STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY BRANCH 1

STATE OF WISCONSIN,
PLAINTIFF, JURY TRIAL TRIAL - DAY 10
vs. Case No. 05 CF 381

STEVEN A. AVERY,
DEFENDANT.

DATE: FEBRUARY 23, 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
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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

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THE COURT: At this time the Court calls State of Wisconsin vs. Steven Avery, Case No. 05 CF 381. We are here this morning, outside the presence of the jury, for the 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 Calumet County District Attorney Ken Kratz, Assistant Attorney General Tom Fallon, Assistant D.A. Norm Gahn, appearing as Special Prosecutors.

ATTORNEY STRANG: Good morning. Steven Avery is here in person, and Jerome Buting immediately to his right, and Dean Strang.

THE COURT: All right. I met with counsel in chambers this morning before beginning. There are a few matters to take up before we bring in the jury. First of all, during yesterday afternoon's proceedings, in which the Court conducted individual voir dire of a juror, there was a side bar conference during the questioning of the juror and nothing has been put on the record yet about that conference.

The Court had previously met with the parties in chambers and the parties asked, before
the Court excused the juror, for a chance for a side bar conference in order to request that additional questions be posed to the juror. That conference did, in fact, take place and each of the parties requested that the Court ask some additional open-ended follow-up questions, which I did. Counsel, is that an accurate representation of the side bar conference? Mr. Kratz?

ATTORNEY KRATZ: Yes.
THE COURT: Mr. Strang?
ATTORNEY STRANG: Yes, it is.
THE COURT: I also noted, in announcing the Court's decision denying the defense motion to strike the juror, I did not recall, as I went home last evening, whether I expressed the Court's opinion specifically under the criteria of subjective bias and objective bias, as Court's are now required to do. So I wanted to add some points of clarification to the Court's decision.

On the question of subjective bias, the Court, first, was satisfied that all of the answers given by the juror during the individual voir dire were credible. The juror indicated that she did not recognize Detective Remiker by
name; in fact, his name was listed on the original jury questionnaire that all of the jurors completed. She did not indicate on that questionnaire that she recognized Detective Remiker by his name. She only realized, when she saw him testify that, in fact, he had been the plaintiff in a civil trial in which she sat as a juror approximately seven years ago. She could not recall whether or not he testified in that trial, which the Court does not find to be that unusual, given the passage of time.

And what that indicates to the Court is that she could not -- or she did not have a recollection as to whether or not she made any judgments of his credibility because she could not even remember if he testified.

The negligence of Detective Remiker was not an issue in that case; apparently it was a rear end collision case involving a couple of other vehicles. So the juror was not required, as part of her duties, to assess negligence that would have involved Detective Remiker. The sole issue with respect to Detective Remiker would have been damages.

There was nothing presented to the Court
to suggest that the case involved any unusually emotional issues; that is, there does not appear to be any traumatic injuries involved. The juror's most vivid memory of the trial was that it involved an injury to the lower left lumbar region. She seemed to remember that more than a lot of other details.

And, in conclusion, the juror said nothing about the case would cause her to give Detective Remiker's testimony any more or less weight in this case. She expressed no doubts about that fact and the Court finds her explanation to be credible and reasonable.

On the issue of objective bias, the law is that the focus of the inquiry into objective bias is not upon the individual prospective jurors, or in this case, the individual juror's state of mind, but rather upon whether a reasonable person, in the individual juror's position, could be impartial. That is, even if the juror says she can be impartial, there can be situations in which a reasonable person would have trouble doing that, and the court system does not ask it.

In this case, the Court is satisfied
that there's nothing about the facts that have been presented to the Court to suggest that a reasonable person could not be objectively biased. There's been a significant passage of time since the last trial. As the Court has already indicated, the juror knew Detective Remiker only as a party in the case, not in any other capacity.

And the passage of time had been such that she did not even remember his name when filling out the questionnaire. She has no recollection as to whether or not he testified, and that tells the Court that while he may or may not have testified in the case, there's no indications that any recollection of his credibility is present in her mind.

As I indicated earlier, his negligence was not an issue in the case and the injuries were not particularly traumatic or emotional, such that a juror in this juror's position could not be expected to be able to put aside any opinions from the case. For those reasons, the Court is satisfied that the juror should be permitted to stay on the jury.

There's one last item for the Court to
take up before we proceed to hear from the parties, and that is, $I$ have informed the attorneys earlier this morning that the Court was notified earlier this morning that a close family member of one of the jurors apparently died overnight. The family member resides in another state and the juror has requested permission to leave the State to attend the funeral.

The Court finds that that is a very reasonable request. I'm not going to give the name of the juror on the record, because I don't even know if all the immediate family members have yet been notified. But given the fact that travel is required to a state in a far part of the country, the juror could not reasonably be expected to come back with even a one day absence for postponing the trial and the Court has decided that it's necessary that the juror be excused. Counsel, does either party disagree with that determination?

ATTORNEY KRATZ: Not by the State, Judge. THE COURT: Mr. Strang. ATTORNEY STRANG: No, we agree that the juror with the family tragedy ought to be excused and we continue to believe that the juror who served
on Detective Remiker's jury also should be excused for the reasons we explained yesterday.

THE COURT: And your objection is duly noted for the record.

Before we bring in the jury, then, the Court has also been informed that I believe the defense has a matter it wishes to take up before we bring the jurors in.

ATTORNEY STRANG: We do. Thank you, your Honor. I renew at this time the earlier motions to suppress that Mr. Avery pursued with respect to execution of the search warrants as -- in so far as they affected his privacy interests.

And I'm particularly concerned here this morning with his own trailer, his residence, the detached garage that consistently has been identified in this trial as Steven Avery's garage, and the area behind it described as the burn area, as well as the burn barrel in the front, again, consistently described in this trial as associated with Steven Avery's house. All of these areas were what -- or within what Mr. Kratz rightly described yesterday, in passing, as the curtilage of Steven Avery's residence.

And I renew the motion on both Fourth Amendment grounds under the United States Constitution and on State Constitutional grounds, reliance specifically on Article 1, Section 11, of the Wisconsin Constitution. Because the evidence adduced to date in the trial casts a new light, or adds some additional relevant fact -relevant facts on the reasonableness of the searches between November 5 and November 12 th, 2005.

The protective sweeps, or the initial two entries, very brief entries on November 5, are not at issue. We aren't challenging those, neither have we ever challenged the consent search on November 4 and, again, don't challenge that today.

But the search of Mr. Avery's private areas beginning at about 7:30 p.m. on Saturday, November 5, 2005, and then every search after that time appear unreasonable, not just for the reasons we explored at length this summer in the evidentiary hearings, but for additional reasons developed here at trial.

The State's witnesses, first, have described the searches of the house trailer and
the garage, in specific, as starting with sort of general searches -- I'm making no effort to repeat verbatim any particular witness' testimony, but I'm synthesizing the testimony as I have heard it. Sort of general or quicker, less thorough searches, initially, and then proceeding a matter of days later to what's been described here repeatedly has a thorough search.

Typically, I think the witnesses have ascribed the thorough search of the house trailer and the garage to November 8, although, there may be some disagreement among the witnesses on whether November 6 or November 7, November 8, or November 9 are the thorough search of the house trailer and the garage.

Now that's, of course, in some conflict with the testimony that the Court took in July and August, 2006, where searchers testified that, with each search they seized all of the relevant items and searched the entire area to be searched.

But, you know, moving past the inconsistency, if we accept on its face the testimony adduced here in trial, we have an approach to searching a citizen's most private
places, his home, his garage, his yard, within the curtilage, and excluding him for many days from his home. We have an approach that suggests that somehow the Fourth Amendment and the correlative provision of the Wisconsin Constitution allow sort of warm up searches, calisthenics, dry runs.

And I -- You know, we're at the right time of the year for Cactus League exhibition games, if this were baseball, but it's not. It's searching and seizing people's private effects and people's private places. And I know of no theory of reasonableness of a search under either the Federal or State Constitutional provisions that allows for this sort of warm-up exercise, or moving from the general to the thorough with repeated entries over a span of days.

This gets to sound, as a matter of fact, if we just look at the reasonableness requirement, just the touchstone, as I understand it, of the Fourth Amendment, this gets to sound and awful lot like the Writs of Assistance of the 18th Century, that caused people living over here in the New World to resent and ultimately rise up against the British Monarch and his agents in
what was then the American Colonies. Sort of a roving, we'll get around to it when we're good and ready or when we feel like it, approach to rummaging through someone's private places and private effects.

I don't think it's reasonable. And the record here, at great length, has laid out why. So, in addition to the reasons we argued earlier, this is a first further reason on which I ask the Court to suppress everything taken from Mr. Avery's house, his garage, the burn area or the burn barrel, beginning at about 7:30 p.m. on Saturday November 5, 2005. And suppressing as well the visual impressions of searching agents in those places, testimony about that, and evidence derived from observations, or from items seized, during the searches I have described.

Second, we have further testimony that I think sheds light on the motion earlier heard and communicated under Franks against Delaware. It is now clear, from a fuller record at this trial, that search warrants were obtained from Judge Fox at about 3:10 in the afternoon on November 5, 2005. And maybe I shouldn't be using plural, at least a search warrant relevant to here.

With the application, saying that the affiant believed there was probable cause to believe that evidence of several crimes would be found, murder, sexual assault, I think false imprisonment was on the list, I think theft was on the list. There may have been a fifth crime, I don't know.

But what I do know is that the evidence we have heard here is that the State's witnesses, at least, insist that nobody knew of any blood in the Toyota, nobody had opened the Toyota, nobody had found anything more than the Toyota concealed under trees and branches and rubbish, old car parts.

And that's where the factual knowledge related to Ms Halbach's disappearance or fate stood at the time the State applied for that search warrant and Judge Fox issued it on November 5, 2005; at least the factual basis as it relates to the places on the Avery property as to which Mr. Avery really has a privacy interest.

So I think the fuller record here adds to the record the Court has before it on the Franks issue, and that's the second additional basis for the motion to suppress that I'm now
renewing. I have described before the relief that we seek here, just a few moments ago, and it's the same specific items, impressions, and derivative evidence that $I$ wish suppressed on that second basis.

Third, and finally, there's newly adduced evidence that bears on the search of the burn area. Here, let me concede, parenthetically, that we have not heard all of the testimony yet about the search of the burn area and seizure of items in that area. I think as to the other searches that I have discussed here this morning, I think we have heard all, or almost all, of the testimony that the State will present bearing on Fourth Amendment or search and seizure issues.

But we heard enough about the dog and the burn area to say this, the reason given for not searching the burn area, pursuant to this search warrant, earlier than November 8, which I think is when the evidence will show, or has shown, that a search of the burn area finally began, is that there was a dog, on a chain, and that the dog -- the dog's chain allowed it to roam the entire burn area and to -- presumably to
scare off searchers.
Now, the record is replete with evidence about how successful a whole group of law enforcement agencies were in excluding the public from the metes and bounds of this roughly 40 acre parcel for about a week, a week or eight days. We have security people at the four corners. We have got a, you know, a command -- two command stations. We have got a check in point out at Avery Road and Highway 147.

We have complete law enforcement control over this property, on this record, for that time. We have people on the property who are trained to handle dogs. And it's not reasonable, as a matter of searching and seizing, with that kind of law enforcement control of the property, to say that one dog kept us from searching an area covered by the warrant.

Presumably the dog was fed during the three days that passed, under law enforcement control, before the burn area was searched. Presumably the dog was given water during that time. And indeed, even if none of the people there were capable of handling one dog and getting the dog out of the area, we have got
testimony here that a family member, namely Bobby Dassey, who lived on the property, from which the public and all family members were excluded, was able to retrieve his dog, with the assistance of law enforcement officers.

So it was feasible to get a dog to a family member, or to someone, presumably, was familiar to the dog and could handle the dog. This was something that the police demonstrated they could do, before November 8.

They were in contact with the Averys, as the record shows, the Jandas, the Dasseys, during that time. Indeed, Mr. Avery himself was interviewed, up in Crivitz, by law enforcement officials, at some length on November 5 and November 6.

Earl Avery was on the property for at least some time while law enforcement officers were there, shortly after 11 o'clock. I don't know when Earl Avery was removed from the property, but we know from the record at trial that he was there at least for a time.

So it's really just not reasonable to say that one dog kept this army of law enforcement officers from searching the burn area
for three days or more. And that's the third plank upon which I renew the suppression motion. There, the relief $I$ seek is the suppression of observations made upon a search or examination of the burn area and items seized in the burn area, or within the area that fell within the range of the dogs reach.

THE COURT: All right. Before $I$ hear from the State, the one question I had was, I thought at the time of the original motion the defense conceded that the search, which started at 7:30 on the 5 th, would have been the execution of the warrant, that the initial sweep searches were just cursory searches that were not the execution of the warrant, but I understand from what you have said today that that position has changed.

ATTORNEY STRANG: I didn't -- I don't mean to change the position, and I'm sorry if I did that. And I -- Let me sort of get back to trying to recall how we argued this sequence. I think there are -- I think there are two initial sweeps of Mr. Avery's home, the first without a dog, and the second even shorter and with a dog. So, yes, I think the Court is right, the 7:30 search would be the first execution of the search warrant. And that was not
unreasonably delayed from, you know, in terms of the passage of time between the execution of the warrant and beginning that search.

So, I do -- I don't mean to change my position, and I think the Court is right that this squares up better as the first search -well, the 7:30 p.m. to 10:05 p.m. search on November 5 being an execution of the warrant.

Now, the second plank that I raised, Franks, of course, would affect even that search. But the first point that I made here, the warm up or Cactus League exhibition searches, would not affect that first search of the home.

And the third argument I made, about the dog, has no bearing on the trailer that was searched on Saturday night, between 7:30 and 10, because nobody -- nobody has said the dog affected that search.

THE COURT: All right. The Franks argument you mentioned, clarify again for me briefly what -or how that argument has been affected by the course of the trial, as supplementing your original argument.

ATTORNEY STRANG: Sure. I explained what we now have as a matter of testimony as the
collective knowledge of law enforcement about the Toyota. We also have law enforcement people saying that, you know, at about the time the Toyota was discovered and the hours immediately after, they had dark suspicions. They suspected the worst. You know, they were gearing up for a criminal investigation. But they still viewed this as a missing persons investigation and still hoped to find Ms Halbach alive.

And, indeed, it's that hope, or that expectation, that makes reasonable at all, the protective sweeps. At least on an emergency doctrine argument, which I understand the State to rely on as justification for, for example, taking dogs through places after an initial sweep through.

So the testimony here is consistent with the actions of the officers in that they are pursuing a missing persons investigation, at least through the first two quick searches of Mr. Avery's house and garage on November 5. That's really -- That's inconsistent with the claim that, you know, you ought to give us a warrant and let us go search, because we are going to find evidence of a murder, and a sexual
assault, and theft, false imprisonment, if that was the other crime. The search warrant applications and search warrant, of course, are a matter of record and the Court can take notice of those.

THE COURT: All right. Who will be responding for the State? Mr. Fallon.

ATTORNEY FALLON: Good morning. Thank you, I will be responding for the State. Naturally, we have a different view of the evidence adduced to this point in the trial. And quite frankly, would offer the opinion at the outset that the arguments made during the July and August hearing, in particular the August argument on the 10th, followed up with the brief, has not necessarily been substantiated, but I would say overwhelmingly supported, and the reasonableness of the searches engaged has been demonstrated to a degree that should remove not only a reasonable doubt but any doubt.

I begin with this point, I have heard nothing in the record so far that establishes the defendant's right of standing to challenge the search of anything on that 40 acre parcel, outside of his trailer or garage, that includes
the burn barrel and the burn pit.
Case law clearly says that although items such as the burn pit and its location may well be within the curtilage, which is a somewhat arcane term from the common law which has relatively fallen out of use in Fourth Amendment analysis these days, but it still has some benefit for purposes of claiming an argument.

The law is quite clear that while something may be within what had traditionally been perceived as a curtilage, does not automatically establish that one has standing to object to a search of that particular item. So nothing in the record has changed that.

Secondly, there's been no evidence whatsoever that there was any joint venture or agency relationship established between the volunteer searchers and law enforcement. It was their entry into the property that commenced the investigation.

Third, it's quite clear, and there's been no evidence to the contrary, in fact, even more evidence now, that there was consent for the original entry by the searchers as well.

Fourth, the theory upon which the State
proceeded at the time of the motion, and continues until this very day, is that this was one continuous search. There was no violation of the one warrant, one search principle originally argued, and continued to be argued today. In that context, a warrant was in fact obtained, as counsel notes, at approximately 3:10, Saturday, November 5th. They returned to the property at 3:25 to commence execution of the warrant. And as counsel has conceded under the Court's questioning, there were two original entries in the concept of a sweep, actually just looking for a person or a body of Teresa Halbach, and/or any other civilian or family member who ought not to be present, should be located. So that was the dual purpose of those searches. I think that's conceded.

