 1 May the record reflect that the document that
marked D1827 2 just shown to the exhibit -- to the witness is now
3 for identification.

Tigar? 4 THE COURT: And how many pages are there, Mr.

which 5 MR. TIGAR: Your Honor, there is a cover page,
6 is ours, and it's Bates' stamped pages 1 through 17.

7 THE COURT: Thank you.

counsel. 8 MR. TIGAR: Let me show it to Government

9 Thank you.

10 BY MR. TIGAR:

11 Q. Now, sir, in the list of people you got that are

part of

12 the trade association for the manufacture of drums, you
had a

13 number of names of drum reconditioners; correct?

14 A. Yes.

15 Q. Did you contact any of the drum reconditioners?

16 A. No.

17 Q. Why not?

18 A. It wasn't in the project.

19 Q. Wasn't in the project?

20 A. It wasn't in the project.

21 Q. Who -- now, you'd be aware that at a drum
reconditioner,

22 you might find drums of various ages; correct?

23 A. I would assume so.

24 Q. And you might find drums that were made by many
different

25 manufacturers. Would you -- you agree with that?

13064

Jeffery Hayes - Direct

1 A. I'd agree with that.

2 Q. All right. And you'd find drums even by companies
that

3 were once in business making drums and then quit doing
it;

4 correct?

5 A. Possibly.

6 Q. And who was it that decided that you weren't going
to

7 contact any drum reconditioners or recyclers?

8 A. Well, I was asked just to contact the high-density-
9 polyethylene natural drum, and other product
manufacturers, not

10 reconditioners.

11 Q. Okay. Now -- and who asked you to do that? Mr.
Mendeloff?

12 A. Yes.

13 Q. He's the one that set the limits; right?

14 A. Yes.

15 Q. Now, when was it decided to go beyond drums to
other

16 products?

17 A. I can't give you a specific date. It was early on
in the

18 project.

19 Q. And who made that decision?

20 A. Mr. Mendeloff.

21 Q. Did you have a discussion with him about it?

22 A. Not that I recall specifically, no.

23 Q. He just told you to change the focus. Is that
right?

24 A. Expand it.

25 Q. To expand the focus.

13065

Jeffery Hayes - Direct

1 Now, sir, do you have any training in
statistics?

2 A. No.

3 Q. Do you have any training in polling techniques?

4 A. No.

5 Q. Have you ever -- did you ever take a statistics
course?

6 A. No.

7 Q. When you would call up people to ask them about
these

8 issues, who would you ask to talk to?

9 A. Well, initially, Mr. Udell or somebody from
Smurfit. The

10 initial list provided names, points of contacts. The
companies

11 that I called cold, I asked either for the production
manager

12 or the chief chemist.

13 Q. All right. And so the typical call was, "Hello,
I'm Agent

14 Hayes of the FBI." Right?

15 A. Yes.

16 Q. "I'd like to talk to your production manager or
chief

17 chemist"; correct?

18 A. Yes.

19 Q. And then you would ask them about what they had --

what

20 ingredients they used. Correct?

21 A. Prior to asking that question, I explained what I
was

22 doing.

23 Q. All right. And did you ask them for any time
frame,

24 particular time frame?

25 A. Yes. As I told you earlier, initially it was with
the Nova

13066

Jeffery Hayes - Direct

1 Chemicals was when the first batch was made in '91 up
until the

2 day of the bombing. With other ones, it went back into
the

3 late 80's, depending on how long they'd been buying a
4 particular resin or how long that particular resin had

been
5 manufactured.

6 Q. And when you say "a particular resin," would you
tell them

7 a code for a resin?

8 A. Well, I would say, for instance -- if they bought
their

9 resin from Union Carbide, I'd give them that Union
Carbide

10 number.

11 Q. And did -- in each case, did you ask the person to
send you

12 business records that reflected the use of this
additive?

13 A. No.

14 Q. So you took the recollection of whoever was
identified to

15 you on the telephone as the person who remembered;
right?

16 A. Correct.

17 Q. Did you ask each person that you spoke to how long
that

18 person had been working at the company?

19 A. No.

20 Q. So you had no idea whether you were talking to
somebody who

21 had only worked there a week, or somebody that worked
there 10

22 years; right?

23 A. That's correct.

24 Q. Now, did you interview anyone from a company in
Puerto

25 Rico?

13067

Jeffery Hayes - Direct

1 A. Not personally.

2 Q. And who was it that interviewed the people in
Puerto Rico?

3 A. A member of our support staff.

4 Q. And that -- was that because the interview had to
be
5 conducted in Spanish?

6 A. Yes, sir.

7 Q. And you found out that there is a company in Puerto
Rico
8 that makes containers -- correct -- for soft drinks and
things?

9 A. I don't know about that particular product.

10 Q. And do you remember the name of the entity in
Puerto Rico
11 with whom you spoke?

12 A. Nampac.

13 Q. Nampac.

14 MR. TIGAR: Will your Honor give me just a
moment?

15 THE COURT: Yes.

16 MR. TIGAR: Just one moment, your Honor.

17 BY MR. TIGAR:

18 Q. Sir, I'd like you to take a look at something here.
Is
19 this document what you received from Nova?

20 A. Yes.

21 Q. And who put the arrows on it?

22 A. I don't know.

23 Q. Did it have arrows on it when it got to you, the
black
24 arrows?

25 A. I don't recall seeing that, but it could have.

13068

Jeffery Hayes - Direct

call 1 Q. Now, based on the information from Nova, did you
2 everybody to whom they supplied resin?

