STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY
BRANCH 1

STATE OF WISCONSIN,

PLAINTIFF,

vs.

STEVEN A. AVERY,

DEFENDANT.

JURY TRIAL
TRIAL - DAY 11
Case No. 05 CF 381

DATE: FEBRUARY 26, 2007

BEFORE: Hon. Patrick L. Willis
Circuit Court Judge

APPEARANCES: KENNETH R. KRATZ
Special Prosecutor
On behalf of the State of Wisconsin.

THOMAS J. FALLON
Special Prosecutor
On behalf of the State of Wisconsin.

NORMAN A. GAHN
Special Prosecutor
On behalf of the State of Wisconsin.

DEAN A. STRANG
Attorney at Law
On behalf of the Defendant.

JEROME F. BUTING
Attorney at Law
On behalf of the Defendant.

STEVEN A. AVERY
Defendant
Appeared in person.

TRANSCRIPT OF PROCEEDINGS

Reported by Diane Tesheneck, RPR

Official Court Reporter

I N D E X

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THE COURT: At this time the Court calls the State of Wisconsin vs. Steven Avery, Case No. 05 CF 381. We're here this morning for a continuation of the trial in this matter. Will the parties state their appearances for the record, please.

ATTORNEY KRATZ: Good morning, Judge. The State appears by Special Prosecutors Ken Kratz, Norm Gahn and Tom Fallon.

ATTORNEY STRANG: Good morning. As well, Steven Avery is in person and Dean Strang and Jerome Buting representing.

THE COURT: All right. Before we begin, I would like to commend the jurors for all getting here on time this morning. When I called the Clerk to notify you last night that we would be having court today, I didn't expect as much snow as I found when I got up this morning. I appreciate the fact, I'm sure you made an effort to get to the bus stop on time.

When we left off on Friday, I believe the defense was about to begin its cross-examination of Ms Culhane; is that correct?

ATTORNEY BUTING: That is correct, your Honor.

THE COURT: All right. You can have the

witness brought in and begin.

SHERRY CULHANE, called as a witness herein, having been first duly sworn, was examined and testified as follows:

THE CLERK: Please be seated. Please state your name and spell your last name for the record.

THE WITNESS: Sherry Culhane, C-u-l-h-a-n-e.

THE COURT: All right. Mr. Buting, you may begin.

ATTORNEY BUTING: Thank you, Judge.

CROSS-EXAMINATION

BY ATTORNEY BUTING:

Q. Good morning, ma'am.

A. Good morning.

Q. I want to pick up on where you left off on Friday, and that is your opinions, series of opinions about the stains that you found in the RAV4. Okay, are you with me?

A. Mm-hmm.

Q. Your opinion, over and over to Mr. Gahn was, do you have an opinion to a reasonable degree of scientific certainty as to whether Mr. Avery is the source of the DNA found in stains one, two, three, whatever it was, right?

A. Right.
Q. And what you are really saying is, that as far as you can tell, Mr. Avery is the original source of the DNA that you find in those stains, correct?
A. I'm saying that his profile was consistent with what I found in the stains.
Q. Right. But what you are not saying is anything about how his DNA found its way inside the RAV4, are you?
A. No.
Q. Your tests aren't designed to tell us how his DNA found it's way into the location where you ultimately swabbed, are they?
A. No.
Q. What you are looking for is a DNA profile, and if you find it, then you compare it to a known reference sample, in this case, Mr. Avery, right?
A. Right.
Q. But if someone else planted Mr. Avery's DNA, or blood, or both, inside that vehicle, you wouldn't know that from these tests, would you?
A. No.
Q. So you cannot tell this jury, with any degree of certainty, scientific or otherwise, that Steven Avery was, himself, ever inside that vehicle, can

you?
A. No.
Q. No meaning correct?
A. That's correct.
Q. All right. You also talked about contamination, and I think you used the word unintentional contamination; do you recall a discussion about that?
A. Yes, I do.
Q. All of the quality controls that you set up inside the Wisconsin Crime Lab are designed to deal with evidence after it arrives at your lab, correct?
A. That's correct.
Q. You can't do anything about contamination that might occur to evidence before it gets to your lab, right?
A. That's correct.
Q. And that would be true for unintentional contamination such as an officer who's sloppy at the scene when he's picking up whatever evidence it may be?
A. That's correct.
Q. Your tests and your quality control doesn't -- can't account for that, right?

A. Right.
Q. And that also would be true as to intentional contamination that occurred before it gets to your lab as well, right?
A. Correct.
Q. Once again, so you have no way, through your quality control tests, controlling whether or not there's some intentional, deliberate tampering with the evidence that goes -- that takes place before it gets to your lab?
A. That's correct.
Q. So if the evidence had been intentionally contaminated or tampered with, before it got to your lab, your tests will not show that; isn't that right?
A. That's correct.
Q. Now, I'm assuming that you would agree with me on this, that normally evidence that you receive from a -- an agency that is police is -- you are assuming that when you get it that the -- that there's good integrity with that evidence, right?
A. Correct.
Q. That is, you trust the police to be honest and fair in an investigation, generally, right?
A. Correct.

Q. Just as we and the jury would trust you and other members of the Wisconsin Crime Lab to be honest and fair in your investigation?
A. That's correct.
Q. And the reason that we can normally be comfortable with that assumption, with regard to your Crime Lab, is that you would never knowingly assign an analyst to examine case evidence who had some connection to a suspect, would you?
A. No.
Q. And I'm sure, for instance, you, yourself, if you had been deposed as a witness in a lawsuit brought by a suspect, you would not volunteer to be the person who runs the tests in that case, would you?
A. No.
Q. And you would -- If you knew that one of your other analysts was also similarly situated with regard to a suspect, you would not assign that analyst to be handling the evidence and making the tests that are done in the case, would you?
A. Not if they had a personal attachment to anyone in the case, no.
Q. Sure. Because it's important for you that your lab be objective in its results, correct?

A. Correct.
Q. And you are aware -- you said that you go to meetings, forensic scientists test meetings and that sort of thing, right?
A. Correct.
Q. You are aware that some labs in other parts of the country have had trouble with that, right, where analysts have been actually accused of falsifying results?
ATTORNEY GAHN: Your Honor, I will object at this time to the relevancy of other labs.
ATTORNEY BUTING: Well, I think it goes to her procedures here.
THE COURT: I'm going to sustain the objection. I think the point has been made.
Q. (By Attorney Buting)~ Well, would you agree with me that if somebody in your lab was so predisposed, it would be very easily -- very easy for that person to frame a suspect?
ATTORNEY GAHN: Objection, your Honor, to the form of the question and it calls for speculation.
THE COURT: I'm going to sustain the objection. I will allow this line of questioning, but the hypothetical fact scenario will have to be a

little bit more specific.

Q. (By Attorney Buting)~ If somebody in your lab wanted to monkey with the evidence and plant it in a way that deliberately framed a suspect, that could be done, couldn't it?

ATTORNEY GAHN: Objection, your Honor, as to what he means by monkeying with the evidence.

THE COURT: It's sustained.

Q. (By Attorney Buting)~ If somebody wanted to take and deliberately contaminate evidence, once it got to your lab, deliberately contaminate evidence, and let's say, put or mix a reference sample from the suspect, with actual evidence in the case, that could be done, couldn't it?

A. It's possible that that could be done, but --

Q. Sure.

A. -- in my opinion that wouldn't happen.

Q. Of course not. Because you take steps to be sure that the person assigned to the case would have no such inclination to do so; isn't that right?

A. That's correct.

Q. And you take steps to be sure that the person assigned to the case has no stake in the outcome of the testing itself or the case?

ATTORNEY GAHN: Objection, your Honor,

vague question.

ATTORNEY BUTING: If she needs clarification she can ask.

THE COURT: Yeah, she can answer that.

THE WITNESS: I'm sorry, could you repeat that.

Q. You take steps to be sure that the person assigned to a case has no stake in the outcome of the case or the test?

A. That's correct.

Q. All right. And, indeed, it's your assumption that when evidence comes to you from a police agency, it's your assumption that the police have also taken similar stakes -- or similar steps to make sure that nobody connected with the suspect has been involved in the collection of the evidence, isn't it?

ATTORNEY GAHN: Objection, your Honor, speculation.

ATTORNEY BUTING: Asking for her assumption.

THE COURT: She can answer.

A. Okay. Obviously, I don't know any of this for a fact, but I would make the assumption that evidence came in from the police agency was --

maintained integrity.
Q. And collected from somebody who had no connection to the case, you would hope?
A. Yes.
Q. Okay. Now, in this case, I believe you said that some of your duties involve case flow and case management, right?
A. Correct.
Q. Does that also involve assigning particular analysts to a particular case?
A. Yes.
Q. But in this case, you assigned yourself?
A. Correct.
Q. All right. And that's a decision that you make, and yours alone?
A. Most of the time, sometimes my supervisor makes that decision but, in this case, I made the decision.
Q. All right. Mr. Gahn pointed out that you were actually the analyst who did the tests that resulted in exoneration of Mr. Avery in 2003, right?
A. Correct.
Q. And you did that because -- in part, because newer, more accurate DNA results -- or tests had

been developed that actually excluded Mr. Avery as the source of a pubic hair?

A. Correct, at the time the original case was worked, DNA was not available.

Q. Okay. But I want to get into just a little bit about what that involved. What you tested were pubic hairs that were found, essentially, on -- in the area of the victim's privates, right?

A. From her pubic area, yes.

Q. These are combings that are done to find any possible pubic hairs from the assailant?

A. Correct.

Q. And your test in 2003 absolutely, positively, excluded Mr. Avery as the source of one of those hairs, right?

A. Correct.

Q. There was no question about that, right?

A. Correct.

Q. And it included -- or matched, a fellow by the name of Gregory Allen, right?

A. Yes.

Q. And you knew that Allen was no friend of the victim, so that his pubic hair shouldn't be found where they were, right?

A. I really didn't have any knowledge of whether she

knew him or not, no.
Q. Okay. But you knew that his hairs -- or that his DNA profile was registered in CODIS.
A. That's correct.
Q. And that, in fact, he was already in prison at the time of 2003 when you did this test?
A. That's correct.
Q. In prison for a rape that he committed after, or while Mr. Avery sat in prison for Mr. Allen's crime.
A. That's correct.
Q. Now, what Mr. Gahn didn't have you point out, though, let's get into a few other things; although you were the one who exonerated -- or whose test exonerated Mr. Avery, the evidence sat at your lab for more than a year before you got around to doing the test that did exonerate him, right?
A. That's correct.
Q. And one of the things that you in fact said you do is control priorities and case flow of what gets tested when, right?
A. Correct.
Q. So, had you done that test as soon as it came in, the evidence being in September of 2002, I

believe, Mr. Avery would have been exonerated then, wouldn't he?

A. Correct.

Q. So Mr. Avery sat for another year, in prison, because of the delays that resulted in your Crime Lab; isn't that right?

A. Correct.

Q. Another thing Mr. Gahn didn't point out is another irony in this case. Not only were you involved in the 2003 exoneration of Mr. Avery, but you were also involved in the 1985 conviction of Mr. Avery, weren't you?

A. I worked evidence on that case, yes.

Q. And you testified as a witness for the prosecution at trial in that case, didn't you?

A. Yes, I testified.

Q. In fact, the trial where he had 16 alibi witnesses and was convicted included your expert opinion regarding some hairs that had been found and were offered by the prosecution to somehow link Mr. Avery to that crime; isn't that right?

A. To be perfectly honest, I do not remember my entire testimony from 1985.

Q. Well, I have it here, if you need to refer to it. But I don't know that we'll get into that much

detail.
A. Okay.
Q. I just want the jury to understand a little background, okay?
A. Sure.
Q. You do recall that you testified, generally, in those terms, right?
A. Yes.
Q. Okay. And just so we understand, there were no DNA tests back in 1985?
A. Correct.
Q. You were testifying about a type of so-called science known as microscopic hair comparison analysis, right?
A. Correct.
Q. And the theory behind that science, in 1985, was that you could take a microscope with two fields and that you could put one hair underneath one microscope field and another hair under the other, and you could examine the two of them together, correct?
A. Correct.
Q. And the theory being that you could -- you present this to the jury anyway, that you could make some conclusions about how similar,

dissimilar, or consistent one hair was to the other?

A. Correct.

Q. And I don't mean to be jumping all over you, you were not the only person in the country doing this kind of testimony in 1985, right?

A. That's correct.

Q. Forensic labs all over the country were bringing in experts to testify to juries about this kind of science, right?

A. Correct.

Q. Including the FBI, right?

A. Yes.

Q. Now, with the advent of DNA, the forensic community discovered something about those tests, right?

A. Correct.

Q. They discovered that those conclusions or opinions that were being drawn by the experts, such as yourself, were really not all that reliable, didn't they?

A. Correct. They have been proven to be much less specific than DNA analysis.

Q. All right. And even wrong on occasions, right?

A. Correct.

Q. So, for instance, in the 1985 trial of Mr. Avery, there were some hairs found, head hairs I think, found on a T-shirt that he was wearing on the day of this poor woman's rape, right?
A. I don't recall exactly.
Q. Well, okay. Do you recall giving an opinion that one hair found on Mr. Avery's T-shirt appeared to be similar to or consistent with a head hair standard of the victim in that case?
A. No, I don't recall exactly. I'm assuming it's in my report, but I don't have independent recollection of that.
Q. Would you like to take a moment to review --
A. Yes, sir.
Q. -- a portion of your transcript?
A. Yes, sir, I can.

ATTORNEY GAHN: Your Honor, at this time I just question the relevancy of this to the testimony that Ms Culhane gave in this case, the relevancy in this 1985 case.

THE COURT: Mr. Buting.

ATTORNEY BUTING: Mr. Gahn tried to present her as a totally unbiased witness for them, in the event that because she -- her test in 2003 resulted in the exoneration, I think the jury needs to hear

that she's also testified the other way for the prosecution at the beginning of the trial.

THE COURT: As I understand your line of questioning, it's an attack on the methodology that was used at the time, not on her credibility.

ATTORNEY BUTING: Also a question on her opinion and the validity of her opinions.

THE COURT: No, I'm going to sustain the objection.

ATTORNEY BUTING: All right.

Q. (By Attorney Buting)~ Let's do it this way. Would you agree with me that at least -- that hair comparison, microscopic hair comparison, so-called forensic science, is one example of how science is not necessarily or -- or our understanding of science is not necessarily infallible, is it?

A. No. With respect to hair analysis, that was a much less objective criteria than what we use today. That was more subjective and open to interpretation -- personal interpretation. The science that we use now, today, with DNA, is much more objective and much more reliable.

Q. Okay. But at the time you were presenting testimony you expressed it in terms of a

reasonable degree of scientific certainty, didn't you?

A. In 1985, I do not remember how I stated that.

Q. Well, in general, whether in Mr. Avery's case or any of the other cases where you presented this kind of hair comparison testimony, you presented opinions to juries or to Courts, to a reasonable degree of scientific certainty, didn't you?

ATTORNEY GAHN: Objection, your Honor, relevancy and asked and answered.

THE COURT: Sustained.

ATTORNEY BUTING: As to which, asked and answered or relevance?

THE COURT: To relevancy.

ATTORNEY BUTING: All right.

Q. (By Attorney Buting)~ When you talked about DNA and what it is and how it's examined, you mentioned -- Oh, by the way, before I leave that, to your knowledge, your lab isn't going around doing those kind of -- providing that kind of testimony anymore, hair comparison testimony anymore, are you?

A. No.

Q. And neither is the FBI, right?

A. I'm not sure about that.

Q. Okay. But going back to DNA, you said that -- and I don't have your -- the power point slides, but I think the jury can probably recall them -- you showed this double helix kind of spiral thing being unwound and bracketing off certain areas of it, right?
A. Correct.
Q. And you talked about a part that was considered a gene and a part that is not a gene, or something like that?
A. I referred to the parts that do not function as genes, and they are referred to as genetic markers.
Q. Okay. And -- Well, I don't know if you got into this or not, but let's just briefly touch on this. When we're talking about genetics, you recognize that certain genes are inherited by everybody, right? The genes, for instance, that make humans have two eyes instead of one, right?
A. Correct.
Q. Two arms instead of one?
A. Correct.
Q. Or two legs, right?
A. Yes.
Q. There were certain genes that are common to

everybody, unless there is some sort of birth defect or genetic mutation, right?

A. Correct.

Q. And so, if you find a gene that says -- that determines that this individual should have two eyes, or two legs, or two arms, that's kind of meaningless in terms of identifying a suspect, isn't it?

A. Well, first of all, we don't even look at those portions at all.

Q. I understand.

A. So it's irrelevant.

Q. But if you were to look at genes that everybody has and find them in a profile, that would be meaningless?

A. Correct.

Q. For your purposes?

A. Yes.

Q. As you would say, that would have zero discriminating power?

A. Correct.

Q. Okay. And other more common types of genes, however, are sort of individually inherited. Like the gene that would say what color your hair should be, may be different from what someone

else has, right?
A. Yes.
Q. Or what your eye color may be, right?
A. Correct.
Q. Or how tall or how short you are, ultimately, going to be when you grow up?
A. Correct.
Q. Those are sort of more individual genetic characteristics that are inherited at different rates in the population?
A. Correct.
Q. Same thing with whether you are Type A, or Type B blood, or Type O positive, or whatever?
A. Correct.
Q. And there are data banks, then, statistics that can say, you know, what are the odds, or what are the chances of finding, you know, a random man population, somebody with blue eyes?
A. I don't know about that. I don't know if there's a --
Q. You are a serologist, so let me focus on that. There are statistics that talk about -- that tell you what percentage of the population is Type A blood?
A. Correct.

Q. And type B and so forth, right?
A. Yes.
Q. And those are well-known statistics that have been developed over years of study?
A. Yes.
Q. Now, in fact, we know, or we're learning, what genes actually determine someone to be -- to have certain characteristics, physical or biological characteristics, right?
A. Yes.
Q. Some diseases we're finding are based on a particular gene someone may have, for instance?
A. Yes.
Q. Now, with DNA tests, you talked about this area that's not really what you call a gene, but you called it a genetic marker, right?
A. Correct.
Q. And it's an area of the DNA that's -- appears to be, I think you used the term hyper variable; do you recall that?
A. I don't recall using that term, but it is -- it's extremely variable in those regions, that's correct.
Q. Okay. But you also said that we don't know what those -- what that portion of the DNA is even

about, why it's there, do we?
A. No.
Q. We don't know what it does, why we would have a marker that would be the D21, blah, blah, blah, number that you come up with in these tests?
A. That's correct.
Q. These are just things that we think, at our current level of scientific knowledge, are rather unique from one person to the next, when you put them altogether?
A. Well, they are variable and that's the important part of them, they vary from individual to individual. Scientists don't know what their function is, but for forensics, the important part is that they are different from person to person.
Q. Okay. But if science later determines that they are not completely, independently inherited, that they are linked together, that would really make a difference for you, wouldn't it?
A. Yes.
Q. Because all of these 1 in a quintillion, or 1 in a billion numbers you come up with are based on the assumption that each one of those 16 numbers on your power point slides are inherited

completely independent of each other?
A. That's correct.
Q. That is, if someone has a D21 16, they are not necessarily going to be -- also have a VWA 12?
A. That's correct.
Q. All right. Let's talk about the testing process just a little bit first, then we'll get into it in more detail. The jury, I think, needs to understand that the tests that you do in your lab, or anyone does in your lab, are not what we would call double blind tests?
A. Could you define what you mean by that.
Q. Or even blind tests, you never heard that term?
A. I have heard the term before, I'm not exactly sure how you are using the term. If you could define that for me.
Q. Well, okay. Let's say, on a proficiency test that you get, that's sent to you from some lab, outside lab, you have no idea what you are testing, right?
A. Correct.
Q. You have no idea what's the suspect sample, what's the elimination sample. You don't know any of that when you do the tests, right?
A. Well, on a proficiency test, we know what the

suspect and we know what the victim are.
Q. Okay. So, those aren't completely blind either. Let me give you an example what I mean by blind. Someone gives you a sample, two reference standards. And you have no idea who the suspect is and who the extremely unlikely elimination sample is?
A. Okay.
Q. All right. And then you get an evidence sample, that's also unknown at that time?
A. Correct.
Q. If you just got those three samples and you are just testing them, you have no idea which is which, that's what I mean by blind testing?
A. Okay.
Q. All right. That's not what you do in your lab?
A. No.
Q. In your lab, when you get a reference sample, you know -- in fact, you usually know the name of the person whose reference sample you are dealing with?
A. Yes.
Q. So when you test Mr. Avery's DNA sample, you knew it was Mr. Avery who you were testing?
A. Yes.

Q. Or Delores Avery in her case?
A. Yes.
Q. Or Allen Avery in his case, right?
A. Correct.
Q. And you know that, and not only do you know who it is you are testing, but you have some idea whether they are considered a suspect in the case or not?
A. That's correct.
Q. You know that because you talk with police and prosecutors?
A. That in part and it comes into the laboratory with a suspect and a victim's name.
Q. Oh, okay. So when you get it, you already know who the suspect is?
A. If there is a suspect, yes.
Q. And in this case, there was a suspect and the name given to that person was Steven Avery, when it came to your lab; isn't that right?
A. Yes.
Q. Not only that, you get messages, phone messages and phone conversations, in this case with Mr. Fassbender, right?
A. Yes.
Q. And he kind of gives you a heads up on what to

look for and, you know, what happened, what they think happened in the case, or at the scene?

A. Correct.

Q. And in this case, you got a number of phone calls and messages from Mr. Fassbender, kind of early on in the testing, right?

A. Yes.

(Exhibit No. 341 marked for identification.)

Q. I'm showing you Exhibit 341, does that look -- does that form look familiar to you?

A. Yes.

Q. This is something that's called a case communication record?

A. Yes.

Q. Something that you use in your lab?

A. Correct.

Q. And what you do is, when you get a phone call from somebody, you will keep jotting notes as to the gist of the conversation?

A. That's correct.

Q. And did you do that in this case?

A. Yes.

Q. Is that your initials at the top?

A. Yes.

Q. Let me put this up on the ELMO. There we go.

All right. I apologize for the delay. Up on the screen, now, is Exhibit 341. And this is one of those phone messages that you got from, in this case, Mr. Fassbender, correct?

A. Yes.

Q. You've got a place to indicate that, where it says you check incoming, Fassbender's name, and the date of this is November 11th of 2005, correct?

A. Yes.

Q. And the very first thing that is indicated on here is, he is telling you that there's some evidence that is going to be coming or is already here, right?

A. Yes.

Q. Here meaning at your lab?

A. Correct.

Q. And he says there's going to be a couple of items from the house and the garage, right?

A. Right.

Q. And then he says -- or you wrote down, I assume that's him telling you -- try to put her in his house or garage, correct?

A. Correct.

Q. So you are being told, before you do any of these

tests, that Mr. Fassbender wants you to come up with results that put Teresa Halbach in Mr. Avery's house or garage; isn't that right?

A. I had that information, but that had no bearing on my analysis at all.

Q. Of course not, but that's what you are being told to do?

A. That was information in the investigation.

Q. That's what Mr. Fassbender told you he hoped you would be able to do with your tests; isn't that right?

A. Yeah, I assume so.

Q. Okay. You also had some emails with Mr. Kratz, correct?

A. Yes.

Q. Actually, before we get to that, let me do one more here.

(Exhibit No. 342 marked for identification.)