And as the Court notes, there was an execution of the -- The commencement of the execution of the full search at 7:30 that evening. But before we get into the details, let us not lose sight of several critical facts omitted from counsel's argument.

And this is where the testimony at the trial does nothing but enhance, not detract, from
the findings the Court made in August, and the arguments the State made then and in its written submission thereafter. The area to be searched was a 40 acre crime scene. It had 3800 to 4,000 cars. I believe the testimony is there was 11 to 15 buildings. Included in that number were four residences.

We heard from one witness in this case, admittedly through lengthy cross-examination by the defense, which only highlighted the testimony of Special Agent Fassbender back in August and again during this trial, that there was an awful lot going on, not only within the 40 acre parcel, but within the surrounding areas, most notably the two or three gravel pits owned by the Radandts.

As Mr. Ertl explained, they had a number of sites to investigate, both on the property -the 40 acre site and other, including this potential burial site, other areas in the gravel pits, and the surrounding, which admittedly took resources away from the attempted search, or from the ongoing search at the property. So those facts must be kept clearly in perspective.

Again, there's a safety issue, there was
a weather issue that delayed the onset of the search. There were limited number of officers that first day. More and more officers arrived to assist in executing the search warrant signed by Judge Fox.

So it's within that backdrop that we now begin to clearly scrutinize and examine both the evidence introduced then, during this trial, and the arguments of counsel.

As reflected by the testimony of the officers and those who supported him -- and when I say the officers, I'm talking specifically of Special Agent Fassbender, who was coordinating, along with Investigator Wiegert, this investigation. It's quite clear that there were a number of teams, in a number of places, being searched simultaneously.

This wasn't just four guys who were going from one place to the next. There were several search teams involving the Crime Lab, involving Manitowoc Police Department, involving some members of the Manitowoc Sheriff's Office, the Calumet County Sheriff's Office, the Department of Justice, Division of Criminal Investigation.

As indicating, the search started out in a funneling effort, a sweep looking for persons and bodies on the property, and then slowly funneled down into more specific evidentiary searches, in support of a missing person/criminal investigation. And I will elaborate on that in a moment.

But I did want to make this particular point first, again, as a legal backdrop to the factual backdrop just provided. Article 1, Section 11 of the Wisconsin Constitution, has been and continues until this very day, to be interpreted the same way as any attack or as any interpretation of the Fourth Amendment to the United States Constitution. And our case law has consistently held that.

And while I compliment counsel on his argument of raising a State Constitutional basis or challenge, for now, the law in terms of interpreting, applying, and assessing that challenge, the analysis is the same under the Fourth Amendment to the United States Constitution and under Article 1, Section 11, of the Wisconsin Constitution.

As such, the touchtone for the Court's
analysis is reasonableness. So within those two, that factual backdrop and the legal backdrop, we examine the searches.

Now, counsel seeks to suppress a number of items, conveniently not designating those items. But let's look at the evidence that was taken during that first search. First search is conceded, so there's nothing that was taken out of her (sic) home on Saturday night, which is subject to the suppression motion in the first place. So in effect, with respect to the home, the only items of evidentiary -- that jump in my head right now, based on the testimony, are the weapons seized on Sunday, and the key, and a few other miscellaneous items on Tuesday.

Now, in examining the searches on those particular days, what do we have. We have a specific description, those weapons were observed on Saturday night during the search, they were looking for other biological trace evidence to show the existence, or non-existence, of Teresa Halbach within that residence, anything that would show or connect her to the particular case.

The weapons were observed. They were seized the next day, hey, go get those weapons,
after all, we do have an individual with a felony record. They are in constructive possession, that's evidence of a crime, take that. So they were sent back in, as part. They were observed there, but they had other duties that night. It was 7:30. There was a torrential rainfall going on. And they were looking, at that time, for evidence of a missing person/criminal investigation. In other words, her missing person could very well be the result of a crime. And while we're on that point, let's make this abundantly clear, nowhere is it said, and counsel cites no case, because there is no case for the proposition that on the one hand we have a missing person, and then you draw a line in the sand and say, oh, well, you crossed the line, now you are in a crime.

Probable cause is defined as something that would excite an honest belief in the minds of an officer that perhaps a crime or criminal activity is afoot. That's the basis to get a probable cause determination.

Now, it's quite clear that many missing person cases may very well fall into that category. Missing person concepts and probable
cause for a crime overlap, frequently overlap. And there is a large difference between probable cause in a missing person case and proof beyond a reasonable doubt that the missing person is missing because of a crime.

So let's not confuse the concepts. They overlap. They are clear. Sometimes they have two operating different spheres entirely, but frequently they overlap. And in the analysis of the searches underway here, there was nothing that was unreasonable in the steps taken by Investigators Wiegert and Fassbender in directing the searches here.

With respect to the garage, the first entry to the garage was on Sunday. So I'm still waiting for the argument as to why anything that was taken, including the shell casings and the other material on the search of the garage on Sunday morning, is subject to the search, subject to suppression.

It's their first enter, other than the sweep that occurred the day before looking to see if there is the person or the body of Teresa Halbach, or the person or a body of somebody else who shouldn't be there.

Now, let's further examine, again, returning briefly to the burn pit and the burn barrel argument. I can think of no other act that is quite so clearly supportive of the concept of abandoned property than the act of throwing something in a fire and burning it.

The burn barrel is clearly -- anything in that barrel is subject to search by any person driving up and down that driveway. That's clearly evidence of property discarded, unwanted, and thrown away.

The quintessential act of abandonment is burning it, consuming it, chopping it up, what have you. The same can be said for the burn pit as well. Anything in there is abandoned property. It is burned. It's evidence of the owner or the possessor, the constructive possessor of that property has shown his intent to discard it and not care about it. It burned.

With respect, again, to the searches of this particular property, I would also point out that the original warrant signed by Judge Fox on Saturday, November 5 th, was renewed on Wednesday, the 9th, I believe, as the evidence in the motion hearing was, some time late that afternoon,
memory strikes me, about 4:00.
And the warrant was reused for the follow-up entries on Thursday, Friday, and Saturday, most notably by Mr. Austin of the State Patrol, Agent Fassbender, and one or two others as they were doing their final go through the premises, and Mr. Austin was taking his copious measurements that we have heard quite a bit about. So, clearly, there's nothing to undermine the inevitable discovery argument that the State made as a fall or drop back position.

Finally, there's one argument that we didn't make earlier that we could make now since the motion is renewed, and that is, I think you also have a good faith belief, as exhibited by the officers, in reliance on a warrant that was issued by Judge Fox, that probable cause was established and then the warrant was reissued. And I would submit to the Court that they had no obligation to reissue that warrant, but just as a safety precaution, they went back to the judge, renewed the warrant, with additional information that had been discovered during those days.
And that takes me, by the way, to another analysis on the reasonableness component,
is that each day, each hour, additional information became available to the officers that justified continuous operations here that say, well, we have got to go back in. Let's look at that. We just got this call from the Crime Lab, we have got presumptive positive for blood here in the SUV, better go back and look for that. Better go back in there and luminol Mr. Avery's trailer and Charles Avery's trailer, and the other places, to see if there is any blood evidence there.

Each hour passed, more information became, probable cause was not only enhanced, it was increased, justifying continued searches and continued investigation by law enforcement officers, further support of the one warrant and one continuous search, which was under way.

Now, with respect to this Franks argument, again, $I$ find that rather disingenuous. Again, nothing has been shown here to show a false or material statement that was false that was introduced or established by virtue of the testimony, that hadn't already previously been discussed.

The only argument is the concept of
while the missing crime and missing person and a missing -- missing person and a criminal investigation analysis. And I think we have already discussed how they overlap.

But there's nothing that has been introduced, to this point in the trial, that suggests that there was any material or false statement or any reckless disregard for the truth by the affiants of that warrant or the information provided them, that being Detective Remiker and Investigator Wiegert.

Again, I'm still waiting for the standing to be established by the defense as to how they are going to search or complain about searching the SUV of Teresa Halbach. Again, there is no basis upon which the defense can challenge the search, the seizure of that $S U V$, or any of the evidence obtained therein.

Next, again, returning to the burn area and the interesting analysis for the dog argument. While one may be trained to handle a bloodhound, one may be trained to handle a human remains detection dog, commonly referred to as a cadaver dog, doesn't mean that one is established and trained to handle all kinds of situations.

And we all know, from our common sense, that there are many people who are good with animals, some are very professional, some do it for a living, many of us are casual pet owners, some are not.

Well, regardless of that, there are animals out there who have such character and demeanor that it doesn't really matter much, for the professional. And the fact that one may be well trained to handle a bloodhound, or human scent detection, or human remains detection, is of no consequence and of no meaning here, doesn't help us at all.

Finally, I think it's very important to note that the -- that the evidentiary significance, as it were, to this burn pit area, wasn't determined at all until Tuesday afternoon. There was no need to remove or do anything with the dog. In fact, we credit Deputy Kucharski for exercising common sense in not shooting the dog when they wanted to search it. They waited. They finally did have somebody remove the dog when the evidentiary significance of the burn pit became clear.

The fact that Bobby Dassey was allowed
to return to get his puppy is an entirely different concept than the junkyard dog in the back of the yard, who lives outside, and a fully grown adult animal and a puppy, in terms of their care, and responsibility, and their needs, etcetera. That's an argument without any merit whatsoever. I don't even need to go further. So, again, what is it that they are asking to suppress. The guns were seized, as I said, on Sunday. There was the shell casings and some blood spatter on the first search of the garage. Where's the challenge to the significance of that? How is that in violation of the warrant? It was their first entry. Again, there's not much at issue. And what is at issue, there is no basis whatsoever, in fact or law, to suppress that evidence. So we would ask the Court to affirm its previous ruling. Thank you.

THE COURT: All right. I'm not going to hear further from the parties on the issue at this time. As Mr. Strang indicated, I think we haven't heard all the evidence that may come in yet with respect to the burn pit. I will give the parties an opportunity to argue further later. I'm not going
to decide it from the bench at this time.
Before we bring the jury in I'm going to take a quick five minute break, and I mean no more than five minutes. I'm going to ask the bailiffs to keep Mr. Avery here. We'll be back out in a few minutes and bring in the jury.
(Recess taken.)
(Jury present.)
THE COURT: Mr. Kratz, at this time you may call the State's first witness this morning.

ATTORNEY KRATZ: Thank you, Judge, the State will call Katie Halbach to the stand.

ATTORNEY STRANG: Your Honor, may we just take a procedural moment at side bar.

THE COURT: Yes.
THE CLERK: Raise your right hand.
KATIE HALBACH, 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: Katie Halbach, $\mathrm{H}-\mathrm{a}-\mathrm{l}-\mathrm{b}-\mathrm{a}-\mathrm{c}-\mathrm{h}$. DIRECT EXAMINATION

BY ATTORNEY KRATZ:
Q. Katie, how old are you?
A. I'm 15.
Q. I'm sorry?
A. 15 .
Q. And do you go to school?
A. Yup.
Q. What grade are you in?
A. I'm a sophomore.
Q. In what community do you live? What city do you live in?
A. I live in Hilbert, Wisconsin.
Q. And who do you live with, Katie?
A. I live with my family, Tom and Karen Halbach, and my sister, Kelly Halbach.
Q. All right. Before October 31st of 2005, did you have another sister?
A. Yes.
Q. Tell the jury who that was, please?
A. It was Teresa Halbach.
Q. Let me show you a picture of what has been received as Exhibit \#1, tell us who that is?
A. That would be my sister, Teresa Halbach.
Q. Katie, can you describe your relationship with your sister? Where did she live, first of all?
A. Um, first, she lived in Green Bay, when she went to college. Then, later, she moved next door to
us.
Q. Okay. When she lived next door to you, did you have occasion to meet with her, or see her a lot?
A. Yeah, she would come over sometimes and hang out with us, or sometimes on the weekend, me and Kelly would go over to her house.
Q. All right. Who's Kelly?
A. She's my little sister.
Q. How much younger is Kelly than you?
A. She's two years younger than me.
Q. And how much older was Teresa than you?
A. She was 11 years older than me.
Q. As sisters, and especially as sisters who lived literally next door to each other, what kind of things would you guys do when you hung out together?
A. We would watch movies, or watch TV, or like play card games, or just hang out.
Q. All right. Let me ask you, Katie, like most sisters, would you ever talk about shopping, or clothes, or things like that?
A. Yes.
Q. Did you ever go shopping with your sister, Teresa?
A. Yes.
Q. And were you aware of the clothes that Teresa wore?
A. Yes.
Q. I'm going to specifically ask you about Teresa's blue jeans, okay? Let me first ask you, Katie, if you were aware of any specific pairs of blue jeans that Teresa owned that she had at her house?
A. Well, she had a lot of Weatherly (phonetic) jeans just because she really liked their jeans and I know she had a pair of Daisy Fuentes jeans.
Q. Let me stop you there. How do you know that she had a pair of Daisy Fuentes jeans?
A. Well, one day she showed me a new pair of jeans she had. And I noticed that the brand was Daisy Fuentes. And I knew that Daisy Fuentes was an older person, so I told Teresa that she has old person jeans.
Q. As those of us that are my age, do you think Daisy Fuentes is a older person; is that what you told her?
A. Well, she's not old, but she's not young.
Q. But you commented, in fact, you teased your sister about wearing an old person's jeans; isn't that right?
A. Yes.
Q. After your sister's disappearance, and after you learned that your sister had died, did you have occasion to go back to her house and look through some of her stuff?
A. Yes, we did.
Q. When you looked through her stuff, Katie, did you find her Daisy Fuentes jeans?
A. We did not.
Q. Sometime during this investigation, were you asked to join, or accompany, a police officer, I think it was Officer Fassbender, in trying to find that pair of jeans, or trying to find a pair that was just like those jeans?
A. I did.
Q. Where did you go to get those?
A. We went to Kohls.
Q. And do you know if Kohl's Department Store is a place that carries Daisy Fuentes jeans?
A. Yes, they do.
Q. Do you know if Daisy Fuentes jeans are carried anywhere other than Kohl's?
A. I do not know.
Q. Katie, I have handed you what's been marked as Exhibit No. 288. Can you tell the jury what that
is, please?
A. They are a pair of Daisy Fuentes jeans.
Q. And have you seen those before?
A. Yes, I have.
Q. Tell the jury how you have seen those before?
A. I went with Mr. Fassbender to Kohl's one day and he asked me to pick out a pair of Daisy Fuentes jeans that $I$ thought Teresa would have worn.
Q. The same style, the same brand; is that right?
A. Yes.
Q. Did you try to also pick out the same size that she would have worn?
A. Yes, I did.
Q. Why don't you hold those up and show the jury. I want you to hold up and show the jury the front and the back of those jeans, if you would, okay. Now, on the back pocket of those jeans, there's some stitching; do you see that?
A. Yes.
Q. Do you know what that stitching is called on the back pocket?
A. No, I don't.
Q. Okay. Katie, let me ask you, do you know what holds a pair of jeans together?
A. Rivets maybe.
Q. Okay. When looking at Exhibit No. 288, does -do those jeans have rivets?
A. Yes, they do.
Q. And on those jeans, do those rivets say anything?
A. They say Daisy Fuentes.
Q. Mr. Wiegert is going to grab those from you, as I ask you one or two other questions. Do you know when the last time when you saw Teresa wearing her Daisy Fuentes jeans was?
A. I don't remember.
Q. Do you remember what size jeans your sister, Teresa, wore?
A. She probably would have worn anywhere between like a five or an eight.
Q. Some clothes, I don't know much about girls clothes, but they run different sizes; is that right?
A. Yeah, depends on like the store, whatever.
Q. I'm going to have Mr. Wiegert turn on a machine which is called an ELMO machine. Mr. Fallon is going to help him as well.

ATTORNEY KRATZ: You can probably zoom in a little bit more, too.
Q. (By Attorney Kratz)~ Katie, is that one of those rivets that you saw?
A. Yes, it is.
Q. What does it say on it?
A. Daisy Fuentes.