3 A. No.

4 Q. And how did you decide who not to call?

5 A. I only called the ones that were purchasing the --
that 6 particular resin that was sold to Smurfit.

7 Q. Now, that particular resin that was sold to Smurfit
didn't 8 have the additive added to it until after Smurfit got
it; 9 right?

10 A. I don't know.

11 Q. So are you telling us that you don't know whether
or not 12 the resin that Nova Corp. makes in the millions of
pounds every

13 year is shipped to -- is identical when it's shipped to
Smurfit 14 as it is to some other companies?

15 A. I can't tell you that.

16 Q. And -- now, you did know about melt index. Right?

17 A. Yes.

18 Q. Did you attempt to contact all of the people to
whom Nova

19 had sent resin that had the same melt index?

20 A. No.

21 Q. That wasn't the basis of your inquiry; correct?

22 A. Correct.

23 MR. TIGAR: I have no further questions.

24 THE COURT: Mr. Mearns, do you have any
questions?

25 MR. MEARNS: Briefly, your Honor.

13069

Jeffery Hayes – Cross

1 CROSS-EXAMINATION

2 BY MR. MEARNS:

3 Q. Agent Hayes, would it be fair to say that during
the course

4 of --

5 MR. TIGAR: Object to leading, your Honor.

6 THE COURT: Sustained.

7 BY MR. MEARNS:

8 Q. Agent Hayes, during the course of your survey, did
you from

9 time to time speak to Mr. Udell?

10 A. Yes, I did.

11 Q. About how many times during the course of your
survey do

12 you think you spoke to Mr. Udell?
13 A. Half-a-dozen times.
14 Q. What was the purpose of contacting Mr. Udell during
the
15 course of your survey?
16 A. Periodically, I had questions regarding similar
chemicals,
17 whether or not a specific chemical additive was similar
to
18 another one.
19 Q. And did Mr. Udell ever tell you the kinds of
questions that
20 you should ask during the course of your survey to
follow up on
21 the type of information you were getting?
22 A. No.
23 Q. Did there come a time in September, the end of
September,
24 when you've completed the chart, the elimination chart
that
25 Mr. Tigar was asking you questions about?

13070

Jeffery Hayes - Cross

1 A. Yes.
2 Q. And did that chart then subsequently get a
Government
3 exhibit sticker?

4 A. I understand that it did.

5 Q. Do you recall what Government exhibit number that
was?

6 A. No, I don't.

7 Q. Let me show you what's been marked for
identification as

8 Government's Exhibit 2055. Is that the final chart
that you

9 prepared in connection with your survey?

10 A. Yes, it is.

11 Q. And that is the chart that you prepared in
consultation

12 with Mr. Udell?

13 A. I didn't have any discussions with Mr. Udell
regarding the

14 preparation of this chart.

15 Q. Did you fax -- did you ever provide him with drafts
of the

16 chart?

17 A. Yes.

18 Q. Is there an entry on that chart for Zarn,
Incorporated?

19 A. Yes, there is.

20 Q. And was Zarn, Incorporated, eliminated as a
possible match

21 with the -- the plastic fragments that were found at
the crime

22 scene of the explosion in Oklahoma City?

23 MR. TIGAR: Objection.

24 THE COURT: Sustained.

25 BY MR. MEARNS:

13071

Jeffery Hayes – Cross

1 Q. Based on your contact with Zarn, Incorporated, did
they
2 tell you whether or not they used calcium carbonate
with their
3 UV stabilizer?

4 MR. TIGAR: Objection, your Honor.

5 THE COURT: Sustained.

6 MR. MEARNS: May I just have a moment, your
Honor?

7 THE COURT: Yes.

8 BY MR. MEARNS:

9 Q. To the best of your knowledge, Agent Hayes, did the
10 information that you obtained during the course of the
survey
11 get included in one form or another on that chart,
Government's

12 Exhibit 2055?

13 MR. TIGAR: Objection, your Honor.

14 THE COURT: Overruled.

15 THE WITNESS: Yes, it did.

16 BY MR. MEARNS:

17 Q. Mr. Tigar asked you certain questions about drum
18 reconditioners. Based upon your survey, do you know

whether or

19 not when a drum is reconditioned, a plastic drum is
20 reconditioned -- whether or not that changes the
chemical
21 composition of the drum?

22 MR. TIGAR: Objection, your Honor.

23 THE COURT: Sustained.

24 MR. MEARNS: I have no further questions, your
Honor.

25 MR. TIGAR: May we approach the bench briefly,
your

13072

1 Honor?

2 THE COURT: Yes.

3 (At the bench:)

4 (Bench Conference 112B2 is not herein transcribed
by court

5 order. It is transcribed as a separate sealed
transcript.)

6

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13076

1 (In open court:)

2 THE COURT: Do you have any additional
questions for

3 this witness?

4 MR. TIGAR: No, your Honor. No follow-up.

5 THE COURT: Is he excused now?

6 MR. TIGAR: He is as far as we're concerned,
your

7 Honor.

8 MR. MEARNS: Yes, your Honor.

9 THE COURT: You may step down, Agent Hayes.
You're

10 excused.

11 And before calling the next witness, I want to
remind

12 you, members of the jury, that you heard testimony from
13 Mr. Udell, who has been referred to here in this
testimony,

14 back on November 26 -- Wednesday, November 26; that in
the

15 course of the testimony of Mr. Udell, this matter of
telephone

16 calls to various manufacturers and so forth came up and
that it

17 was after Mr. Udell stepped down from the stand on that
day

18 that upon request, the notes, including the notes that

19 Mr. Hayes here has referred to, which he gave to Mr.
Udell, or

20 information was provided to the attorneys for the
defense, this

21 information-- these notes and the matters that are
going to be

22 talked about here -- that have been talked about with
Mr. Hayes

23 and will be talked about, perhaps, with other
witnesses, were

24 provided on December 2.