Q. I'm showing you Exhibit 342, would you be able to identify that for us?

A. Yes.

Q. That's another one of those case communication records?

A. Yes.

Q. But this one, though, is dated December 15th?

A. Correct.
Q. Concerns another phone conversation with Mr. Fassbender?
A. Yes.
Q. Mind if I put it up on the ELMO now?
A. No.
Q. This is, again, an incoming call where Mr. Fassbender is calling you, right?
A. Yes.
Q. Now, the first entry we should clarify a little bit, it says swab keys and collect swabs, no need to analyze at this time, right?
A. Correct.
Q. Just so we're not confused, the jury is not confused, that is not in reference to this Toyota key that was brought to you earlier, right?
A. Correct.
Q. That was a completely separate test that was done. This is some other keys that they brought to you?
A. Yes, this was referencing some additional keys.
Q. It also says, like a couple days later, four days later, that Mr. Fassbender wants you to swab handcuffs and leg irons, right?
A. Yes.

Q. As well as the license plates from the RAV 4 and to check the .22 caliber gun, Item DD, for any indication of the victim's blood on the barrel, right?
A. Yes.
Q. And also to swab the trigger guard area to compare with Steve Avery?
A. Correct.
Q. And we'll get into this with a little more detail with some of the other things first, but as long as we're at these phone messages, let me just clear this up. You did do that in this case, right?
A. Yes.
Q. You swabbed the handcuffs and the leg irons?
A. Yes.
Q. And you found no DNA of Teresa Halbach on those items, did you?
A. No.
Q. And you swabbed the license plates and you found no usable DNA that you could draw any conclusions from, right?
A. Right.
Q. And you checked the Item DD, .22 caliber gun, that's a rifle, right?

A. Yes.
Q. You looked for any blood of the victim on the barrel, right?
A. Correct.
Q. You found no DNA of Teresa Halbach on that barrel?
A. Correct.
Q. You looked at the trigger guard as well, not just the trigger guard, but the trigger itself?
A. Yes.
Q. You swabbed both, right?
A. Yes.
Q. And you found no DNA of Mr. Avery, right?
A. Correct.
Q. Okay. And as to the handcuffs and leg irons, you did find some DNA on it, though, didn't you?
A. Yes, I did.
Q. You found Mr. Avery's own DNA?
A. In a mixture sample, yes.
Q. In a mixture with some other male, right?
A. I can't tell for sure whether it was a male or a female.
Q. Well, it wasn't a mixture with Teresa Halbach?
A. Correct.
Q. And the fact that you found DNA of any kind on

the handcuffs, is an indication to you that they hadn't been wiped down with bleach, isn't it?

A. That would be correct.

Q. Okay. And you, of course, had no idea, way of knowing how old that DNA that you did find, from Mr. Avery, on those handcuffs or leg irons was, right?

A. Right.

Q. That's one thing about DNA, when you find a profile, you can't tell when it is -- or when it was originally deposited, correct?

A. Yes, that's correct.

Q. You find DNA sometimes in mummies thousands of years old.

A. That's correct.

Q. Okay. Now, I have used the term elimination samples today. I don't believe you used that term yesterday -- or Friday; do you recall?

A. I don't recall.

Q. With Mr. Gahn, you referred to samples as exemplars or reference samples, correct?

A. Correct.

Q. That's because the term elimination samples has a meaning behind it, that the others don't?

A. That's correct.

Q. Elimination sample is something that you refer to when you are just trying to eliminate somebody as a source?
A. Correct. That would be -- excuse me -- that would be a situation where it was a case and perhaps you knew that someone's DNA was there ahead of time, and the elimination sample, for instance in a sexual assault case, and someone had consensual sex, then you would have an elimination standard from that consensual sex partner.
Q. Right. So in that circumstance, there would be -- it's just sort of assumed, there's really no question or doubt, that the sample that you are looking at has nothing to do with the case?
A. It just helps us sort that out if we find a mixture of DNA. An elimination sample would help us sort out who the possible contributors are.
Q. Right. With the understanding that that person you are trying to eliminate is not a suspect?
A. Correct.
Q. Okay.

ATTORNEY GAHN: Your Honor, the State would like to be heard on this outside the presence of the jury.

THE COURT: Very well, at this time we'll excuse the members of the jury for the Court to hear argument. Again, members of the jury do not discuss the case or any portion of the testimony you heard today, on your break. You are excused.

(Jury not present.).

THE COURT: You may be seated.

ATTORNEY BUTING: May I go ahead and mark this so we know what we're talking about. I will mark this one because it's not highlighted.

(Exhibit No. 343 marked for identification.)

ATTORNEY BUTING: Just by way of explanation, what I'm attempting to do at this point is show Ms Culhane an email that she received. I guess it's from Mr. Kratz. I do not intend to actually offer this into -- Well, I don't intend all the content of this email to come into this case, or to be sent to the jury, but I do wish one particular line of it where Mr. Kratz is telling the witness certain samples that he refers to as elimination samples. That's my only purpose. I don't know if counsel objects to that limited use.

THE COURT: Mr. Gahn.

ATTORNEY GAHN: Can I see that again, please.

ATTORNEY BUTING: I don't know if we need to send the witness out at this point. If there's any lengthy argument, we will otherwise.

THE COURT: I guess I'm anticipating the objection, if it's what I'm thinking it's going to be I don't know that it's necessary to send the witness out, but I will defer to the attorneys on that one.

ATTORNEY GAHN: Our position, your Honor, is that this email is dated February 7, 2006, and this is well after charges being brought in the Criminal Complaint against Mr. Avery. This is clearly work product on the part of Mr. Kratz. He's talking to his witness, Ms Culhane, and basically talking trial strategy, how to go about the case, testing certain exemplars, or items of evidence, and it's just clearly a work product.

ATTORNEY BUTING: Judge, first of all, if it is work product, that privilege is waived by turning it over in discovery, in my view. But I'm not really getting into work product. And I'm sensitive to that concern and I don't usually like to use emails in court at all. But here, I'm simply using it for one limited purpose, and that is her understanding of the characterization of specific

samples as being elimination samples.

Those are Chuck, Earl, and Bobby. And that's really all I want to get into with this particular document.

THE COURT: Seems to me that point can be made without reference to this document.

ATTORNEY BUTING: If she can recall it and if she can say she's aware that they were described in those terms, sure, we can do that.

THE COURT: Does the State have any objection of letting the witness take a look at the email before she testifies and then we can bring the jury back in without introducing the email?

ATTORNEY GAHN: That's fine.

THE COURT: All right.

ATTORNEY GAHN: As long as Mr. Kratz is not going to be mentioned in your question that Chuck, Earl, and Earl's samples were -- could be considered elimination samples. That's all you want to say?

ATTORNEY BUTING: We could just say submitted by the State, whether it's police or prosecution is -- is not disclosed.

THE COURT: I may be wrong, but I thought there's been evidence already about elimination samples taken from other members of the Avery

family. So I don't think the subject matter is a problem. And I don't see a need to phrase the question such that it would involve any attorney/client work product. So let's have the witness take a took at the email, if she needs it to refresh her memory, and I then think the question can be asked without suggesting that it involves a conversation with the attorneys.

All right. Mr. Buting, I think you can retrieve the document now, I believe the witness has reviewed it.

ATTORNEY BUTING: Okay. Are we ready to go?

ATTORNEY GAHN: Are there additional emails that you intend --

ATTORNEY BUTING: No, this is all.

ATTORNEY GAHN: Could I just look at that one more time?

ATTORNEY BUTING: Sure. There are other items that I'm not going to introduce.

ATTORNEY GAHN: We're ready to proceed, your Honor.

THE COURT: All right. Mr. Buting, do you want to retrieve the document you gave the witness.

ATTORNEY BUTING: Yes. And just so the

record is clear, I'm not going to offer this as an exhibit. It's been marked, for the record, but this will be one of those where it's just part of the record, but it's not evidence in this trial.

THE COURT: Very well.

ATTORNEY BUTING: Is that fair? Okay.

(Jury present.)

THE COURT: You may be seated. Mr. Buting, you may continue.

ATTORNEY BUTING: Thank you, your Honor.

Q. (By Attorney Buting)~ Now, Ms Culhane, you received a number of samples, not just Mr. Avery's, to compare the various pieces of possible evidence in the case, right?

A. Correct.

Q. And when you received a sample -- that is a DNA standard of Chuck Avery -- first let me establish that you did. You received an exemplar standard of Chuck Avery, Earl Avery, and Bobby Dassey, right?

A. Yes.

Q. Among some others?

A. Yes.

Q. Like the parents, Mr. and Mrs. Avery --

A. Yes.

Q. -- right? And when you received those samples, you were asked to do a profile for each of them, right?
A. Yes.
Q. And when you were asked to do a profile for each of them, those samples were referred to you as elimination standards, correct?
A. Yes.
Q. Which to your mind, and your understanding, would seem to indicate that you were not to consider any one of those three, Chuck, Earl, or Bobby, as suspects?
A. That's not entirely correct. When I'm submitted a standard, it doesn't really matter if you call it an elimination standard, or a reference sample, if it fits the profile, the evidence sample, then it's reported on. If it's a match, it's reported on. Whether it's submitted as an elimination sample or as a reference standard, it's interpreted in exactly the same way.

So, if any of those elimination samples, or reference samples, are excluded, no matter what the evidence is, and no matter what you call them, then that's how it would be reported.
Q. Sure. So if you get something that is told to

you by the police as an elimination standard, and it hits, it matches some kind of crime scene evidence, you are going to report that, of course, right?

A. Yes.

Q. But the very fact that the items come to you with that designation, elimination standard, tells you something about what the police theory, or what they believe those samples relate to, whether they are a suspect or not?

A. Correct.

Q. Okay. Let me go back for a minute and talk about your background. I don't recall what exhibit it is that is your curriculum vitae, but I just want to clarify a few things. You have got a bachelor's degree in biological science; is that right?

A. Yes.

Q. And you actually went to two colleges, though. Your first college was Millsaps, M-i-l-l-s-a-p-s, College in Jackson, Mississippi?

A. Yes.

Q. You went there for just two years?

A. Yes.

Q. And then you transferred to Mississippi College

to complete your undergraduate education, right?
A. Correct.
Q. Are you originally from that area, is that why you were going to school down there?
A. Yes, I'm from Jackson.
Q. Okay. And then you got your bachelor of science in 1978?
A. Yes.
Q. You did not go on and get a master's degree, right?
A. Correct.
Q. Never in all your years since, have you gone back to try and get a master's?
A. That's correct.
Q. I don't see anything in your CV that shows that you worked as a research scientist, right?
A. No, I didn't.
Q. You have little or no publications in the field?
A. No, I have no publications.
Q. Okay. And I don't see in here that you do any kind of public speaking, or teaching to other forensic scientists, outside of your own lab, in Wisconsin?
A. Actually, I did present a paper at one of the Promega User's Meetings, because we were involved

in the original validation of the Power Point 16 Kit. And I did present a paper at that meeting.

Q. Okay. But that's the only time?

A. That's correct.

Q. And we'll talk a little bit more about validation in a few minutes. It's not really clear to me what jobs you had before you came to Wisconsin. Was it just working at the Jefferson Parish Sheriff's Office Crime Lab, or did you have some other employment between 1978 and 1984?

A. No, I worked at the Jefferson Parish Crime Lab for two and a half, three years, I don't remember exactly, then I came to Wisconsin. And then after a year I was in Wisconsin, I was hired by the Crime Lab.

Q. Okay. And now it's been 23 years that you have been on the job at the Wisconsin Crime Lab?

A. That's correct.

Q. And your current title is DNA Technical Unit Leader?

A. Yes.

Q. A position that you were appointed to in 1997?

A. Yes.

Q. Now, is that a position that requires -- Well, obviously, doesn't require a master's degree,

right?
A. Actually, it does. At the time -- time frame when I was appointed to this position, the DNA Advisory Board offered, was referred to as a waiver for individuals who had a certain amount of experience in forensics. In order to get that waiver, I had to go back to school and take molecular biology, statistics, and bio-chemistry classes, which were all at UW Madison or online.
Q. Okay.
A. So those requirements were filled. Now, anyone after a certain period of time, it does require a masters.
Q. Okay. So you were sort of grandfathered in with this other way of getting some additional educational miles, right?
A. Right. And because of my experience.
Q. Okay. So it's kind of a seniority thing, too, because you have been there longer than most people?
A. Because I have experience, that's correct.
Q. Okay. Now, this current position as technical leader, you discussed as having some administrative duties, right?
A. Yes.

Q. And also some training duties?
A. Yes.
Q. And then, also, some actual DNA testing?
A. Correct.
Q. Can you tell me what percentage of your job involves each?
A. Probably 70 percent is actual case work. The duties with training varies according to how many people we have in training. When everyone is trained and there are no new analysts, then I don't have any training responsibilities. But when we hire a new analyst, then I do spend a considerable amount of time training them. Overall, I would guess 70 percent is spent on case work.
Q. So about 30 percent less case load, generally, than the other analysts?
A. That's correct.
Q. Okay. Let's talk about quality control, what you know about it in your lab, and just in general. You talked a lot about accreditation, right?
A. Yes.
Q. How important that is?
A. Yes.
Q. How rigorous the process is, right?

A. Yes.
Q. And one part of that is -- in fact, a big part of it, is these outside auditors, whatever you want to call them, outside overseers, look at the protocols that you are using to do certain tests, right?
A. Yes.
Q. And the -- there's various, I assume, accrediting type boards in different forensic fields?
A. I believe there are several different accrediting institutions depending on what type of work. There's one for paternity testing. Most forensic labs have an ASCLD accreditation.
Q. Okay. And certainly part of that is DNA protocols, right?
A. Yes.
Q. But more than that, it's also what other kind of test protocols your lab is following?
A. Are you referring to other sections?
Q. Yes, other sections.
A. Yes, each section has their own protocols. And then we have lab-wide quality control standards that everyone follows, basically the same.
Q. Okay. So, for instance, fingerprints, whatever that's called, identification division?

A. Yes.
Q. They have a specific protocol or number of steps they follow in order to come to a conclusion, right?
A. Correct.
Q. Ballistics the same way?
A. Yes.
Q. DNA, the same way?
A. Yes.
Q. And like trace -- let's say, one subsection of the trace division seems to be like volatile chemicals?
A. I believe so.
Q. So, in other words, there's -- in order for -- let's say someone comes -- brings in evidence from an arson, and the Crime Lab is asked to do these chemicals tests to determine whether there might be volatile chemicals like gasoline or something like that?
A. I believe so.
Q. Okay. And there's a protocol that they have to follow in order to do that test?
A. Yes.
Q. And these protocols are developed after a lengthy process, right?

A. Correct.
Q. They are peer reviewed?
A. Yes.
Q. And peer reviewed means that they are published so that other scientists, even in other parts of the country or world, can also try the same protocol and see if they get the same result?
A. Yes.
Q. They want to replicate, they want to be able to do the very same tests elsewhere and find that the results are valid and reliable?
A. That's correct. And it also allows laboratories to compare results and exchange information.
Q. Okay. And that's really -- that's part of the scientific process?
A. Right.
Q. Just in general, the whole idea that someone comes up with a theory, until it can be tested and repeated by others, it's just a theory, right?
A. Yes.
Q. And it becomes science after others have been able to test the theory over and over and replicate it, right?
A. Yes.

Q. And sometimes that can take years before something rises to the level where it's considered science in the community, right?
A. That would be correct.
Q. And that's true of protocols, a protocol is a plan, basically, a plan or method in which to test some item to get to a particular end result; would that be fair?
A. Yes.
Q. And those can take years, certainly months, sometimes years, to test over, and over, and over, to be sure that others can get the same results?
A. Well, most of the time, when we're introducing a new protocol, it has been tested by -- like if the company that would provide the reagents and the equipment that we use to test it. And that would be a development validation.

In our laboratory, we don't necessarily go through a developmental validation, which would be more like research. We basically test it to make sure that it works in our laboratory. And that doesn't really take years.
Q. Sure. But the development by the -- in your example was a reagent, or use of a reagent. But

development by that chemical lab can take quite a while?

A. Yes.

Q. And you don't pick it up as something to use in your lab until it's already been -- until you are satisfied that it's been tested, retested, and it's a valid reagent.

A. Correct.

Q. Now, these audits you mention, these audits are something that are done for government labs as well as private labs, right?

A. I believe so.

Q. So, it's not like government labs are somehow exempt from the usual examination of auditors just because they are government, right?

A. Right.

Q. We don't just say, you know, we're the government, trust us?

A. That's correct.

Q. You guys have to prove your validity, your reliability, scientifically, like any other lab?

A. Correct.

Q. That's true of the Wisconsin State Crime Lab, right?

A. Yes.

Q. It's true of all government labs that you are aware of?
A. If you're accredited -- We all have to follow the same rules if you are accredited by ASCLD.
Q. Okay. And this whole accreditation process involves auditors at the very beginning getting the protocols, the test plans, and reviewing those before they ever get to your lab, right?
A. That's correct.
Q. And only then, if those protocols pass the peer review, at least that level of peer review from outside auditors, do they even take the next step of coming to your lab?
A. Well, our protocols are set in place and they are given to the auditors so that they are familiar with our procedures before they come to the lab. And then, when they come to the lab, they verify that we're following our protocols.
Q. So if you came up with a brand new protocol, never before done anywhere in the country, and you sent it off to these auditors and it had never been peer reviewed, what do you think they would say?

ATTORNEY GAHN: Very speculative, no foundation.

THE COURT: I'm going to sustain the objection. I think this might be more related to some other issue that doesn't involve this witness.

ATTORNEY BUTING: Well, I think this witness can testify, she's a scientist that was involved with quality control in her lab. I think I should be allowed to explore her understanding and knowledge of the development of protocols.

THE COURT: I don't think it's specifically related enough for the topic for which it's being introduced to be relevant, so I'm sustaining the objection.

Q. (By Attorney Buting)~ Okay. Have you ever, in your lab, submitted a brand new protocol for a test that had never been done anywhere else in the country?

A. I can only speak to what's been done in DNA. I don't have knowledge of any of the other sections or what they have done. In DNA, the protocols that we use have been peer reviewed and validated, developmental as well as the internal validation.

Q. All right. And so you are comfortable with the protocols because of that.

A. Yes.

Q. And you would not submit a brand new protocol, never done before, for your DNA test, and expect to pass accreditation with that, would you?

ATTORNEY GAHN: Objection, your Honor, to the form of the question.

THE COURT: Sustained.

Q. (By Attorney Buting)~ All right. So let me move on a little bit. Your auditors come after they get the protocols and they check out the lab, right?

A. Yes.

Q. They check out the analysts, by way of proficiency tests?

A. Correct.

Q. And they also check out security and that whole process?

A. Yes.

Q. Like chain of custody?

A. Correct.

Q. Let's talk about that for a moment. Wisconsin's Crime Lab's chain of custody procedure, I believe you testified the agency submits it, usually police, bring it into your lab, some central gathering person, right?

A. Yes.

Q. What do you call them?
A. We have three evidence specialists.
Q. And what they do is, they look at the evidence. You said they make sure it's sealed, right?
A. Yes.
Q. They give it one of these numbers, or you call them numbers but they are often letters, right?
A. Well, a lab number refers to the whole case, and then an item designation and a letter.
Q. Okay. So the lab number in this case is -- well, I don't expect you to have it memorized, but it's M05-2467.
A. Yes.
Q. Okay. Then you do have it memorized. And then as the items come in they get named, or designated, item A, B, C, all the way through the alphabet?
A. Right.
Q. Then they start getting called AA, AB, AC all the way through the alphabet that way?
A. Yes.
Q. Where do they go after that, B?
A. BA.
Q. BB, BC, BD, and you keep on going.
A. Right.

Q. And in this case, probably you got higher designations than any other case that's ever come to your lab?
A. I believe that's correct.
Q. Three hundred fifty you said, right?
A. About that, yes.
Q. And when that happens, when it first comes in, this evidence specialist not only gives it a designation, but then fills out some kind of form that verifies the evidence has come into the lab, right?
A. Yes.
Q. And at the end of the case, or whatever, at whatever point your lab decides to send the evidence back to the submitting agency, they submit another -- or fill out another form, right?
A. Yes.
Q. And that form is called an Evidence Release Return Form?
A. Yes.

ATTORNEY GAHN: Again, your Honor, we're going to have to be heard on this.

THE COURT: All right. Members of the jury, I think what I will do at this time is excuse

you for your morning break. And we'll resume with testimony after the break is complete. I will remind you, again, not to discuss this matter during the break. Jury is excused.

(Jury not present.)

THE COURT: You may be seated.

ATTORNEY BUTING: Excuse the witness, please.

THE COURT: I'm going to excuse the witness right now. You are excused. Mr. Gahn.

ATTORNEY GAHN: Your Honor, Mr. Buting has presented a form here from the -- used by the Crime Lab. It's an Evidence Release Return Form. But, again, I guess I would like to see an offer of proof of where are we going with this 1985 case. This had to do with the 1985 case, when that evidence was returned, to whom it was returned, and I just fail to see the relevancy of going down this road at this point.

THE COURT: Can somebody give me a copy of the offered exhibit?

ATTORNEY BUTING: Should I mark it?

THE COURT: I think we should mark it.

ATTORNEY GAHN: My understanding, your Honor, is they have stated their defense, it's this

planting of the blood vial. And this has nothing to do with the blood vial, or anything remotely connected.

ATTORNEY BUTING: Judge, what it is is a record regularly kept in the course of her business. She's going to be able to easily identify it. She's talked about the 2003 exoneration. It shows that Mr. Avery's buccal swabs --

THE COURT: Is your microphone on?

ATTORNEY BUTING: Yes. It shows that Mr. Avery's buccal swabs, that used to be in the custody of the Crime Lab, were sent back to the Manitowoc County Sheriff's Department in 2003.

THE COURT: All right. I had understood that the blood that was in the Clerk's Office was going to be the subject of the defense. How does this exhibit relate to that defense?

ATTORNEY BUTING: Well, this witness has testified that there's DNA found on items that she said she didn't see any blood, which could have come from buccal swabs. So she's already testified to that, so it's in play, whether or not the Manitowoc Sheriff's Department had any of Mr. Avery's DNA in another form, which they did.

THE COURT: Do we know if these items,

which on their face at least, say they are sealed, are still sealed somewhere in the Sheriff's Department Office?

ATTORNEY BUTING: That would be the subject of testimony later, I suspect. But at this point, all I'm doing is showing that they are not still at the Crime Lab, that they were sent back to the submitting agency, in this case, Detective Remiker.

THE COURT: Mr. Gahn.

ATTORNEY GAHN: Well, your Honor, I guess I don't understand what's happening here. Is -- Now, are we switching that the planting did not come from the blood, but the planting now came from the buccal swabs of Steven Avery? Is that what the defense is stating now? Are they switching and changing their theory of defense, that it's no longer from the blood vial that's in the Clerk's Office, but now the planting took place with buccal swabs of Steven Avery? Now this is new --

ATTORNEY BUTING: Judge, this is not new. We have alleged -- Look, they brought up, on direct, that there was DNA that she discovered that she said did not appear to come from blood. So it had to come from another source. This is another source, that according to this record at least, was sent

back to Manitowoc County Sheriff's Department. And we will tie it up later when we establish that it is in fact still in the Manitowoc Sheriff's Department, or at least it was as of October -- or November 5th, whatever, 2005.