ATTORNEY KRATZ: Thank you, Mr. Wiegert.
Q. (By Attorney Kratz)~ Katie, the other thing that I want to talk to you about is an exhibit that $I$ have handed you. It's blue, in front of you. I think it's Exhibit No. 287. Have you ever seen that before?
A. Yes, I have.
Q. And unwrap that, please, and show it to the jury and tell the jury what it is.
A. It's a blue lanyard.
Q. Does it say anything on it?
A. It says Air National Guard.
Q. Katie, does that look familiar to you?
A. Yes, it does.
Q. And how does that look familiar?
A. I was at the EAA convention two summers ago, and I was at an exhibition building. And it was the Air National Guard had like a little stand, and they had free lanyards and I picked it up.
Q. Now, a lanyard -- or at least that part of the lanyard, and I'm going to show you a picture of it here, there are two pictures in front of you,
let's just identify those real quickly. Do you see those pictures in front of you?
A. Yes.
Q. Can you look at Exhibit No. 285, and tell me if that's what we're looking at up on the big screen?
A. Yes, it is.
Q. That lanyard that you got at the Air National Guard, was there another part that went with it?
A. Yes, there was a little clip that clipped on, on the end.
Q. Do you know what went on that little clip?
A. A key chain.
Q. Now, a couple summers ago, Katie, when you picked up that -- that lanyard and that key chain, did you give that to anybody?
A. I gave it to my older sister, Teresa.
Q. Let's look at the next picture. Okay. That's Exhibit No. 286, do you see that picture?
A. Yes.
Q. Tell the jury what that is, please?
A. It is a picture of the lanyard and the connecting piece that was with it.
Q. I'm going to show the jury, now, Exhibit No. 286. Do you recognize the piece -- or the other piece of the lanyard, the thing that's called the fob? Do you know that that's called a fob?
A. Yeah.
Q. All right. Do you recognize that?
A. Yes, I do.
Q. And what is that?
A. It's the little connecting piece with the key chain and a key on it.
Q. All right. Mr. Wiegert is finally going to hand you an exhibit.

ATTORNEY KRATZ: What's the exhibit number, Mr. Wiegert? DETECTIVE WIEGERT: 211. ATTORNEY KRATZ: All right. I'm going to ask Mr. Wiegert if he would be so kind as to, if it will, if those items could be placed together.
Q. (By Attorney Kratz) ~ Now, Katie, just touching the lanyard; that is, just touching the blue area, which would be to your left, could you hold up that entire key for us, please. Hold it up nice and high so we can see it. Is that lanyard -- or does that fob fit into that lanyard?
A. Yes, it does.
Q. And does that look the same as when you gave it
to your big sister, Teresa?
A. It does.

ATTORNEY KRATZ: I would move the admission of Exhibits 287, 288, 285 and 286 at this time. And I have no further questions.

THE COURT: Any objection?
ATTORNEY STRANG: I don't think so. I missed 285, though.

THE COURT: That is a photo, 1 believe, of the lanyard, without the key fob.

ATTORNEY STRANG: Thank you, no objection to any of those four.

THE COURT: Very well, those exhibits are admitted. Mr. Strang, are you going to be doing the questioning?

ATTORNEY STRANG: I am. Thank you. CROSS-EXAMINATION

BY ATTORNEY STRANG:
Q. And good morning. I'm going to call you Ms Halbach.
A. Okay.
Q. Because we don't know each other and we're in a formal sort of place, okay? And I'm Mr. Strang, you probably figured that out long ago.

The jeans, Exhibit 288, now when guys
buy jeans, typically, it's by waist size and then an inseam -- yeah, an inseam length. And -Okay. And these things look like they just have a Size 6.
A. Yeah.
Q. Okay. When -- I don't know if you can answer this, give it a whirl. When women, or for that matter, girls, buy blue jeans like these Daisy Fuentes jeans, does the leg always just come in one length?
A. Sometimes there could be a 6 short, 6 regular, and a 6 long.
Q. Okay. And do you know what your sister, Teresa, wore in terms of a short, regular, or long?
A. Probably a regular.
Q. Okay. And, then, sometimes, then, you know, if it's you, or another woman, or girl, do you have to hem the pants or change the length of them?
A. Sure.
Q. Because there's just the three sizes, basically --
A. Yeah.
Q. -- of length, in the leg?
A. Yeah.
Q. Okay. And you don't know whether on the Daisy

Fuentes jeans Teresa had to either roll up the pants leg, or hem it, or something?
A. No, I don't know.
Q. Okay. So, you showed us the rivets. What -What do you close the waist with on these jeans?
A. A button.
Q. Does that kind of look like -- more or less, like the rivet, except a little bit bigger.
A. Yeah.
Q. Okay. It seems to be metal; does that seem right?
A. Yeah.
Q. Is that the button you just described?
A. Yeah.
Q. Okay. What -- Did you ever see Teresa use the lanyard you bought her?
A. Yes, I did.
Q. Did she keep any other keys on there?
A. I'm not sure.
Q. One way or the other?
A. She might have, I don't know.
Q. Do you know, did she -- did your sister, Teresa, typically carry a purse when she was going somewhere in her car?
A. I believe she did.
Q. But you don't no where she carried keys or other things that might go on a key chain?
A. No, I don't.
Q. Ms Halbach, do you have any -- any memory at all of about how long ago you would have seen this pair of old person's jeans, you know, the pair of Daisy Fuentes jeans that you actually saw Teresa have?
A. Um, it was probably more recent because it was fresh in my memory.
Q. Mm-hmm. But you didn't -- I mean, you don't remember now what year, or what time of year, that kind of thing.
A. No, I don't.
Q. I assume at the time it didn't make a big impression on you, this was just a new pair of jeans or something?
A. Yeah.
Q. Okay. You weren't with Teresa when she bought them?
A. I wasn't.

ATTORNEY STRANG: Okay. That's all the questions I'm going to ask you. Thanks.

ATTORNEY KRATZ: I have got nothing further, Judge. Thank you.

THE COURT: Very well, you are excused. And, Mr. Kratz, you may call your next witness.

ATTORNEY KRATZ: Actually, it's Mr. Gahn. THE COURT: Sorry, Mr. Gahn.

ATTORNEY GAHN: Thank you, your Honor. State would call Ron Groffy to the stand.

THE CLERK: Raise your right hand.
RONALD L. GROFFY, 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: My name is Ronald, middle initial L. Groffy, G-r-o-f-f-y.

## DIRECT EXAMINATION

BY ATTORNEY GAHN:
Q. Are you how employed, sir?
A. I'm employed as a forensic scientist with the Wisconsin Department of Justice, Crime Laboratory Bureau, stationed in Madison, Wisconsin. My working title is Forensic Imaging Specialist.
Q. And how long have you been employed at the Wisconsin State Crime Lab?
A. I have been with the Crime Lab for about 32 years.
Q. And what are your duties, currently, at the Crime Lab?
A. My primary duty is the technical unit leader for the Forensic Imaging Unit and responsibility includes administration of the unit, photographing evidence that may be brought into the laboratory, and also doing whatever imaging analysis might be requested of our unit.
Q. And could you explain, or describe for the jury, exactly what is a Forensic Scientist Imaging Specialist.
A. Again, as I previously stated, my duty is to examine photographic evidence, take pictures of evidence that is submitted to the laboratory, evidence that may be used as part of analysis. There might be things on evidence that needs to be imaged before other analysts, also, or scientists can look at it. That's our primary duty.

THE COURT: Excuse me, Mr. Groffy, can you move the microphone over closer?

THE WITNESS: Sorry, your Honor. THE COURT: That's good. THE WITNESS: Okay. I don't think it likes me.
Q. (By Attorney Gahn)~ Mr. Groffy, on November 6 of 2005, did you take photographs of a 1999 Toyota RAV4 that belonged to Teresa Halbach?
A. Yes, I did.
Q. And where did you take those photographs?
A. That would have been at the Wisconsin State -THE COURT: Mr. Groffy, you can move it over closer. The feedback was because I had the volume turned up to high. THE WITNESS: Is this better, your Honor? THE COURT: Go ahead.
A. That would have been at the Wisconsin State Crime Lab located in Madison, Wisconsin.
Q. And also on November 8, 2005, did you take photographs of a blue 1993 Pontiac Grand Am that belonged to Steven Avery?
A. That is correct, I did.
Q. And what I'm going to ask now is for Mr. Fallon to bring up to you a pack of photographs.

Mr. Groffy, if you would just quickly look
through those photographs and tell me when you are finished looking at each one of them.
A. I'm done, sir.
Q. And did you take those photographs?
A. Yes, I did.
Q. And as you look at those photographs today, do they accurately portray the condition of both of those vehicles as you photographed them back in November of 2005?
A. Yes, they do.
Q. Mr. Groffy, on the back of each of those photographs, there's an exhibit number. They are sequentially numbered Exhibit 289 through 305. I would like you to take the top photograph, which would be Exhibit 289. And I'm going to ask you to describe what that photograph is of. And please tell the jury that, and then we're going to show that -- well, here it is up on the screen. Describe what that photograph is, please.
A. State's Exhibit 289 is the exterior view of the RAV4 from the driver's side of the vehicle.
Q. And that photograph that you have in your hand, that's the same photograph that is up on this big screen?
A. That is correct.
Q. Sir, will you please take the next photograph and describe that. Tell us what the exhibit number is and describe it for the jury.
A. That's State's Exhibit 290. That is the front
interior portion of the RAV4 looking from the driver's side of the vehicle.
Q. And is that photograph the same photograph that we have up on the big screen?
A. Yes, it is.
Q. And please continue.
A. State's Exhibit 291 is a photograph of the interior of the RAV4 looking at part of the driver's side, $I$ guess you would call it, instrument panel, near the ignition switch.
Q. And is this photograph -- is that photograph represented up on the big screen?
A. Yes, it is.
Q. Mr. Groffy, I would like to ask you, is there anything about this photograph that you did any further processing of this vehicle with?
A. Yes, the area that shows the red stain, I did a presumptive test on that area.
Q. And what is a presumptive test?
A. This is a presumptive test for the presence of blood. It's known as phenolphthalein.
Q. Could you describe a little more for the jurors just how that stain appeared to you.
A. It was a reddish color stain on the dash.
Q. You did the presumptive test for blood?
A. Yes, I did.
Q. I'm sorry, sir, what were the results for that?
A. It was positive.
Q. Next exhibit, please.
A. State's Exhibit 292, that is some items that were discovered on the front passenger seat of the RAV4.
Q. And is that photograph represented on the big screen?
A. Yes. It is.
Q. Next exhibit, sir.
A. State's Exhibit 293, that is a view, again, of the front passenger area, looking through the front passenger door, of the seat and the floor area and part of the dash.
Q. And, again, where were these photographs taken?
A. At the Wisconsin State Crime Lab in Madison.
Q. And is the photograph that you just described accurately represented up here on the big screen?
A. Yes, it is.
Q. The next exhibit, please.
A. This would be State's Exhibit 294. This is the frame area of the RAV4 toward the passenger side, backseat.
Q. And what was the purpose of taking this
photograph?
A. This was to show a reddish stain that was on that frame area.
Q. When you were taking these photographs, was anyone suggesting areas of the RAV4 for you to take photographs of?
A. Yes, in this particular area, I was actually directed to make this photograph by our blood stain pattern analyst, Nick Stahlke.
Q. Mr. Groffy, I'm going to ask Mr. Fallon here or Mr. Kratz perhaps, to bring up a laser pointer. I would like you to just point out to the jury this area that the blood spatter expert, Mr. Stahlke, wanted you to photograph.
A. It would have been approximately in this area right here.
Q. And, again, could you just describe for the jurors where exactly is that located?
A. That was on the passenger side of the vehicle, toward the rear seat.
Q. Okay. And the next line, please?
A. That would be State's Exhibit 295, that's a view looking into the cargo area of the RAV4, toward the passenger side of the cargo area.
Q. And did anyone direct you to take this
photograph.
A. This particular photograph would have been taken as part of our standard overall photographs of the vehicle. At a later time, I was also told by Nick Stahlke, again, to get some medium -- what we call medium using and close up extra photographs of those areas also.
Q. Why, what was in the back of this cargo area of the RAV4 that you wanted photographed?
A. There appeared to be stain patterns that contained blood and he was interested in recording the pattern information.
Q. Could you take the laser point and point out those areas.
A. That would have been approximately in this area here. And then later on, there was also some area in here that he had me photograph.
Q. Did you do any presumptive testing in this area of the vehicle?
A. Yes, I also did a presumptive test in approximately this area and the test was positive.
Q. And positive for what, sir?
A. For blood.
Q. Next exhibit.
A. This would be State's Exhibit 296. This is a closer view of that stained area in the back cargo portion of the RAV4, behind the passenger seat, passenger's rear seat, excuse me.
Q. And is this the area that you stated that you did a presumptive test for blood?
A. Yes, that's correct, sir.
Q. Next photograph, please.
A. This would be State's Exhibit 297. This, again, is another -- a closer view of that stained area within the cargo portion area of the RAV4, behind the rear seat.
Q. And could you just describe for the jurors, when you looked at this stain, what did you observe? What was the condition of the stain?
A. It was pretty much what you see on the photograph. It was reddish in color, it appeared to be over a -- an area of that particular rear quarter panel.
Q. Next exhibit, please.
A. This would be Exhibit 298. This is the molding and the metal frame area as you opened the cargo door of the RAV4. Where the carpeting ends toward the back of the cargo area, that's the molding. And, again, the metal trim area and we
were documenting some reddish stains that are on that molding.
Q. Could you take the laser pointer, and just point out to the jurors these reddish stains that you were documenting in this photograph.
A. I believe the areas of interest were right about in here.
Q. Next exhibit, please.
A. This would be State's Exhibit 299. This is the interior portion of the rear cargo door. Okay. The panel that's on that cargo door. And, again, we were photographing this to show stain patterns.
Q. And, again, could you take the laser pointer and just point out those stained areas that you were trying to document?
A. Yes, there's some over here, and I believe there were a few over here.
Q. Next exhibit, please.
A. This would be Exhibit 300. This is a more of what we would consider an overall view of the whole cargo area of the RAV4.
Q. And could you point out for the jurors, again, that area that you did your presumptive test for blood?
A. Yes, it would have been approximately in this area here.
Q. Next exhibit, please.
A. This would be State's Exhibit 301. This would be the driver's side of the cargo area of the panel and the portion of the floor and the rear seat.
Q. Next exhibit, please?
A. State's Exhibit 302, this is showing that the battery cable was disconnected from the battery.
Q. And on which vehicle is this photograph?
A. This is on the RAV4.
Q. Next exhibit.
A. This would be State's Exhibit 303. This is of the Grand Am, which was our Item B. This is the front of the Grand Am, showing the condition of the vehicle.
Q. And this is the vehicle that belongs to Steven Avery?
A. That is correct.
Q. And the next slide, please.
A. This would be State's Exhibit 304, this is a view from the passenger side of that Grand Am showing the passenger seat, the front dash, the floor, and part of the counsel area.
Q. And would you go on to the final exhibit.
A. Yes, sir. And that would be State's Exhibit 305. This is just a closer view of that middle console area in the front seat. The gear shift knob and some of the surfaces of that console area.
Q. Was there any particular reason to take this photograph?
A. If I remember correctly, I believe Nick Stahlke wanted me to show some stains that were located near or on, that -- or that he perceived to be stains.
Q. All right.

ATTORNEY GAHN: Thank you. That's all I have.