25 There has been a reference to this document
called

13077

defense 1 Exhibit 2055, a summary chart. That was provided to
not in 2 counsel before the trial began. That, of course, is
have 3 evidence; but we're going to -- I assume we're going to
4 Mr. Udell back.

5 MR. TIGAR: The next witness, your Honor.

reason 6 THE COURT: The next witness. And that's the
has this 7 that he's being re-called; that defense counsel, now
he 8 material that was not available to him at the time that
had at 9 cross-examined Mr. Udell back on November 26. All he
10 that time was the summary chart.

11 All right. Re-call Mr. Udell.

oath you 12 Mr. Udell, you're being re-called under the
13 took with us back on November 26.

14 THE WITNESS: Okay.

15 THE COURT: Please resume the stand.

16 Mr. Tigar.

17 (Theodore Udell was re-called.)

18 DIRECT EXAMINATION

19 BY MR. TIGAR:

20 Q. Good morning, sir.

21 A. Good morning.

22 Q. Mr. Udell, do you remember testifying that you gave
the FBI

23 a list of questions that were to be asked of people?

24 A. Generally, yes.

25 Q. Pardon?

13078

Theodore Udell - Direct

1 A. Yes.

2 Q. Did you, in fact, give the FBI a list of questions?

3 A. Not a written list.

4 Q. Do you remember being asked this question: "Did
the FBI

5 give you a list of questions that you were supposed to
ask the

6 witnesses that you were interviewing on their behalf?

7 "Answer: I think I gave them a list of
questions.

8 "Question: Did they accept your list?

9 "Answer: I believe so."

10 Your testimony is that was an oral list?"

11 A. Yes.

12 Q. Now, do you remember on the last occasion that you
were

13 here that you talked about your notes?

14 A. Yes.

15 Q. And you told us the method that you had done to
make the

16 survey. Do you recall that, sir?

17 A. I don't follow on your question.

18 Q. Well, you told us of the survey that you had
conducted;

19 correct?

20 A. Yes.

21 Q. And do you remember telling us that the notes would
tell us

22 what questions you asked and what answers you received?

23 A. No, I don't remember saying that.

24 Q. Do you remember being asked, "Question: Would
those notes

25 tell us what questions you asked and what answers you
received"

13079

Theodore Udell - Direct

1 and your answering yes?

2 A. Yes.

3 MR. TIGAR: Placing a sticker on, for our
reference,

4 Defendant's D1828, consisting of 17 pages.

5 BY MR. TIGAR:

those the 6 Q. Some of the page numbers we put in in pen. Are
7 notes to which you referred?
8 A. Yes.
9 Q. That's all of them?
10 A. I believe so.
11 Q. Well, are there any questions in there?
12 A. No.
13 Q. Why did you tell the jury under oath that we'd find
14 questions in your notes, if there weren't any there?
15 A. I don't think I -- well, my -- I guess the answer
is the
16 answers to the questions I asked, I basically quizzed
the
17 people I talked to about the information that I was
looking
18 for.
19 Q. Now, that's your explanation?
20 A. Yes.
21 Q. Did you keep any record of this list of questions
that you
22 provided to the FBI?
23 A. No.
24 Q. Who in the FBI did you give a list of questions to?
25 A. Jeff Hayes.

Theodore Udell – Direct

1 Q. Is he the only person in the FBI with whom you
spoke about

2 these matters?

3 A. Yes.

4 Q. Did you also speak to Mr. Mendeloff about these
matters?

5 A. Not that I remember.

6 Q. When did Mr. Hayes first contact you?

7 A. At least a year ago.

8 Q. So that would be sometime late in 1996?

9 A. Approximately.

10 Q. And did he ask for your help?

11 A. I can't say precisely.

12 Q. What -- what was the conversation?

13 A. At what point in time? I mean this --

14 Q. When he first called you, sir, what was the
conversation?

15 What did you talk about?

16 A. I think the problem is you're starting in the
middle of

17 something, and it's hard for me to grasp where you're
trying to

18 go.

19 Q. I understand. Well, at some point you were first
contacted

20 by Special Agent Hayes; correct?

21 A. Yes.

or
22 Q. Now, before that time you had talked to Special --
23 Monica Knuckles; correct?
24 A. That's correct.
25 Q. And what other agents had you talked to?

13081

Theodore Udell - Direct

1 A. I did not write a list of who I talked to.
2 Q. Now, did Agent Hayes contact you about doing some
sort of a
3 survey?
4 A. I believe so, but I can't be certain that he's the
one that
5 initiated it.
6 Q. Well, do you have any memory of talking to anyone
else
7 other than Agent Hayes from the federal government
about doing
8 some sort of a survey?
9 A. No.
10 Q. When is the first time you can remember talking to
Agent
11 Hayes about doing some sort of a survey?
12 A. I don't have an exact date.
13 Q. Well, were you asked at sometime to help in doing
some sort
14 of a survey?

15 A. Yes, I was.

16 Q. And what was your understanding of what your
responsibility

17 was in doing this survey?

18 A. When Monica -- can I answer that by just going back
a

19 little bit in time?