ATTORNEY GAHN: Your Honor, I guess their offer of proof in this case, which the Court required, and in their offer of proof, it was the planting was done by the blood vial. Simple as that. That was it. Now they are going off on this buccal swab now, that the planting may have come from there. And I don't --

ATTORNEY BUTING: Judge, I don't mean to cut counsel off, but it is in response to testimony they elicited here, that some of it, some of the DNA apparently did not come from blood. Now, we have a right to respond to that and this is a response. It is not an explanation for the blood in the RAV 4.

THE COURT: Right.

ATTORNEY BUTING: Maybe an explanation for some of the other.

THE COURT: My recollection is that the previous contested hearing involved the blood vial. I don't know that I was asked to rule on anything other than the vial. I believe the evidence first

came up at that point, that there was some DNA evidence of Mr. Avery, apparently not from blood, that was found, if I recall correctly, on the Toyota key and on the hood latch.

And so I don't think I can say that this exhibit would not be relevant. The State is free to show in rebuttal or as part of it's case-in-chief that these samples are still sealed somewhere in the Sheriff's Office. I think it is relevant. So after we get back from our break, I will allow the defense to pursue this matter.

ATTORNEY BUTING: Thank you. What time did you say?

THE COURT: Let's come back in 15 minutes.

ATTORNEY BUTING: All right. Thank you.

(Recess taken.)

(Jury present.)

THE COURT: At this time the witness can be brought back into the courtroom. Attorney Buting, you may resume.

ATTORNEY BUTING: Thank you, your Honor.

CROSS-EXAMINATION CONTD.

BY ATTORNEY BUTING:

Q. Now, Ms Culhane, we were talking about, before the break, about this process that you go through

when -- your lab goes through when evidence is brought in from the agency and, actually, also, when it's returned to the agency, correct?

A. Yes.

Q. I'm showing you Exhibit 344, can you identify that?

A. Yes, this is a copy of our -- the forms that we fill out when we send evidence back to the agency.

Q. Okay. And this is a regular record that's used by your lab in the course of business, day-to-day?

A. Yes.

Q. Okay. And it's meant, as part of a chain of custody, to document where evidence goes, who has it at any given time?

A. Right.

Q. When you're done with it, you want to make sure it's clear you are done with it, it is no longer your responsibility, from that point on?

A. Right.

Q. All right. I'm just going to put up here, on the ELMO, Exhibit 344. And this has a case number on it, rather old case number, right?

A. Yes, that's actually the agency number. I would

recognize it by our lab number, which is on the other side.

Q. I'm sorry, let's move over here.

A. There you go.

Q. And the 85 -- M85, 85 refers to the year of the case that it's submitted to you?

A. Yes.

Q. So that would be 1985?

A. Yes.

Q. So this is actually an Evidence Release Form relating to Mr. Avery's 1985 conviction, right?

A. Correct.

Q. And the last item number, W, designated W, at the bottom there, says one sealed envelope containing -- I always call it buccal, is it buccal?

A. Buccal.

Q. Buccal. Containing buccal swabs reportedly recovered from Steven Avery, right?

A. Yes.

Q. And by this form, what you are saying is that -- moving it to show the date here -- the date is October 13th of 2003, right.

A. Could you slide it over just a little bit?

Q. Sure. Let me zoom out of it, maybe we can see.

Does that help?
A. Yeah. It was released from our lab on September 25th, 2003.
Q. Okay.
A. And it was signed for at Manitowoc Sheriff's Department on 10/13/03?
Q. And the name of the person who is signing it is Detective Remiker, or Dave Remiker?
A. It appears to be.
Q. Manitowoc Sheriff's Department, right?
A. Yes.
Q. That's the printed name and then there's a signature next to it, which I assume you can't identify yourself?
A. No.
Q. Do you know Mr. Remiker?
A. No.
Q. Okay. So, what this document tells you, then, is that on -- in September of 2003, you returned Mr. Avery's buccal swab reference sample to the Manitowoc County Sheriff's Department?
A. Yes.
Q. Okay. Now, back to the internal chain of custody. When the evidence first comes in to this evidence specialist; we saw a name up there,

Sue Glitchel, I think it was?
A. Gitchel, yes.
Q. G-l-i --
A. G-i-t-c-h-e-l.
Q. G-i-t-c-h-e-l. Fran Lutz is another one?
A. Mm-hmm.
Q. L-u-t-z?
A. Yes.
Q. Anyway, they take it and they put it in some sort of communal storage room; is that what happens?
A. Yes.
Q. And that's a locked room?
A. Yes.
Q. That only certain people can come and go?
A. That's correct.
Q. Those people include the individual DNA analysts, right?
A. No.
Q. No?
A. No, it's only evidence specialists, the supervisors, and our director.
Q. So when you need to go work on something that's a part of evidence that's been brought in, you have to go check in with the evidence custodian?
A. Yes. And we request evidence and then they bring

it to -- there's a window there, they bring it to us, and then we take custody of it.

Q. Okay. And somewhere it's marked that you now have custody of it, rather than the central storage?

A. Yes.

Q. Okay. And then when you take it, you or any of the analysts take it into your possession, you bring it over to your lab bench?

A. Yes.

Q. Do you have some sort of storage lockers there?

A. Yes, in the front part of our lab bench.

Q. And can you just describe what those are, what they look like?

A. The front of our lab bench, they are probably about this deep and maybe, I don't know, 3, 6 feet long. And they have shelves in them.

Q. The lab benches are about 6 feet long?

A. Well, I don't remember. There's shelving inside there and they are on the front of our lab bench where we do our work space. And then on the front we have cabinets that we can put evidence in.

Q. Okay. And is there more than one on each bench?

A. The benches in the lab are T-shaped. There's one

analyst on each side. I have -- Each analyst has two cupboards for storage.

Q. Okay. When you say cupboards for storage, these are like drawers?

A. No, you just open the door and there's shelving.

Q. Okay. There's shelves underneath the bench you are actually working on?

A. Yes.

Q. That's the lab bench where you are doing certain tests?

A. Yes.

Q. Extractions usually?

A. Yes.

Q. Okay. And are these cupboards or these shelves you are talking about, are they -- they have doors on them?

A. Yes.

Q. Are they like open wire mesh kind of doors?

A. No, they are regular locked wooden doors.

Q. Solid doors?

A. Yes.

Q. And they have locks on them?

A. Yes.

Q. And there's two separate shelves, or two separate cupboards?

A. There's two shelves in each cupboard and there's two separate cupboards.
Q. Okay. And each analyst has two of those?
A. Yes.
Q. And that's so that if you are working on one big case, you don't mix up the items from that case with some other case you are working on?
A. Yes, it's just storage space for evidence that's being worked.
Q. So you wouldn't mix one case -- evidence from one case that you are working and put it in the same cupboard with another?
A. No. We do store several cases, but the cases are -- the items of evidence within the case are packaged and sealed.
Q. Sure. All right. So you -- you do try and keep the evidence from one case all together?
A. We try, yes. But we have several cases in that area at the same time.
Q. Okay. And so in this case, when you would be working on any of the evidence in this case, you would try and keep all of the evidence that's not up on the bench, you would try and keep it all in one cupboard?
A. Yes.

Q. All right. And is the key that only you have to the cupboard, or do all the analysts keys work on the same cupboard?
A. All the analysts have a key.
Q. And the key works for all of these cupboards?
A. Yes.
Q. So you could open up someone else's cupboard?
A. Yes.
Q. Or they could open up yours?
A. Yes.
Q. Okay. Not that you would want to, but I'm just trying to establish that for the record?
A. Right.
Q. Now, when you take evidence out of your cupboard and start working it on your bench, is it always put back at the end of the day and locked in the cupboard?
A. No.
Q. Sometimes you have tests and things that work overnight, right?
A. Yes.
Q. All right. Now, in this case, you worked a little bit differently with regard to the RAV 4 stains, because you are the one who actually took them in?

A. That's correct.
Q. So instead of the police department delivering swabs of these stains, that you would then check out from the evidence custodian, it didn't work that way?
A. Right.
Q. What happened was, on November 7th, I believe?
A. Yes.
Q. Monday, you come down to the garage and you see there's this RAV 4 there, Toyota RAV 4?
A. Right.
Q. And you are there after Mr. Groffy, right?
A. Yes.
Q. He's already done his photographs and processing before you ever touch it?
A. Right.
Q. And you testified that you took a number of those swabs, a number of stain swabs. You mentioned a -- I forget what the last number -- actually the last number was A-23, right?
A. I believe so, yeah.
Q. So you actually took 23 swabs in different areas, some of them the same areas?
A. No. I only took -- someone else was processing it for ident, I believe. And that's where the

23, I didn't take 23 swabs.

Q. I see what you are saying. So what you are saying is, you took A-1, A-2, A-3, A-4, up to where, 12?

A. A-12, I believe.

Q. Okay. And then Mr. Riddle, Michael Riddle?

A. Yes.

Q. He's the fingerprint guy?

A. Right.

Q. He examined it. And when he would find fingerprints on it, he would give those a designation like A-13 or A-14.

A. Right. Actually, I worked up through A-14.

Q. Okay. And then there is a stain, a swab that you took, though, that's designated A-23?

A. Correct.

Q. And that's because Mr. Riddle found something he thought maybe you should take a look at and swab.

A. Yes.

Q. So Mr. Riddle found something, fingerprints or whatever, that he designated A-15 through A-22?

A. I assume so.

Q. Okay. And you came in and did this last one?

A. Yes.

Q. Okay. And then you took all these swabs, you

said they were in like a test tube holder, to dry?

A. Yes.

Q. Did you package them there at the bench in the garage, or did you take it back to your department, your bench, to package?

A. I believe I packaged them in the garage.

Q. So they were dry already?

A. No, I put them in the coin envelope and I left the envelope open.

Q. Okay. And these swabs, just so we're clear, they're like Q-tips?

A. Yes.

Q. Longer?

A. Essentially, yes.

Q. Okay. So then you took the swabs that you found from the RAV 4, the 14, and you brought them directly to your lab bench?

A. Yes.

Q. And then into your storage locker?

A. Actually, they were on my lab bench while they air dried -- or they were in the coin envelopes on my lab bench, overnight, while they air dried.

Q. Okay. And, then, once they were dried and you were -- Well, you did some tests with them, I'm

sure. But once you were done with doing those first round of tests in November, you put them in your storage locker?

A. Yes, they were sealed up and put away.

Q. You didn't return them or place them in central storage?

A. I can look. I don't recall exactly when I --

Q. Why don't you look. Why don't you look at -- you have the Chain of Custody Report?

A. Yes.

Q. Look at Page 1 of 50?

A. I'm sorry, what items?

Q. It's the Chain of Custody Report, just look at the first page.

A. Okay.

Q. First page lists A, A-1, 2, 3, 4, 5 -- I'm sorry, 4-A.

A. Yes.

Q. Right?

A. Right.

Q. And A-1, A-2, A-3, were all determined to be Teresa Halbach's DNA, if you recall?

A. That's correct.

Q. Those were the swabs from the blood in the back, and the rear of the cargo?

A. And four.
Q. And four as well. Okay.
A. Yes.
Q. And those were in your custody until when?
A. April 3rd, 2006.
Q. Okay. And so, then, on that date, you returned them to the central storage area with the evidence specialist?
A. Correct.
Q. But from November up to April 3rd, they were sitting in your storage area of your lab bench?
A. Sealed, yes.
Q. Yes. But in that same compartment all together?
A. That's correct.
Q. With whatever other evidence you had on the Avery case, all in that same cupboard, right?
A. Correct.
Q. Okay. Then, if you look ahead maybe to Page 38 of your Chain of Custody Report, directing your attention to Item FL as in Larry, FL?
A. Yes.
Q. Now, you previously testified about that, that's the bullet fragment?
A. Yes.
Q. Right?

A. Yes.
Q. That's the one that you say you found Teresa Halbach's DNA on?
A. Correct.
Q. That came into your lab on what date?
A. March 16, 2006.
Q. And it came into your custody from that central room on what date?
A. March 28, 2006.
Q. Okay. And then you actually started working on it the next day, March 29th; isn't that right? Do you need to refer to your case notes?
A. Yes, I do.
Q. That's fine.
A. I began -- I began -- I screened the evidence on March 29th, '06.
Q. Okay. And, then, one of the things you do in that -- first thing is you open it up and take a look at it, right?
A. Yes.
Q. You unseal the -- whatever it is, and in this case it was like a little plastic bag, right?
A. Right.
Q. And you then began -- we'll talk about it more later, but at that point you began the process of

extraction amplification and, ultimately, figuring out a profile?

A. Yes.

Q. And that's the test that we later -- we heard later, at some point in the process, was contaminated with your DNA?

A. That's correct.

Q. Proficiency tests are something that you take about every year or so?

A. Twice a year.

Q. Twice a year. And they involve you doing -- testing a sample that's sent to you by some outside private company?

A. Yes.

Q. And those are just pass/fail, right?

A. No.

Q. You get a grade, A, B, C?

A. Well, you -- I suppose they are pass/fail, but it's not -- you are required to put the types down and they are -- also you are required to actually record the types that you develop and then there are several interpretation questions on there. Could the sample contribute to this evidence sample? Could the sample from the victim contribute to the evidence sample? So we

actually have to record our types and do some interpretation.

(Exhibit No. 345 marked for identification.)

Q. I'm showing you now Exhibit 345, can you identify that for the record?

A. Yes. This is a copy of the -- Once we sent our answers back to the company, then they send us documentation as to whether our types are consistent with the types that should be on the case --

Q. All right.

A. -- test.

Q. And, then, this actual report that you have in your hand is something that's filled out by supervisors in your lab?

A. Well, yes.

Q. Okay. That report isn't prepared by this outside company, that's prepared by someone in your lab, right?

A. Yes.

Q. And on this particular one, it has a number of boxes -- in fact, they all have a number of boxes where they say -- well, let's look at the main ones. Technical performance on this one was accepted, right?

A. Right.
Q. But on this particular one, it also has some comments. What does that mean? What are the comments on this?
A. I'm not sure. I don't recall that test, so I really -- I'm not sure what is meant by that.
Q. Let's look at the date for a minute. The date is April 7th of '06?
A. Correct.
Q. Actually, if you look up here, the test is -- looks like you completed the test on March 1st?
A. Yes.
Q. And then it was received -- compilation received by the a lab or something on --
A. Yes.
Q. -- on April 4th?
A. Yes.
Q. So this is really right about the time that you are doing this test on the alleged bullet fragment in Mr. Avery's case, right?
A. Yes.
Q. And often these results or comment sections are blank. They don't say anything. They just check acceptable or not acceptable, right?
A. Sometimes. Sometimes there's a comment.

Q. And this one indicates some what, a mistake that you made?
A. I don't believe so, no.
Q. It's referring to a non-sperm fraction with a mixture of victim and semen donor is what that says.
A. Like I said, I can't really comment because I don't remember the specific proficiency test.
Q. And that's not your handwriting?
A. No.
Q. But it is your -- also your supervisor's signature at the bottom?
A. Yes.
Q. And your signature on April 10th of '06?
A. Right.
Q. Okay. But you don't ever recall seeing this?
A. Well, obviously I saw it, because I signed it.
Q. Sure.
A. But, no, I don't independently recall.
Q. Okay. Would it be fair to say that the Wisconsin Crime Lab has a pretty heavy case load of DNA, your section, the DNA unit?
A. Yes.
Q. You have gotten a lot of publicity about it lately?

A. Yes.
Q. Became an issue in the last election for the Attorney General for the State of Wisconsin, right?
A. Apparently.
Q. Well, you were in the lab and you are part of management to some degree, right?
A. Not really. I'm not really part of management. I have some management duties, but I'm not really considered management.
Q. Okay. But part of those duties are case work, case flow, and case management?
A. Right.
Q. And priority, right?
A. Yes.
Q. So you are certainly aware that the case load has been going up, and up, and up, at the Crime Lab?
A. Yes.
Q. And that you are getting calls from prosecutors and police all the time, asking you to, please, do these -- get these results in yesterday?
A. Correct.
Q. They want them fast?
A. Yes.
Q. And so there's some pressure on the analyst to

get the job done?
A. Of course.
Q. Okay. And that's important for a number of reasons, for instance, you don't want a suspect in a case, who's DNA has already been sent to you, to be out running around committing new crimes, when if you can get to your tests quicker, you might be able to link him to something and get him off the streets?
A. That's correct.
Q. It's also important, because you do some post-conviction tests as well?
A. Yes.
Q. And you don't want an innocent man sitting in prison longer than necessary, while his DNA sample sits in your office, unanalyzed, because of backlog?
A. Correct.
Q. And just to give the jury some estimate or some understanding of the numbers here, correct me if I'm wrong, but my understanding is that your -- the DNA Unit's backlog of work, approximately tripled between 2003 and 2005; would that be about right?
A. I believe that's right.

Q. If I gave you the number that your backlog of cases that you were working on in 2003 was 478, and as of 2005 it had gone to 1,375; does that sound about right?
A. I don't remember the exact numbers, but when you are talking about DNA cases, you are talking about the Madison Lab and the Milwaukee Lab.
Q. Sure.
A. So, we're not just talking about one laboratory. And if those numbers were what was quoted, I assume that's correct. I don't recall exactly.
Q. So when Mr. Avery's case came to your lab, it came to your lab at a time when there was already this huge backlog that had just ballooned or exploded over the last two years, or tripled?
A. That's correct.
Q. This case, then, put an enormous demand on your resources, right?
A. Yes.
Q. Three hundred and fifty submissions to the overall Crime Lab, all the different sections, right?
A. Correct.
Q. One hundred eighty just to the DNA Unit?
A. That's correct.

Q. And so while all these -- while these 180 pieces of evidence were in your lab to be analyzed in the Avery case, your analysts were also working very hard to reduce that backlog and deal with all the other submissions that kept coming in?
A. That's correct.
Q. Would you agree that there was, given the case load, there was a shortage of analysts, in 2005, in your lab?
A. Yes.
Q. The Madison Lab?
A. Yes.
Q. And that you were trying to bring new ones on board, that's part of the idea was to -- your function, was to help train new people?
A. That's correct.
Q. But you said that takes some time, nearly a year, to train somebody new, right?
A. Right.
Q. And the way you trained them, let's talk about 2005 and 2006, you had a number of new analysts that were sort of under your wings, right?
A. Yes.
Q. And you would train them by -- kind of like you see on doctor shows, where you have the main

doctor and the interns following along, right, like ducklings?

A. Sure.

Q. They follow you around to wherever you go?

A. Part of their training --

Q. Okay.

A. -- involved that.

Q. And part of that training would mean they would follow you when you went up to your lab bench to do something?

A. Sometimes.

Q. Okay.

A. Not that often. Most -- A lot of their training revolves around lectures, and reading, and running their own samples. And some of the trainees in this case were coming from other laboratories, so they had quite a bit of training already. So it wasn't totally following me around.

Q. All right. But there were some -- certainly some aspects of the training that required them, these trainees, to be with you when you are actually doing tests at your lab bench?

A. Yes.

Q. And so you could demonstrate for them how to do

it, right?
A. Yes.
Q. Okay. Now, that means, however, that there were more people than usual surrounded around a lab bench when you are doing your tests?
A. Yes, on a limited basis.
Q. Sure. You try and limit it, and you are not trying to contaminate anything, of course, right?
A. Right.
Q. But the more people around an evidence bench, or lab bench with evidence on it, the greater the risk of contamination, right?
A. Yes.
Q. Did you ever have any trainee actually do a hands on test in this case?
A. No.
Q. Even under your supervision?
A. No.
Q. You did it all?
A. Yes.
Q. And they just watched?
A. Yes.
Q. And that was especially true on the day that you were testing the bullet?
A. Yes.

Q. Item FL?
A. Yes.
Q. The trainee's were around you.
A. Well, there were two -- two trainees sitting by my work space watching the beginning portion of the extraction.
Q. Okay. We'll talk more about that in a moment. All right. I apologize for the delay. I'm going to show you what's marked Exhibit 308 and 307. Just take a moment to orient yourself.
A. Okay.
Q. Okay.
A. Mm-hmm.
Q. Let me put these up on the screen. Tell me what these are pictures of. Can you tell me what this Item 307 is a picture of?
A. That's the rear of the RAV 4, our item A.
Q. Okay. And that is in the Crime Lab garage?
A. Yes.
Q. And you recognize the location?
A. Yes.
Q. And this particular photograph shows the rear of the RAV 4, with the wheel cover and the cargo door, right?
A. Yes.

Q. And if I zoom in on this a little bit, does this depict the door handle for the tailgate, or whatever you want to call it, the rear door?
A. Yes.
Q. Cargo door. That's the area that Mr. Riddle was working on for fingerprints, correct?
A. I believe so, yes.
Q. And that's the area where he said, hey, maybe -- there's something here maybe you want to take a look at that?
A. Yes.
Q. That's the item, then, that became A-23?
A. Yes.
Q. And you tested that, with a swab, for DNA, right?
A. Yes.
Q. And you did not find Mr. Avery's DNA on that swab, did you?
A. No.
Q. And, so, if Mr. Kratz, in his opening statement, told this jury, with a power point slide, right up here showing that, with the circle around that rear door, and said that that would -- there would be evidence that Mr. Avery's DNA was on that door handle, that would be wrong, wouldn't it?

A. Based on my results, I didn't find Steven Avery's DNA on that sample.
Q. In fact, you found Mr. Avery's DNA nowhere on the rear of that vehicle at all, correct?
A. Correct.
Q. Even more so, you never found Mr. Avery's DNA anywhere around the outside of any of the door handles of that vehicle, did you?
A. No. But I -- I didn't test any of the exterior doors.
Q. And you later received some swabs of the interior door handles, didn't you?
A. Yes.
Q. And you did not find Mr. Avery's DNA on that, did you?
A. No.
Q. You found Teresa Halbach's DNA on at least one of them, right?
A. Right.
Q. You testified, though, to finding six apparent blood stains, and all of them were, essentially, in the passenger compartment area. This is in November we're talking about. Okay.
A. Mm-hmm.
Q. All of those were in that passenger compartment

area of the RAV 4, right?
A. Exactly which ones are you referring to, because there were several -- there were stains throughout the car.
Q. Sure. And that's why I want to get clear.
A. Okay.
Q. Would you go to your -- Do you have some handwritten notes of --
A. Yes, I do.
Q. -- where you found those stains on November 7th?
A. Yes.
Q. You want to take a moment and refresh your recollection on those.
A. Are we talking about stains throughout the car, or stains consistent with each individual, or -- I'm not sure what your question is.
Q. Let's talk about the stains that you say your tests showed were Mr. Avery's DNA, or had Mr. Avery's DNA on them?
A. Okay.
Q. You found them several places in the driver's seat?
A. Yes.
Q. And the ignition on the dash?
A. Yes.