THE COURT: Mr. Buting.
ATTORNEY BUTING: Thank you, Judge.
CROSS-EXAMINATION
BY ATTORNEY BUTING:
Q. Good morning, Mr. Groffy.
A. Good morning, sir.
Q. I won't be very long with you, but just bear with me one moment. We'll mark a few other exhibits. I will put these up here for the moment and then I'll get right back to them. Let me just start, though, you said that your -- these photographs were taken on November 6th, right?
A. Some of them were, that's correct, sir.
Q. And that was a Sunday, correct?
A. That is correct, sir.
Q. Now, you actually were called in some time early on Sunday, right?
A. My supervisor called me approximately mid-morning and asked if $I$ could come in and assist --
Q. Okay.
A. -- that's correct.
Q. You don't normally work on Sundays?
A. Normally, no. No, I do not.
Q. Okay. It was your understanding, though, that this Toyota RAV4 had arrived at your Wisconsin -I'm sorry -- Madison Lab sometime very, very late the night before, Saturday night, early morning, Sunday?
A. I don't know that for sure, sir.
Q. Okay. Well, when she called you in, your supervisor, would that be Lucy Meier?
A. That's correct.
Q. Did she tell you that this had just arrived and that you were going to be one of the first people to see it?
A. She had conveyed to me that they had received a vehicle at the laboratory for processing. And
she was wondering if $I$ could come in and assist and do the photography on the vehicle.
Q. Okay. And when you arrived, it was parked in the garage that was displayed in that first photograph.
A. That's correct.
Q. And when you approached, the -- were the doors standing open or were they closed?
A. The doors to the vehicle, sir?
Q. Yes.
A. The doors to the vehicle were closed.
Q. Okay. Did you have gloves on as you approached the vehicle?
A. As I approached the vehicle?
Q. Yes.
A. Not as I approached the vehicle, no. There's a large area around the vehicle.
Q. Okay. At some point you touched portions of the vehicle, though, right?
A. That is correct, I did.
Q. And before you did that, you put gloves on?
A. I put a laboratory coat on and gloves, that's correct, sir.
Q. Okay. And did you, with your gloved hands, try the driver's door handle?
A. Yes, I did.
Q. It was locked or unlocked?
A. The driver's door was unlocked when I got there.
Q. Okay. The other doors were locked?
A. Yes, the other doors were locked.
Q. And that would be actually four more doors, correct, including the rear?
A. That's correct, four doors.
Q. Now, if I understand, what you did was, by opening the driver's side door, you were able to sort of reach over and, with your gloves, unlock the front passenger side door first, right?
A. That's correct, I did that.
Q. And then from that location, that position on either side, front and passenger, you were able to easily reach around and unlock the rear driver and passenger side doors.
A. That's correct, I unlocked those doors.
Q. And then you were able to open all four of those doors, wide open, for taking pictures and what not?
A. That is absolutely correct.
Q. And that's how it got to the appearance that we see in those photographs that you showed earlier, taking pictures of the side, the front, and the
rear side passenger and driver's side doors?
A. That's correct.
Q. And then you, and another individual by the name of Steve Harrington, he was also there.
A. That's correct, Steve was also there at that time.
Q. He's another forensic scientist with the Crime Lab?
A. He is currently retired.
Q. Okay. But was he employed then?
A. At that time he was employed, yes, sir.
Q. Okay. And the two of you then did this presumptive test for blood?
A. That is not correct. I did the presumptive test for the blood.
Q. Okay. Was that a phenolphthalein test or was that some other test?
A. That is what we called a phenolphthalein test.
Q. Okay. So is it specific for human and animal, or just any kind of blood?
A. I do not have that knowledge, sir.
Q. Okay. But, you did get a positive on the ignition stain and that larger area that you mentioned over in the cargo area, kind of on the passenger side?
A. That's correct I had a positive test for those two areas.
Q. Those are the only two areas that you tested, though?
A. That is correct.
Q. Did you do any other tests that day or take any other pictures?
A. My activities were limited to photographing the exterior portions of the RAV4. And then the interior portions that we could get photographs of without actually having to go inside the vehicle and get those pictures before other analysts could have a chance at processing the vehicle.
Q. Okay. And then a decision was made with you and your supervisor, Lucy Meier, not to process the Toyota any more that day and that you would instead wait until morning when the forensic DNA analyst and other types of people would be normally working; is that right?
A. That is correct.
Q. Okay. The photographs that you displayed, though, do you still have those up in front of you?
A. Which ones are you referring to sir?
Q. All the ones that you introduced --
A. Yes, I do.
Q. -- on direct. Okay. With the exception of the ones of the Pontiac Grand Am; I'm not directing your attention to those right now at all. But with respect to the RAV4 pictures, do you know, were all of those taken on November $6 t h$, or were some of them also taken on the 8th? And if so, do you know which ones were on the 6 th and which ones were on the 8th? That's my question.
A. This may take a moment.
Q. That's fine.
A. I believe I'm ready.
Q. Okay. Could you just tell us which ones, if any, were taken on the 6th?
A. That would be State's Exhibit 289, 290, 292, and 293, of the ones that I have.
Q. Okay. With Mr. Gahn's indulgence, I'm going to use -- I have got duplicates of those exhibits, they are just larger. So I'm going to use those on the ELMO. So this is 290 , right?
A. I believe --
Q. 289 ?
A. 289, that's correct.
Q. 290 is that picture of the -- sort of looking in
the driver's door, across to the passenger side, with the passenger door open?
A. That's correct.
Q. 291 was not one of them you said, right?
A. That's not one that I have here with me. Hang on a second, sir. That's correct that is not one of them.
Q. So what was the next one you mentioned?
A. 292 .
Q. Okay. That's this one here?
A. That's correct.
Q. And that's looking in at the front passenger seat, right?
A. That is correct.
Q. Shows a black case of some sort, a Aquafina bottle and some other nail polish or something, right?
A. Yes.
Q. Okay. And then, I'm sorry, was there just one more?
A. 293.
Q. That's really the same direction, it's just farther back, right?
A. That's also correct.
Q. Looking through the passenger door, front
passenger door. Is that it?
A. That would be it for that date, of these pictures that I have, sir.
Q. Okay. So then, I just want to clarify something here. Turning your attention to No. 300, which is this kind of overall view of the cargo area?
A. Yes, sir.
Q. This shows very little in there, in the -basically shows an empty cargo area, with the exception of a crumpled piece of paper of some sort and what looks like a parking light lens assembly or something?
A. That could be, yes.
Q. Did you notice whether there were ever more items in the rear of this area, or was it always, when you first saw it, did it look like this?
A. When I opened up the cargo door and took this photograph, that was what was in the back of that vehicle, sir.
Q. Okay. Did you ever see any other items in this -- or maybe let's turn to the rear seat. Do you have a picture of that looking in? I don't know if you do. Do you ever recall finding other stuff in the interior of this RAV4, other than the few items, loose items that we seem to see
here in this photograph and in Exhibit 293?
A. I did not physically process the vehicle, sir. All I did was photograph it. Other analysts might have, but I did not.
Q. Okay. So you don't know whether, for instance, there was any cardboard boxes, or other soda bottles, or clothing items, or anything like that found in the vehicle?
A. If $I$ saw them, $I$ don't recall it.
Q. And would you have -- would you have been asked to take photographs of any of those kinds of items before they had been removed or touched in anyway?
A. I may or may not have been, it would have been at the discretion of the analyst processing the vehicle whether or not they wanted that photographed.
Q. Okay. And to your recollection today, do you recall seeing any other pictures that you may have, that you didn't bring with you today, that would show those items?
A. I have contact sheets of all the photographs that I took of the vehicle, but $I$ would have to look at those.
Q. Okay. You don't have any recollection right now
of that, though?
A. No, I do not.
Q. All right. Just a couple more things. There's three new exhibits that $I$ have given you; would you take a look at those. Oh, by the way, just so we're clear, all of the other photographs that we didn't discuss as having been taken on November 6; were those taken on November 8th?
A. They would have been taken on November 7 th and 8th.
Q. Okay. Two days.
A. Yes.
Q. All right. Can you identify Exhibit 306, 7 and 8.
A. State's Exhibit $3-0-6,306$, is the front of the vehicle, the bumper area where there is the headlight and it appears to be a missing light fixture.
Q. Okay. I will put these up in a moment. Go ahead and identify all three of those. And you took these photographs?
A. That is correct, sir. This is State's Exhibit 307. This is a overall photograph of the back of the RAV4.
Q. Okay.
A. This is State's Exhibit 308. This is a view primarily of, I guess you would call it the wheel cover of the spare tire that's on the back of the RAV4.
Q. Okay. Let me just quickly put this up on the screen. The first one you mentioned was, this would be the driver's side bumper, front bumper, appears to have some damage to it?
A. That is correct, sir.
Q. And that's the parking, running light assembly that's missing?
A. If that's the correct terminology, yes.
Q. Okay. And do you know if that item that we saw in the rear cargo area is from here or not?
A. I do not know that, sir.
Q. Okay. And then this was the -- No. 307 is the sort of wide shot of the rear of the vehicle?
A. That is correct.
Q. Would you just please indicate with the pointer where the cargo -- rear cargo door handle is to open the door. If you can use that laser pointer.
A. If I remember correctly, I believe it's right in this area here.
Q. Let the witness reflect -- or the record should
indicate that the witness is pointing to what looks to be the far left side of the cargo door, over by the taillight assembly.

THE COURT: The record will so reflect.
Q. (By Attorney Buting)~ And we'll zoom in on that just so it's a little clearer. It's also next to what looks like a dealer sticker that says LeMieux Green Bay?
A. That's correct, sir.
Q. And does that look like that's where the key goes in, as well?
A. I believe that's the position where the key was put in, yes.
Q. Okay. Now, showing you the last one, 308, this is a closer up view of what we were just looking at, so I don't have to have it zoomed as much. That's the wheel cover you are talking about?
A. That is correct.
Q. I notice it looks kind of dusty; is that because it had already been fingerprinted by the fingerprint people?
A. No, this is the condition that we received the vehicle in. It is -- One of my duties is to photographically document this before it is processed. So that would have been the condition
that the RAV4 was received at the laboratory.
Q. Are you entirely sure about that? Let me just direct your attention to the far left side there, above the RAV4. Do you see, isn't that some sort of a sticker, oblong white sticker up there?
A. Yes, that appears to be one of the scales that we used for denoting where fingerprints are.
Q. Okay. So, it appears, then, that perhaps the fingerprint people had already been through here, or at least looked at some of the vehicles?
A. When this particular photograph was taken, yes.
Q. Okay. So that looks -- Is that the sort of thing that people -- the fingerprint people put on when they find what they think might be a usable or a latent print, fingerprint or palm print?
A. They usually use those stickers to identify areas that they want us to photograph.
Q. Okay. Do you know if you took a closer up picture of that particular area?
A. I did take some photographs of fingerprints that were on the RAV4, at the direction of forensic scientist, Michael Riddle. So those negatives would probably be in his possession.
Q. Okay. And when you take those, those are just negatives, you don't print them out like this?
A. No, our common procedure is that we put them on photographic film and then we also supply a negative to the examiner to work off of.
Q. Okay. And on the wheel cover, this -- do you see some markings that almost look like fingers, there and there, that is, on the upper surface of that wheel cover of the RAV4?
A. One of reasons I took a photograph similar to that before it was dusted for fingerprints was because I did observe what looked like to be two handprints on that wheel cover.
Q. Okay. And then a little bit lower on that, there also appears to be some other sort of markings. I don't know if you can describe what those are at all. Do those appear to be handprints to you as well or no?
A. That $I$ don't know, sir.
Q. Okay. But you don't believe -- I mean, you believe this is the way it actually looked without adding any kind of fingerprint dust to it?
A. That is correct, sir.
Q. That being the wheel cover, right?
A. That is correct.
Q. Okay. Did you happen to notice, as you were
taking photographs of this portion of the cargo door where the door handle is and the key goes in, it looks like on this prior photograph I don't see that little scale you mentioned?
A. It doesn't appear to be in that photograph, no, sir.
Q. Okay. Did you happen to notice, though, as you were taking those close up photos of the negatives that you said you gave to Mr. Riddle; did you happen to notice whether there was anything that appeared to be a blood stain in that area?
A. I don't recall.
Q. Okay. Do you recall Mr. Riddle directing your attention to anything, saying, hey, let's take a picture of this, this looks like this might be a blood stain of some sort or a dark reddish type stain?
A. I don't recall that conversation. No, I don't.
Q. Okay. All right. Now, last area of questioning is, you also took some measurements of the vehicle, correct?
A. That is correct, I did.
Q. And those measurements were done at the request of Mr . Fassbender, who is sitting in court today, right?
A. That is also correct.
Q. You were in phone contact with him when he was out at the scene, up in the Mishicot area?
A. I don't know if he was at the scene when he contacted me, but ...
Q. Okay.
A. But he did contact me by phone.
Q. Okay. And he suggested that you take some seat measurements of the, I guess the front driver's seat, right?
A. That's correct.
Q. Let's just see if those -- if that area -- maybe I have it up there. And those seat measurements are done sometimes just to -- just to document before anybody touches -- touches it, to see just how close up or how far back that driver's seat is, right?
A. That is correct, sir.
Q. All right. Showing Exhibit 290 to you, I believe it's up on the screen. As I understand it, you take -- you don't actually see the break pedal here, but what you do is, you measure from the break pedal up to the front curvature of the driver's seat?
A. Yes. In this particular case, that is one of the measurements that I took.
Q. And you came up with 18 inches, right?
A. Yes, I did.
Q. You also measure from the floor, directly down underneath the front of the seat, right up to the top curvature of the seat and take that measurement as well?
A. I wouldn't say underneath the seat, but it would have been on the same plain as the front of the seat to the floor.
Q. Okay. And so that would give you the seat height off of the floor?
A. The approximate height, yes.
Q. And in this instance you got 12 and a half inches, right?
A. That's correct.
Q. And then you also measure from the center of the steering wheel to the back of the driver's seat, the seat back?
A. That's correct, I also did that.
Q. And in this instance, you got 23 and a quarter inches?
A. That is correct.
Q. And that's without adjusting the angle of the
seat back, tilting it forward or ... That's leaving it the way it was, right?
A. That's with the seat in the position as we received it; that is correct.
Q. Okay. And then you also, in addition to taking those measurements, at some point, I guess just so I'm clear, this was actually on November 8th, right?
A. Yes.
Q. So this was after the vehicle had been processed for DNA, right?
A. I believe Ms Culhane had finished her examinations at that point.
Q. So it was okay for you to lean inside of it and, you know, touch things at that point, right?
A. Yes, but we still wore the appropriate clothing.
Q. Okay. But then you actually sat inside, in the driver's seat, in the position that it was, correct?
A. Yes, we did that.
Q. And you did that and you are 5 foot 11 , right?
A. Yes, that's pretty close.
Q. And you found that it was very uncomfortable, cramped, for you, with the seat in that position, right?
A. That's correct, it was a very tight fit for me.
Q. Your knees hit the console when you tried to break, for instance?
A. Yes.
Q. And you also had Mr. Nick Stahlke, your blood spatter guy, do that?
A. Yes, Nick also did that because he's smaller in stature than I am.
Q. He's about five-seven?
A. About five-seven and a half, round it off, five-seven.
Q. And -- just one moment. I won't ask you for Mr. Stahlke's characterization of whether he could fit or not, but did you see him sit in?
A. Yes, I did.
Q. Did it look like his foot or his knee was also hitting the console at all?
A. He conveyed to me --
Q. No, don't.
A. Oh, I'm sorry.
Q. Don't tell me what he conveyed, that would be hearsay, we'll deal with that, just what you could observe.
A. It appeared to me that it was also a close fit for Mr. Stahlke.
Q. All right.

ATTORNEY BUTING: That's all I have. Thank you.

THE WITNESS: You're welcome.
THE COURT: Mr. Gahn, any redirect?
ATTORNEY GAHN: No, your Honor.
THE COURT: Very well, the witness is excused. We started with the witnesses a little late this morning, so we'll take our morning break at this time and try to make it about 10 minutes.

ATTORNEY GAHN: Your Honor, before the jury leaves, I would like to move in the Exhibits 289 to 305, photographs.

THE COURT: Any objection?
ATTORNEY BUTING: No, objection. I also would like to move in exhibits 306,7 , and 8 , which I'm returning.

THE COURT: Any objection from the State?
ATTORNEY GAHN: No, your Honor.
THE COURT: Very well, all of those exhibits are admitted. Members of the jury, I will remind you again not to discuss this matter with yourselves during the break and we'll see you in about 10 minutes.
(Recess taken.)

THE COURT: Who will be calling the next witness for the State?

ATTORNEY GAHN: I will, your Honor.
THE COURT: Mr. Gahn, you may call your next witness.

ATTORNEY GAHN: State would call Sherry Culhane.

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, last name, $\mathrm{C}-\mathrm{u}-\mathrm{l}-\mathrm{h}-\mathrm{a}-\mathrm{n}-\mathrm{e}$.

## DIRECT EXAMINATION

BY ATTORNEY GAHN:
Q. Ms Culhane, what is your occupation?
A. I work as a Forensic Scientist in the DNA Unit, a Technical Unit Leader in the DNA Unit at the Wisconsin State Crime Laboratory in Madison.
Q. And how long have you been employed with the State Crime Laboratory in Madison?
A. 23 years.
Q. And could you expand a little bit more on what
your duties and responsibilities are at the Crime Lab.
A. As a Forensic Scientist in the DNA Section, I'm primarily responsible for the examination of physical evidence for the presence of biological material. We examine these items of evidence and try and identify the biological material and develop DNA profiles from those samples.

We're also submitted reference samples from specific individuals. And, again, we attempt to develop DNA profiles from those samples and simply compare the two to see if a specific person could or could not be the source of the evidence sample.

In addition to those duties, I also have technical leader responsibilities. And those include things like training new analysts, monitoring our quality control procedures, monitoring proficiency tests of the analyst. I'm also responsible for any new techniques, new equipment that is brought on line at the laboratory, for signing off on those procedures and making sure that they are tested properly.

And I'm also responsible for case flow, making sure that we meet court dates, our cases
are prioritized, and we get them out in a timely fashion.
Q. And how many people work in the DNA Unit at the Madison Crime Lab?
A. Currently we have 10 trained analysts.
Q. And how long have you been conducting DNA testing?
A. Since 1996.
Q. And is your full workday solely devoted to DNA analysis?
A. Yes, it is.
Q. And can you tell us approximately how many DNA tests have you, yourself, run?
A. Since 1996, a conservative estimate would be around 5,000.
Q. And what education do you have that qualifies you to perform DNA testing?
A. I have a bachelor of science degree in biology. My training program in 1996, the original training program, consisted of a series of lectures, written tests, written exams, that were all specifically related to the DNA typing process.