20 Q. No. What's your understanding -- well, all right.
I'm

21 sorry. I want to be fair to you, sir. Monica Knuckles
came to

22 you. Was that the first contact with the FBI?

23 A. That's correct.

24 Q. And you testified that you spread out a bunch of
plastic

25 fragments on a conference table; correct?

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Theodore Udell - Direct

1 A. That's correct.

2 Q. And how many plastic fragments did you have spread
out on

3 the conference table?

4 A. I have no idea. It was a lot of pieces of plastic.

5 Q. All right. And there came a time when it was
decided to

6 focus just on a couple of bags of plastic fragments;
correct?

7 A. That's correct.

8 Q. And there was an effort just going to be working
with those
9 plastic fragments and see if they matched somebody's
barrels;
10 correct?

11 A. Yes.

12 Q. Do you know if other people were asked to take
other pieces
13 of plastic on the conference table and try to match
them to
14 somebody else's barrels?

15 A. Well, before Monica Knuckles came to me, she went
to
16 Van Leer and asked Van Leer to do the same thing.

17 Q. Now, my question -- and that's the only knowledge
you have
18 of any attempt to find out whose barrels or whose
polyethylene
19 things might match the pieces of plastic on your
conference
20 table, you and Van Leer; correct?

21 A. I don't follow your question now.

22 Q. You know that attention focused on some pieces of
plastic
23 that were on your conference table to see if they
matched your
24 plastic; correct?

25 A. Yes.

Theodore Udell - Direct

1 Q. And you heard from Monica Knuckles that she had
taken some 2 other pieces of plastic and gone to Van Leer; correct?

3 A. Yes.

4 Q. Do you know of any efforts to try to match all
these other 5 pieces of plastic on your conference table to somebody
else's

6 barrels other than yours and Van Leer's?

7 A. No.

8 Q. Now, after you talked to Monica Knuckles about this
and you 9 looked -- you identified some pieces of plastic as
perhaps 10 being yours; correct?

11 A. Yes.

12 Q. You told us about that last time you were here?

13 A. Yes.

14 Q. Then what's the next thing did you with the FBI?

15 A. Well, I told Monica Knuckles that she was in luck
because 16 we had a tracer in our natural drums.

17 Q. Now, you said your tracer. Now, that's this
calcium 18 carbonate; correct?

19 A. Yes.

20 Q. And calcium carbonate is added to an additive

package

21 produced for you by Allied; correct?

22 A. Yes.

23 Q. And that is designed to help, when you analyze it,

24 determine if the percentage of additive is correct in
the

25 product. Is that one purpose of it?

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Theodore Udell - Direct

1 A. One purpose of it.

2 Q. Yes. It's also a filler; correct?

3 A. We do not use it as a filler, but it can be used as
a

4 filler.

5 Q. Now, you're aware -- you were aware at the time
that the

6 calcium carbonate is used in other people's drums;
correct?

7 A. Yes.

8 Q. And you're also aware that calcium carbonate has
uses in

9 being mixed with additive packages in high-density
polyethylene

10 for non-drum uses; correct?

11 A. I learned that afterwards, yes.

12 Q. Now -- so there is nothing unique about -- calcium

13 carbonate is used by other people than Smurfit;

correct?

14 A. Calcium carbonate by itself is not unique.

used by 15 Q. Calcium carbonate is part of an additive package

16 other people. You know that; correct?

17 A. Yes.

Did you 18 Q. Now, we had this conversation with Ms. Knuckles.

package that 19 have any other conversation besides the additive

some 20 Smurfit used before you agreed to participate in doing

21 kind of a survey?

22 A. Excuse me. I don't understand the question.

the time 23 Q. Between the time you talked to Monica Knuckles and

survey, did 24 you agreed to help out the FBI doing some kind of a

this 25 you have any talk with anybody in the Government about

13085

Theodore Udell - Direct

1 additive package in your drums?

2 A. Not that I recall.

back and 3 Q. Okay. Now -- then beginning with -- you talked

4 forth with Mr. Hayes; is that correct?

5 A. Yes.

6 Q. And discussed with him who he should call; correct?

7 A. Yes.

8 Q. And you understood that he was calling
manufacturers of

9 high-density polyethylene; correct?

10 A. Among others, yes.

11 Q. Now, did you understand that he called all
manufacturers of

12 high-density polyethylene in North America?

13 A. I gave him a list of manufacturers of high-density

14 polyethylene and other drum manufacturers.

15 Q. Did you give him a list of the -- or membership
roster of

16 the Society of the Plastics Industry?

17 A. Yes.

18 Q. And is it your testimony -- what else did you give
him

19 other than this membership roster of a trade
association?

20 A. There were a number of lists; and whether it was --
I think

21 I had a handwritten list as well of manufacturers of
plastics

22 material and maybe the -- the PDI, the Plastic Drum
Institute,

23 list of members.

24 Q. And what is the Society of the Plastic Industry?

25 A. Well, the --

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Theodore Udell - Direct

1 Q. Or the Plastics Industry.

2 A. The -- everybody associated with plastics or -- are
invited

3 to join this association, Society of Plastics
Industries. The

4 Plastic Drum Institute, PDI, is a subset of the Society
of

5 Plastics Industries; and PDI is Plastic Drum Institute,
so some

6 drum members are members of the PDI.

7 Q. So it's not required that you be a member of it;
correct?

8 A. That is correct.

9 Q. And it includes reconditioners of drums; correct?

10 A. That is correct.

11 Q. You testified earlier that these drums do not have
any

12 fixed useful life?