Q. And the seat right next to the driver's seat, the front passenger seat, right?
A. Yes.
Q. And then you found one in the rear passenger door, on the right side, as you open the door. There's a little ledge.
A. Panel, yes.
Q. Okay. But you found none of Mr. Avery's DNA on any stains in the rear cargo area of that vehicle, did you?
A. No.
Q. None on the outside handle of the cargo door?
A. That's correct.
Q. None on the inside handle of the cargo door?
A. Correct.
Q. And, in fact, where you found those six stains in November, of 2005, November 7th --
A. Yes.
Q. -- the ones that were attributed later, to Mr. Avery's DNA, one could have planted simply by opening two doors in that vehicle?
A. I really can't comment on that.
Q. Okay. You have got -- if someone was to plant Mr. Avery's blood in that vehicle, to get to those six stains, they would need to open the

driver's door, right?
A. Yes.
Q. Likely, or the passenger door on the front?
A. Yes.
Q. From either one, but more likely the driver's door, you could reach the location where all of the stains were found in that front seat area?
A. Except for the rear passenger door.
Q. I'm getting to that. Okay? The first five that you found were all in that front compartment?
A. Yes.
Q. Front seat compartment?
A. Yes.
Q. Reachable by opening one door, right?
A. Yes.
Q. And, then, the only other stain that you found there was in the rear passenger door that could also be accessed simply by opening that one door?
A. Yes.
Q. So if somebody was to plant Mr. Avery's blood in that vehicle, before you got it on November -- in November, all of those stains you found could have been done by simply opening two doors?
A. Yes.
Q. Now, many months later, April I believe it was,

you got a swab that was told to you was a hood latch swab?

A. Correct.

Q. That was not tested, or did not come from your test in November?

A. Right.

Q. And you weren't present when it was taken, by whomever, sometime before it arrived at your lab?

A. No, I was not.

Q. And you didn't do a presumptive test for blood, right?

A. Correct.

Q. You didn't see any blood particularly visible on the swab, right?

A. Right.

Q. But it was discolored?

A. Yes.

Q. Dirty, might possibly have had some residue of blood mixed in with the dirt and grime and whatever else was on the swab, right?

A. It's possible, but there was no visual indication.

Q. And you often -- well, not often, but you do sometimes find blood without visibly seeing it, right?

A. Yes.
Q. And your presumptive tests will usually indicate that?
A. Correct.
Q. But you didn't actually do one here, on this hood swab, right?
A. Correct.
Q. So you can't rule out the source of that DNA being a blood drop or a blood smudge of some sort, can you?
A. No. I can --
Q. That's fine.
A. I can say that it wasn't a visible --
Q. Sure. But you can't rule out that blood may have been the source?
A. A very trace amount, yes.
Q. Because this was a low amount, you say, right?
A. Well, the entire swab was a low amount of DNA and that's why I didn't test it for presumptive, because I didn't want to waste any of the sample on a presumptive test.
Q. Okay. We'll get to that in just a moment here. You also testified very, very briefly, I think, about Item B, which is Mr. Avery's own Pontiac Grand Am --

A. Yes.
Q. -- right?
A. Yeah.
Q. And you did test a number of stains or swabs that came to you, or did you actually get them yourself?
A. I collected them.
Q. You collected them, okay. And overall you found Mr. Avery's DNA on those swabs, right?
A. Yes.
Q. Not at all unusual to find one's own DNA on one's own possessions?
A. Correct.
Q. You didn't find Teresa Halbach's DNA on any of those items, or anywhere in Item B, the Pontiac Grand AM, did you?
A. No.
Q. And you certainly were looking for that if that was -- right, that was part of your test, part of your examination?
A. Well, I just processed the blood samples and they were what they were.
Q. And they were not Teresa's?
A. Correct.
Q. Okay. Let's turn to the key. Would this be

something that you would consider that had trace levels of DNA?

A. I guess it depends on how you define trace.

Q. Let's say a relatively low amount of DNA in this particular instance?

A. Yes.

Q. If you could look at your notes maybe, refresh your recollection. I'm going to ask you in a moment about that. If you can give me some estimate, from your records, about just what the volume or level of DNA you found on that key was? Okay?

A. Yes.

Q. Now, I believe you testified that there was no blood visible on this item either?

A. Correct.

Q. But, again, you didn't do a presumptive test?

A. No, I did not.

Q. What you did was, you took a swab, a Q-tip, moistened with this distilled water, right?

A. Yes.

Q. And you rubbed it all the way around, both sides, top, bottom, whatever, of the black plastic part of the key?

A. Correct.

Q. And the swab, I think in this instance you said was not discolored?
A. That's correct.
Q. Now, when you tested this swab from the key, you used the entire amount. You used the entire swab, didn't you?
A. Yes.
Q. Normally, you will try and just cut a swab in half, use half, save half?
A. Yes, if there's enough, yes.
Q. But this particular test, just by looking at it, looking at the item you were dealing with, you thought you couldn't do that.
A. Well, I felt that being what we refer to as a touched item, and there being no visible indication of a biological fluid like blood, that, yes, I would probably have a low amount to start with.
Q. Okay. So when I call something trace, I'm talking about this small amount of DNA that may be transferred by something less than the usual bodily fluids of blood, or -- well, let's just stick with blood.
A. Yes. I mean, it all depends on the stain. There are touched items that have lots and lots of DNA

present. Some touched items don't have that much. It just depends on who touches them and what the item is. So to generalize all touched items with the term trace amounts, I'm not sure that's accurate.

Q. All right. You said you keep up with the literature in your field, right?

A. I try.

Q. And I take it, then, that you have read a report, a study by Ray Wickenheiser?

A. I don't remember the name, may I see it.

Q. Sure. I'm not going to actually mark it, but take a moment and look at it and see if you maybe recognize this article, or the study it refers to.

A. Yes, I believe I have read this.

Q. Okay. And this -- basically, this is an article published in 2002, says at the bottom, right?

A. Yes.

Q. And the title is, Trace DNA: A Review Discussion of Theory and Application of the Transfer of Trace Quantities of DNA Through Skin Contact, right?

A. Yes.

Q. This article, among other things, talks about

some of the different theories about how one actually transfers DNA by touch or by skin.

A. Yes.

Q. And there's different theories. Some people think that it's really just a transfer of some bodily fluids, somebody who rubs their eyes, like this, maybe gets some tears on it, then picks something up, right?

A. Well, anytime you touch your body and you have cells on your hands, then that would be a way to transfer it.

Q. Sure. Or if you touch your mouth, you know, something like that, you have got your fingers to your mouth and then you touch something, you may be transferring DA (sic) through little bits of saliva, right?

A. Well, again, you are talking about skin. I mean, even just your hands are going to slough off skin, so you don't have to really touch your face, you just touch something with your hands you will leave --

Q. But you are aware, though, that there is kind of a dispute in the field of people that are studying this, as to whether or not the cells, just the epithelial cells that you are shedding

from your fingers alone is enough to produce a DNA result or profile, or whether, in fact, what really is happening is you are transferring some bodily fluid to your fingers and then touching it and transferring it that way?

A. I understand there's probably different opinions, but the bottom line is, if you touch something with your hand, or any part of your body, and you leave cells, it has the potential for our DNA profile.

Q. Okay. And I don't know if you had a chance to look at your notes yet?

A. Yes.

Q. Can you tell me approximately -- if I told you that the amount recovered in that swab of the key was somewhere between -- somewhere around 20 nanograms of DNA, would that be a ballpark?

A. No.

Q. What do you come up with?

A. Well, actually, in the whole sample, you may be right. My quantitation is .17 for one microliter.

Q. Sure. But you have to add volume to it and --

A. And the total amount of the extract was probably around 30 to 35 microliters.

Q. Okay. So a little bit more than what I said.
A. Yes.
Q. You are familiar with tests of liquid blood would have DNA in the amount of over 20,000 nanograms, something like that?
A. I don't recall exact numbers, no.
Q. And how about buccal or buccal swabs, are you aware that they have, generally, anywhere from couple thousand maybe, 2,000, 3,000?
A. Again, I don't recall exact numbers.
Q. Let me show you another study, see if you recognize that. It's a study by Henry Lee (phonetic), Karl Ladd (phonetic), does that look at all familiar?
A. No, I have never read this.
Q. Okay. Have you read anything that tells you, or that's made some kind of determination of what the volume of -- or in terms of nanograms, what the amount of DNA one would typically find in a buccal swab.
A. Sure. I just don't recall the exact number.
Q. Okay.
A. But it's obviously much more DNA in a buccal swab or a blood sample. Those are rich sources of DNA, so there's going to be a lot of DNA there.

Q. Sure. And if one was to take a buccal swab and rub it on the key in this case, it might transfer 30, 35 nanograms of DNA?
A. I have no idea.
Q. Well, would that be an unreasonable amount, or reasonable?
A. I really -- There's no way for me to comment on that. And there's no -- you may transfer a lot of DNA, you may not transfer very much at all.
Q. Okay.
A. There's really no way to answer that.
Q. Would it be fair to say that the DNA volume or amount that you found on that key was not very much?
A. No, it was a low level, yes. That's correct.
Q. Low level. If one was to rub a toothbrush up against a key, that might also transfer some low level amount of DNA to the key, right?
A. That would be possible, however, in my experience toothbrushes are not a real good source of DNA. It's very difficult to get a profile from a toothbrush.
Q. That's when you test the toothbrush itself. But in terms of transferring just 30 to 35 nanograms of DNA, that could be done by rubbing a

toothbrush on it, potentially?
A. Like I said, it's possible but.
Q. And it's also possible to get that amount by rubbing a buccal swab against the key as well, right?
A. Yes.
Q. There are many ways, many personal items that someone might rub against a key that might also shed and deposit a low amount of DNA like such as you found on this key?
A. Yes, it's possible.
Q. Okay. And from looking at this key, and your swab, and the evidence you found, you cannot tell whether the DNA that was found on that key was planted there by somebody or not, can you?
A. No.
Q. And, indeed, if somebody did plant the DNA on that key that you determined -- that you found in your tests, it would look much like what you found?
A. Yes.
Q. Okay. Now, you found no mixture of DNA on that key, right?
A. Right.
Q. You did not find any DNA of Teresa Halbach on

that key, did you?
A. That's correct.
Q. A car key that presumably she handled and used daily, right?
A. Correct.
Q. And you did swab all the way around the key?
A. Yes.
Q. Now, there are some studies in the Wickenheiser report, for instance, that talk about how the last person who touches an item may leave the major portion of DNA that's left on there?
A. Yes.
Q. But most often when that happens, there's still a mixture and there's a minor contributor as well, right?
A. No, I -- I would disagree with that. In some cases, yes. It's very difficult. There's no way to really predict that. If you have someone who's a good shedder and sheds a lot of DNA, when they touch something, a lot of studies show that that is going to be --the last person is going to be the DNA you pick up. If you don't shed a lot of DNA, then you may not find any at all.
Q. What you found on this key was not a lot of DNA, right?

A. Correct.
Q. Turn to page 448 of that article, I'm going to ask you to agree or disagree with this.
A. Yes.
Q. Paragraph begins, as the sensitivity, do you see that?
A. Yes.
Q. About half way down?
A. Mm-hmm.
Q. Do you agree or disagree with this statement: Although case experience has found that the handled object bears the profile of the most recent handler, many more mixed profiles will be recovered if commonly handled objects are examined, doorknobs, handles, light switches, ignition switches, and doorbells have all yielded DNA profiles. And then there's a table that's referred to.
A. Yes.
Q. You agree with that?
A. In many of the cases, yes, but not all the time.
Q. Okay. Let's go to the bullet for a minute, just to clear up a couple of things. The bullet that you, tested you didn't get it until April, or March actually. right?

A. Yes, that's correct.
Q. And to the eye, you didn't see any blood visible?
A. That's correct.
Q. But you didn't do a presumptive test?
A. Right.
Q. And, in fact, did you do a swab at all?
A. No.
Q. This is one where you put it into a buffer and sort of dissolved the amount, right?
A. Yes, I washed it.
Q. So you can't really say whether the DNA on that bullet came from blood or some other source, can you?
A. All that I can say is it was nucleated cells.
Q. Which could mean blood or any other sources?
A. Right.
Q. Let's talk about some specific results that you did get and we haven't heard. Out of all the tests that you did, 180 items that you looked at, came into your lab, right?
A. Yes.
Q. No DNA of Teresa Halbach's was ever found on any item that was indicated it came from Mr. Avery's house, correct?
A. That's correct.

Q. No DNA of Teresa Halbach was ever found on any swabs of Mr. Avery's car?
A. Correct.
Q. No DNA of Teresa Halbach was ever found on any item, or on the surface inside his Ford F350 pickup?
A. I don't believe I examined the pickup.
Q. Okay. And no DNA was found of Teresa Halbach's on any item, any item in that garage, detached garage next to Steven Avery, with the exception of that one bullet, FL?
A. Correct.
Q. In a test that you admit showed contamination, correct?
A. In the control, not the evidence.
Q. In the test, correct?
A. As I said, in the control, not the evidence.
Q. All right. We'll pursue that later, but it will probably have to be after lunch. But let's go through some of the items. You never found any of Teresa Halbach's DNA on any kind of mattress or bedding, did you?
A. I don't believe I examined any mattress or bedding.
Q. Okay. So none of that was even sent to you,

right?
A. Correct.
Q. You never found any DNA of Teresa Halbach's on any carpet in his house, did you?
A. No.
Q. There were some stains that were sent to you that I want to make clear the jury isn't confused about, though. There was a stain that was found that appeared to be a blood drop on the bathroom floor, right?
A. There were several items on the bathroom floor. I don't know which one you are referring to.
Q. Let's put them all together. All the bathroom items, the floor, the vanity, the sink, whatever, right?
A. Mm-hmm.
Q. You tested all of those?
A. Correct.
Q. None of them had Teresa Halbach's blood on them, did they?
A. No.
Q. You also tested, there were some drops that were found on a molding of a door near the bathroom or bedroom, right?
A. Yes.

Q. No DNA of Teresa Halbach, right?
A. Correct.
Q. You tested the headboard of a bed, right?
A. Yes.
Q. You tested the footboard of a bed?
A. Just the headboard, I believe.
Q. Do you have your reports with you?
A. Yes, I do.
Q. All right. I stand corrected, looks like you tested several items, several areas of the headboard, right?
A. Yes.
Q. The legs, the spindle things, right?
A. Yes.
Q. No DNA of Teresa Halbach?
A. Correct.
Q. You tested stains that were recovered from the nightstand in Mr. Avery's bedroom, right?
A. I don't recall if I looked at stains from a nightstand.
Q. May 8th report, second page, Item HX and Z.
A. That's correct, you're right.
Q. No DNA from Teresa Halbach?
A. Correct.
Q. You also tested outlet covers, and light

switches, from Mr. Avery's house?
A. Yes.
Q. No DNA from Teresa Halbach?
A. That's correct.
Q. And you tested the handcuffs and leg irons?
A. That's correct.
Q. None of Teresa Halbach's DNA found on either of those items?
A. That's correct.
Q. Which we decided -- which you said earlier, clearly had hot been cleaned off with bleach or something because they had a mixture of other people's DNA on it?
A. That's correct.
Q. Then you examined many knives that were sent to you, right?
A. Yes.
Q. I see at least seven just in the May 8th report, right?
A. Yes.
Q. No DNA of Teresa Halbach's?
A. Correct.
Q. In the garage -- Actually, Judge, I don't know what time you want to break for lunch. I may have yet another 10 or 15 minutes on this part of

it before I move so.

THE COURT: All right. I didn't know how long this part was going to go. If that's the case, we'll take our lunch break at this time. Members of the jury, do not discuss the case or any of this morning's testimony during your lunch break.

(Jury not present.)

THE COURT: You may be seated. Counsel, let's report back about 1:00 then.

ATTORNEY BUTING: Okay. Thank you.

(Noon recess taken.)

(Jury present.)

THE COURT: Mr. Buting, you may resume your cross-examination.

ATTORNEY BUTING: Thank you, your Honor.

CROSS-EXAMINATION CONTD.

BY ATTORNEY BUTING:

Q. All right. Ms Culhane, you were talking about all of the items in the house that you looked at. And would it be fair to say that you were not able to -- as Mr. Fassbender requested -- put her in his house?

A. That's correct.

Q. So then you looked at the garage as well, not sequentially, but at some point you were looking

at the garage?
A. Yes.
Q. And they sent you a number of stains. I'm going to show you a couple of exhibits that were introduced earlier, take a look at them and then I will put them up on the screen.
A. Okay.
Q. Okay. I'm showing you Exhibit 247 first, a number of evidence markers there. We had testimony that -- where all those one, two, three, up to eight, I believe, swabs were taken? Okay?
A. Yes.
Q. And you tested those swabs, right?
A. I assume so.
Q. Well, if you need to refer to your notes, you did find some DNA on garage floor stains in this case, right?
A. Yes, I was submitted a number of swabs and I gave them my item designations when they came in. I was not -- I didn't actually collect them.
Q. Okay. I understand. But you did indicate, looking now at your March 31st report -- if you need to refer to it that's fine -- a number of items, question stain, reportedly recovered from

the garage floor, right?
A. Yes.
Q. You have got Item G through P described that way?
A. Yes.
Q. And they have different tag numbers associated with them. Those are the tag numbers from the -- presumably the law enforcement people who submitted them?
A. Correct.
Q. And when you tested those, you found out that six of them had DNA -- had Mr. Avery's own DNA?
A. Yes, that's correct.
Q. Now, if you are getting a DNA reading off of swabs, that must mean -- or correct me if I'm wrong -- that no one had tried to clean that area with bleach before the swabs were taken, right?
A. I really -- I don't know.
Q. Okay. Let me ask it this way, that was poorly phrased. Looking at this exhibit on the screen right now, which is a photograph of the garage, if somebody had cleaned that garage floor with bleach before the police came, you would not expect to find any DNA would you?
A. If it was cleaned thoroughly enough and the bleach destroyed all the DNA, no, I wouldn't.

Q. Okay. But in this case, you did find DNA. You found Mr. Avery's own DNA?
A. That's correct.
Q. And, again, it's not unusual, nothing sinister about finding one's own DNA in one's own property, is it?
A. No.
Q. And then later in the case, return to your December report, and, actually, you can see part of it in this exhibit up there, you see that crack that runs along the left side?
A. Yes.
Q. I will put on Exhibit 237 right now, to show it a little better. See that crack that sort of runs north/south in this garage?
A. Yes.
Q. It's your understanding that law enforcement actually took a jackhammer into this garage and tore up concrete chunks, right?
A. That was my understanding.
Q. And they did that because they thought, well, if the victim had been killed here, perhaps her blood would have soaked into those cracks, right?
A. I assume so.
Q. And so this crack was divided into a bunch of

different concrete chunks, that were later sent to you?

A. The swabs from the chunks were, yes.

Q. Okay. I apologize, the swabs from the chunks. And in your December report, there was actually -- my gosh, almost three full pages of swabs, right?

A. Correct.

Q. Did you find Teresa Halbach's DNA on any of those swabs?

A. No, I did not.

Q. You did find Mr. Avery's DNA on one of them though, right?

A. Correct.

Q. Now, you also looked, or asked to look, we saw that message earlier, at the -- at .22 rifle swabs that were taken from it, right?

A. Yes.

Q. And the purpose there was not to see if you would find Teresa Halbach's DNA, but to see if you would find Mr. Avery's DNA, right?

A. Was that item DD?

Q. Yes.

A. I believe I was requested to look for possible blood on the barrel part and DNA from the trigger

area.
Q. And you found neither, correct?
A. That's correct.
Q. You did not find Mr. Avery's DNA on that weapon anywhere, did you?
A. On the trigger guard is the only place I swabbed, but, no, I didn't.
Q. And you did not find Teresa Halbach's DNA anywhere on the barrel either?
A. Correct.
Q. Are you familiar with close -- close, almost contact-type shootings?
A. I don't know what you mean by that.
Q. Are you familiar with the term blow back?
A. Yes.
Q. You know that if someone shoots another human being with a gun, that's very close to them, there may be blow back spatter of blood onto that weapon?
A. I assume that's possible.
Q. Well, that's what you were looking for?
A. I was simply looking for blood stains, yes.
Q. On the barrel?
A. Correct.
Q. And you found none?

A. Correct.
Q. You also were asked to look at license plates that were recovered?
A. Yes.
Q. Two of them, right?
A. Yes.
Q. Two of them that, at least your understanding was, were the license plates originally on that RAV 4?
A. That was my understanding, yes.
Q. And you didn't find Mr. Avery's DNA on that, did you?
A. No, I did not.
Q. By the way, in all of this evidence that you have tested, all of it, some of it we heard you found Mr. Avery's DNA, things in his own garage or his own house, right?
A. Yes.
Q. Did you ever find any DNA of a gentleman named Brendan Dassey, anywhere, in all of your tests?
A. No, I did not.
Q. Not one shred, right?
A. No, I did not find his DNA.
Q. And you had his profile?
A. Yes, I did.

Q. All right. I want to talk about contamination. All right?
A. Yes, sir.
Q. You are aware it can happen?
A. Yes.
Q. In a lab. It's happened in your lab, you know that?
A. Yes.
Q. And we talked about contamination that may occur before it ever gets to your lab, intentional or otherwise, right?
A. Right.
Q. But you are involved in quality control at your own lab?
A. That's correct.
Q. Are you like the head honcho there, in charge of quality control?
A. No, I just monitor the quality control in our unit.
Q. The DNA unit?
A. Correct.
Q. So, you are responsible for making sure that the quality that comes out of your DNA unit is good?
A. Correct.
Q. And because DNA is very small, and relatively

easily contaminated, you take steps to try and prevent that, right?

A. Yes.

Q. You mentioned a couple of them, but, for instance, you have seen instances where, during a test, material from one case may end up getting contaminated into another case?

A. Yes, that's happened.

Q. Okay. You try to minimize that. That last one, idea or example I gave you, would be called cross-contamination, right?

A. Yes.

Q. Okay. So the analysts wear, you mentioned, gloves?

A. Yes.

Q. Um, lab coats?

A. Yes.

Q. Glasses?

A. Yes.

Q. And you said you bleach down the instruments in the test areas before -- in between tests?

A. That's correct.

Q. At least you try to. And you try and -- You mentioned this amplification room, you try and stay out of that, or you know, or when you are

working in there, stay in there, and do your test, and be done, right?

A. Correct.

Q. And despite all this, all these precautions, the Wisconsin Crime Lab still experiences the phenomena of contamination, does it not?

A. Correct.

Q. Now, there's some things -- other things you could do. For instance, you could wear masks, like surgeons do, right?

A. Correct.

Q. You don't?

A. No.

Q. You could use disposable lab coats that you throw out once you move from one room to the next, right?

A. We do have different lab coats that we use from one room to the next. We have a different lab coat for the amplification room than our work area.

Q. Okay. All right. But you don't change lab coats when you work from one case to the next?

A. No, we don't.

Q. And you don't use -- are you familiar with something called biological containment hood?

A. Yes.
Q. They're like a -- almost like a range that you -- that someone would see in their home, with a hood bent over it?
A. Yes.
Q. And it's got a work space inside of it?
A. Yes.
Q. And it has filtered air circulating through it?
A. Yes.
Q. And it's designed to prevent outside contaminants from coming in?
A. Yes, and we have two of those hoods that we use to set up our amplification. After our samples were processed, we set those up in a hood very much like that.
Q. Okay. But when you are working on extractions and that sort of thing you don't --
A. Correct.
Q. -- use those kinds of hoods, right?
A. Correct.
Q. It's just out on your table or your bench as you are working, right?
A. Right.
Q. And right next to you in this T, at the other end, may be one more analyst or two more

analysts?
A. One more analyst.
Q. Okay. Now, since you know that there's a potential for contamination, you use what's called controls, to try and minimize that, or catch it if it happens, right?
A. Right.
Q. These are internal controls, right?
A. Well, yes, they are controls that we set up with each -- with different phases of the examination.
Q. Okay. And just want to take a moment to explain to the jury how this works. You actually have, when you run any kind of a DNA test, start to finish, you run what's called a positive control at the same time, goes through the whole sequence?
A. No, sir. We have -- The positive control that you may be referring to is our amplification control. And that's only introduced in the amplification part of the process.
Q. Okay. I stand corrected. But that positive control, basically, is a known DNA profile that you expect to get as it goes through the test, right?
A. Yes.