I have also had course work in molecular biology, statistics and biochemistry class at the

UW Madison. I have also attended numerous schools and work shops that are specifically related to DNA typing methods and interpretation of those results.
Q. How long does it take to become qualified to become a DNA analyst?
A. It depends on the experience of the person training, but anywhere from nine months to a year.
Q. And do you have hands-on training during this training period?
A. Yes.
Q. And could you describe that a little bit for the jurors.
A. Part of the training process is to run many, many, many samples through the system from start to finish. Those samples are processed exactly as you do case work. And those samples are interpreted by the trainee in exactly the same way.
Q. Who makes the decision when you are capable to perform case work analysis?
A. In my case, it was the person who trained me, which was my supervisor, Marie Verielle. I make that decision in training new analysts.
Q. And what role do professional societies and organizations play in the science of DNA technology?
A. The primary reason for those organizations is for scientists to get together and basically exchange information. All of those professional meetings are -- there's an agenda, there are people who present information about new technologies, about new instrumentation. It's also a place for scientists to get together and discuss problems that they have had, how they solved those problems. So it's a really good forum for exchange of information.
Q. And on a regular basis, do you read scientific literature in the area of DNA typing?
A. Yes, I do.
Q. And why do you do that?
A. For basically the same reason we go to professional meetings, to keep up with new technologies that are coming along, and to find out any new information that we need.
Q. Ms Culhane, have you testified before in court?
A. Yes, I have.
Q. How many times?
A. Ninety-one times.
Q. And have you ever qualified in court as an expert in DNA identification testing?
A. Yes, I have.
Q. And how many times?
A. Thirty-one.
Q. Has the court ever rejected you as an expert in DNA identification testing?
A. No.

ATTORNEY GAHN: I'm going to ask if -Mr. Wiegert, would you please obtain Exhibit No. 309 and hand that to Ms Culhane.
Q. Would you identify that document, please.
A. This is a copy of my curriculum vitae, which has all of the classes and educational background that I have.
Q. And, basically, does that summarize the qualifications that we have talked about thus far?
A. Yes.
Q. At this point, $I$ would like to talk a little bit about DNA itself and just what it stands for. We have prepared a power point presentation, a number of slides. Have you seen them before?
A. Yes, I have.
Q. And will they assist you in your testimony today
in front of this jury?
A. Yes.
Q. Okay. Ms Culhane, will you just take a moment and explain to the jurors what DNA stands for and what it is?
A. DNA stands for deoxyribonucleic acid. And, basically, it's the information storage system of the cell. It's the way the cells in your body store information. This slide is a short segment of DNA. And it illustrates the fact that DNA is composed of smaller units that are strung together in a specific order. The order of those units is what determines the information and how that information is stored.
Q. Could you tell us about some of the characteristics of DNA and how it is inherited?
A. The easiest way to think of DNA is to compare it to a blueprint. Just like when you are building a house or a building, you have a blueprint that gives you all the information that you need, all the components that are necessary to build that house or that building.

DNA is exactly the same way except it's on a cellular level. All the information that your cells need to function, to produce proteins,
and enzymes, all the things that make your body work, that information is contained in the DNA.

And you can see here, this structure is referred to as a gene. That information is stored in these structures referred to as genes. From the time of conception, all the way through your life, your DNA is responsible for the cellular development. It's responsible for how your cells develop. And many of our physical characteristics such as eye color, hair color, predisposition to certain diseases, all of those things are controlled by the information in your DNA.

Forensically, we are more interested in the portions of DNA that really do not function as a gene. They don't really do anything. Scientists aren't sure why they are there. And in the forensic application, there's a huge amount of variation within those portions of DNA. And so that's what we're really interested in. DNA is inherited from your biological parents. You receive 50 percent from your mother and 50 percent from your father. And you, consequently, pass on 50 percent of your DNA to your offspring. And these regions of DNA that
we're interested in forensically are inherited in exactly the same way.
Q. Now, Ms Culhane, you have used the word forensically a number of times, and in a forensic context. Would you explain to the jurors what you mean when you say in a forensic science capacity.
A. The word forensic is simply applying science to matters of law. So it's applying scientific principles to matters of law.
Q. And is it fair to say that the scientific underpinnings that you have just described are the reason why you can make DNA comparisons in your laboratory?
A. Yes, it is.
Q. I would like to just return now to what goes on in your laboratory and ask you, when you are performing DNA testing, is there a specific or particular protocol that you follow?
A. Yes, it is.
Q. And what is a protocol, please explain that?
A. A protocol is a detailed description of every step in the process of DNA testing. The protocol has all the components that you need for the reactions to work properly, all of the parameters
for your instrumentation. All of that
information is contained in the protocol. In our protocols, we also have interpretation guidelines that set up parameters and rules by which we interpret our results.
Q. Does your protocol cover every step from the receipt of evidence, through the testing process, to the writing of reports in a DNA case?
A. Yes, it does.
Q. And has your protocol been approved by any outside agency or organization?
A. Our protocols are reviewed during the process of accreditation. Our laboratory is an accredited lab and during that process our protocols are reviewed and examined by the auditors.

ATTORNEY GAHN: And I'm going to ask, Detective Wiegert, if you would just obtain Exhibit 310 and would you, please, hand that to Ms Culhane.
Q. And you have now, in your hand, what has been marked as Exhibit 310. Would you please tell the jurors what that is?
A. This is a copy of the protocols that we're currently using in the laboratory.
Q. And is it that protocol that you follow in
performing the tests in this case that you are about to testify about today?
A. Yes.
Q. Do you and other members in your lab undergo what's called proficiency testing?
A. Yes, we do.
Q. Would you describe that for the jurors and tell them what proficiency testing is.
A. A proficiency test is designed to evaluate a laboratory system as well as individual analysts. The proficiency tests are designed to mimic actual case work samples. We purchase our proficiency tests from an outside company called Collaborative. And we're required to perform those tests, each analyst, twice a year.

Most of the proficiency tests come to the laboratory, we treat them just like case samples. We take notes on them, we make documentation, and treat them just like a case. And most of them consist of two reference standards from a victim and a suspect, and two samples that are designed to mimic forensic samples. So they may be blood samples, they may be semen samples, they may be saliva samples, or they may be a combination, a mixture of those
samples.
When we look at those samples, we do preliminary tests and presumptive tests on them, to determine what type of fluid they are. And we develop DNA profiles from them. We also develop DNA profiles from our reference standards and compare the two just like we would in an actual case, and we make interpretations.

All of those types are recorded and sent back to the company. And then, after a period of time, we receive documentation back from the company whether we passed or whether we got all the types correct or not.
Q. Now, I believe you stated that -- you said the company name is Collaborative?
A. That is correct.
Q. And is that an outside agency, outside the State of Wisconsin?
A. Yes, it's a company that provides proficiency tests to many labs all across the country.
Q. And they have no affiliation with the Madison Crime Lab except to provide tests for you?
A. That's correct.
Q. And have you -- Well, let me ask you this, what are the results of all the proficiency tests that
you have taken?
A. They have all been correct.
Q. In other words, you passed all of your proficiency tests?
A. Yes.
Q. And what does it mean to say that a laboratory is accredited?
A. The specific type of accreditation that we have in the forensic lab is a certificate of accreditation by the laboratory accreditation board of ASCLD. ASCLD stands for the American Society of Crime Lab Directors. And it's a group of Crime Lab directors from all over the country that come into your laboratory and audit that laboratory once a year. I'm sorry, once every five years.

This is a voluntary program. And it's available to forensic labs who are doing case work. So the laboratory agrees to go through this accreditation process and these individuals come in and audit every aspect of your laboratory.

They look at -- Before they get to our laboratory they have all of our protocols and all of our procedures. So before they get there,
they know what we should be doing. So when they come into the lab, they check everything from security, to the physical layout of the lab, to evidence handling, sealing of evidence, and how the evidence is tracked through the system.

And then, anywhere from one to two auditors are assigned to each section in the lab. And they look through things like proficiency tests, quality control documentation. They pull case -- actual case files, and look through, make sure we're documenting everything correctly and that we're interpreting things according to our protocol.
Q. Has the Madison Crime Lab undergone this accreditation process?
A. Yes.
Q. How long ago was that?
A. The last time we went through accreditation was in May of 2006 .
Q. And did this ASCLD or outside organization, did they accredit the Madison Crime Lab?
A. Yes.
Q. And when you say that you are accredited, is accreditation -- is that an indicator of the quality of work that a laboratory does?
A. In my opinion, it is. What it does is, when these auditors come in, they use an audit document that is authored by the FBI. And that document contains specific standards that a forensic lab must adhere to if they are going to do case work.

So it ensures the quality of the work. It ensures that you are following accepted protocols in the community, and that your interpretations are correct. So, yes, in my opinion, I believe it does.
Q. And besides the five year accreditation process, are there any other inspections, shall we say, or audits, that happen at your Crime Lab?
A. Yes, and as part of the accreditation, DNA Section is required to be accredited by an outside individual from another Crime Lab once every two years. And it's usually a team of anywhere from two to three individuals from other crime labs that come into the lab and really audit many of the same things as the ASCLD auditors.

They look at case jackets. They look at all of our documentation. They look at our interpretations and our protocols and make sure
we're doing everything like we should. In addition to that, we do an internal audit. The Madison Lab goes -- sends people to the Milwaukee Lab, and they send people to our lab, to do an internal audit of many of the same things. So the DNA Section is essentially audited by someone, once a year.
Q. Does the Madison Crime Lab do DNA testing solely for law enforcement and for the prosecution?
A. By state statute we are required to provide services for authorized submitters. Authorized submitters are defined as law enforcement agencies, or District Attorney's Offices. However, defendants can request testing to be done that has to go through the District Attorney's Office, or it has to be through a court order.
Q. When you use the words, defendants can request this, are you referring to convicted offenders, perhaps people who are serving time in prison, can they request DNA testing?
A. Anyone can request DNA testing as long as they go through the proper channels and as long as they have a court order that tells us we have to do it.
Q. Are you familiar with the Innocence Project --
A. Yes, I am.
Q. -- which is run out of the University of Wisconsin Law School in Madison?
A. Yes, I am.
Q. Can you tell the jurors about that a little bit.
A. The Innocence Project, as I understand it, is a group of law students at the UW Law School in Madison and they review post-conviction cases for the possibility of reexamining evidence, or perhaps it's new evidence that's come along, or it is evidence that technology wasn't available at the original conviction and now technology of some sort is available and that evidence can be retested.
Q. And do they ever request testing from the Madison Crime Lab?
A. Yes.
Q. Have you, yourself, ever performed any DNA testing for the Innocence Project on behalf of a convicted person?
A. Yes.
Q. The jury has been informed that Mr. Steven Avery was convicted of an offense in 1985, and he went to prison for that offense; are you aware of
that?
A. Yes.
Q. Did some time come in the year 2003 when you were asked to review that case and look at the evidence again?
A. Yes, it was.
Q. And were you asked to perform any type of DNA testing in that case?
A. Yes.
Q. And it was your -- Was it your understanding that Mr. Avery had maintained his innocence in that 1985 case?
A. Yes.
Q. Do you remember exactly what were the evidentiary items that you examined in that case?
A. Yes, I do.
Q. Could you tell the jury about those?
A. In that case I examined 11 pubic hairs that were taken from a victim's pubic hair combings. Those were taken in a sexual assault case to recover any hairs that had been transferred during contact.

There were 11 pubic hairs -- yeah, 11 pubic hairs. And I attempted DNA analysis on all 11. Only two of those hairs gave me a DNA
profile. In a hair sample, we're actually looking at the root portion of the hair with cells attached to it.

Two of those hairs gave me results. One hair was from a male, one hair was from a female. The hair from the male was entered into the CODIS System and hit on an individual.
Q. Now, you are going to have to explain for the jurors a little bit. What do you mean by the CODIS System and what do you mean by hit on an individual?
A. The CODIS System is a data base of DNA profiles that is maintained by the FBI. Forensic labs contribute samples, evidence samples, to these data bases. They are also a data base of convicted offenders. And anyone who has been convicted of a felony, it's different rules in different states, has to submit samples to this data base.

So, when we have an evidence sample, it's entered into the data base, and it's searched against this index. And in this case, that male profile was entered into that system and searched.
Q. And what was the result of that search?
A. It hit on another individual.
Q. When you say another individual, you mean someone other than Steven Avery?
A. That's correct.
Q. And you, yourself, performed this testing?
A. Yes, I did.
Q. And because of the testing that you performed, and because of the search of the CODIS data bank, what happened to Mr. Avery?
A. I believe he was freed from prison.
Q. And that was because of the testing that you did?
A. Correct.
Q. Basically, did you follow the same protocol that you did in testing that case, testing the 1985 case, that you followed in this case?
A. Yes, I did.
Q. Did you basically follow the same steps and procedures in the DNA testing?
A. Yes.
Q. What is it meant in terms -- the terms called quality control and quality assurance in a laboratory?
A. The term quality assurance refers to system-wide or lab-wide measures that are in place to assure the quality of the work that's put out. Quality
control refers to everyday routine checks that we do on things like our equipment, our balances, our instrumentation, our reagents.

Everything that is used that is critical to the process of DNA typing, we do quality control checks to make sure that they are working properly, that they are calibrated, and that they are performing the way that the manufacturers tell us they are going to perform. That's what is referred to as quality control.
Q. And are quality control measures, as you just described, in place and implemented in the Madison State Crime Lab?
A. Yes, they are.
Q. And are they described in the protocol that you just identified?
A. Yes.
Q. Now, I would like to shift out of the laboratory just for a moment. And I would like to ask you to describe for the jury where DNA is found in the human body. And we'll put up this slide.
A. This slide illustrates many of the sources that we find biological evidence. When we're developing a profile, any cell in the body that has a nucleus, the center portion of the cell,
has DNA in it. So, what we're looking for is nucleated cells to develop a profile. Blood, semen, and saliva are probably our most common types of biological evidence.

If we're looking at a blood sample, we're looking at the white blood cells, because that's where the nucleus is.

If we're looking at a semen sample, we're trying to determine whether the DNA is in a sperm cell.

In a saliva sample, there is really
nothing in saliva except the cells that are in your mouth that are sloughed off in your saliva. And that's where the source of DNA is in a saliva sample.

The same with urine, cells that are sloughed in the process of urination, those would be our source of DNA in that sample.

Hair, the type of DNA testing that we're doing is referred to as nuclear DNA. And it's -again, it's only present in cells with a nucleus. In the hair, the only place we can find that are cells that may be attached to the root of the hair.

Teeth, the portion of the tooth that you
would find DNA would be in the pulp, the soft portion of the tooth.

And the last two, bone and tissue, both of those, what you are looking for is cells. In a bone, it's usually the center portion of the bone, and any part of the tissue that has nucleated cells would be a very good source of DNA.
Q. You talked about cells that are sloughed off, I believe you said. Can skin cells be sloughed off and can you obtain DNA from them?
A. Yes.
Q. Could you just talk about that a bit and tell the jurors how those profiles can be determined.
A. During the process of the day, usually when you are touching things, you are sloughing off cells and your body is making new cells all the time. Some individuals slough off or shed more cells than other individuals.

So, in the process of touching things you are, in some instances, leaving your DNA behind. We can develop profiles from that DNA if the quantity is sufficient and the levels are high enough for our systems to detect.
Q. In a person's body, is the DNA the same from
whatever biological fluid or tissue it comes from?
A. Yes, it is.
Q. Now, the jurors have heard testimony about buccal swabs being taken. Can you just briefly remind them what a buccal swab is?
A. A buccal swab, we use as a standard. And it's the swabbing of the inside of the cheek. So, you take a cotton swab and swab the inside of the cheek. And those cells are a source of DNA. And that's what we use as a standard in some cases.
Q. And when a buccal swab is obtained, you can get, through the testing process, a DNA profile from that, correct?
A. Correct.
Q. The DNA profile that you would get from a buccal swab, can you compare that profile to a DNA profile that perhaps you obtained from a biological substance at a crime scene?
A. Yes.
Q. And does the technology allow you to make comparisons?
A. Yes, it does.
Q. And does the technology allow you to determine whether a particular person was the source of the
DNA that was at that crime scene?
A. Yes.
Q. And is there a typing process that you use at the Madison Crime Lab to make those determinations and comparisons that we just talked about?
A. Yes. The current technology that we're using is referred to as STR typing.
Q. And could you tell the jurors a little bit about the DNA STR testing technique and the characteristics involved?
A. STR typing is a PCR based system that allows us to specifically amplify, or make a lot of copies, of specific target regions of DNA. These target regions of DNA are referred to as STR markers, or genetic markers. And they are interspersed throughout all of your DNA.