13 A. That is correct.

14 Q. That they could last many, many years; correct?

15 A. Yes.

16 Q. And in the plastics industry, there are -- have
been since

17 1985 mergers and acquisitions; correct?

18 A. Yes.

19 Q. That is to say, companies have changed hands. Is

that

20 right?

21 A. Yes.

22 Q. Now, at some point, did -- then did Mr. Hayes
forward you

23 a -- the notes that we've just identified as D1828 and
ask you

24 to fill in the blanks?

25 A. No. He gave it to me to look at.

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Theodore Udell - Direct

1 Q. And did you make notes on it?

2 A. Yes, I did.

3 Q. Did the notes reflect telephone calls that you
made?

4 A. Yes, they -- yes, they did.

5 Q. All right. Now, for instance, when you called
Phillips 66,

6 you talked to somebody named Dave. Remember that?

7 A. Yes.

8 Q. Now, who is Dave?

9 A. Well, I have to look at my notes to tell you who
Dave is.

10 Q. Okay. Well, just looking at D1828, page 1. See it
says

11 "talked to Dave."

12 A. Yes. Uh-huh.

13 Q. Now, from your notes, who does it say that Dave is?

14 A. Says Dave Morgan.

15 Q. Dave Morgan?

16 A. Dave Morgan was in charge or knowledgeable about
17 polyethylene production that Phillips produced.

18 Q. Now, you say -- and then there is a question mark
beside
19 that note. Well, when did you talk to Dave? On the
date
20 indicated here?

21 A. Most likely.

22 Q. Now, what does Dave do? What's his job title?

23 A. I'm not sure at this point. I know Dave Morgan.
I've
24 worked with him. I believe he's like the sales and
marketing
25 manager.

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Theodore Udell - Direct

1 Q. For Phillips 66?

2 A. For Phillips 66.

3 Q. How long has he been the sales and marketing
manager for
4 Phillips?

5 A. I couldn't tell you.

6 Q. So you got some information from him; right?

7 A. Yes.

8 Q. All right. And then at Solvay Polymer, you talked
to Ken

9 Rosengard. Correct?

10 A. If it's on the list, yes.

11 Q. Well, what does Ken do for a living?

12 A. All the people that I talked to --

13 Q. No, no, sir. Do you remember what Ken does for a
living?

14 A. His exact title?

15 Q. Yes, sir.

16 A. No.

17 Q. Do you know how long he's worked for Solvay
Polymer?

18 A. No.

19 Q. Did you talk to somebody at Greif Brothers?

20 A. Yes.

21 Q. And who did you talk to there?

22 A. Who's ever on the list.

23 Q. All right. Looking at your list, page 2, does that
refresh

24 your recollection who you talked to at Greif Brothers?

25 A. Yes. John Stein.

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Theodore Udell - Direct

1 Q. All right. Now, what's John Stein's title?

2 A. Well, it says technical manager.

3 Q. That's what it says on this typewritten list here?

4 A. Yes.

5 Q. And that was supplied by Agent Hayes?

6 A. Yes.

7 Q. Well, did you -- how long has John Stein worked for
Greif Brothers?

9 A. I can't tell you.

10 Q. What are his responsibilities as tech manager?

11 A. To know what the formulation of the materials would
be.

12 Q. And do you know that of your personal knowledge,
sir, or
13 are you just guessing?

14 A. No. I asked that question to everybody I talked
to.

15 Q. Okay. And then you got back something that caused
you to

16 write "unknown" -- correct -- after you found out that
he knew

17 what he was talking about? You see it there, sir?
"Unknown"?

18 A. Oh, yes. Yes. Okay.

19 Q. Well, do you have a recollection right now of why
it is

20 that after you found out this guy knew what he was
talking

21 about, you wrote "unknown"?

22 A. Yes.

23 Q. What was that?

24 A. In the questions I asked, I asked very broad-based

25 questions that I -- where I would be sure that they
knew what

13090

Theodore Udell - Direct

1 they were talking about and had the right information.

2 Q. Okay.

3 A. So I talked to him the first time. He did not have
the

4 information that went back as far as I had requested,
and so I

5 asked him to go back to '76, when his earliest records
were;

6 and so I wrote the "unknown" when I first talked to
him. He

7 went back and I talked to him since that time, and he
clarified

8 the fact that -- the data on the chart.

9 Q. None of these questions, these broad-based
questions, are

10 on this chart; correct?

11 A. That is correct.

12 Q. And you wrote here "none from 1990"; correct?

13 A. Yes.

14 Q. Is this your testimony that was a result of your

first

15 conversation with this Mr. Stein?

16 A. I have to look at my notes to comment on those.

17 MR. TIGAR: Can I have a device just to show
it to him

18 on the monitor, your Honor? I think that would save me
from

19 walking across --

20 THE COURT: Yes.

21 BY MR. TIGAR:

22 Q. Sir, there it is just for you to refresh your
recollection.

23 What did you find out the first time you talked to Mr.
Stein?

24 A. I think the first time it was "none from 1990."

25 Q. Okay.

13091

Theodore Udell - Direct

1 A. Then we talked about that he had dated back to
1976, and I

2 asked him to go back to '76.

3 Q. All right. And then you said "go back '76";
correct?

4 A. Right.

5 Q. And then underneath "go back '76," it says
"unknown."

6 Correct?

7 A. Yes. But that doesn't refer to that.

8 Q. Pardon?

9 A. That doesn't refer to that. The "unknown" was
written

10 first, and then it was "go back to '76." And the
checkmark in

11 the right -- on the left-hand -- the right-hand corner
of the

12 first column means that I was satisfied with his
answer.