Q. And you go through the test and you don't get that profile, you know something is wrong?
A. Correct.
Q. And then you also have what is called a negative control, which is supposed to go through and do what?
A. Well, we have two samples that could be considered negative controls. We call the first one a manipulation control. And that's the one we set up with the extraction. And that is carried through the entire procedure. We have an additional negative control that is introduced in the amplification process. And that's carried through the last part of the procedure.
Q. Okay. Well, let's talk about that one just for the moment, just to get rid of it. That negative control you introduced in the amplification process only?
A. Yes.
Q. And if it goes all the way through and comes up with something other than zero, you know something is wrong?
A. Correct.
Q. But back at the extraction part, you motioned with your hands, there's sort of like an item

that's about the size of a brick maybe, that you put these samples in and run it through?

A. Well, we set our samples up in a test tube rack, and they are different sizes.

Q. Okay. And so they are altogether sitting in a rack, and go through some machine, is that it, when you extract them?

A. No, these extractions are all done manually, by the analyst. And you set them up, your evidence samples, one in each tube, and then at the end of the process you add a tube that is a negative control with all of the reagents that you added into your sample.

Q. Okay. And that negative control you are talking about is what you call manipulation control?

A. Yes.

Q. But what I'm getting at is, when you run this whole block of samples through, whatever machine it is you do, there's more than one case in it, right? Often?

A. In the extraction procedure, no. When we amplify -- or I mean, I'm sorry, when we quantitate, there can be more cases batched together. And then when we amplify, we amplify them singly in a set, and then it's put on the instrument in

batches.
Q. Okay. So the first thing, this extraction thing that you do by -- manually, you then get a reading and it tells you whether there's any DNA that's worth even pursuing, right?
A. That's part of the quantitation, yes.
Q. Okay. Well, if there is enough, then you quantify it, do that test, and then go into amplification?
A. The quantitation part tells us if there is enough. If there is enough, then we continue. If not, we stop there.
Q. Okay. So this manipulation control that you are talking about is supposed to be zero, right?
A. Yes.
Q. It's supposed to be -- When you go through the test, it is supposed to show no human DNA whatsoever, correct?
A. Correct.
Q. And the reason you call it a control is because if you do the test, and at the end you find out, hey, there's something in here, then that's a clue that there is contamination, right?
A. Yes.
Q. Okay. Now, contamination of evidence samples is

harder to detect than these contaminations of the controls, right?

A. Not necessarily, depends.

Q. Well, with the control, if it comes back anything other than zero, you know there's something contaminating it, right?

A. Right.

Q. With an evidence sample, if it comes back with DNA, if that DNA had been contaminated, you wouldn't necessarily know that?

A. Correct. If it had been contaminated with the same type of DNA, that's correct. However, if it's been contaminated with another type, or the analyst, or another source of the DNA, it would show up as a mixture of DNA and we would be able to separate that out.

Q. Well, it would show up as a mixture if the original piece of evidence had any DNA that was testable -- detectable, right?

A. Yes.

Q. A lot of these samples you will test and you don't find any DNA on them, right?

A. Right. And at that point, we wouldn't go any further.

Q. Sure. But if that sample that has really no DNA

on it, gets contaminated in this process, with some other DNA, from it's own case or another case, you wouldn't necessarily know it when you go through this test, would you?

A. No.

Q. Meaning correct?

A. Yeah, that's correct.

Q. Because at the end, you would get a profile, on the piece of evidence, and you would assume that that profile must be from the suspect, or must somehow be related to the case, right?

A. Correct.

Q. You wouldn't know that it had been contaminated before it even went through?

A. Correct.

Q. Okay. Now, you keep a log of these kinds of contamination incidents, correct?

A. Yes.

ATTORNEY BUTING: I'm going to mark this. I have already shown counsel.

(Exhibit No. 346 marked for identification.)

Q. We'll call this Wisconsin Crime Lab's Contamination Log. I think you changed the names a couple times, but that's Exhibit 346. Can you identify that.

A. Yes, these are copies from the logs that we keep in the lab.
Q. Okay. And the first few pages are in a different format. They are like a full page, each deals with one incident, correct?
A. Yes.
Q. But as you get back a little bit farther, really, just before August of this past year, August '06, it's more of a log with numerous incidents on each page --
A. Yes.
Q. -- right?
A. Yes, we changed our forms.
Q. Okay. You will need this with you so you can refer to it. Did you bring a copy of that with you, by the way, in your own file?
A. No.
Q. Okay. You don't normally keep that in your files when you come to court?
A. No.
Q. Now, what your policy at the lab is, whenever you run through these tests and you find a contamination such as a manipulation control contamination, you make a note of it in this log?
A. Yes.

Q. And you put the date, the case number, the type of error detected, the analyst, and then there's some corrective action that's taken?
A. Yes.
Q. But, again, that, of course, is only in those manipulation or those control cases where you can see clearly that there's contamination because it's something other than zero?
A. Correct.
Q. Now, despite the best efforts of the analysts and their supervisors, sometimes no explanation can be found for the contamination; is that fair?
A. Yes.
Q. Sometimes it's rather obvious, like in your case in this instance, that your DNA is found in a control and then it's assumed that somehow you contaminated it yourself, the analyst, right?
A. Right.
Q. But other times it's baffling, somehow or another, something was contaminated and no one can figure out how or why?
A. Correct.
Q. I want you to take a minute and look at this exhibit that's in front of you. It's a 24 month period, basically, from November of '04 --

actually, December of '04 to December of '06. Could you count the number of errors -- You said earlier that you believe there were 89 errors since 2001.

A. Right.

Q. Do you remember that?

A. Yes.

Q. Would you count how many contamination incidents are recorded in that 24 month period from 2004 to 2006.

A. Fifty.

Q. All right. Take a minute and count how many you have, how many errors, contamination errors, you report, yourself, in that 2 month period -- 24 month period? I believe I counted 44 errors, but you must have found some more.

A. Seven.

Q. Actually, if you look at the third to the last page, begins, it has three there, starting March of '04. That's all right, never mind. So you count 7, 7 out of 50.

A. Yes.

Q. I counted 8, but maybe I miscounted. You said there's about 10 analysts?

A. Anywhere from 10 to 12.

Q. Okay. So, if there's 50 errors, the average, if spread evenly, should be five errors a person, right?
A. That depends on how many cases each analyst works.
Q. That's true. You, though, have 7 out of 50, which is more than the average, if you divide it evenly, correct?
A. But not all those analysts work the same number of cases.
Q. That's true. However, some of them are full-time --
A. They are all full-time.
Q. -- doing nothing but DNA. All of them.
A. They are all full-time.
Q. They are all full-time, and you are not. You are 70 percent; 70 percent of your time is doing DNA testing, that's what you told us, right?
A. That's correct.
Q. So we have all these other analysts who are working full-time, more cases than you, and yet you have a higher error rate than anyone.
A. No, actually, I believe if you look at the numbers, I'm one of the higher producing analysts as far as number of cases.

Q. Well, I don't see those numbers, but I do see that you are the highest producing contamination person in this log; isn't that right?

ATTORNEY GAHN: Objection, your Honor, this is argumentative.

THE COURT: Sustained. I will ask that you rephrase the question.

Q. (By Attorney Buting)~ Isn't it true that for this two month -- two year period, you have one of the highest contamination records of anybody at the Wisconsin Crime Lab in Madison?

A. I don't know, I haven't counted up all the other instances of other people. So I really don't know how many each analyst has.

Q. Well, take a moment and look if you like.

A. Do you want me to count up for each analyst?

Q. I want you to see if there's anybody who has more errors in that 20 more -- 24 month period than you?

ATTORNEY GAHN: Your Honor, I'm going to object at this point to the relevancy of this, number one. But, also, I think, foundationally, what the other analysts -- I don't know how this witness can testify to the causes or why there was contamination in other analyst's cases.

THE COURT: I think that's a matter for redirect. I'm going to allow the question.

Q. (By Attorney Buting)~ Would you agree with me that you have more errors in that 20 month -- 24 month period than anybody?

A. If you counted them up and your numbers are correct, then I agree with you.

Q. Now, let's look at -- Why don't you look at just the months of September and August of 2006, count how many errors there are total and how many of them are yours?

A. September and August?

Q. Yes.

A. 2006.

Q. These are all the big sheets, right, full page ones?

A. Yes, there's only one.

Q. There's eight errors in September and August total for the lab, right?

A. Oh, I thought you said for me.

Q. Well, let's just talk about first for the lab?

A. Oh, for the lab. Five.

Q. Go to the next page that has a log of several, August 1st, August 3rd --

A. I'm sorry, you're at five, okay.

Q. August 1st, August 3rd, August 28th, 29th, September 6th, September 14th. And on the second page, another on August 3rd and another on August 29th.
A. Seven.
Q. Okay. You come up with seven, two of which are yours. Look at September 6th.
A. Yes.
Q. And look at August 1st?
A. I don't have that.
Q. I'm sorry. You're right, there's a page missing from this exhibit. I'll correct that, but here's a photocopy of apparently a page I didn't have in this exhibit, shows an August 1st entry.
A. Okay.
Q. With an error from you, right?
A. Yes.
Q. So in that two month period, two of the seven errors were made by you?
A. Yes.
Q. And in October and November of 2006, I count eight of these sheets, eight errors?
A. Total.
Q. Total, right? So in the lab, in the four month period of October, November, September, and

August, you have got 15 errors already, just in that one little period of time, right?

A. Yes.

Q. Would you agree with me that the contamination error rate has been going up in the Crime Lab over the last few years?

A. Yes.

Q. Okay. Now, look, just for a moment, at some of these contaminations so we can talk about what kind of contaminations there are. Would you turn to one that's entered on October 18th of 2006. Do you see the October 18th?

A. Yes.

Q. Case No. W06-1209?

A. Yes.

Q. Okay. Now, this is not a mistake or an error contamination by you, but you did sign off at the bottom of it as the DNA Technical Unit leader, right?

A. Correct.

Q. So you are familiar with what happens here when your analysts make -- do a test; they find contamination; they have to do one of these reports; you review it and the supervisor reviews it, right?

A. Correct.
Q. And this is an instance of cross-contamination between two completely different cases, is it not?
A. Yes.
Q. And the corrective measure for this particular analyst is that she or he, I don't know who it is, is going to try not to extract high level DNA samples near in space in time to low level DNA samples?
A. Correct.
Q. So that one was apparently explained. Now, if you look at the very next page, different case W05-1876?
A. Yes.
Q. Do you see that one?
A. Yes.
Q. Description of the contamination here is believed to have been a problem with labeling. Hold on, I'm sorry, it's the next page, W05-140?
A. Yes.
Q. This is a contamination where it was concluded that it's possible the samples were actually switched or mislabeled during the test process?
A. Yes, it's possible.

Q. And the corrective measure is specifically to limit distractions and to limit cases working at one time in order to prevent errors, correct?
A. Yes.
Q. Distractions like you faced when you tested that bullet with trainees around you?
A. No, I believe she was referring to distractions like phone calls and questions and.
Q. Okay. There's also something called carryover, as another kind of contamination, right?
A. Yes.
Q. And that's referred to in the very next incident. And that's where it's possible for DNA from a prior test, to actually carryover into the one you are doing, through the instruments somehow, right?
A. No. Are you talking about the one dated 10/8?
Q. Well, yeah, but there's a number that talk about carryover. I'm just asking in general.
A. Carryover in this instance would be to carryover in the same case, not case to case, into the control, from one sample to another into the control.
Q. Okay. Let's turn to your error noted on September 6 of '06?

A. Yes.
Q. This is another one where you developed your profile from a swabbing of evidence, Item A?
A. Yes.
Q. This was evidence, not a control?
A. That's correct.
Q. You contaminated evidence in this instance, did you not?
A. With my own DNA.
Q. With your own DNA?
A. Correct.
Q. And you even entered it into CODIS, which is the big national data base?
A. Right.
Q. As a female DNA that somebody could hit on?
A. Right. And because we have a system in the lab to catch this, we have profiles of everybody in the lab, my profile included. So this was resolved because it obviously hit on myself and it was removed.
Q. But it wasn't even detected until you ran your own profile through CODIS, as if you were some suspect, right?
A. It was detected when we ran it through the system, yes.

Q. That's right. And so you had to then remove it from the whole CODIS system, otherwise you would look like you are some suspect?
A. That's correct.
Q. Let's turn to two pages further down, August 28th, analyst is K.W., right?
A. Yes.
Q. This is an example where a partial female profile was developed in a control and the analyst was completely unable to determine the origin of that profile, right?
A. Correct.
Q. It wasn't her -- I'm sorry, I'm assuming it's a her, looks like, do you know K.W.?
A. Right.
Q. Okay. It was not her DNA, right?
A. Correct.
Q. And it was not carryover, right?
A. Correct.
Q. It was determined as contamination that simply is unexplainable?
A. That's correct.
Q. The very one right before that, I believe it's Karen Daily; is that right? August 29th?
A. Yes.

Q. This one is actually a duplicate. If you look at the page, the first page of the running log.
A. Okay.
Q. I'm sorry, it's the second page of the running log that starts June 6th?
A. Yes.
Q. See, at the very bottom there, it says August 29th?
A. Yes.
Q. It says K.D.D., that's Karen Daily?
A. Yes.
Q. Another contamination in which she's finding alleles, some of which are similar to her and some of which are not?
A. Correct.
Q. A source that is completely unknown?
A. That's correct.
Q. And, finally, turn to March 16th of '06; do you see this page?
A. Yes.
Q. This is not you, right?
A. Correct.
Q. It's initialed M.R.S., it's a completely different case, right?
A. Yes.

Q. You weren't involved in the testing of that -- in that experiment at all?
A. Not that I recall, no.
Q. And yet this analyst found a partial profile in the control that was consistent with you?
A. That's correct.
Q. You ended up contaminating someone else's test?
A. That's correct. My profile, partial profile, wasn't complete, so I'm assuming it was consistent with mine throughout.
Q. All right. Now, your big profile, I'm sorry, protocol, that I think was entered even, as an exhibit, it recognizes that there may be some contamination in these tests, right?
A. Yes.
Q. And it says, it's got specific rules about what you can do, when you get a contamination?
A. Yes.
Q. And one of those rules in the protocol is, if you get a contaminated control, it forbids you from making a call to include somebody as the person in that DNA, right?
A. Yes.
Q. It tells you, that if you go through these tests and the manipulation control is contaminated,

that you are to report it as inconclusive for matched purposes?

A. Correct.

Q. Now, here, you ran this test on the bullet and you got a result that shows the manipulation control was contaminated, right?

A. Correct.

Q. And according to protocol, you should have not said that that was Teresa Halbach's DNA on the bullet, your protocol told you that you were to report it as inconclusive; isn't that right?

A. Yes.

Q. But if that happens, usually what you do is you try and re-extract it and run it again?

A. Yes.

Q. But in this case, it was a one time deal, you put that bullet into a buffer and you took whatever sample there was and you ran it off?

A. Yes.

Q. So you could not redo the test?

A. That's correct.

Q. And if the test came back inconclusive, you would not be able to put Teresa Halbach in Mr. Avery's garage at any time, right, like Mr. Fassbender asked?

A. There were reasons why --
Q. I will get to that.
A. There were reasons why this profile was reported on.
Q. We'll talk about that. But my point is this, out of all these tests that you have done --
A. Right.
Q. -- not one single test put Teresa Halbach in Mr. Avery's garage?
A. That's correct.
Q. Except for this bullet.
A. That's correct.
Q. And this is the only one, right?
A. Yes.
Q. And you couldn't retest it, so you either had to call it inconclusive or else deviate from your protocol.
A. That's correct.
ATTORNEY BUTING: Let's mark this exhibit.
(Exhibit No. 347 marked for identification.)
Q. I now show you Exhibit 347, can you identify that?
A. Yes.
Q. And what is it?
A. It's a copy of our deviation request form in our

laboratory.
Q. Okay. And this is a form that, if you want to deviate from your protocol in any way, you have to -- or any analyst has to fill out this form and it's to be reviewed by two people, right?
A. It's to be reviewed by the Technical Unit Leader and approved by the supervisor.
Q. Okay. And the Technical Unit person is who?
A. Myself, in our lab, and Gretchen DeGroot in the Milwaukee lab.
Q. Okay. So you had one person sign this, one person review this, and that is Gretchen DeGroot, right?
A. That's correct.
Q. You went all the way to the Milwaukee Lab to get approval to deviate from your protocol in order to make a call that says Teresa Halbach's DNA is on that bullet, right?
A. No, sir. I discussed this with my supervisor in the laboratory. In fact, I discussed it with numerous analysts in the laboratory. And, yes, I did talk to Gretchen about it. Since this was a technical matter, and Gretchen and I are more in tune to the technical issues, she is the one I would have, as well as the peer reviewer who

reviewed my case, that I would have talked to first, and I did talk to Marie, my supervisor.

Q. You are familiar with the protocol?

A. Yes, I am.

Q. Record should reflect you are looking at Exhibit 310, right?

A. Yes.

Q. There you go. All right. In this section of your protocol, it says interpretation of STR results, right?

A. Yes.

Q. That's the heading and it talks about how it's a matter of professional judgment and expertise, right?

A. Yes.

Q. And it recognizes that maybe some situations may not fit a preset rule?

A. Correct.

Q. Gives some latitude for that, right?

A. Right.

Q. But it also says, any deviations must be documented in written form, prior to peer review; in those situations any deviations must be approved by the technical leader and the supervisor, right?

A. Correct.
Q. The exhibit in front of you, which is the unit deviation form, does not have any approval from the supervisor, does it?
A. It has no signature, but I did discuss it with her and she did approve it.
Q. But she didn't sign anything, is that what you are saying?
A. Apparently it was an oversight.
Q. Okay. All right. Thank you. Now, this kind of a deviation from protocol is a pretty unusual thing in your lab, right?
A. Yes.
Q. You don't do it very often?
A. Right.
Q. Twenty-three years you have been there, right?
A. Yes.
Q. This is the only time in your entire career you have ever filed a deviation of protocol so that you could make a call and include somebody, isn't it?
A. Yes.
Q. This case is the only time, right?
A. Yes.
Q. So, when Mr. Gahn asked you on direct whether --

when you did the exclusion of Mr. Avery in 2003, whether you followed the same steps there that you followed here, that's not entirely true, is it?

A. I don't understand what you mean.

Q. When you did the test that excluded Mr. Avery, proved he was wrongly convicted in 2003, you did not have to deviate from any protocol to make that call, did you?

A. No, because our protocol doesn't require any deviation for an exclusion --

Q. That's right.

A. -- no matter what.

Q. I'm sorry?

A. No matter what.

Q. Right. But there was no -- you didn't have to deviate anyway, you had no contamination in his test?

A. Right. The protocols that I followed were all in the same -- I mean, they were all in place. That deviation was available if I had needed it. The request to make it was available.

Q. But you didn't need to?

A. No, I didn't.

Q. But in this case you did?

A. That's correct.
Q. The one and only case in 23 years you did, right?
A. This kind of deviation, first of all, in this context, we're talking about DNA evidence. And we haven't been doing DNA evidence for 23 years. So --
Q. Well, you have been doing it since 1997?
A. No. 19 -- Yeah, 1996, you are right.
Q. Okay. Ten years, then, 50,000 -- 60,000 tests is what you have told Mr. Gahn, in your lab?
A. Yes.
Q. And whatever portion of that is yours, you have never filed a request to deviate from the protocol in order to make a call and say that's her DNA, until this case?
A. That's correct, because we have never -- I have never had this situation before.
Q. Turn to your reports, please. Do you have those in front of you?
A. Yes.
Q. I'm showing you Exhibit 314. Let's talk about it in terms of exhibit numbers, okay. Is that your report that's dated May 8, 2006?
A. Yes, it is.
Q. And that is the report that says -- gives a

result of this test of the bullet?
A. Correct.
Q. Correct?
A. Yes.
Q. Now, these reports are very important, right?
A. Yes.
Q. These are your final reports?
A. Yes.
Q. For that test? They are signed by yourself?
A. Correct.
Q. And by Marie Beth Varriale?
A. Correct.
Q. Who's the supervisor of the lab, your unit?
A. Yes.
Q. And she's signing it as the designee for the Attorney General of the State of Wisconsin, correct?
A. Yes.
Q. That's how important these reports are. They are from the Attorney General.
A. That's correct.
Q. And you know how these reports are used, correct?
A. Yes.
Q. Courts rely on them?
A. Yes.

Q. Juries rely on them?
A. Yes.
Q. Prosecutors and police rely on them?
A. Yes.
Q. Defense attorneys rely on them?
A. That's correct.
Q. Now, on Page 2 of your report -- I'm sorry, it's page 4, you have a sentence in there, at the end of the first paragraph, that says -- Actually, the first paragraph says the profile is developed from the bullet fragment --
(Court reporter asked the attorney to repeat.)
ATTORNEY BUTING: I'm sorry.
Q. The profiles developed from the bullet fragment, Item FL, in the interior driver's door handle, Item IG, are consistent with the profile developed from the Pap smear, Item EF, reportedly collected from Teresa Halbach. And then it refers to a prior report.
And then the last sentence, the manipulation control extracted with the bullet fragment, Item FL, contains DNA that is consistent with this analyst?
A. Correct.
Q. All right. At no time, in this report, do you

ever disclose, that in order to make that finding, you had to deviate from a protocol, did you?

A. No.

Q. Anyone reading this report would never know that, in order for you to make that call and say that that's Teresa Halbach's DNA, you had to do something you have never done in your career as a Crime Lab analyst, right?

A. Without discovery, no.

Q. So, if a defense attorney, or Court, didn't dig through all of those mass of papers that you have there and find this unit one page report, no one would ever know that, in order for you to make that call in this case, you had to do something you have never done before?

A. The deviation that I requested was appropriate for this situation. And the results that I reported were correct. And that's why the deviation was requested. All my data supported the deviation, it was okayed --

Q. But --

A. -- and it was reported.

Q. -- ma'am, you did not disclose, in that report, that official report, that Courts, and juries,

and judges, and lawyers, and everybody else relies on, you did not disclose that in order to make that call you had to do something so rare you have never done it before, did you?

A. No, I did not.

Q. And you didn't put that in there because if you did, you wouldn't be able to satisfy Mr. Fassbender's request that you put Teresa Halbach in Steven Avery's garage, right?

A. That's not correct.

Q. Let's close with this. Other than that bullet, all your other tests, none of them put Teresa Halbach, ever, in his garage, or his house, or any of his vehicles, right?

A. Correct.

Q. Thank you.

THE COURT: We're going to take a 10 minute break at this time. And then we'll resume.

(Jury not present.)

THE COURT: You may be seated. All right. Counsel, I will see you in 10 minutes.

ATTORNEY BUTING: Ten, you said?