The actual process that we use to make all these copies that I'm talking about, is referred to as PCR. And that's the basis for this entire system. It allows us to copy these specific pieces of DNA to get a profile. When we develop a final profile that characterizes our stain, we look at 15 different target regions like this all throughout your DNA. So the final profile reflects the types at all 15 different
locations on the DNA.
Q. Now, this technology that you used to date, this PCR STR typing, how long have you been using that at the Madison Crime Lab?
A. Since 1999.
Q. And before using this technology, or going online with it, did you do anything to make sure that you can do this technology in your laboratory?
A. Yes, we did.
Q. And what did you do?
A. We go through a process referred to as validation. And that simply means that any time we are adding a new technology or new procedure, we have to make sure that it performs like we think it will.

So we -- Same goes for a new piece of equipment. We always have to validate and prove that it performs like we think it does. So it goes through a very lengthy testing process. We test the sensitivity. We test the reagents, all the components that are used in the reaction. We test whether it is appropriate for forensic use, whether -- A lot of our samples are very small samples and very compromised samples. They may be degraded. And those types of samples
are what we use in the forensic -- or what we have in the forensic setting. So we have to make sure that all of these techniques we're using are appropriate for those types of samples.
Q. This DNA testing that you do at the Madison Crime Lab, is this used in other fields besides criminal cases?
A. Yes, it is.
Q. Could you explain some of those for the jurors.
A. The basis of STR typing, like I said, is the PCR reaction. And $P C R$ is used in many, many different applications. It's used in the medical community to diagnose diseases. It's used for medical research. It is used to detect genetic diseases or predisposition to certain diseases. It's also used in anthropology to type very old remains or old artifacts.

It's also used for mass disasters such as Katrina, 911, all of those types of disasters. It's used to identify individuals that may have been involved in that.

So it has many, many applications. The basic reaction, the system we're working with, has many different other applications besides forensics.

ATTORNEY GAHN: Your Honor, I don't know what your preference would be, but I'm about to enter an area that I would not like to break up. And it probably would go about 20 minutes. And we're getting close to the results in this case. We could do that and take a late lunch or would you prefer to break now?

THE COURT: Well, is there a consensus on the jury? Would you like to break now or continue. Continue? All right. Seems to be a consensus to continue.

ATTORNEY GAHN: Thank you.
Q. All right. Ms Culhane, are there -- there are certain procedures or steps in the DNA STR typing process?
A. Yes, there are.
Q. Would you explain these to the jurors.
A. This shows all of the different steps that are involved from start to finish, how we come up with a DNA profile. The first thing we need to do -- and all of these steps are -- each sample is treated to all these steps. So, in other words, our evidence samples and our reference samples that are taken from specific individuals, are processed in exactly the same way.

The first step we need to do is extract DNA. We need to remove DNA from the sample, whether it's a reference sample, or an evidence sample. We need to get it out, extract it, and remove it. And then we need to find out how much DNA we have. And the next step is what does that.

And that's referred to as quantitation. We need to quantitate, or find out what the concentration of DNA is in our sample. Some samples have lots of DNA. Some samples have very small amounts of DNA. And that's important information for us to have.

The next step of the process is known as amplification. And remember, I was talking about all of these different target regions that we make copies of and that we amplify. This is the process by which we do that. We take our sample and we subject it to amplification. And all of these different fragments of DNA are amplified so that in the end we have a sample with all of our fragments and lots of DNA to look at.

The next step is to develop a DNA profile and to interpret that. When we interpret DNA profiles, we have an evidence sample and we
have a reference sample. And our interpretation involves deciding whether the person who the reference sample is from could or could not be the source of the evidence sample. And that's the basis of our interpretation.

If that person -- If the DNA profile from the evidence sample is different from the reference sample, that would be considered an exclusion and that person is excluded as the source of that evidence DNA. If the evidence profile matches or is consistent with the reference sample from a person, then we can say that person could be the source of that DNA. So that's what we refer to as interpretation.

If we have an exclusion, we're finished, that's the end of it. But if we have an inclusion, if we include someone as the source of the DNA, then we have to determine how common or how rare that type is in the population. And that's the last part of our process, is a statistical analysis to tell us how common or how rare that evidence profile is in the general population.
Q. Now, you have talked about a reference sample and an evidence sample. When you are talking about a
reference sample, is that like the buccal swabs you described that they take from the cheek of an individual?
A. Yes, it is.
Q. And it would be that reference sample that you would make comparisons with the crime scene samples?
A. That's correct.
Q. Now, suppose that you have, in the laboratory, a suspect's reference sample, say this buccal swab, and you have an evidentiary sample. Will you -and I'm going to look here now at the extraction step, the first step, do you extract them at the same time?
A. No, we don't.
Q. And why not?
A. We always try to keep those samples separate during extraction. And the primary reason is to avoid contamination, or switching of samples, the contamination of the evidence sample with the reference sample.
Q. And after you have completed a sampling, or the extraction, or one case, is there anything you do to your work area in between cases or the instruments that you use in the DNA process?
A. Yes, we clean down all of our instruments, our bench tops, all of the scissors, the forceps, pipettes, everything we use, with bleach. And we do that several times a day. We do that in between cases. We clean our forceps and our instruments, our scissors.

Anything we're touching the items of evidence with is done between each item of evidence. That way it allows us to make sure that we're not cross-contaminating samples, one with the other. So all of our scissors, and our forceps, everything that touches the evidence is cleaned in between each piece of evidence.
Q. And do you wear any special type of clothing to protect against any type of contamination of samples?
A. Well, we always wear gloves. Any time we're touching anything, we wear gloves. And we wear lab coats and safety goggles.
Q. And when you perform -- Let me ask you, and I want to look at the extraction and the amplification, those two steps, step one, the extraction, step three, the amplification, are those steps performed in the same area or location?
A. No, they are not.
Q. And would you explain to the jurors why you keep those steps separate.
A. Our extraction procedures are set up and done at our lab bench. The amplification process is done in a completely different room. The reason is because once you amplify those target regions of DNA, there's a lot of DNA in that sample. And it's a perfect template to amplify more DNA. So it's very important to keep that DNA confined into your amplification rooms and not let it get out into the general lab space.

So everything that goes into that amplification room, stays in there. All the test tubes, and all the equipment, everything stays in there. If it has to be brought out, it's cleaned down with bleach. So, once it goes into that room, it stays in there.
Q. Now, you say you cleaned down these rooms, or your work station with bleach; why do you use bleach?
A. Because it basically chews up the DNA and it destroys the DNA into a form where we can't get a type from it.
Q. When you perform these steps, are any type of
controls used with the performance of each step?
A. Yes.
Q. Would you describe what -- First of all, what is a control?
A. Controls are samples that we run along with our evidence samples and our reference samples. And we have several different kinds of controls. And each one of these controls serves a different purpose.

The purpose of the controls, depending on what they are, is to, one, make sure that our system is working correctly. And, two, to make sure that we can monitor any contamination that might be introduced into the sample or into the evidence, during the process.
Q. Would you describe for the jury what you in the forensic community, the science community, refer to as contamination. What is contamination?
A. In the laboratory, obviously we can't control any evidence until it comes into the lab. Once it's into the laboratory, we have many steps that try and minimize the chance of contamination. When we use the word contamination, we are referring to the unintentional introduction of DNA into a sample or into a control.
Q. And what steps do you take to deal with the possibility of contamination?
A. As you mentioned earlier, separating standards from evidence samples is one. We make sure that when we are opening the top -- opening our tubes that have DNA in them, we spin them down first in a centrifuge so that all the liquid on the top of the tube goes to the bottom. We use special sterilized tips when we're pipetting and removing liquid to make sure it's clean. We autoclave all of our reagents to make sure our reagents are clean and free of DNA. All of these steps are taken in order to minimize that risk.
Q. If contamination were to occur, does that necessarily mean you cannot interpret a DNA profile?
A. Not necessarily, it depends on what it is.
Q. Do you maintain a log of instances of contamination in your laboratory.
A. Yes, we do.
Q. And why do you maintain that log?
A. We maintain that $\log$ to -- it helps us troubleshoot in a lot of instances to find out where the contamination came from, where it was introduced, and what we can do to solve the
problem.
We have a data -- We have a list of everybody's DNA type in the laboratory so all the analysts know what their DNA type is. So it allows us, if we see any contamination, to see what the source of it is. Sometimes we can't determine the source of it. Sometimes it's very easy to see the source of the contamination.

We can also tell if we have DNA that may have been introduced from the manufacturer, may have been introduced into our reagents. So the contamination $\log$ is a learning tool. And it helps us determine where that contamination may have come from.
Q. Do you know, do all laboratories maintain contamination logs?
A. All accredited laboratories are required to maintain a contamination log. As far as -- And like I said, yes, we have one. And ours is because of as a learning tool and also because we're required by accreditation.
Q. Ms Culhane, do you know -- and I'm going to give you the date of January 1st of 2001 -- since January 1st of 2001, how many instances of contamination have you logged at the Madison

Crime Laboratory?
A. I believe it was 89.
Q. And that's been since January 1st of 2001?
A. Correct.
Q. I would like to also ask you, do you know how many samples of DNA you have processed at the Madison Crime Lab during that same period of time, January 1st, 2001 , to the present?
A. A conservative estimate would be a little over 50, 000.
Q. And of those 50 -- over 50,000 cases, samples, that you have analyzed, you have documented 89 instances of contamination?
A. Correct.
Q. And how many analysts do you have working at any given time in the DNA unit?
A. Anywhere from 8 to 12.
Q. And are those 89 instances of contamination over the past five years spread out among those analysts?
A. Yes, they are.
Q. I would like to go back just a little bit before the date of January 1st of 2001. I think you stated that you went online with this DNA STR testing methodology in 1999 , did you say?
A. Yes.
Q. Can you tell the jurors how many samples of DNA, using this technology, that you have tested at the Madison Crime Lab, since going online?
A. Again, this is an estimate, but a conservative estimate would be a little over 60,000.
Q. And the last step in your DNA STR typing steps is the statistical analysis. How do you go about determining this statistic to determine how rare or how common a particular profile would be in the population?
A. We use a data base that is maintained by the FBI. And that data base tells us the frequency of each one of these types in the entire DNA profile. So, by looking at that data base, we can determine the frequency of the entire profile in the general population.
Q. And why is this important?
A. Because this -- If you have a match between an individual and an evidence sample, and it occurs in 50 percent of the population, that's not very discriminating. That includes a lot of people. But if you have a match between an evidence sample and a reference sample, and it occurs one out of a trillion people, that's a very
discriminating match. And the statistical analysis allows us to do that, to tell whether we have a very common match, or whether we have a very rare match.

ATTORNEY GAHN: Your Honor, we're sort of on the cusp here of getting into the results of this case. And this may be a good time to break for lunch.

ATTORNEY BUTING: Your Honor?

THE COURT: Yes.
ATTORNEY BUTING: Why don't we do something else. I don't believe Mr. Gahn has actually offered Ms Culhane as an expert yet. And I have no objection to that, subject to my cross of her qualifications, perhaps doing that now, if you like.

THE COURT: Mr. Gahn.
ATTORNEY GAHN: I have no objection.
THE COURT: All right. So you don't object to her being qualified as a witness.

ATTORNEY BUTING: I don't, no. She's been testifying at length already. I think it's just an oversight probably.

THE COURT: All right. I did make a note, I was wondering when that was going to be asked. But I will, then, based on the representations of
the parties, accept this witness as an expert in the field of DNA testing.

ATTORNEY BUTING: Thank you, Judge.
THE COURT: All right. Members of the jury, at this time we'll take our lunch break. Let's plan on resuming at 1:15. Again, do not discuss the case or anything about it during your lunch break.
(Jury not present.)
THE COURT: You may be seated. Counsel, I don't think we have anything else to take up before resuming this witness at 1:15, correct?

ATTORNEY BUTING: Correct.
THE COURT: Very well, we'll see you at 1:15. (Noon recess taken.)

THE COURT: Mr. Gahn, at this point you may resume your direct examination.

ATTORNEY GAHN: Thank you, your Honor. DIRECT EXAMINATION CONTD.

BY ATTORNEY GAHN:
Q. Ms Culhane, would you describe for the jury what procedures your Crime Lab has in place for the documentation and processing of evidence that is brought to your lab for analysis?
A. When evidence is brought into the lab for analysis, whether it's through the mail or directly from an officer, we have individuals known as evidence specialists who take that evidence into the lab. They check to make sure it is packaged properly, that it's sealed properly. And then they give an item designation and a case designation to each piece of evidence. We have a computerized tracking system in the laboratory that works on a bar code system and a bar code is printed that identifies that piece of evidence as belonging to a specific case with a number and it also gives it a item designation.
Q. When you perform testing on items or evidence that is brought to you by the law enforcement agency, do you create some type of case file?
A. Yes, we do.
Q. And do you have that file with you today?
A. Yes.
Q. Do you need it with you to testify today in this matter?
A. Yes, I do.
Q. And does that file indicate whether you received evidence in the case of State of Wisconsin vs.

Steven Avery?
A. Yes.
Q. And does your file indicate what items and how many items of evidence were brought to the State Crime Lab for testing?
A. Yes, it does.
Q. Can you tell the jury approximately how many submissions of evidence came to the Crime Lab as a whole, not just specific to the DNA Unit but to the whole Crime Lab, for examination and analysis?
A. I believe there was around 345.
Q. And what other units are there at the Crime Lab besides DNA that would be examining this type of evidence?
A. We have a full service lab in the Madison Lab and we have a section that does fingerprints for identification. We have an imaging unit that takes photographs. We have a firearms section. We have a trace section. We have a drug analysis section, and a document section.
Q. And, specifically, for the DNA Unit, how many items, how many submissions were sent to you in this case at the DNA Unit?
A. 180 .
Q. Is that normal for a case?
A. No, that's very large.
Q. For you, yourself, is this the largest number of submissions you have ever encountered in a case?
A. Yes, it is.
Q. And how about for the Crime Lab as a whole, were the submissions of 345 or 46 items the largest number of submissions the crime lab has received for one case?
A. I believe so.
Q. Now, did you perform DNA testing on all 180 of those submissions to you?
A. No, I did not.
Q. Tell the jurors what you do when an item of evidence is submitted to you; what's the first thing you do?
A. The first thing we do is a visual examination of the item. We're looking, as I stated earlier, for a biological material. And a lot depends on what type of case it is. So, we basically make a visual examination of the item.

We take notes and we document the packaging of the item, what the item looked like, and exactly what we did. Depending on what biological material we're looking for, we have
what's referred to as a presumptive test, or preliminary test.

And these tests give us a good indication of what kind of biological fluid that we're looking for. We perform these preliminary or presumptive tests on the evidence, or on the stain. And from that point we make decisions as to which direction we should go, whether we should continue with the analysis to take it to the final step, which is DNA, or do we stop.

If we do a visual exam and there is no indication of a biological material, and it's not an item that was submitted specifically to be examined for touch, DNA that's left by touching, then that's the end of our analysis. If the presumptive test that we do for whatever biological fluid we're looking for is negative, then that's also the end of our analysis.
Q. Did you conduct presumptive tests on any of these 180 submissions to you?
A. Yes, I did.
Q. Basically, Ms Culhane, what were you looking for in this case?
A. The bulk of the evidence in this case $I$ was looking for bloodstains.
Q. Do you know how many submissions of this evidence that you submitted to presumptive tests for blood?
A. Yes.
Q. Tell me.
A. 41 .
Q. And did you get positives in those presumptive tests?
A. Yes, they were all positives.
Q. What -- How do you decide what to test and how to test it?
A. A lot depends on the piece of evidence it is, the results of our presumptive testing and, also, we have information as to what the alleged incidents are. Police officers and law enforcement that submit items of evidence will request certain testing based on whether they believe the item we're looking for is probative, whether it's going to provide information or not. So that plays into the decision that we make as to what type of analysis and how far to go.
Q. So you rely upon the investigators in the field and what they are finding; is that correct?
A. Correct.
Q. And they will make recommendations to you on the
probative value of a particular piece of
evidence?
A. Yes.
Q. Do they ever ask you to prioritize an item of evidence and put it at the top of the list for testing?
A. Yes.
Q. And why does that happen?
A. A lot of times we're not really sure. That's information that they have. They may want results on a particular item of evidence sooner than the additional items of evidence. Usually it's prioritized based on what is the most probative and what is most important to their investigation.
Q. Now, you have spoken a number of times about standards and about reference samples. And once again, so the jury is clear, what is a standard?
A. A standard is a known sample from a specific individual. And in most cases we request buccal swabs, which is the swabbing of the inside of the cheek, because that's a rich source of DNA. So the inside of someone's cheek is swabbed and that sample is used as a reference for their DNA types.
Q. Now, these are called, also, reference samples?
A. Yes.
Q. Are they sometimes called exemplars?
A. Yes.
Q. Did you receive standards in this case for testing?
A. Yes, I did.