13 Q. But without you here to explain all this to us, in
order of

14 the series, it reads "none from 1990, will call 3-25,
will call

15 3-14, go back '76, unknown, left message 3-10"?

16 A. But at the same time, if you look up above it --

17 Q. Sir, is that what it says? Is that what you wrote?

18 A. That's what I wrote.

19 Q. Now, who did you talk to at Russell-Stanley Corp.?

20 A. I have to look at my notes to --

21 Q. All right, sir. Did you talk to Earl Lind?

22 A. Yes, I did.

23 Q. He was a former Smurfit chemist; correct?

24 A. Yes, he is -- yes, he was.

25 Q. And at what point, did you write "From 1990 - did
not use

Theodore Udell – Direct

1 622 or calcium carbonate"? When did you write that?

whole
2 A. You're showing me half a chart. I really need the
3 chart.

the whole
4 Q. I'll show you the whole chart, sir. There. See
5 page? When did you write that?

6 A. That was probably my first conversation with him.

you don't
7 Q. You say that "probably"? As you sit there today,
8 recall whether it was or not?

9 A. It was my first conversation with him.

he went
10 Q. Now, when had Earl Lind worked for Smurfit before
11 to Russell-Stanley?

12 A. About eight years ago.

been,
13 Q. So as of the time that you were calling him, it had
14 what, a little less than eight years?

15 A. Yes.

16 Q. Now, did you call an outfit called Nampac?

17 A. Yes, I did.

18 Q. And who did you speak to there?

19 A. Charlie Clut.

in the
20 Q. Now, did you reach Charlie Clut in Puerto Rico, or
21 United States?

- 22 A. In the United States.
- 23 Q. How long has he worked for Nampac?
- 24 A. I do not know.
- 25 Q. Do you know what his title is?

13093

Theodore Udell - Direct

- 1 A. No.
- 2 Q. The plant manager is listed as Marcos Aviles on
your notes.
- 3 Did you talk to Marcos Aviles?
- 4 A. No.
- 5 Q. Why not?
- 6 A. He speaks Spanish only.
- 7 Q. Now, there came a time, sir, in which you reported
your
- 8 results to the FBI; correct? Yes?
- 9 A. I -- I was sent the charts, and I basically told
them that
- 10 I had basically agreed with the information in the
charts.
- 11 Q. Now, what about Zarn, Inc.?
- 12 A. Yes.
- 13 Q. You had a telephone call about Zarn, Inc.,
recently;
- 14 correct?
- 15 A. Telephone call about Zarn?

last 16 Q. Yes. Did you call Mr. Geoffrey Mearns within the

17 three days?

18 A. Yes.

19 Q. And what was the subject of your telephone
conversation

20 with Mr. Mearns?

21 A. I said I found another name on the list that I
hadn't

22 verified.

23 Q. That you had not verified?

24 A. That's correct.

25 Q. And that -- what name was that?

13094

Theodore Udell - Direct

1 A. Zarn.

2 Q. And what other conversation did you have with Mr.
Mearns?

3 A. I was asking him why I was being asked to come
back.

4 Q. And he didn't answer, did he?

5 A. No.

6 Q. Now, you said there was another name other than
Zarn that

7 you hadn't verified? I didn't understand what you
said. You

8 told him there was a name -- that Zarn was another name
that

9 you hadn't verified?

10 A. I said Zarn was a name that I had not verified.

11 Q. Were there other names you had not verified?

12 A. Not on the last list. There was -- there were --
the list

13 that you have has two sets of data in it. The second
set of

14 data, there were two names I had not verified. This is
going

15 back several months. And I got the information, called
and

16 verified those two names. I missed the Zarn name.

17 Q. And -- okay. Now, if I were to go through all of
these --

18 how many people did you contact?

19 A. Must have been 50 or more.

20 Q. Okay. And of those 50 people, as to how many of
those

21 people can you tell us how long they'd worked for the
company

22 that you were calling?

23 A. I couldn't tell you that.

24 Q. And as to those 50 people, other than their title
-- all

25 right -- as to how many of them can you provide a
detailed job

1 description?

2 A. None.

3 MR. TIGAR: No further questions, your Honor.

4 THE COURT: Mr. Mearns, are you going to have
some
5 questions?

6 MR. MEARNS: Yes, I do, your Honor, briefly.

7 THE COURT: All right.

8 CROSS-EXAMINATION

9 BY MR. MEARNS:

10 Q. Mr. Udell, in response to a question from Mr.
Tigar, you

11 talked about a conversation that you had with Ms.
Knuckles --

12 A. Yes.

13 Q. -- of the FBI back in 1995.

14 A. Yes.

15 Q. Do you recall that?

16 Why is it that you told Ms. Knuckles that she
was in

17 luck?

18 A. Because we added a tracer to our natural
formulation, so

19 the combination of the tracer, the particular UV
stabilizer we

20 were using, the antioxidant package, the base resin,
and the

21 phosphite would be a very unique formula in combination
with

22 the Novacor resin.
23 Q. Is it simply the presence or absence of calcium
carbonate
24 in the additive package that makes the Smurfit recipe
unique?
25 A. No. It's the -- it's the -- the combination, the
recipe of

13096

Theodore Udell - Cross

1 multiple chemicals that make it unique, not just the
calcium
2 carbonate, because there are other people who add
calcium
3 carbonate; but they do not add calcium carbonate in a
lot of
4 cases to their natural drums, in most cases to the
natural
5 drums, and they do not add calcium carbonate with the
Tinuvin
6 622 UV stabilizer. So it's a very unique formulation.
7 Q. And that was your opinion in 1995 when you spoke to
8 Ms. Nichols when you were first contacted by the FBI?
9 A. Yes.
10 Q. And as the result of the survey that you conducted,
has
11 your opinion changed in any way?
12 A. Not at all.
13 Q. What is your opinion as you sit here today?