THE COURT: Yes, I'm giving the court reporter a break. We'll take another one before the afternoon is over.

(Recess taken.)

THE COURT: Mr. Gahn, do you have any questions on redirect?

ATTORNEY GAHN: Yes, your Honor.

THE COURT: You may begin.

ATTORNEY GAHN: Thank you, sir.

REDIRECT EXAMINATION

BY ATTORNEY GAHN:

Q. Ms Culhane, will you explain to the jurors exactly what it is that goes into a report, a final report that you file in a case?

A. The content of the report is usually everything that we examined, of all the items submitted, exactly what we examined; a description of the technology that we're using; the types -- sometimes, not always -- the actual types go into the report; and then our results, with reference to our profiles we developed, whether they are inconsistent or consistent; and a final conclusion.

Q. You indicated in your report when you read about the bullet, Item FL, that Teresa Halbach's profile was contained on that bullet, correct?

A. That's correct.

Q. And you also indicated in your report that your

profile was contained in the control; is that correct?

A. Yes.

Q. And your request for deviation, was that in all of your notes?

A. Yes.

Q. Were you hiding anything from anyone?

A. No.

Q. And anyone reading your report would have seen that your profile was in the control, correct?

A. Yes.

Q. And wouldn't that cause them to ask further questions about that?

ATTORNEY BUTING: Objection, speculation.

THE COURT: Sustained.

Q. (By Attorney Gahn)~ But further information about your profile in the control was contained in all of your notes?

A. That's correct.

Q. And did you turn your notes over to the defense in this case?

A. Yes.

Q. Similarly, with the contamination log that Mr. Buting showed you, you turned your contamination log over to the defense, correct?

A. Correct.
Q. And, again, what is the purpose of the contamination log?
A. Several different purposes, actually. We use it to troubleshoot, to find out if we're having a systemic problem in the lab, to make sure that our reagents are clean, to make sure that we haven't inadvertently contaminated our reagents or something and that way we would be introducing DNA into our samples. That's one function.

The other function is to troubleshoot each situation as it happens. If you further look at that contamination log, I would guess 99 percent of the instances that we had were resolved, either by reworking the case, or by the fact that the evidence was actually an elimination or it excluded someone. So it, basically, provides us with the information to, if we have those instances, to troubleshoot and try and find out what happened in that particular case.

Q. Do the inspectors see the contamination log?
A. Yes.
Q. And I think you testified that every five years you are up for your accreditation?

A. Yes.
Q. And when was the last time you received your accreditation?
A. May of 2006.
Q. And did the accrediting board members see your contamination log?
A. Yes.
Q. And did they express any concerns about it?
A. No.
Q. Every two years you have an audit?
A. Yes.
Q. And did the auditors see your contamination log?
A. Yes.
Q. Did anyone express any concerns at that point?
A. Not to my knowledge.
Q. Why is it good practice to keep a contamination log?
A. Because it happens. Any type of lab work where you have human beings doing the work, the possibility for these types of contamination are going to happen. It's unavoidable.

The techniques that we're working with are extremely sensitive. And, actually, that's why they are so useful. They are very sensitive because they do pick up on small amounts of DNA.

But taking that into account, you also have to realize that contamination is going to happen. And it's interpreted and dealt with on a case by case basis.

Q. Does the scientific community recognize that contamination is a possibility or a risk in the DNA PCR testing process?

A. Yes.

Q. And have studies been conducted about the contamination risks using this type of methodology?

A. Yes.

Q. Is it well documented that there are risks of contamination with this type of technology?

A. Yes.

Q. Do the manufacturers of the kits and the equipment that you have in your laboratory recognize contamination?

A. Yes, they do.

Q. Have they conducted validation studies about this?

A. I assume so, I'm not 100 percent familiar with that.

ATTORNEY BUTING: Objection, I move to strike the answer.

THE COURT: Court will order the answer stricken.

Q. (By Attorney Gahn)~ And, again, would you explain to the jurors why this testing methodology is so sensitive and the ability to -- the ability it has to pick up trace amounts of DNA?

A. The PCR reaction that we use to copy all of these genetic markers that I'm talking about works on very small pieces of DNA. So, if you have DNA that has been compromised by environmental factors such as heat, UV light; if you have substrates like soil, or wood, or things like that that may compromise the sample; PCR is very good for that. Because even though the DNA is chewed up a little bit, there's still usually enough there to amplify or make a whole lot of copies. So this amplification process gives us a lot of material, after it's completed, to work with.

Because of that fact, it also amplifies very, very small amounts of DNA, so, such as in this case, my DNA -- my DNA being introduced into the negative control, even though it was a very, very small amount, the technique was sensitive enough to pick that up.

Q. Would you explain to the jurors the exact set up of your evidence and your control during an extraction?

A. I have a test tube rack in front of me. And say, for instance, I'm doing three evidence samples, so I'm going to have three separate tubes labeled with the number and the item designation for each item of evidence. And then I'm going to have a fourth tube that's referred to as the manipulation control.

As I sample each one of my samples, depending on whether it's a cutting or what the evidence is, if it's a cutting, I will cut a portion of the swab or material off, put it into the tube and close the cap; clean my scissors and forceps off; go to the next item, put it in the tube, close the cap. I do that for all the evidence items.

And, then, the control, I actually just add to the liquid the buffers that cause the reaction to happen. And that all takes place on my bench top, in a test tube rack; I have a piece of white paper down on my desk.

Q. Now, while you were performing this extraction what else were you doing? Were you training

anyone?
A. Concerning the bullet, right?
Q. Yes, concerning the bullet.
A. Concerning the bullet, this was a little bit unusual, because there was nothing to cut. And there was nothing -- I didn't feel like, by swabbing it, that I would get enough DNA off of the item, so I actually put the entire bullet into the tube, with my reagents, and washed all the DNA off that was on that tube.

Because this was a little unusual, most of our samples are swabbings or cuttings, I had two of our newer analysts sit next to my workbench and watch me. And as I was doing it, I was explaining what I was doing and why I was doing it. And I felt like I was far enough away from my workbench so that my talking wouldn't interfere; but, obviously, that was incorrect.
Q. If when -- If your DNA profile had been on the bullet, would that have changed anything?
A. Yes.
Q. Please explain that to the jurors?
A. If my DNA had been on the evidence sample, I would have reported that as a mixture of DNA from myself and Teresa Halbach and I would have done a

statistical analysis referred to as a likelihood ratio. That type of contamination is different than what actually happened.

Q. If your -- If the control in this case had contained a DNA profile that was unrecognizable to you, would that have changed anything?

A. Yes.

Q. Please explain that to the jury.

A. I would not have requested a deviation because it would not have been appropriate; it would have been inconclusive, just like our protocol calls for.

Q. Explain to the jurors why you felt that deviation was appropriate in this situation.

A. First of all, there were a couple of reasons, my DNA was in the control, not the evidence sample. And because I was the analyst using it -- processing it, I knew what the source of the DNA was. And I felt this was probative evidence, and I felt it was appropriate simply -- primarily because it was my own DNA and it was in the evidence sample.

Had it been any other profile, had it been mixed with the sample, again, I would have reported it, but I would have reported it as a

mixture, and all the information would have been in my report just like it was in this report.

All the information was there, but I felt it was appropriate because I could not go back and re-extract. I was stuck with what I had; I couldn't redo anything to remedy the situation. And I felt it was probative evidence, so I reported it.

Q. Did the presence of your DNA profile in the control, in any way, cause the presence of Teresa Halbach's DNA profile on the bullet?

A. No.

Q. Was there any mixture on the bullet?

A. No.

Q. Who's profile did you find on the bullet?

A. It was a single source of DNA, meaning from one person, and it was consistent with Teresa Halbach.

Q. And the control in this case contained your profile?

A. Correct.

Q. I believe you testified on direct examination that since January 1st of 2001, the Crime Lab has analyzed -- was it over 50,000 samples?

A. Correct.

Q. And did you also testify that you have logged, since that time, 89 instances of contamination?
A. That's correct.
Q. Mr. Buting asked you about the work that you did on the exoneration of Steven Avery?
A. Yes.
Q. Explain, again, to the jurors, what samples you were analyzing for that exoneration?
A. I was examining pubic hairs that were originally submitted back in '85. In 1985 we did a microscopic comparison of hairs. That was state-of-the-art, that's what every crime lab did.

At the time, I made no statement about the pubic hair combings because, microscopically, I could not tell the difference between the victim and the suspect's pubic hairs. So if I couldn't tell the difference I certainly couldn't tell if any of these pubic hairs were foreign, so that was inconclusive.

When I was asked by Project Innocence to go back and look at these hairs, they were all mounted on microscope slides that I had originally mounted them on in 1985. I removed the cover slip; I took the hairs off; I washed

the hairs; and I attempted to extract DNA from them.

You probably remember me telling you that the type of DNA testing that we're doing is only appropriate if you have nucleated cells. So the hair shaft, we couldn't get DNA from, it had to be the root of the hair, if there was some skin attached to it.

And in this case I extracted 11 hairs, two of them did have cellular material; one was consistent with a woman and one was consistent with a male.

Q. In 2003, were you qualified to do DNA testing?

A. Yes.

Q. Tell the jurors about the potential for getting a DNA profile from the root of a single hair?

A. Traditionally --

ATTORNEY BUTING: Objection, this is irrelevant, I think.

THE COURT: Well, there were some questions on cross about it, I will allow her to explain what she did.

A. In most cases, again, unless there is cellular material attached to the root of the hair, we don't have a lot of success with nuclear hair --

I mean nuclear DNA off of -- which is the type of DNA we're doing, off of hair, in general. To get DNA off of a hair that old, that was mounted on a microscope slide, was pretty unusual.

Q. And is this sort of a one shot chance when you are doing one hair?

A. Yes.

Q. There are no second chances going back?

A. No.

Q. And you developed a DNA profile from that one single hair didn't you?

A. Yes.

Q. Mr. Buting stated that the profile you developed from that one single hair was responsible to free Mr. Avery; is that correct?

A. Yes.

Q. And you ran that profile through the data bank and it hit on an individual by the name of Gregory Allen; is that correct?

A. Yes.

Q. Ms Culhane, if by chance your DNA profile had been in the control of that case, would you have not reported Gregory Allen as the person with the profile on the hair?

A. No, I would have requested a deviation from our

protocol because --

ATTORNEY BUTING: Objection, speculation here.

THE COURT: No, I think there actually were some questions about this on cross, so I'm going to allow it.

A. I would have requested a deviation in that particular case too because I couldn't go back and redo that hair. I had one shot, and if I got contamination, and it would have been my DNA in the manipulation control, I would have requested a deviation.

Q. So requesting deviations are very rare, aren't they?

A. Yes.

Q. But the circumstances of this case required you to request a deviation, correct?

A. Yes.

Q. There was no going back, a second chance, was there?

A. No.

Q. Just like when you analyzed the one hair in 2003, that resulted in Steven Avery's freedom?

ATTORNEY BUTING: Objection, no comparison.

THE COURT: It's been asked and answered.

Sustained.
Q. (By Attorney Gahn)~ Now, Ms Culhane, Mr. Buting handed you, before, Exhibit 344, and I will have it brought up to you in just a moment. But this was an exhibit that listed the buccal swab of Steven Avery being returned to the Manitowoc County Sheriff's Department; is that correct?
A. Yes.
Q. I would like you to take another look at that.
A. Yes, this is a copy of our receipt.
Q. And first off, did you ever have a vial of Steven Avery's blood in your laboratory?
A. No.
Q. So what did you use to make your comparisons, the standard that you used in 2003?
A. A buccal swab.
Q. Of Steven Avery?
A. Yes.
Q. And it's listed on that exhibit?
A. Yes.
Q. And what happens when you are finished with a case, explain to the jurors how it's packaged up and how it is sent back to the submitting agency?
A. When I finish with a case, it's put pack in the original container and it's sealed with evidence

tape, or whatever tape we have in the laboratory, usually evidence tape. And our initial -- my initials are across the seal.

Q. And if that envelope that you returned the buccal swabs in was still in that condition today, would you be able to recognize it?

A. I believe so.

(Exhibit No. 348, marked for identification.)

Q. By looking at the envelope, will you be able to tell whether your initials are on it?

A. If my initials are on there, I will recognize them.

ATTORNEY BUTING: Can I see it, please?

ATTORNEY GAHN: What's the exhibit number?

DETECTIVE WIEGERT: 348.

Q. (By Attorney Gahn)~ Detective Wiegert is going to hand you what has been marked as Exhibit 348 and ask if that has any markings on the outside of the envelope that you recognize?

A. Yes, it does.

Q. Explain what the markings are for the jury.

A. This is the evidence tape we use in the laboratory. Those are my initials. And this is also the label for our case number.

Q. May the record reflect that she's pointing to the

blue label on the exhibit.

THE COURT: Mr. Buting, I'm going to have to ask you if you agree, since I really can't see very well.

ATTORNEY BUTING: Point to it.

THE COURT: It is a blue label. Looks like a blue label.

ATTORNEY BUTING: Sure.

THE COURT: All right. The record will so reflect.

A. And my initials are also across that label.

Q. Would you open up that envelope?

ATTORNEY BUTING: Objection, hold on, I don't want --

THE COURT: I'm going to sustain the objection. The defense may have the right to ask questions on recross that might pertain to the current state of the envelope. I will let you address opening it after recross is finished. Fair enough?

ATTORNEY BUTING: Sure.

THE COURT: Okay.

Q. (By Attorney Gahn)~ Does the case number on that exhibit correspond to the case number on the -- on Exhibit, is it 344, the transmittal evidence

form?

A. Yes, it does.

ATTORNEY GAHN: Your Honor, at this point, I will turn Ms Culhane over to Mr. Buting, if he wishes to voir dire the witness on this point. And I would like to have the opportunity to resume this line of questioning.

ATTORNEY BUTING: No, I think he can finish his cross (sic) and if there's any --

THE COURT: Stop. I'm going to excuse the jury for a couple minutes here. We'll bring you back in a few minutes.

(Jury not present.)

THE COURT: All right. You may be seated.

ATTORNEY BUTING: Can I take a look at this a little bit closer?

THE COURT: By all means.

ATTORNEY BUTING: Okay. Do you want me to discuss this now?

THE COURT: Well --

ATTORNEY BUTING: I can --

THE COURT: The reason I excused the jury was, I assume that this is the envelope that the buccal swabs were sent back to the sheriff's department, you are asking to open it so she can say

that, presumably, yes, these are the buccal swabs, they are in the same condition they were when I sent them back?

ATTORNEY GAHN: No, there will be inside this, the envelope that she packaged them in, which will be all completely sealed with her initials on it from the Crime Lab and show that it has not been opened or tampered with.

THE COURT: Okay. So her initials aren't on the --

ATTORNEY BUTING: They are.

THE COURT: -- Federal express?

ATTORNEY GAHN: They are.

THE COURT: There was testimony earlier about her sealing something, putting her initials on it. I guess what I'm getting at is, is this the document she sealed, or is there another document inside that's the document that's sealed?

ATTORNEY GAHN: Yes, inside.

ATTORNEY BUTING: Well, Judge, let me just make a point, for the record. I don't know what's inside, I haven't opened this document. But I can tell that as you face the -- as you are looking at the front with the label on it, the left edge of it has been slit open at some point. The cardboard you

can see is cut and there is a piece of tape.

I don't know if we should excuse the witness at this point. Well, I think -- that's okay. There is a piece of larger tape sealing it, but if you look closely, there's also just another little piece of scotch tape that could very easily be peeled back without any damage noted and potentially gain access to the inside of that.

I don't know what's inside, but that left hand seal, or left hand side of the envelope, does not appear to be sealed with any kind of evidence tape. Do you see the little piece of scotch tape I'm referring to?

THE COURT: I see a piece of scotch tape on there.

ATTORNEY GAHN: Your Honor, we could open this outside the presence of the jury. Open it right now, see what's inside there.

ATTORNEY BUTING: I want the jury to see that it's just sealed with a piece of scotch tape, just like what they are going to see a little later. When does scotch tape become proper evidence sealing material? To me this looks like yet another exhibit with Mr. Avery's DNA in it, that has a seal of

nothing more than scotch tape.

ATTORNEY GAHN: Your Honor, what's happening here is what we tried to work out, I think, in our pre-trial motions. We're getting back into this ***Richardson*** frame-up, the defense initially gives an offer of proof that the planting was done by the blood vial in the Manitowoc County Clerk of Court's Office. And that changes today and now the implication is the buccal swab of Steven Avery was used to do the planting of the evidence.

This causes us to have to respond to this. This is outside the scope of what his offer of proof was. I believe it all was outside the scope of what the Court ruled would be the parameters in this case under ***Richardson*** and under ***Denny***. And we have to respond to this.

THE COURT: All right.

ATTORNEY BUTING: With regard to that. Can I just quickly respond. The difference here is that this witness has testified that some of the DNA appears to have come from a non-blood source. Now, given that, we have a right to respond and show what other sources might be, that's what this is.

THE COURT: I have already allowed you to pursue that. I'm looking at the address label on

this document and this is from the Department of Corrections, Stanley Correctional Institution, to Marie Beth Varriale at the Crime Lab. You know, if that's the case, it's not very surprising that it was opened. I thought, initially, that this was the envelope from which it was sent from the Crime Lab back to the Sheriff's Department.

ATTORNEY BUTING: It is.

THE COURT: Before I rule on whether or not the jury should see it in its current condition or make any conclusions about it, I think we have to know what it is, if it came from -- if this is the original label, and it came from the crime lab. It's not going be too surprising that it's been opened and closed again.

ATTORNEY GAHN: Correct. The critical piece of evidence is what is going to be inside that envelope and that will be the buccal swabs that Ms Culhane used to do the exoneration testing for the Innocence Project in 2003. And what we want to show, your Honor, is that these were not reopened and used to wipe on a key or a hood latch.

THE COURT: Is this -- So this isn't the envelope that you're attempting to show to the jury was sealed with her initials on it and has never

been opened since?

ATTORNEY GAHN: No, your Honor.

THE COURT: Does that change anything for the defense, Mr. Buting?

ATTORNEY BUTING: Well, in order to get to whatever is inside, one would have to first open that envelope, as I understand it. And what I'm saying, as I look at it right now, is that that envelope appears, yeah, it's been opened. And I understand that what happened is that probably came from the Crime Lab -- I'm sorry, from the prison, to the Crime Lab, they tested it, put it back in the same envelope, and returned it to Mr. Remiker.

THE COURT: All right. Let's do this. Let me suggest this, what if you present this to the witness, as is, ask her questions, and have her explain anything about its condition. And before it gets opened, I will give Mr. Buting an opportunity to provide a description to the jury of its current condition, including the scotch tape, and you can be -- the State can be asked if you agree with that description.

ATTORNEY BUTING: Okay.

THE COURT: Fair enough, Mr. Buting?

ATTORNEY BUTING: Sure, no problem.

THE COURT: All right. Someone can come back up and pick up the envelope. We'll bring the jurors back in. Mr. Wiegert.

DETECTIVE WIEGERT: Would you like me to give it to the witness, Judge?

THE COURT: Sure.

(Jury present.)

THE COURT: You may be seated. And, Mr. Gahn, you may resume your redirect.

Q. (By Attorney Gahn)~ Ms Culhane, could you explain and describe to the jurors exactly what is on that envelope and how it is packaged and what information will be helpful in determining its basic chain of custody?

A. It's an express mail package that was sent to the Crime Lab. Again, when it came into the laboratory, it got a case number and our bar coding system, and it was signed by whoever receipted the case. And, then, at some point was opened and I believe resealed with my initials and evidence tape.

Q. And when that arrived at the Crime Lab and you opened it, it contained evidence to be analyzed in the case of the exoneration of Steven Avery?

A. Yes.

Q. Do you know what that evidence was?
A. No, I don't. I would have to open this.
Q. Can you tell by your seal whether it has an item number?
A. No, it doesn't have an item number; I have a case number.
Q. But contained inside that envelope, you believe, is the exhibit that you examined?
A. Yes, I believe so.

ATTORNEY GAHN: If Mr. Buting has any questions.

THE COURT: Are you about to ask the witness to open the envelope?

ATTORNEY GAHN: Yes, I would like her to open the envelope.

THE COURT: All right. I think before she does that, I believe Mr. Buting wanted some information placed on the record about its condition. And after he gives that description, I will ask if the State agrees.

ATTORNEY BUTING: All right.

THE COURT: Perhaps, Mr. Buting, you can take it to the prosecution table, so as you are describing it, all attorneys will have a chance to look at it.

ATTORNEY BUTING: Well, I think -- isn't the witness going to -- can't I ask her to explain what it is, so I'm not the witness who is testifying.

THE COURT: If you wish to ask some questions now, I believe that was the State's original request. I thought you objected to it, but if you want to and the State agrees, go right ahead.

ATTORNEY BUTING: Sure, I mean, I would rather do it that way so that --

THE COURT: Counsel, is that correct? Mr. Gahn?

ATTORNEY GAHN: That's fine, your Honor.

THE COURT: All right. Mr. Buting, go ahead.

ATTORNEY BUTING: Okay. Just, we don't know what's inside at this point, but on the left side of the envelope, as you are facing the label.

THE WITNESS: Mm-hmm.

ATTORNEY BUTING: Does it appear at some point it was opened?

THE WITNESS: Yes.

ATTORNEY BUTING: And then there's a piece of tape, sort of a wide piece of tape that says State Crime Lab?

THE WITNESS: Yes.

ATTORNEY BUTING: And it has an initial over it?

THE WITNESS: Yes.

ATTORNEY BUTING: Would you look on top of that -- By the way, this tape that says State Crime Lab, it's a clear tape?

THE WITNESS: Yes.

ATTORNEY BUTING: But it has your label in red?

THE WITNESS: Yes.

ATTORNEY BUTING: And that's your little initials?

THE WITNESS: Yes.

ATTORNEY BUTING: That little black thing right there?

THE WITNESS: Yes.

ATTORNEY BUTING: If you look on top of that, doesn't it appear that there's a piece of small scotch tape that appears to be closing it?

THE WITNESS: Yes, it does.

ATTORNEY BUTING: And, your Honor, I would ask, if she's going to open it, rather than cut it with a knife, I would ask that she peel off that piece of scotch tape and see if its accessible that

way.

THE COURT: Any objection?

ATTORNEY GAHN: No, your Honor.

THE COURT: All right. Do you understand the request?

THE WITNESS: I think so.

THE COURT: All right. If you can peel off --

THE WITNESS: Peel this tape off?

THE COURT: Just the thin piece of scotch --

ATTORNEY BUTING: Just the scotch tape, not your evidence tape.

THE WITNESS: All right. I can't really get it all off.

THE COURT: Do you prefer it peeled off or use a letter opener that would leave the scotch tape on, in two pieces, one on each side?

ATTORNEY BUTING: Well, what I would rather see is, is if by taking the scotch tape off one can open it. It looks like -- Is that what you have done.

THE WITNESS: That's what I just took off.

ATTORNEY BUTING: Okay. And if you peel off this last little bit, does it appear to -- I

don't know if we're going to be able to tell if this is torn off. Just go ahead and open it. I would just slit it along that edge.

THE WITNESS: Should I cut it along this opening here?

THE COURT: Do you want us to use a letter opener or something?

ATTORNEY BUTING: She has a little knife.

THE WITNESS: I do have this.

THE COURT: All right. Sounds like both parties are agreeable, so go ahead.