ATTORNEY GAHN: I'm going to ask Detective Wiegert if he would bring up to you standards that were received and I'm going to ask you to identify them for the jury.

DETECTIVE WIEGERT: Which number?

ATTORNEY GAHN: Exhibits 317 through 325, please.
Q. Ms Culhane, I'm going to ask you to look at those exhibits and tell the jury what the exhibit number is, and if you can, identify from whom the standard is from.
A. The first one is Exhibit No. 319, item -laboratory item designation KL. It's buccal swabs from Barb Janda. And I received this in the laboratory. I have markings, my initials and dates, that $I$ received this.
Q. Thank you.
A. Exhibit No. 320, item designation -- lab item
designation KM, buccal swabs from Bobby Dassey. And, again, these have markings, my initials, and the date. My markings are on this packaging.

Exhibit 321, Crime Lab number -- or item designation KN, buccal swabs from Earl Avery. And, again, my markings are on here with my initials.

Exhibit 322, Crime Lab item designation KO. These are buccal swabs from Charles Avery. And, again, my markings and initials are on the -- this is the bar code that we put on it when it comes into the laboratory, with the case number and the item designation.

ATTORNEY BUTING: The record should reflect the witness was pointing to -- it's a yellow label, is it not?

THE WITNESS: Yes.
ATTORNEY BUTING: Bar code.
THE WITNESS: Yes.
A. Exhibit 323, Crime Lab item designation KP, and these are buccal swabs from Delores Avery.

Exhibit No. 324, item designation BU, and these are buccal swabs from Steven Avery. And, again, my initials and markings are on the packaging.

Exhibit No. 251, Crime Lab item designation EM. And, again, my initials and markings are on the packaging.

ATTORNEY GAHN: And, Detective Wiegert, if you could find Exhibits 317 and 318. These would be the buccal swabs of Allen and Brian Dassey -- I'm sorry, Allen Avery and Brian Dassey.

THE COURT: I'm sorry, did we hear what 251 was?

ATTORNEY BUTING: She didn't finish identifying 251. You just said the designation EM. THE WITNESS: Oh, I'm sorry, I apologize. These are buccal swabs from Brendan Dassey.

DETECTIVE WIEGERT: This is 318, you want 317 as well?

ATTORNEY GAHN: Correct.
Q. Would you identify what's been handed to you as Exhibit 318?
A. These are buccal swabs, item designation BS, from Brian Dassey.

ATTORNEY GAHN: We're also looking, Detective Wiegert, for Exhibit 325.
Q. While he is looking for that, Ms Culhane, you state that they contain what's called a item designation number; what is that number?
A. That's a number that we assign to that item when it comes into the laboratory. We start with a case with item designation $A$ and then we go through the alphabet. And so that is the item designation that we assign the item.
Q. And would you please identify that exhibit.
A. This is Exhibit 317, Crime Lab item designation AY, and these are buccal swabs from Allen Avery. And, again, my markings and initials are on the packaging.

This is marked as Exhibit 325, item designation from the Crime Lab as EF. And this is a slide holder that contains Pap smear from Teresa Halbach. And, again, my initials are on the packaging.

ATTORNEY GAHN: And, your Honor, I might add that I believe there is a stipulation as to the Pap smear for Teresa Halbach, that that was taken at the Bellin Hospital in Green Bay, Wisconsin, in the year 2002.

THE COURT: Is that correct, Mr. Buting?
ATTORNEY BUTING: That is correct.
THE COURT: Very well. The Court will
accept that stipulation.
Q. Now, Ms Culhane, did you develop DNA profiles
from each of these standards that you just identified?
A. Yes, I did.
Q. And did you compare the DNA profiles from the standards with DNA profiles that you developed from evidentiary samples in this case?
A. Yes.
Q. Now, did you issue reports in this case?
A. Yes, I did.
Q. How many reports did you issue?
A. Five.

ATTORNEY GAHN: I would ask Detective Wiegert to bring you Exhibits 311 through 315.
Q. I would ask you to identify each of those exhibits and tell the jury what they contain.
A. Exhibit 311 is a copy of the first report that I wrote in the Crime Lab and the findings as of that point in time. Exhibit 312 --
Q. I'm sorry, could you please -- did you give the date of that?
A. I'm sorry, no, that was issued on November 14, 2005.

The second report is listed as
Exhibit 312, that was issued on December 5th, 2005. And that was additional testing and my
results of that testing.

Third report is a marked as Exhibit 313, it was issued on March 31st, 2006. And, again, it contains the findings in this group of analysis.

The fourth report is marked as Exhibit 314. It was issued May 8th of 2006 . And this is a copy of my report.

The final report is marked as Exhibit 315, and it was issued December 4th, 2006.
Q. Now, do each of those reports have your findings and conclusions that you came to after completing your DNA testing?
A. Yes. Yes, they do.
Q. And do those reports describe the comparisons that you made between the DNA profiles developed from the standards compared to the DNA profiles developed from the crime scene samples?
A. Yes, they do.
Q. I'm going to show you what has been marked as Exhibit 298 -- I'm sorry -- 289, and previously identified as the 1999 Toyota RAV4 of Teresa Halbach. Do you recognize that?
A. Yes, I do.
Q. When was the first time you saw that vehicle?
A. On November 7th of 2005. And when I first saw the vehicle it was in the garage bay at the Wisconsin State Crime Laboratory.
Q. And what action did you take at that time?
A. I was assigned to this case to process the case, to process the car for biological materials.
Q. How did you go about processing the vehicle and tell the jurors, like what did you do first and then next in your process?
A. The first step processing a vehicle, or any item of evidence, is like $I$ said before, is to do a visual examination. When $I$ saw the vehicle, it had already been photographed, the doors were open. I looked inside the car and it was obvious there were numerous reddish brown stains that were consistent with the appearance of blood.

I began to go through and sample each one of these areas of staining and take notes and document where the stains were, and what my preliminary tests indicated. I performed preliminary tests of all the stains that were -the appearance of bloodstains, reddish-brown stains. And, again, I sub-designated each one of these stains. The item designation of the vehicle was item A. And as I recovered stains
from that, $I$ numbered them $A-1, A-2$, until $I$ recovered the number of stains.

ATTORNEY GAHN: I'm also going to ask that Detective Wiegert bring you what has been marked as Exhibit 326. I'm also going to ask Detective Wiegert if he would open that envelope and remove the contents and hand that to Ms Culhane, or show it to her.
A. It's marked as Exhibit 326. This is the first thing that $I$ recovered from the vehicle and it's my item designation $A-1$.
Q. And how can you tell that?
A. I have -- This is the coin envelope that I placed the swabbing of the stain into. And my markings, my initials and date is on it.
Q. And that envelope contains the actual swab that you took?
A. Yes.
Q. And you state that you gave that Crime Lab item designation number $A-1$; is that correct?
A. Yes.

ATTORNEY GAHN: And I'm going to ask Mr. Fallon if he would bring you what has been marked as Exhibit 296.
Q. And ask you if you recognize that photograph?
A. Yes, I do.
Q. And what is it?
A. This is a large reddish-brown stain in the rear cargo area of the vehicle. And this is where I sampled for presumptive test, which was positive for blood. And then I sampled additional staining to continue with DNA typing.
Q. Do you have the laser pointer up there?
A. Yes, I do.
Q. Just point to the area of where you did your presumptive test for blood?
A. The presumptive test, and then very close to that, I sampled my actual sample that I tested for DNA.
Q. And would you describe for the jurors exactly how you did the presumptive test?
A. Presumptive test is a color test. And it basically reacts positively with blood. I took a cotton swab, moistened it with sterile water. I swabbed just a tiny bit of the stain and I put reagents on it. If it's blood, it turns bright red -- or pink, bright pink. And a negative reaction is no color change. So that I performed on this stain.

Because it was positive, it gave me a
good indication that this was probably a bloodstain. So from that point I sampled the stain that $I$ was actually going to do my typing from.
Q. And tell the jurors how you sampled that.
A. I took another clean cotton swab, put sterile water on it, and basically just removed some of the stain onto the cotton swab and then allowed it to air dry.
Q. And then what did you do with that cotton swab?
A. I put it in -- I had a -- In the space where I was working, I have a test tube rack. And I had a test tube and I put the swab in there and allowed it to air dry.

ATTORNEY GAHN: I would ask Detective Wiegert, if you would remove the standards from the desk in front of Ms Culhane, and also you can bring back item A-1 exhibit.
Q. And could you also describe for the jurors as how this stain appeared to you and the general size of the stain. Can you do that?
A. It was a reddish-brown stain, probably about that big.
Q. And you are -- May the record reflect --
A. Six inches.
Q. -- you're holding your hands about 6 inches --
A. Six inches.
Q. -- apart? Was this a large stain that you sampled?
A. Comparatively speaking, most of the other reddish-brown stains were much smaller than that.

ATTORNEY GAHN: Now, I would ask Detective Wiegert to bring you what has been marked as Exhibit 327.

Your Honor, I had a talk with defense counsel, Mr. Buting, before we resumed this afternoon, and I have opened up the first exhibit, which was Exhibit 326, and Ms Culhane identified the coin envelope that had her swab in it. We have a number of swabs for her to identify. And Mr. Buting is not going to require us to open every envelope and pull it out and identify it with her initials. If something comes up, they are here, we can open them. But I believe that's the understanding that we have. ATTORNEY BUTING: That is correct, your Honor.

THE COURT: Very well.
Q. (By Attorney Gahn) ~ Ms Culhane, you have in front of you what has been marked as Exhibit 327. And
does that envelope contain -- can you tell what item designation number is contained in that envelope?
A. Yes, Item A-2.
Q. A-2. And can you tell the jurors where it was that you collected the swab in A-2 from.
A. It was collected from the plastic panel across the back cargo area of the vehicle. Like when you are stepping up into the cargo area, there is a plastic strip there. And A-2 was collected from that plastic strip?

ATTORNEY GAHN: Mr. Fallon is going to show you an exhibit which has been marked as Exhibit 298.
Q. I would like you to examine that. And also tell the jurors whether that photograph is depicted on the large screen as well.
A. Yes, this is a photograph of the swabbing I took, A-2. And it was actually located in this area here.

ATTORNEY GAHN: I would ask if Detective Wiegert would bring to you what has been marked as Exhibit 328.
Q. I will ask you, Ms, Culhane if you can identify Exhibit 328?
A. Yes, the item designation is A-4.
Q. And what is A-4?
A. That's a swabbing that was recovered from this area here, this metal around the frame of the opening of the cargo door area.
Q. And prior to swabbing those areas, did you also do presumptive tests?
A. Yes, I did.
Q. And what were the results of your presumptive tests on those two stains?
A. Both A-2 and A-4 were positive.
Q. For what?
A. For blood.

ATTORNEY GAHN: I'm going to ask Detective Wiegert if he would bring you Exhibit 329.
Q. Could you identify that exhibit, please.
A. This is item designation A-3.
Q. What is that?
A. This is a cotton swab from a reddish-brown stain that was taken from the inside surface of the rear cargo door.

ATTORNEY GAHN: Mr. Fallon is going to bring you a photograph marked as Exhibit 209.
Q. And $I$ will ask if you can -- if you recognize that. And tell the jurors whether that photograph is depicted on the large screen.
A. Yes, I do. This is the photograph I'm holding here, $A-3$, was recovered from this area here.
Q. And did you also perform a presumptive test on A-3?
A. Yes, I did.
Q. And what were the results of that test?
A. It was positive for blood.
Q. And similar to item designation No. A-1, did you take additional swabbings from $A-2, A-4$, and $A-3$ ?
A. Yes, I did.
Q. And what did you do with those?
A. Those were taken in exactly the same manner that I took A-1. I took a cotton swab and moistened it with sterile water, and I swabbed a portion of the stain and put it in a rack so it could dry, air dry.
Q. And what was the purpose of taking the swabs; were you going to be conducting any further testing?
A. Yes. My intention was to attempt to develop a DNA profile from those samples.

ATTORNEY GAHN: I'm going to ask Detective Wiegert if he would bring you Exhibit 330. I'm also going to ask, Detective Wiegert, if you will open that bag.
Q. Ms Culhane, I'm going to ask you to handle this item. Would you like some gloves for that?
A. Yes, please.

ATTORNEY GAHN: I'm sorry, Detective Wiegert.

DETECTIVE WIEGERT: That's all right.
Q. Can you identify that item?
A. This is item designation A-14. And this was a Pepsi can that was recovered from the cup holder by the front driver's side of the RAV4.

ATTORNEY GAHN: I'm going to ask Mr. Fallon
if he would bring you a photograph that has been marked as Exhibit 293.
Q. And I'm going to ask you to tell the jury whether that photograph is depicted on the large screen.
A. Yes, it is.
Q. And can you use the laser pointer and show the jurors where you found that Pepsi can.
A. Right here.
Q. And you, yourself, found this Pepsi can there, correct?
A. That's correct.
Q. And what did you do to process that can? Will you explain that and show the jurors.
A. I collected this can with the intention of
developing a profile, to see if $I$ could determine who may have drank out of the can. There is no visible staining on the can, so what I did was, I took a cotton swab, a sterile cotton swab, just like $I$ did in all the other stains, except in this particular case $I$ was only swabbing a particular area, not necessarily a stain. And I swabbed around the opening here where your mouth would touch if you drank out of this can.
Q. And just for the record, that exhibit is more properly described as a Wild Cherry Pepsi can?
A. Yes, sir.
Q. And you didn't do any presumptive tests on that?
A. No, I didn't.
Q. And why not?
A. There were no visual indications that there were blood stains of any kind.
Q. And what did do with the swabs that you took from the Wild Cherry Pepsi can?
A. I also put them in a rack, and allowed them to air dry, and eventually developed a DNA profile from that.

ATTORNEY GAHN: I would ask, Detective Wiegert, if you could remove those items from that area. Detective Wiegert, I would ask you if you
would please take to Ms Culhane Exhibit 331 and Exhibit 332. And I'm also going to ask Mr. Fallon if he will bring you a photograph which has been marked as Exhibit 292.
Q. Firstly, can you tell us what Exhibit 331 is?
A. Yes, it's a -- my item designation A-9.
Q. And what is A-9?
A. It's a cutting that was taken from this area of the front passenger seat, of a reddish-brown stain.
Q. And did you tell us what Exhibit 332 is?
A. 332 is my item designation $\mathrm{A}-10$ and that was a reddish-brown stain that $I$ recovered here from a $C D$ case in the front passenger seat.
Q. Now, you stated that $A-9$ was a cutting; how does a cutting differ from a swab?
A. Any time we have a biological material on a hard surface like glass, or wood, or that can, the best way to recover the most amount of DNA is to swab it with a cotton swab. If we have a stain that appears to be a reddish-brown stain like blood, or any biological material that's on fabric, we simply cut that stain completely out.
Q. And what did you do with the cutting and the swab? I'm sorry, back up. Referring now to Item

A-10, which is Exhibit 332; what is that?
A. That was the swab from the CD case, right here.
Q. And describe for the jurors what you observed on that CD case?
A. There was a reddish-brown stain on the case. I performed a presumptive positive, or presumptive test and got positive results. And, therefore, I sampled a portion of that stain to be further tested for DNA.

ATTORNEY GAHN: I would ask that Detective Wiegert would bring you Exhibits 333 and 335.
Q. And can you identify what Exhibit 333 is.
A. Yes, this is my item designation $A-6$.
Q. And can you identify 335?
A. It's my item designation as A-7.

ATTORNEY GAHN: And I'm going to ask
Mr. Fallon to bring you a photograph that has been marked Exhibit 290.
Q. And ask you if this photograph is depicted on the large screen?
A. Yes, it is.
Q. And would you tell the jurors what Item $A-6$ is, which is Exhibit 333?
A. That's a cutting of a stain that was taken from this area. It's a stain on -- actually the
fabric of the front driver's seat.
Q. And can you show the jurors what $A-7$ is and where you obtained it.
A. A-7 were some reddish-brown crust that $I$ found here on the floor beside the console.
Q. And did you perform any presumptive test on each of those samples?
A. Yes, I did.
Q. And what test did you perform?
A. I performed a preliminary test for blood. Both of them were positive. So, therefore, I took the cutting of $A-6$ from here and I removed the blood crust of $A-7$ from this area.
Q. And what did you do with those?
A. The cutting $I$ put in a coin envelope and sealed it up. And the blood crust $I$ put into a tube, a small plastic tube and sealed that and put that in a coin envelope.

ATTORNEY GAHN: I'm going to ask Detective Wiegert if he would bring you Exhibit 334. And I'm going to ask Mr. Fallon to bring you a photograph that has been marked as Exhibit 294.
Q. And I ask you if Exhibit 294 is the photograph that is depicted on the large screen?
A. Yes, it is.
Q. And can you identify what Exhibit 334 is?
A. It's my item designation $A-12$ and that was this reddish-brown stain here that I sampled. It's on the metal door frame between -- on the passenger side, between the backseat and the cargo area.
Q. And did you conduct any presumptive tests on that stain?
A. Yes, I did. I tested -- preliminary test for blood and it was positive.
Q. And then what did you do?
A. I, again, sampled that in a clean cotton swab with sterile water. And I took another portion of the stain, I let it air dry. And that's what I used for my DNA analysis.