14 A. In doing the telephone search, I made sure, No. 1,
that I
15 was talking to a person who had full knowledge of what
their
16 formulations were prior to 1995, not just from '92 to
'95 when
17 we produced the drums, but going as far back as the
records
18 could indicate. And if I was not satisfied that the
person on
19 the list had that information, you'll notice on the
list there
20 are other names. I got -- I called other people up,
and I did
21 not quit asking questions until I was absolutely
certain that
22 there was no question that the information I had was
correct
23 and that the Smurfit formulation was the only one that
carried
24 all those ingredients.

25 MR. MEARNS: I have no further questions, your
Honor.

13097

1 THE COURT: Mr. Tigar?

2 REDIRECT EXAMINATION

3 BY MR. TIGAR:

4 Q. Would you agree with me, sir, that an opinion is no

better

5 than the facts to back it up?

6 MR. MEARNS: Objection. Argumentative.

7 THE COURT: Overruled.

8 THE WITNESS: Excuse me?

9 BY MR. TIGAR:

better

10 Q. Would you agree with me, sir, that an opinion is no

11 than the facts to back it up?

12 A. True. Yes.

13 Q. Do you do market research, sir? Your company?

14 A. My company, yes.

market

15 Q. And when you do market research, do you retain a

16 research firm?

17 A. Not always.

18 Q. Have you retained market research firms?

19 A. I have.

other

20 Q. And you know that they use sampling techniques and

statistical

21 techniques designed to make their results have

22 validity; correct?

23 A. Yes.

24 Q. And, sir, if you wanted to find out what was in a

suitable

25 particular drum make you made to find out if it was

13098

Theodore Udell - Redirect

1 for a customer's use, for instance -- let's take a
chemical
2 company, Conoco -- would you ask them to rely on your
word, or
3 would you give them a materials sheet?
4 A. Could go either way.
5 Q. Materials sheets are routinely made by your
company, aren't
6 they?
7 A. A material sheet of what?
8 Q. Materials sheet that show the additives in your
products so
9 that the customer can evaluate whether or not that
product is
10 suitable for their use.
11 A. No, we do not.
12 Q. Did you see Mr. Hayes' notes?
13 A. That's the one basically you were showing me that I
14 commented on.
15 Q. Have you seen any other notes?
16 A. Other than those, no.
17 Q. Is it your testimony, sir, that a company that
deals with
18 you does not get a materials sheet that shows what's in
your
19 product so they can determine whether or not it's

suitable for

20 their uses?

21 A. That's correct.

22 Q. You don't tell them that you have ultraviolet
packages and

23 so on? You don't tell them that?

24 A. We don't list it, no.

25 Q. If they called up and asked you for a materials
sheet, do

13099

Theodore Udell - Redirect

1 you give it to them?

2 A. We don't have a materials sheet that lists those
3 ingredients. If they ask me, we tell them it's in
there.

4 Q. So it's your testimony, sir, you don't do that.

5 Now, you said on redirect examination that you
kept on

6 asking questions until you were satisfied. Correct?

7 A. Yes.

8 Q. And you'd agree with me that none of those
questions you

9 kept on asking is in your notes; right?

10 A. That's correct.

11 Q. So that if we read your notes, we're not going to
find out

12 that fact; right?

13 A. Yes.

14 Q. And you testified on redirect that you kept -- that
you
15 made sure the person you were talking to had full
knowledge;
16 correct?
17 A. Yes.

18 Q. Yet you cannot tell us, can you, sir, how long any
of those
19 people worked for the companies you were talking to?
20 A. Yes, that's correct.

21 Q. And is your opinion today about the -- according to
your
22 very unique formulation -- based on this survey that
you did;
23 that is, what you based your opinion on, the opinion
you've
24 given us today, based on this survey?
25 A. I wouldn't call it a survey.

13100

Theodore Udell - Redirect

1 Q. Well, what would you call it?
2 A. A fact-finding.
3 Q. All right. Is your opinion today based on this
4 fact-finding mission that you engaged in with the FBI?
Is that
5 what it's based on?

6 A. Yes.

7 MR. TIGAR: No further questions.

8 MR. MEARNS: Nothing further, your Honor.

9 THE COURT: May he now be excused?

10 MR. TIGAR: Yes, your Honor.

11 THE COURT: You may step down. You are now
excused.

12 Members of the jury, we'll take our afternoon
13 recess -- luncheon recess, not afternoon recess. It's
after

14 noon but it's not midafternoon. Usual time here of
about 90

15 minutes, maybe just a little longer; but, of course,
usual

16 cautions: Please recognize you're going to hear a lot
more

17 than you've heard so far; so keep open minds, avoid
discussion

18 of the case with other jurors and with all other
persons, and

19 continue to be careful to avoid anything outside the
evidence

20 that could influence you in the decisions to be made.

21 You're excused now till about 1:35. We could
be a

22 little bit delayed. You're excused.

23 (Jury out at 12:03 p.m.)

24 THE COURT: Mr. Japha here?

25 MR. JAPHA: Yes, your Honor.

13101

Japha. 1 THE COURT: Please. Could you come up, Mr.

Honor 2 MR. TIGAR: I'm sorry, your Honor. Did your
3 want to do it at the bench?