ATTORNEY BUTING: Record should reflect inside of the postal envelope is another manila envelope that appeared to be unsealed. And now you have pulled out something that was inside of that.

THE WITNESS: Would you like for me to describe it?

THE COURT: Mr. Gahn?

Q. (By Attorney Gahn)~ Yes, if you would describe what's in the envelope.

THE COURT: Go ahead.

A. This is a manila envelope, says Marie Beth Varriale. These are my markings, my initials, the lab number and the item designation. This is actually samples that are used to collect data

bank samples. It's just a kit that we have.

Inside the kit is a sealed white envelope with the laboratory case label and item designation, W, my initials. And then this is the -- this is a cut that I made when I took the sample out and it's been resealed with my initials across it.

Q. Explain a little more to the jury exactly what that contains and when you sealed it and how you sealed it.

A. When samples are collected for the Wisconsin State -- the CODIS System, the data base, convicted offender samples, these preprinted kits are used. It says Wisconsin DNA Data Bank. and sometimes there are also other police agencies will sometimes use these to collect standards from individuals.

So there's some paper -- there's some documentation here as to where this kit came from and there's some instructions here if you were going to submit this to the data bank. There is a place for a fingerprint on here, which I really don't know anything about.

But I received it in this condition, with this -- this was completely sealed. And we

placed our bar code from the lab across the top here and I signed and initialed and dated it. And, then, when I took my sample out, I cut along the top edge here.

The swabs are actually inside this white envelope here. This is just a piece of paper that's stuck to the envelope. So the swabs are inside this envelope.

When I took my sample, I split the top and pulled out the swabs, sampled the swabs, put it back, and sealed -- resealed it, this is the evidence tape in the lab, and initialed it.

Q. And can you tell if that is the buccal swab that corresponds to, I believe, Exhibit 344, where the evidence was turned over, signed for by Detective Remiker?

A. Yes. They both have the same Lab No. M85-1051, and they both have the item designation of W.

Q. I would like you to describe the condition of those buccal -- of the buccal swabs, right now.

A. I can feel in here, there appears to be one swab in here. And all the edges are sealed and this is the seal -- this was cut open at one time when I took my sample and then I resealed it back. And this is the seal that I placed on it. And

appears to be exactly the way it was when I put it on there.
Q. Has that been -- Does it appear to be tampered with in any way?
A. No.
Q. Are there any seals broken that where someone could remove that buccal swab and use it to rub on a key and plant evidence of Steven Avery?
A. None of the seals are broken.
Q. And can you tell on what date you sealed that envelope and sent it back to the Manitowoc County Sheriff's Department?
A. Not by the markings on here, no.
Q. Can you tell when you sealed it yourself?
A. Not by these markings, no.
Q. Does Exhibit, is it 344, tell you when you sent it back -- or 348, I'm sorry?
A. 344 is the evidentiary release form and it was returned on September 25, 2003.
Q. And it would have been returned on September 25, 2003, in the condition that you just described for the jurors?
A. Yes.
Q. And today, as you look at that, does it appear to have been tampered or opened in any way?

A. No.

ATTORNEY GAHN: Thank you, that's all I have.

THE COURT: Mr. Buting, any recross?

ATTORNEY BUTING: Sure. There's always something.

RECROSS-EXAMINATION

BY ATTORNEY BUTING:

Q. Back to this deviation request form for a moment, you said -- you didn't go through the contamination log, but you just said you would guess that maybe 90 percent get resolved, meaning 90 percent of the contamination errors can be determined?

A. Actually I said, or I meant to say, everything is resolved somehow. Probably 99 percent are resolved by re-extracting. There are several instances that samples were not re-extracted, simply because they were exclusions; in other words, the evidence sample excluded the alleged suspect, so if it's an exclusion then that's the end of it.

Q. Yes. As a matter of fact, the protocol does specifically allow, when there's a contamination in a manipulation control, it does still allow

you to make a exclusion?
A. Correct.
Q. But not an inclusion?
A. Right.
Q. Explain the difference between an inclusion and exclusion?
A. When you are excluding someone, like if I have a evidence sample and I have a reference sample, and the profiles do not match, they are not the same, then, that reference sample is excluded. That person is not the source of the evidence sample. An inclusion is, if I have an evidence sample and a reference sample, and the profiles are the same, they are consistent with one another, that's referred to as an inclusion.
Q. All right. And the reason why you can still use these contaminated tests to exclude somebody is because an exclusion is the absence of something, that is lacking, the evidence does not have the profile that the defendant or the suspect would be, right?
A. Right.
Q. Whereas, an inclusion, when there is a contamination, there's concern that there's something may be added to it that shouldn't be

there, and that it may be because it's added that it includes somebody?

A. Correct.

Q. So they are treated differently in the protocol?

A. Correct.

Q. And page, the very next page from where we were looking before in the protocol, the E2 -- for some reason my pages aren't numbered. Starts on the top of evaluation of controls?

A. Yeah.

Q. Okay.

A. This page, right.

Q. Yeah, okay. Very first paragraph says that -- it talks about how manipulation controls may reveal the presence of contamination, right?

A. Correct.

Q. And what it specifically says is if -- if you're -- if this control -- manipulation control exhibits identifiable allele peaks, that means, basically, a DNA profile, right?

A. Right.

Q. Then the DNA specimens that are extracted along with that control, in other words, the evidence sample that's being done, along with your control?

A. Correct.
Q. The DNA specimen will be considered inconclusive for match purposes, right?
A. Correct.
Q. That's the rule that your lab has?
A. Right.
Q. And you said about 99 percent of the time they are re-extracted. In fact, do you know whether you might be the only lab analyst ever, at the Crime Lab, to ask for a deviation from the protocol in order to include somebody?
A. No, I'm not.
Q. Do you see any in that control -- in that contamination log?
A. No, but this was before that. We did have a deviation before the instances in the contamination log.
Q. Okay. Before you started keeping track?
A. Yes.
Q. From your memory you recall that?
A. Yes, I do.
Q. Okay. But there's no record of it.
A. Not in this documentation, no.
Q. Okay. And you said that you felt that it was appropriate to deviate because you felt this was

probative evidence, right?
A. Correct.
Q. That means you make a judgment -- a value judgment about whether this evidence is important in this case, right?
A. We do that every piece of evidence we look at, on every case.
Q. That's right, because it's not a blind test, like we talked about earlier, right?
A. That's the way we work. That's the way any Crime Lab works cases.
Q. That's the way you work. And in this case Mr. Fassbender asked you to try to put Teresa Halbach in the defendant's garage or house, right?
A. As I said before, in your request from the investigator, had no bearing whatsoever on my examination or my results.
Q. No bearing whatsoever?
A. That's correct.
Q. And yet, for the first time in your career, you deviate from a protocol to include -- to find one piece of evidence, the only piece of evidence in this entire case that links Teresa Halbach to Mr. Avery's garage or house, you deviated from

the protocol so that you could call her on that one piece of evidence, right?

ATTORNEY GAHN: Your Honor, argumentative.

THE COURT: The objection is sustained.

Q. (By Attorney Buting)~ You contaminated -- Your results showing that you contaminated this bullet, you got the results on April 3rd; is that right?

A. I would have to check. Actually, April 6th.

Q. Okay. April 6th. And you were aware, I believe, because your lab objected to it, that the defense filed a motion to assure fair forensic testing to allow the defense to have a witness there when you do any tests that would result in using up all the evidence?

ATTORNEY GAHN: Objection, your Honor, relevancy.

THE COURT: I'm sustaining the objection, not on relevancy, but on the grounds it's beyond the scope of recross.

Q. (By Attorney Buting)~ Well, in any event, because you used up all of the sample, not only could you not re-extract it, the defense had no opportunity to retest that, did we?

A. You didn't have any opportunity to test the

original item, but my extracts are available for retesting.

Q. Did you retest them?

A. No.

Q. Why not?

A. Because my results from my quantitation show that there was DNA in the manipulation control --

Q. You're telling me --

A. I would have gotten the same thing.

Q. You are telling me that you get a test that requires that you go to so far as to deviate from the protocol when you could have simply retested the same extract?

A. There was nothing different about it. Retesting it would not have changed anything.

Q. Because it was contaminated already.

A. Because the DNA was introduced during the extraction process.

Q. Because it was -- That's right, therefore, the extract was contaminated already; isn't that right?

A. The control was contaminated with the my DNA, not the extract.

Q. So, rather than retest, you went out on a limb and made this request, that you have never made

before in your life, so that you could give Mr. Fassbender what he wanted, some evidence that would link Teresa Halbach to that --

ATTORNEY GAHN: Objection, your Honor, to the form of the question.

THE COURT: Objection is sustained.

Q. (By Attorney Buting)~ You talked about 50,000 samples, I think you brought that up again. The thing about contamination is, once you find a contaminated sample, it doesn't matter what the percentage of other cases that you -- where you have contamination, does it?

A. Yes.

Q. Well, it doesn't matter whether this is one in 50,000, or whether this is the 89th in 50,000, it's a test that you know is contaminated, right?

A. Are you referring to the bullet?

Q. Yeah.

A. Yes, I know it's contaminated with my DNA.

Q. So whether it is a unusual or rare circumstance in the big picture or not, doesn't matter because you have a case where you know there was contamination; it's one of the incidents that need to be reported?

A. Correct.

Q. The 2003 case, just so nobody is confused, the pubic hair that you found comingled with the victim's pubic hairs was not just a man, it was Gregory Allen, right?
A. Correct.
Q. And you knew, from discussions with the police, that Gregory Allen, in fact, was a suspect in that very case, from the very beginning?
A. No, I did not.

ATTORNEY GAHN: Your Honor, this is beyond -- far beyond the scope of our redirect.

THE COURT: Mr. Buting?

ATTORNEY BUTING: It's not beyond the scope, he just brought it up, he talked about it.

THE COURT: He did bring it up, but the question about whether he's a suspect is beyond the scope, so I'm going to sustain the objection on that basis.

Q. (By Attorney Buting)~ In any event, he was in the data bank and it hit on him, right?
A. Correct.
Q. And it excluded Mr. Avery, right?
A. Yes.
Q. Without any kind of deviation from protocols, right?

A. Yes, that's correct.
Q. It was a standard test that proved he was excluded?
A. That's correct.
Q. The bottom line is, in this case, if you had followed the protocol of your own lab, and you would have had to file a report that says any DNA tests on that bullet were inconclusive, right?
A. Without a deviation, which our protocol does allow for, yes.
Q. Ma'am, the question is, if you had followed the protocol and not requested a deviation, your report would have said, the DNA on that bullet was inconclusive?
A. Correct.

ATTORNEY BUTING: That's all your Honor.

THE COURT: Anything else Mr. Gahn?

ATTORNEY GAHN: Just a couple questions, your Honor.

FURTHER REDIRECT EXAMINATION

BY ATTORNEY GAHN:
Q. Ms Culhane, why do scientists allow for deviation in protocols?
A. Because every situation, each case that we work and every situation, is different. And sometimes

there are circumstances that warrant deviating from the stated protocol.

Q. And did this situation with the bullet warrant deviation from the protocol?

A. In my opinion, yes.

Q. And why?

A. Because my DNA was not in the evidence sample, it was only in the control, and it was a source that I could track. It was me. It was introduced when I was handling the tubes. It had no bearing, no scientific bearing on the type of the evidence sample at all. It was no mixture. It was a single source sample that was consistent with Teresa Halbach, and for those reasons I felt it was appropriate.

Q. And did the fact of your profile being in the control in this case have any impact whatsoever on Teresa Halbach's DNA being on the bullet?

ATTORNEY BUTING: Objection, been asked and answered.

THE COURT: Sustained.

ATTORNEY GAHN: I have no further questions.

ATTORNEY BUTING: Just one quick response here.

FURTHER RECROSS-EXAMINATION

BY ATTORNEY BUTING:

Q. So, now we understand that you know how that bullet -- how that control test was contaminated, because it was you handling the tubes; is that your testimony? Didn't you say earlier that you were training and talking and were too close to the bench?

A. That's correct. And I believe that's why it was introduced.

Q. You just said --

A. By handling --

Q. -- a moment ago --

A. -- I meant handling the evidence, and that includes everything I did in reference to that evidence.

Q. And that includes the bullet sample too, right? Handling that, the evidence you are talking about is the sample with the bullet in it -- DNA in it, right?

A. Of course I had to handle it --

Q. Of course.

A. -- to extract it.

Q. Of course. So when you say you know where this came from, you don't know where this came from.

You don't know whether it came because you were spitting too close as you were talking, or whether you were handling it and got it off on your hands; you don't know how that control was contaminated, do you?

A. The fact is, it was my DNA.

Q. Ma'am, you don't know how that control became contaminated, do you?

A. Not 100 percent for sure, no.

Q. Just like many other incidents reported in the log, where it is undetermined how contamination occurred --

ATTORNEY GAHN: Objection, argumentative.

THE COURT: Court is going to sustain the objection. And we're just plowing the same ground here so I'm going to excuse the witness.

ATTORNEY BUTING: I'm done anyway. Thank you, Judge.

THE COURT: Members of the jury, we'll take our afternoon break at this time. Again, I will remind you not to discuss the case during the break.

(Jury not present.)

ATTORNEY BUTING: Judge, I would move the introduction of all the exhibits that we filed.

THE COURT: All right. I think there were

some exhibits produced by both sides; do -- are both parties asking for their exhibits to be admitted?

ATTORNEY GAHN: Yes, your Honor.

THE COURT: All right. Everything that was introduced today, then, is admitted.

ATTORNEY BUTING: With the exception of 343, which I think we just marked.

THE COURT: That's right there was one that was specifically requested not to be admitted. Okay.

(Recess taken.)

THE COURT: At this time the State may call its next witness.

ATTORNEY GAHN: The State will call Nick Stahlke to the stand.

THE COURT: All right.

THE CLERK: Please raise your right hand.

NICK STAHLKE, called as a witness herein, having been first duly sworn, was examined and testified as follows:

THE CLERK: Please be seated. Please state your name and spell your last name for the record.

THE WITNESS: Nick Stahlke, Stahlke is spelled, S-t-a-h-l-k-e.

DIRECT EXAMINATION

BY ATTORNEY GAHN:

Q. Mr. Stahlke, how are you employed?

A. I'm a forensic scientist with the State of Wisconsin Crime Laboratory?

Q. Which Crime Laboratory is this?

A. Madison.

Q. And what is your position there?

A. Currently I'm the forensic science training coordinator.

Q. And could you tell the jurors a little bit about your formal educational background, please.

A. Yes, I have a bachelor's in science degree and medical technology, with a minor in chemistry.

Q. And what are your current duties and responsibilities at the Crime Lab?

A. As a forensic science training coordinator, I'm responsible for a course that the Crime Lab puts on, which is the evidence -- basic evidence technician course. It -- I also then am responsible for coordinating the instructors, the curriculum, and I critique those particulars, those particular trainers.

I also am responsible for the Field Response Training Program within the State of Wisconsin. I make sure that we have an on call

roster to cover the statewide program for -- on a 24 hour basis.

I also examine bloodstains for -- for the interpretation of those stains and I am a team leader with the field response program where we trans -- or we will respond to crime scenes.

Q. As to the bloodstain patterns that you said was one of your duties and responsibilities, have you attended any specialized schools dealing with bloodstain pattern analysis?

A. Yes, it's a requirement that anybody that does any bloodstain pattern analysis has a minimum of 40 years -- 40 hour course. And in 1988, I attended a 40 hour course. I, again, attended a course that was entitled Advance Crime Scene Examination; however, it was also a bloodstain course, or ultimately was a bloodstain course. So, I have attended two 40 hour bloodstain courses.

Q. And what experience do you have in the area of bloodstain pattern analysis?

A. Well, I got my first training -- or 40 hour course in '88, so I have had 19 years of experience looking at stains and interpreting those stains.

Q. Have you given lectures or taught on subjects related to bloodstain pattern interpretation?
A. Yes, I have.
Q. And have you conducted workshops related to that field?
A. Yes, I have.
Q. Could you explain some of those to the jurors?
A. There was a Wisconsin Association of Identification, asked me to present a lecture on that subject and I also had a workshop associated with that lecture. I also gave a -- taught at the North Idaho College, which was a program for incoming or new recruits as far as law enforcement recruits. It was a Criminal Justice Program there in the North Idaho College.

I routinely monitor or -- crime scenes, then, also at the Death Investigation School, which is put on by the Department of Justice's Division of Criminal Investigation.

Q. I believe you stated that you had been involved in the interpretation of blood stain patterns for 19 years; is that correct?
A. Yes.
Q. Have you testified in courts of law in Wisconsin as an expert in interpreting bloodstain patterns?

A. Yes, I have.
Q. And how many times have you done so?
A. About 10 times.
Q. Have you ever been rejected as an expert in bloodstain pattern analysis?
A. No, I have not.
Q. What I would like you to do is, could you just describe to the jurors the different types of determinations that can be made from bloodstain patterns.
A. Bloodstains, when they are present at a scene, basically freezes that scene on that particular moment in time when blood is shed. You can determine the position of the bleeding victim, if the victim is bleeding.

You can possibly determine the movement of that victim. You can determine the possible position of the assailant or the attacker. You might possibly be able to determine movement of the attacker as well.

In some cases, you can determine the type of weapon that was used. If it was a bludgeoning or a beating, you may be able to determine the minimum number of blows that was inflicted to the victim.

Some of the reasons for looking at stains is not only to determine those positions, or those things that I already described, but you might be able to confirm or refute statements given by witnesses, using the analysis of bloodstain patterns. Or you can determine the difference between, and distinguish the difference between, suicide or homicide, possibly.

Q. Are there different types of bloodstain patterns?

A. Yes, there is.

Q. Will you please explain to the jury what they are?

A. Well, basically there's three categories of bloodstains. There are the passive stains. You have the projected stains. And you also have the -- I forget the third category. Passive contact -- oh, excuse me -- contact type transfer stains.

Q. And can you determine by looking at a bloodstain pattern how it was deposited?

A. Yes, you can.

Q. And what specific experiments or tests have you yourself conducted and performed in bloodstain pattern analysis?

A. Well, in the 40 hour course, it's very heavy in practical exercise, because the whole idea of the course is to give you experience in seeing these types of stains. And so the practical experience is, then, you use different types of weapons; you put victims in different positions; and you try all the possible scenarios you can imagine or think of that you might run into or encounter at a crime scene.

Q. And by performing these tests or experiments yourself, how do these help you perform your job?

A. Well, obviously, if you have seen these types of stains before and you know how they were constructed, or how they were manufactured, through practical experience, you can then relate those same experiences to a crime scene itself.

Q. I'm going to show you what has been marked previously as Exhibit 289 and ask if you -- it's a photograph -- recognize that photograph?

A. Yes, I recognize this.

Q. And how do you recognize that?

A. This is the '99 -- blue '99 RAV4 that was in our second bay, or middle bay, in our Crime Laboratory in Madison.

Q. When did you first observe it?

A. Monday, November 7th, 2005.
Q. And what involvement did you have with the examination of this RAV4?
A. I was asked to analyze the bloodstain patterns that may have been present in this vehicle.
Q. What was the first thing you did, when you saw the vehicle and began your processing?
A. Well, the first thing I do is an external -- on a vehicle such as this, I do an external examination of the vehicle. So, I typically will find a point on a car. It may be the front, left corner, or the driver's door and I do a walk around, typically in a counter clockwise pattern, looking for any possible stains that are on -- present on the exterior. And what I look for is anything that appears to be a bloodstain. But if it's the proper color and shape, then I have a presumptive test done to determine that it probably is blood, then.
Q. And did you make any observations during your external view and examination of the RAV4?
A. I did not observe any stains on the exterior.
Q. Then after the exterior examination, what would you do next?
A. Then we move to the interior of the vehicle.

Q. And did you make any observations in the interior of the vehicle?
A. Yes. I typically will start at the driver's compartment. And inside a driver's compartment, I saw what appeared to be three contact stains.
Q. Mr. Stahlke, Mr. Fallon is going to bring you a pile of photographs that have already been marked as exhibits in this case. And if you could keep them in that order and I would ask you to take the first photograph and read off what exhibit number it is, please.
A. Exhibit No. 290.
Q. And is that photograph that you have being shown on the big screen here that the jurors are looking at?
A. Yes, it is.
Q. Could you describe for the jurors what you observed in this photograph?
A. This is an intermediate view of the passenger's compartment. On this particular photograph, you can see a red brown stain on the driver's seat.
Q. Would it be helpful if we were to zoom in on that for you?
A. Sure.
Q. And do you have a laser pointer up there?

A. No, I do not.
Q. We'll have one in a moment. And could you point out to the jurors where you observed this particular stain. Is there anything else that you observed in the -- this compartment of the vehicle?
A. Yes. Well, this particular stain, however, it is a bit of a thick stain, so it's a little thicker than your normal contact transfer stain. There were two other areas in this passenger compartment that I saw stains.
Q. Before we go to those, could you describe the type of stain this is?
A. This is -- I would call this a contact transfer type stain; however, it was thicker than your average transfer stain. So I'm kind of bordering on that being a passive drop, which is a drop that falls to that surface. And it's thicker because it's -- it's -- it has fallen there, as opposed to a bloody surface contacting that particular unstained surface.
Q. Is this what you call an individual stain, did you say?
A. It can be, yes.
Q. And could you explain, just amplify a bit more

for the jurors what you mean by contact transfer stain?

A. A contact transfer stain is the transfer of blood from a bloody object, or bloody item, or blood source, onto an unstained surface.

Q. Would you look at the next exhibit that we have and just read the exhibit number and describe what that is for the jurors.

A. Exhibit 292, this is the -- yes, there's a -- this is the passenger's front seat or the front seat on the passenger side of the vehicle. And in this seat, or on this seat is a water bottle, a cassette -- or excuse me -- a CD holder, hard plastic, and I believe that's a perfume bottle, I can't tell you for sure.

Q. Did you observe any bloodstain patterns in this area of the RAV4?

A. Yes, I did.

Q. And could you describe them for the jurors and where they are?

A. The CD box or container would have had bloodstains on the surface of it.

Q. Would it be helpful for you if we were to zoom in on this for you to identify it?

A. Sure.

Q. Can you use your laser pointer to point out the area that you observed these bloodstains.
A. Well, you can see some here, but there were stains throughout, basically covering 50 percent of the surface of this CD box, but you can see this is the most obvious stain on this photo.
Q. Was there anywhere else that you observed bloodstain patterns?
A. In the vehicle, yes.
Q. No, in this photograph. Let's zoom back out now, please.
A. There was another stain on the front, left portion of that seat cushion.
Q. And can you point out where that was located?
A. Yes.
Q. And we could zoom up to that area?
A. If you can, it's right in this area here.
Q. You may not --
A. More to the right, yeah, right there.
Q. And could you describe for the jurors what type of stain that was that you observed?
A. Contact transfer.
Q. Again, what do you mean by a contact transfer stain?
A. Again, a bloody source, a bloody item, a bloody

object coming in contact with an unstained surface.

Q. I would like you to look at the next exhibit and identify it and describe it for the jurors.

A. This is Exhibit 291.

Q. And did you observe any -- Sorry, let me back up here. Is the photograph on the large screen a photograph that you have in your hand?