4 THE COURT: No.

5 MR. TIGAR: I'm sorry. Misunderstood.

6 THE COURT: No.

witness 7 Mr. Japha, you were appointed to represent a
8 who was -- is in custody and was brought here at the
request of 9 Counsel.

10 MR. JAPHA: That's correct, your Honor.

visited 11 THE COURT: Is that correct? And you have
12 that he 13 with him. I take it you found out about what it is
14 would be asked?

14 MR. JAPHA: Yes, your Honor.

advised 15 THE COURT: And after -- and, of course, you
16 of the 17 him with respect to his rights under the Constitution
18 United States.

18 MR. JAPHA: Yes.

19 THE COURT: Particularly with respect to the
privilege
20 under the Fifth Amendment.

21 MR. JAPHA: Correct, your Honor.

22 THE COURT: And without getting into anything
that
23 would obviously be privileged with respect to the
communication

24 back and forth -- we're not going to ask you that --
but after

25 talking with counsel who requested him and then after
talking

13102

1 with the witness, can you tell us what the position of
the
2 witness would be if called and asked questions of the
type that
3 you were informed would be asked?

4 MR. JAPHA: Yes, your Honor. After consulting
with
5 Mr. Hart, I can represent to the Court that he would
invoke his
6 Fifth Amendment privilege.

7 THE COURT: Essentially on all of the subject
matter
8 that you were informed that he would be asked?

9 MR. JAPHA: Correct. On the substantive
matter, yes.

Japha. 10 THE COURT: Yes. All right. Thank you, Mr.

11 And, Mr. Conner.

12 MR. CONNER: Yes, your Honor.

13 THE COURT: Would you come up, too, please.

14 I take it you were in the room when I asked
these 15 questions of Mr. Japha.

16 MR. CONNER: I was, your Honor.

17 THE COURT: And you were appointed to
represent

18 another person who has been brought here in custody,
and I take

19 it you also were informed by requesting counsel as to
the

20 subject matter of -- about which your client witness
would be

21 asked?

22 MR. CONNER: I was, your Honor. I was also
23 provided -- it's my understanding -- with the agreement
of the

24 Government, the interview reports that had been done of
my

25 client, Mr. Morris; and I've fully discussed Mr.
Morris'

13103

1 proposed testimony with him.

his 2 THE COURT: And advised him with respect to
3 rights --
4 MR. CONNER: Yes, I have.
5 THE COURT: -- under the Constitution?
upon -- 6 MR. CONNER: Under the Constitution and based
7 THE COURT: And again, I don't want you to get
into 8 any privileged communications with your client; but are
9 you prepared to advise us what his position is with respect
to the 10 invocation of the privilege on the matters that you
understand 11 he would be asked about?
his 12 MR. CONNER: Yes, your Honor. He would invoke
13 privilege against self-incrimination under the Fifth
Amendment 14 of the Constitution.
15 THE COURT: On essentially everything that
would be 16 pertinent to the purpose for his being called?
17 MR. CONNER: That is certainly my belief, yes,
your 18 Honor.
19 THE COURT: All right. Well, do either
counsel have 20 any questions of counsel with respect to this?

21 MR. WOODS: Not from us, your Honor.

22 MR. MACKEY: No, your Honor.

23 THE COURT: Or the Government?

24 All right. Thank you.

25 MR. TIGAR: Your Honor, may we request a
finding by

13104

1 the Court that the witnesses are unavailable within the
meaning
2 of Federal Rule of Evidence 804.

3 THE COURT: Yes. And I'm going to rely on
these two
4 lawyers and their representations of the position of
the
5 witness without calling them.

6 Is that a satisfactory procedure to both
sides?

7 MR. TIGAR: Yes, your Honor.

8 MR. MACKEY: It is, your Honor.

9 THE COURT: All right. So yes, my finding is
that
10 these two witnesses, Shawn Morris and Jason Hart, are
not
11 available.

12 Okay. Counsel, Mr. Japha, Mr. Conner, we
appreciate
13 your service in this matter. You're now excused.

14 MR. JAPHA: Very well.

15 THE COURT: From the courtroom, I mean.

16 MR. CONNER: Thank you, your Honor.

17 THE COURT: Not a general excuse for
everything you've

18 ever done.

19 MR. JAPHA: I have one more matter that
perhaps we

20 could take up. I did file something under seal.

21 THE COURT: Yes, and I granted it except with
respect

22 to the motion. That may want to be redacted. We'll
have

23 counsel who filed the motion look at that and decide
whether

24 there is any objection.

25 MR. JAPHA: Very well. Thank you, your Honor.

13105

1 THE COURT: Well, we'll be in recess till
1:40.

2 (Recess at 12:10 p.m.)

3 * * * * *

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5 Item
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6 WITNESSES

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	16	Theodore Udell
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DEFENDANT'S EXHIBITS

Withdrawn	21	Exhibit	Offered	Received	Refused	Reserved
	22	D10	12978	12978		
	23	D12	12972	12972		
	24	D13	13015		13016	
	25	D5	12984	12984		

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1 DEFENDANT'S EXHIBITS (continued)
2 Exhibit Offered Received Refused Reserved

Withdrawn

3 D6 12969 12969

4 * * * * *

5 REPORTERS' CERTIFICATE

6 We certify that the foregoing is a correct
transcript from

7 the record of proceedings in the above-entitled matter.

Dated

8 at Denver, Colorado, this 8th day of December, 1997.

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Paul Zuckerman

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Bonnie

Carpenter

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