A. Yes, it is.

Q. Could you describe -- point out, on the large screen, the bloodstain pattern that you observed here?

A. Right here.

Q. And would you describe that for the jurors and tell what type of stain that is.

A. And this is a contact transfer stain; again, a bloody object, or item, coming in contact with an unstained surface.

Q. We'll zoom in on this so the jurors can get a good look at that. And, again -- Once again, what do you mean by a bloody contact transfer?

A. It would be an object that has blood on it, that transferred that blood from that surface onto a non-stained or unstained surface.

Q. I would like you to look at the next photograph

and identify the exhibit number?
A. Exhibit 193.
Q. And I would like you to tell the jurors whether this -- the photograph you have in your hand is being shown on the big screen?
A. Yes, it is.
Q. And this -- I would like to ask you whether you have an opinion, to a reasonable degree of scientific certainty, whether this cut to the hand is consistent with being the bloody object that came in contact with the dashboard, by the ignition switch of the RAV4?
ATTORNEY STRANG: Objection, foundation, personal knowledge, and entirely speculative. He has no idea on the timing of this.
THE COURT: I'm going to sustain the objection. I think at this point the witness has testified about expertise in blood transfer, but I don't think anything has been established about this photo.
Q. (By Attorney Gahn)~ Could the bloodstain that you observed on the dashboard of Teresa Halbach's RAV4, have come from a cut to a finger?
A. Yes.
ATTORNEY STRANG: Objection, this is beyond

the scope of the disclosure under 971.03 as well, your Honor.

THE COURT: I'm going to have to ask you to elaborate on that, Mr. Strang.

ATTORNEY STRANG: This is -- the opinion he is being asked to express is not one included in the report or otherwise disclosed pursuant to discovery request.

ATTORNEY GAHN: Your Honor, I believe that the witness has testified what a contact transfer bloodstain pattern is, that being a bloody source coming into contact with a surface that doesn't have blood on it. I'm simply asking if a cut such as this is consistent with being the bloody source coming in contact with the dashboard.

ATTORNEY STRANG: Well, your Honor, I mean, to the extent that if someone is bleeding they can drop blood or brush it, we don't need an expert to tell the jury that; that's entirely within the canon of ordinary experience and nothing from an expert is helpful on that point.

THE COURT: I guess I would like to hear a few more questions about his experience in this area. So far we have heard something about three kinds of blood transfers, but that's about when you

observe a transfer on another surface. But I think that's all I heard.

Q. (By Attorney Gahn)~ Mr. Stahlke, could you explain, what is your experience with examining contact transfer bloodstains.

A. Contact transfer bloodstains is a -- it can be a transfer of a pattern. You can see in some stains the outline of a particular -- of the particular item that is bloody contacting a -- the unstained surface. And in some cases, you can see the pattern or detail from the bloodied item that has been transferred, then, onto an unstained surface.

Q. And have you been to crime scenes and examined contact transfer stains?

A. Yes, I have.

Q. Do you know how many you have been to?

A. Well, I have been to approximately 200 field responses. Of those, then, over 100 crime scenes. And in every scene that has blood present, I examine the stains to determine whether or not there would be any additional information that would be gained from those stains that would be helpful in this investigation.

Q. Do you also examine photographs of bloodstains?
A. Yes.
Q. And do those help, are you able to interpret bloodstain patterns from the photographs?
A. Yes. Many times we're asked by agencies that have processed their own scenes and taken their photographs and then realized that maybe they could gain some knowledge or some valuable information from those stains. And this would be after the fact and we have been often asked to look at photographs to analyze this bloodstain.
Q. And will those photographs include contact transfer stains?
A. Yes, they do.

ATTORNEY STRANG: Your Honor, this may be a good time to take up a subject out of the jury's presence.

THE COURT: All right. The Court is going to excuse the jury for a few minutes.

(Jury not present.)

THE COURT: Are you asking for the witness to be excused? You can step outside. Mr. Strang.

ATTORNEY STRANG: Your Honor, I will tender the Court a copy of the report that we received from Mr. Stahlke and a copy of his resume as well. It's

a two page report. Nothing in that report suggests that the State intended to elicit from this proposed expert an opinion tying any particular injury to the blood patterns that he's testifying he observed.

I don't know how he possibly could do that either without knowing personally, A, when this photograph was taken and, B, the likelihood that it was actively bleeding at any relevant time, which I think is probably well beyond his expertise. So, this goes beyond disclosure that the State has provided and gets into something both of which we don't have notice and of which his own expertise or even personal knowledge is questionable.

And, finally, the point is simply that, you could get a cut and may drop -- you may be dripping blood, or you may leave a bloodstain if you brush your cut against something. Again, that's -- that's not a subject requiring expert testimony at all.

THE COURT: Mr. Gahn.

ATTORNEY GAHN: Well, your Honor, I think the report speaks for itself. If you look under observations on page one of Mr. Stahlke's report. States that on the second -- beginning with the

second sentence, contact transfer stains were present on the driver's seat cushion, the passenger seat cushion, and on the dashboard near the ignition switch.

ATTORNEY STRANG: And that's fine, nobody questions his ability to describe what a contact transfer stain or, you know, a passive stain, or swipe, or any other type of pattern looks like. The issue is tying it to any particular source.

ATTORNEY GAHN: If I may finish, the next sentence states that these stains are the result of a bloody source coming into direct contact with those surfaces. That's what I asked him in his opinion. Is this cut consistent with the bloody source coming in contact with it. That's all I asked.

ATTORNEY STRANG: Not when that photo taken it's not.

THE COURT: Yeah, I think the -- reading the report, the conclusion is that the bloodstains, or at least a couple of them, were consistent with an individual who was actively bleeding. I haven't heard the answer yet, from the witness, so I wasn't sure where you were going. But if the witness was going to say that the particular pattern of the

stain near the ignition matched this particular cut, it appears to me that would be going beyond what I see here in the report.

If you want to ask the witness if whoever this is, if this person had been sitting in the vehicle and had that cut at a time when it was actively bleeding, could that have caused the bloodstains, I think that's something that's within his expertise, that is contained -- or that is within the conclusions that he drew in the report. But I think that's about as far as he can go.

ATTORNEY GAHN: We did not intend to go any further, your Honor.

THE COURT: And, Mr. Strang, I don't know if you object to that, or if that's inconsistent with what you are saying or not.

ATTORNEY STRANG: No, if he is trying to link the blood patterns he saw, to this photograph, we don't have notice of that and he is not qualified to do it. Neither does he have the foundation, since that doesn't appear to be something that's bleeding. And, you know, he has no idea when the photo was taken or when the cut may have been actively bleeding, none that I know of. And that

would have been the purpose of notice.

THE COURT: What exactly are you proposing to ask him, Mr. Gahn?

ATTORNEY GAHN: Just when I asked him the questions, whether he has an opinion, to a reasonable degree of scientific certainty whether this cut is consistent with being the bloody object that came in contact with the dashboard by the ignition switch. And I can add, if it were actively bleeding, if this cut were actively bleeding, could this be the source, the bloody source, coming in contact with the dashboard.

THE COURT: Mr. Strang.

ATTORNEY STRANG: Again, there's just nothing in the report that suggests that this witness was going to try to link a stain to any possible injury on Steven Avery or anyone else. And I -- Again, I don't know how he would possibly do that, other than a hypothetical, if it were actively bleeding. Sure, but he doesn't know. Beyond -- I can't -- What hand is this, this looks to me like a left hand. Is that what that is?

ATTORNEY GAHN: Sergeant Bill Tyson testified that this was the right hand of Steven Avery.

ATTORNEY STRANG: Where's the thumb. Maybe if it's being held like this, I suppose if the cuts on the outside of the right finger. Sure looks like a left hand from here. The point is, your Honor, we don't have any foundation for any of this, from this witness let alone notice.

THE COURT: All right. As I think about it, I think I agree with the defense on this one. He can testify -- he's already testified that it came from a cut that was actively bleeding, the jury has already seen this photo. They can determine if it looks like a cut that was at one time actively bleeding.

I just don't think for the witness' level of expertise there is really much he can add to that so I'm going to sustain the defense's objection. Anything else before we bring the jury back in? If not, if someone can bring the witness back in, we'll bring in the jurors.

THE COURT: Mr. Gahn, before they come in, any idea how long your direct is likely to go? Are you hoping to finish it today?

ATTORNEY GAHN: Yes. We would also like to -- hopefully we can finish the cross today too because Mr. Stahlke has a appointment tomorrow

morning.

ATTORNEY STRANG: I don't know -- I don't know where this is --

THE COURT: Well, we'll wait and see.

ATTORNEY STRANG: -- this is going, so.

(Jury present.)

THE COURT: You may be seated. And Mr. Gahn you may continue.

DIRECT EXAMINATION CONTD

BY ATTORNEY GAHN:

Q. Mr. Stahlke, this pattern that you observed on the dashboard of Teresa Halbach's RAV4, is this pattern consistent with someone who could be actively bleeding on their right hand?

A. Yes, it's consistent with that.

Q. I would ask if you could pick up the next exhibit, please, and identify it for the jurors?

A. Exhibit 294.

Q. And what does that show, please?

A. This is the passenger side, rear entry, or the threshold of the door frame.

Q. And does the photograph on the big screen accurately reflect that photograph?

A. Yes, it does.

Q. And did you observe any bloodstain patterns to

this area?
A. Yes, I did.
Q. Would it be helpful if we zoom in?
A. Sure.
Q. Could you describe for the jurors what type of bloodstain this is?
A. This is a stain that is indicative of passive bleeding; it's a passive drop.
Q. And what do you mean by passive drop?
A. Passive drop is a particle of blood, or a drop of blood that is only influenced by the gravity, or the force of gravity.
Q. And is this type of drop consistent with being left by a person who is actively bleeding?
A. Yes, it is.
Q. I'm going to ask you to look at the next exhibit, identify the exhibit number.
A. Exhibit 295.
Q. And does the photo on the big screen reflect that exhibit?
A. Yes, it does.
Q. Describe for the jurors what you observed here?
A. This is the rear cargo area of the Toyota RAV4. This would be a view looking through the back entry door and looking at the passenger side just

behind the right rear seat. In this area, there are numerous stains and they all are basically described as contact transfer stains.

Q. Would you look at the next exhibit, please, identify it.

A. Exhibit 296?

Q. Yes.

A. This view is a close up view depicting the same stains that we saw on the previous exhibit, Exhibit 295.

Q. And describe these stains that you observed to this portion of the vehicle.

A. These are contact transfer stains, a bloody object coming in contact with an unstained surface. And there is a stain in this grouping of stains that is a classic stain for as far as a transfer contact stain.

Q. Would you describe that for the jurors.

A. This stain right here has a wave like appearance to it. It is indicative of bloody hair transferring the blood from those -- from that head here onto this surface.

Q. And how can you tell that?

A. Well, it has this crescent shaped or wavy appearance to it. And this is just a classic

example of bloody hair transferring onto an unstained surface. It is -- has enough blood there that it also shows a bit of a flow pattern off of the bottom of that. But you can see that it is thicker here and it -- as it -- the length draws out, it comes to a point. This is -- is indicative of blood hair -- bloody hair transfer.

Q. Would you look at the next exhibit, please?

A. Exhibit 297.

Q. And does this photograph show what you're -- the exhibit that you have in your hand?

A. Yes, it is.

Q. And, again, did you observe any other bloodstain patterns?

A. Yes, I did.

Q. Would you please describe those for the jurors.

A. These stains here, as well, are all contact transfer variety of stains. And along the base of this is a flow patterns which is indicative of a passive stain -- or type of a passive stain, whereas gravity is the only thing that is influencing it.

So there's enough blood that has contacted this surface that it will drain on its own, with the gravity, only gravity influencing

that stain. Along the base of this is pretty heavily stained and it appears that it's all contact transfer.

Q. Based upon the combination of these stains, that you observed in the rear cargo area, are they consistent with a body with bloody hair being present?

A. Yes, they are.

Q. Did you examine the threshold area of the RAV4?

A. Yes, I did.

Q. And when I ask you to pick up the next exhibit, next photograph, identify the exhibit, please.

A. Exhibit 298.

Q. And is that the exhibit that is being shown on the big screen?

A. Yes, it is.

Q. Would you describe for the jurors your observations of the threshold area of the RAV4?

ATTORNEY STRANG: Maybe we can -- Where are we? What threshold area? I wonder if we can orient it.

A. I can explain that. It's the cargo door, or the rear door of the RAV4. So, if this is the cargo area at the top of the -- this photograph, this would be the opening to the rear -- rear end of

this vehicle. And this being the threshold, and I will use this as the general term, as far as the threshold, but this -- this threshold had not only transfer contact stains, but it also had impact stains.

Q. Could you point out for the jurors the -- we can even zoom in here for you -- where you observed the different stains and describe them again, please.

A. This is an example of an impact stain. There's -- this is transfer. If you want to rotate more to the right. More staining right in here that would be indicative of a transfer. And then right -- as -- right there, more contact transfer. And these stains actually are -- this stain right here can be caused by -- as a swipe pattern, which is a bloody object that has come in contact with an unstained surface that is showing motion. So a swipe will show motion of that bloody source.

Q. Just for the record, Mr. Stahlke, I would like you to identify each of these stains. Could you point out the impact stain that you observed?

A. The most obvious impact stain would be this stain right here. Impact stains are generally circular

or elliptical. They show that a particle of blood or a drop of blood that has been in flight, has been airborne, and when it contacts a surface or impacts that surface, it leaves a stain that's either circular or elliptical indicating the angle of impact. This is a transfer stain.

Q. Just stop for one moment. May the record reflect that when Mr. Stahlke pointed to the impact stain, it was a bloodstain that was at the top of what he referred to as the threshold area and to the left of what appears to be a screw or a bolt in that threshold area.

THE COURT: Does the defense agree?

ATTORNEY STRANG: Sure. But, you know, really all of this is for the jury.

THE COURT: All right. All right. The record will so reflect.

A. Additional stains are present are contact transfer variety. Here to the left of that bolt and to the right of the bolt here.

Q. And I think you also indicated that you observed what were swipe patterns?

A. Yes. And that's down and to the right, in relationship to that bolt.

Q. Thank you. Did you also -- Would you look at the

next exhibit, identify it, please.
A. Exhibit 299.
Q. And does the photograph you have in your hand, that exhibit, is that being displayed on the big screen?
A. Yes, it is.
Q. And did you observe any bloodstain patterns to -- I'm sorry, please, describe what this photograph shows.
A. This is the rear door of the RAV4. And when -- This is the type of door that has a hinge on its side so it opens like a regular car door, but on the rear end of the vehicle. This is the interior panel of that door.
Q. And did you observe any bloodstain patterns on the interior panel of the rear cargo area?
A. Yes, I did.
Q. And could you explain those for the jurors and we would be more than happy to zoom in on any stains you would like.
A. There were a number of impact stains on the rear panel of this door and some of the stains had associated flow patterns.
Q. Could you use the laser pointer and point these out for the jurors and describe them.

A. If you want to zoom in right here. This is some of the better stains as far as groupings. Okay. That's good. You can see here, these are impact stains; they are circular or near circular. And, then, some of these stains have a flow pattern, meaning they had enough quantity or volume that once they impacted the surface, gravity influenced them and drew that blood down -- down toward the ground. So this is an example of a impact stain with an associated flow pattern and this one as well and these are all impact stains.

Q. Were there any other type of stains on the door area that you observed?

A. No.

Q. And are you able -- Were you able to determine how those would be deposited, the ones that you observed, the impact stains with the flow pattern?

A. Yes, I have seen these stains at other scenes where -- where we assume that a bloody object was being handled and that these stains -- or this blood was -- was -- appeared to have been flung off or released from a bloody object.

Q. Would that be consistent with a body with bloody hair being put into the back of this vehicle?

A. Yes, it would. And in this particular case, this -- these stains don't necessarily require the -- the bloody hair component; however, it is consistent with a bloody object such as a body being comploded (phonetic) into the rear end of this vehicle.
Q. If you would look at your next exhibit, please, and identify that.
A. Exhibit 300.
Q. And is the photograph on the big screen, is that the same one you have with you?
A. Yes, it is.
Q. Could you describe what this is?
A. This is an overall view of the rear cargo area or storage area of this RAV4.
Q. Did you make any measurements to this rear cargo area?
A. Yes, I did.
Q. What area did you measure and could you give those dimensions to the jury.
A. I measured from door frame to door frame. And it was 42 inches.
Q. And would a five-foot-six slender woman fit in the back in the cargo area?
A. Yes, it would.

Q. Did you do any other examination or processing of this vehicle, besides the bloodstains?
A. We were asked to give the odometer reading on the vehicle.
Q. And what did you do to obtain the odometer reading?
A. Well, looking at the instrument panel, we couldn't determine what the odometer reading was, since there appeared to have been a dead battery.
Q. And what -- Did you check any further as to whether there was a dead battery?
A. Yes. We thought we needed to charge the battery so we opened up the hood of the vehicle and discovered that the battery cables had been disconnected.
Q. Would you look at the next exhibit that you have, identify it, please.
A. Exhibit 302.
Q. And what does that exhibit show?
A. This is the disconnected battery cable.
Q. Is that how you observed it when you opened up the hood?
A. Yes, it is.
Q. It was you who opened up the hood, correct?
A. That's correct.

Q. How did you do that?
A. Released the interior latch on the vehicle and then opened up the hood, releasing the latch on the hood, or the front of the vehicle. And propped it open with its -- its a -- with a prop, I guess, on the hood itself and saw this battery.
Q. And what did you determine by looking at the battery?
A. Well, that -- that was the reason for the problem with no power to the instrument panel, is that the battery was disconnected.
Q. And when you opened up the hood of the RAV4, were you wearing gloves?
A. Yes.
Q. What type of gloves were you wearing?
A. Latex.
Q. I would like you to look at the next exhibit, please, identify it.
A. Exhibit 303.
Q. And is this the exhibit that you have in your hand, being shown on the big screen?
A. Yes, it is.
Q. And has this been identified to you as the vehicle owned by Steven Avery, a 1993 Grand Am?
A. Yes.

Q. Did you process this vehicle for any blood stain pattern analysis?
A. Yes, I did.
Q. And did you find any bloodstains in it?
A. Yes, I did.
Q. Will you look at the next exhibit, please, identify it.
A. Exhibit 305.
Q. And is Exhibit 305 reflected on the big screen?
A. Yes, it is.
Q. And could you point out for the jurors any bloodstain patterns that you observed in this vehicle?
A. This seems to be zoomed in a bit, can we zoom out. Yes, there's stains present in this particular photograph. There's some stains on the backside of this gear shift here. And two circular stains, one here and one here. Now, off this photo, that you can't see, are additional stains, right along here, on the passenger side of the center console.
Q. Do the blood stain patterns that you observed in this 1993 Grand Am, are they consistent with the operation of this Grand Am by a person who was actively bleeding?

A. Yes, they are.
Q. And the bloodstain patterns that you observed in Teresa Halbach's RAV4, are those consistent with the operation of the RAV4 by a person who is actively bleeding?
A. Yes, they are.
ATTORNEY GAHN: That's all I have. Thank you, Judge.
THE COURT: All right. Members of the jury, it's almost 4:30, since I'm sure you got up a little early this morning, it's a good enough reason to let you go a little early today. I will remind you not to discuss this matter among yourselves or with anyone else and we'll see you tomorrow morning.
(Jury not present.)
THE COURT: You may be seated. Counsel, I will ask you to see me in chambers a little after 8:30 again tomorrow morning to let me know what we will be doing.
ATTORNEY FALLON: Yes, Judge, could we put another matter on the record at this time.
THE COURT: Sure.
ATTORNEY FALLON: In light of this afternoon, or should I say this morning's developments, the State would like to renew a motion

previously made and ruled upon by the Court. And that is, again, we would renew our ***Richardson*** motion for disclosure and evidence, if there is to be any more frame-up allegations, or should we say wild speculation, that we at least be given notice and a new offer of proof with respect to that type of evidence.

This morning's example, the buccal swabs or buccal swabs, is a perfect example of evidence not covered by the original offer of proof and the Court had already noted that any such evidence should be the subject of at least pre-trial notice. Obviously, that's not possible since we're in trial at the moment. But the existence of those swabs and those conditions was well known to the defense and disclosed.

So if there was to be any more ***Richardson*** evidence, then we would demand a notice, and an offer of proof, and a ruling outside the presence of the jury, before it is presented to the jury. We have that ruling from the Court. It did not include the buccal swabs, it included only the blood vial. We will be certainly hearing more about that in the next couple of days.

But any other evidence, we renew our motion to exclude and prohibit that evidence. As this morning's example demonstrated, there was no basis and no reason to present that evidence today. It's entirely irrelevant. Conjecture, speculation, and wild accusation, that's all it was. We object.

THE COURT: Mr. Buting.

ATTORNEY BUTING: Judge, then the State has to give advance notice of any of their theories and any type of evidence that their expert will testify ahead of time. And in this instance they elicited an opinion from an expert, that was not in the report, in which she was saying -- they had her try to say that this DNA on the key, for instance, was -- she didn't like my use of the word trace, I can't remember what word she used -- but they tried to raise an issue that somehow it could not have come from a blood source.

So they brought into the trial a completely different issue. We were simply responding to that, and that's going to happen, if they bring in, you know, additional opinions like this one. You know, this is not irrelevant the jury can draw from it what they want, but it

was a relatively minor point, given the length of the whole cross-examination, so I don't see that it's worth arguing too much about.

I don't know that there's going to be anything else at this point, that I'm aware of, but if some other witness comes up here and presents some kind of testimony that may require it, then I think it's fair game.

THE COURT: All right. Mr. Fallon, I'm not going to hear from you, because you are going to win this one. I know from conferences in chambers before that the State had already made the point when the blood vial thing came up first, that the key, and I believe the hood latch, were alleged to involve DNA that did not consist of blood.

I let the defense evidence in today about the buccal swabs, but I agree with the State that although -- although I would have determined it was relevant had we had a ***Richardson*** hearing about it, that if there is any other ***Richardson*** type evidence that the defense intends to introduce, I'm going to require from this point forward that the State get advance notice of it. And that if the State objects, the Court has a chance to evaluate it for whether or

not it is admissible as frame-up evidence.

I think that the defense had notice ahead of time that the State was claiming that there was some DNA evidence which the State could not say didn't come from blood, as we heard from the expert witness today, but didn't appear to be. I assume that was the reason why the defense sought to introduce the buccal swab evidence, which I did let in.

But I think the State's point is well taken, they are entitled to notice if there's any other evidence like that that the defense will be seeking to introduce. Anything else before we adjourn today?

ATTORNEY KRATZ: You wanted us in chambers, Judge, is that what you said?

THE COURT: Before trial tomorrow morning.

ATTORNEY KRATZ: Oh, I'm sorry. That's fine. Thank you.

THE COURT: All right. We'll see you tomorrow morning.

(Proceedings concluded.)

STATE OF WISCONSIN)
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COUNTY OF MANITOWOC)

I, Diane Tesheneck, Official Court Reporter for Circuit Court Branch 1 and the State of Wisconsin, do hereby certify that I reported the foregoing matter and that the foregoing transcript has been carefully prepared by me with my computerized stenographic notes as taken by me in machine shorthand, and by computer-assisted transcription thereafter transcribed, and that it is a true and correct transcript of the proceedings had in said matter to the best of my knowledge and ability.

Dated this 21st day of November, 2007.

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Diane Tesheneck, RPR
Official Court Reporter