ATTORNEY GAHN: I'm going to ask Detective Wiegert to bring you Exhibit 336. And I'm going to ask Mr. Fallon to bring you a photograph that has been marked as Exhibit 291.
Q. And I ask you if Exhibit 291 is the photograph that is depicted on the large screen?
A. Yes, it is.
Q. And will you identify for the jurors what exhibit 336 is?
A. It's my item designation A-8. And it was a sample that I recovered from this reddish-brown
stain here, right by the ignition.
Q. Did you conduct a presumptive test for blood on that stain?
A. Yes, I did, and it was positive.
Q. Then, after you conducted your presumptive test, what did you do?
A. I sampled another portion of that stain on another cotton swab and that's what I retained for my DNA testing.
Q. And after you collected all these stains, then what did you do with them?
A. I processed the car down in the garage area of our laboratory. We have like a work space, a work bench there. And that's where I had all of my samples set up. When I was completed processing the car, those were taken to my work bench and the cotton swabs were put into small coin envelopes to keep them until I began my analysis on them.
Q. And when you say begin your analysis, are you talking about the DNA testing procedures?
A. Yes, I am.
Q. In other words, you are going to begin those five steps that you described to the jurors before lunch?
A. Correct.

ATTORNEY GAHN: I would ask if Detective Wiegert would bring you Exhibit 325. It's the Pap smear of Teresa Halbach.
Q. Now, we have already identified that exhibit as the Pap smear of Teresa Halbach; is that correct?
A. Yes.
Q. What is a Pap smear?
A. As I understand it, it is a sample of cells from a woman's cervix. It is used for medical testing to check for abnormal cells.
Q. And where would the DNA come from in a Pap smear?
A. As I stated earlier, any cell that -- any
nucleated cell is going to have DNA. So any of the cells from the Pap smear, cervical area, tissue cells, it will come from the nucleus of those epithelial cells that are on that smear.
Q. Now, using the DNA technology that you described before lunch time, did you develop a DNA profile for Teresa Halbach, from that Pap smear?
A. Yes, I did.
Q. And I'm going to ask you, if according to your reports, does the slide we will put up next display your results?
A. Yes, it does.
Q. I would like you to take the laser pointer and at this point explain to the jurors exactly what they are looking at.
A. This series of numbers and letters on this side are referred to as genetic markers. And all of this information pinpoints where those genetic markers are found throughout your DNA. Earlier I talked about the target regions of DNA that are amplified, and we make a whole lot of copies of them.

This is what $I$ was referring to. We looked at 15 different target areas of DNA that are amplified. These numbers on the right side are the types at each one of those locations. So for instance, at D3S1358, Teresa Halbach's type is a 1618.
Q. Are there other possible types at that genetic location of D3S1358?
A. Yes.
Q. Do you know how many different types there are at that location?
A. Not exactly, but probably something like 11 to 20.
Q. Can you compare, for the jurors, when you talk about types, how these would be like ABO types?
A. These types are actually the different fragment sizes, those different target sizes that we amplified. The ABO system is a type of genetic marker, but the discriminating power of $A B O$ systems, which is what we used many years ago, is much less than the discriminating power of the combined -- all of these combined types.
Q. Now, you previously testified that you collected your swab A-1 from the rear cargo area --
A. Yes.
Q. -- of the RAV4; is that correct?
A. Yes.
Q. Can we go to the next one, please. And, again, please show the jurors where you collected your A-1 from.
A. In this area right here.
Q. And that was a blood stain that tested positive in this presumptive test, correct?
A. Right.
Q. You also testified that you collected swab A-2 from across the panel of the rear cargo area. Show the jurors, again, where that was.
A. Yes, that was right in this area here.
Q. And you also testified that you collected your swab A-4 from the metal frame. Show the jurors
where that was.
A. Right along here.
Q. And you also testified that you collected A-3 from the cargo door itself; is that correct?
A. Yes.
Q. And can you show the jurors where that is?
A. Right here.
Q. And, again, all of these stains, you had a presumptive positive test for blood?
A. That's correct.
Q. And you also testified that you collected a swab from the Wild Cherry Pepsi can which you labeled at $A-14 ;$ is that correct?
A. Yes, right here.
Q. And, again, show the jurors. Thank you. Now, did you develop DNA profiles from each of these swabs?
A. Yes, I did.
Q. And according to the reports that you have, does the following slide correctly depict your results?
A. Yes, it does.
Q. And, again, would you explain to the jurors what this slide shows.
A. Again, these are the genetic markers, these are
the 15 different markers we're looking at. And these are the types that were developed from each one of these evidence samples.
Q. And each one of those evidence samples came from the RAV4 of Teresa Halbach, correct?
A. Correct.
Q. Now, can you tell whether this particular DNA profile is from a male or a female?
A. Yes.
Q. How can you do that?
A. This marker here, referred to as amylogen, is a gender marker. If you are female, you are only going to have an X chromosome. If you are a male, you will have a X and a Y chromosome.
Q. So this profile is from a female?
A. Correct.
Q. I notice that after genetic marker D7SA20 there is an 11?
A. Correct.
Q. Why is there only one number there?
A. As I stated earlier, these genetic markers are independently inherited, just like genes. So you inherit 50 percent from your mom and 50 percent from your dad. Now, the fact that this is an 11 means that she is a homozygote at this marker.

And that means she got the same type from her mom and the same type from her dad. At D-3 there are two markers. This is referred to as a
heterozygote. And she received one from her mom and one from her dad.
Q. And this DNA profile that you developed from the cuttings and the swabs from the RAV4, did you compare that profile to the DNA profile that you developed from Teresa Halbach's Pap smear?
A. Yes, I did.
Q. And according to your reports, does this slide correctly display your findings?
A. Yes, sir, it does.
Q. Would you please point out to the jurors your findings and conclusions?
A. Again, these are all the genetic markers. And you can see that the types from the evidence samples are consistent with the types from the Pap smear of Teresa Halbach. So at this genetic marker, the evidence sample is 16 18, Teresa is 16 18. At this marker it's 69.3, Teresa is a 69.3. And all of these markers are consistent with the ones from Teresa Halbach.
Q. And did you calculate a statistic to determine how rare or how common this particular DNA profile would be in the population?
A. Yes, I did.
Q. And I'm going to show you a slide and ask you if this correctly depicts the statistical analysis that you performed?
A. Yes, it does.
Q. And would you explain to the jurors what this slide means.
A. Remember earlier I said that we do a statistical analysis when we have a match between an evidence sample and a reference sample. If we have an exclusion, we're finished, that's the end of it. But if you have a match between an evidence sample and a reference sample, then you have to determine how common or how rare that match -- or I mean that profile from the evidence sample is in the population.

This first number here tells me that the probability of finding someone in the Caucasian population, some unrelated, random person that has the same profile as the evidence sample, the probability of that is 1 person in 416 quadrillion in the Caucasian population, 1 person in 642 quadrillion in the African-American population, 1 person in 641 quadrillion in the
southeastern Hispanic population, and 1 person in 1 quintillion in the southwestern Hispanic population.
Q. And why do you look at these different populations when you are estimating the frequency of these genetic markers?
A. When we are calculating and estimating these frequencies, we use a data base that's maintained by the FBI. And that data base has samples from individuals in these four different population groups. This slide illustrates that even though the rarity of the profile is different, in these four population groups, there's not a lot of difference between population groups. There are some differences, but this profile is extremely rare across all four populations.
Q. What does this number -- What do these numbers mean, Ms Culhane?
A. This number means that the probability of finding a person, random person, unrelated, in the population, that has the same profile as the evidence sample, is 1 person in 416 quadrillion.
Q. Do you have an opinion, to a reasonable degree of scientific certainty, whether Teresa Halbach is the source of the blood that you found on $A-1$,

A-2, A-3 and A-4, and the source of the biological fluid on the Wild Cherry Pepsi can?
A. Yes, I do.
Q. And what is that opinion?
A. That Teresa Halbach is the source of the DNA from those items.

ATTORNEY GAHN: I'm going to ask Detective Wiegert to bring you what has been marked as Exhibit 337.
Q. Again, I have spoken with defense counsel before we began this afternoon and, Ms Culhane, does that container, which is Exhibit 337, contain some charred remains that you examined in this case?
A. Yes, it does.
Q. And did you assign a Crime Lab designation number to that?
A. Yes, I did.
Q. What is that?
A. Item BZ.
Q. And I'm going to ask you to look on the slide on the big screen. And what is contained in that box there in front of you, which is Exhibit 337, is this the piece of charred remains that you examined?
A. Yes, it is.
Q. And when did you receive this; do you know?
A. I can refer to my notes.
Q. Please.

THE COURT: Do we have a number for the photo exhibit?

ATTORNEY GAHN: Your Honor, we don't have that with us, but you will get one.
A. Item BZ was taken into the laboratory on November 11th, 2005.
Q. And was this -- When you examined this, was this a combination of bone and tissue?
A. It appeared to be, yes.
Q. And what is shown on the big screen here, which we will later get an exhibit for and mark it, is that the bone and tissue fragment sample that you examined?
A. Yes, it is.
Q. How did you go about processing this for DNA?
A. Because this sample was compromised, it had been subjected to -- appeared to be subjected to intense heat, I needed to find an area that I felt was the least damaged. So I chose a portion of the tissue, which $I$ believe was in this area here, close to the bone. And sampled a portion
of that to continue my extractions and to
continue my typing.
Q. Were you able to develop a DNA profile from this piece of charred remains?
A. Yes, I was.
Q. And according to your reports, does the next slide correctly display your findings of your test?
A. Yes, it does.
Q. Would you explain to the jurors what this is.
A. Again, these are the genetic markers that we're looking at. And these are the types. You will notice here there are no numbers at these positions, these markers. And the reason is because this was a fairly degraded sample of DNA. DNA is a very stable molecule; however, it breaks down and is degraded and broken up into pieces by several things, heat being one, sunlight, nucleases in the environment that chew it up.

But this was obviously a sample that had been subjected to intense heat. And so, therefore, on these fragments, these STR markers, which are fairly large, the fragments -- there was not enough DNA at those positions to develop a type.
Q. Did you compare this partial profile with the DNA profile that you obtained from the Pap smear of Teresa Halbach?
A. Yes, I did.
Q. And does this slide accurately depict your findings?
A. Yes.
Q. And would you please explain what your findings were, to the jury?
A. In the -- At the marker positions where I did get results, these types are consistent with Teresa. Obviously, I don't know what the types are here because there were no results. But for everything else, all the types that I actually developed, they were consistent with Teresa Halbach.
Q. Now, you stated previously, when you made your comparisons to Teresa Halbach's DNA profile with the samples of blood that you found in the RAV4, you were able to determine that Teresa Halbach was the source of that blood; is that correct?
A. Yes.
Q. Can you say that in this case?
A. No.
Q. Why not?
A. This was a partial profile. When we have a partial profile, we can only do a statistical interpretation on the markers that we have results for. In order to get very large numbers and very rare profiles, what gives us those large numbers is results, at all 15 different markers. When we have less than that, then the frequency of that profile becomes a little more common than it would if it was a complete profile.
Q. Were you able to develop a statistic to tell you how rare or how common the DNA profile on Item BZ, the charred remains, would be in the population?
A. Yes, I was.
Q. And does the next slide depict the frequency in the population of the DNA profile on the charred remains?
A. Yes.
Q. And would you explain to the jury these numbers and what they mean.
A. This calculation was done exactly like the calculation from the blood stains. The difference is, this was not a full profile, it was only a partial profile. So if you do a statistical analysis of the types that you got,
and calculated the frequency of those types, the probability of another random, unrelated person, in the population, having the profile, the partial profile of the remains, is 1 person in 1 billion in the Caucasian population, 1 person in 2 billion in the African/American population, 1 person in 2 billion in the southeastern Hispanic population; and 1 person in 3 billion in the southwestern Hispanic population.
Q. And, again, can you break this down for the jurors, exactly what that number, one billion, would mean, as it relates to this DNA profile from the charred remains?
A. That is the frequency that that partial profile, those results at just the markers that I got results from, the frequency of that partial profile, that is the frequency that it occurs in the population.
Q. Are there a billion people in the State of Wisconsin?
A. I don't believe so.

ATTORNEY GAHN: Your Honor, I have now what has been a photograph that has been marked as Exhibit 338. I will ask Mr. Fallon if he will give that to Ms Culhane.
Q. And Ms Culhane, would you look at that photograph, and is that a photograph of the piece of charred remains that we previously put up on the large screen.
A. Yes, it is.

ATTORNEY GAHN: I would ask if Detective Wiegert would bring you Exhibit 237 -- I'm sorry, 277. This would be the bullet fragment.
Q. And can you identify that exhibit that's in front of you, Ms Culhane?
A. Yes, this is Crime Lab item designation FL. And it is a lead bullet fragment. My initials and markings are on the packaging.
Q. And can you tell when you received that exhibit?
A. That came into the laboratory on May 16 -- I'm sorry, March 16th, 2006, and I took custody on March 28th, 2006.
Q. And how did you process that bullet?
A. The first thing I did was, just like every item of evidence, it was a visual examination. There was nothing visual on the fragment. There didn't appear to be any stain. So in order to remove any residual DNA that might have been on the bullet, I washed it. I put it in a test tube and washed it with some buffer that we use to extract
the DNA. And the washing of that bullet, the washing liquid is what $I$ performed the rest of my procedure on.
Q. And were you able to develop a DNA profile from that washing on Item $F L$, the bullet?
A. Yes.
Q. And according to your reports, does the next slide correctly display your findings?
A. Yes, it does.
Q. And would you please explain your results to the jurors?
A. Again, I was looking at all of these. These are the different markers. And these are the types at each one of these markers. You will notice at D-16 and at TPOX I am -- there's an asterisk there. That indicates that there was a visible peak there which represents a type. But it was below our parameters for including that in the final analysis. So it -- I'm missing a peak here and a peak at TPOX.
Q. And did you compare this profile that you obtained from the bullet fragment with the DNA profile you obtained from the Pap smear of Teresa Halbach?
A. Yes, I did.
Q. And according to your reports, does this slide correctly display your findings?
A. Yes, it does.
Q. And would you explain them to the jury.
A. The profile from the bullet is consistent with all of the types from Teresa Halbach. You will notice at $D 16$ she's missing the 13 type, and at TPOX she is missing the 10 type. And, again, those peaks were visible, but they were below our threshold for calling those types.
Q. Did that have any impact on your match criteria in this interpretation?
A. The impact is that I cannot use the information, the frequencies at this marker, and at this marker, to figure out my final frequency. In other words, I had to calculate the frequencies at all of the other markers except D16 and TPOX.
Q. But nothing about those two asterisks that you have on your -- on the chart here excluded Teresa Halbach as being on the bullet?
A. That's correct.
Q. Did this match differ in any way from the previous matches that you called?
A. Yes, it did.
Q. And could you explain to the jury what happened.
A. During the extraction of this item of evidence, as I talked about earlier, we set up controls that we run with all of our samples. When we begin an extraction, whether it is an evidence sample or a reference sample, when we begin the extraction, we begin what's called a manipulation control. And it's, basically, a negative blank control. And its helps us monitor if any unintentional DNA is introduced into the sample or into the process.

In this particular case, there was a trace amount of -- a trace amount of DNA showed up in the quantitation portion where I had to quantitate and find out how much DNA I had. There was a trace amount of DNA in the negative control. I took the profile to completion and I developed the profile on it. And the profile in the negative control turned out to be consistent with my own DNA type.
Q. What did that mean?
A. That means that during the extraction procedure $I$ inadvertently introduced my own DNA into the negative control.
Q. Did that have any impact on your interpretation of your results?
A. It did not have any impact as far as the profile from the evidence sample. It's just the fact that I introduced my own DNA into the manipulation control.
Q. Were there any other profiles developed on the bullet besides Teresa Halbach?
A. No.
Q. Was Teresa Halbach's profile the only profile that you found on that bullet?
A. Yes.
Q. Were there any mixtures?
A. No.
Q. And your profile was found where?
A. In the negative control, which should have had just reagents in it. It should not have had any DNA at all in it.
Q. And how do you think your DNA profile got into that control?
A. I believe my DNA profile was introduced during the extraction procedure when $I$ was talking. At the time when I was setting up these samples, I was training two analysts, newer analysts, in the lab. And they were watching me. This sample was not an average sample, simply because we handled it a little different. It wasn't a swabbing and
it wasn't a cutting. The washing part of it was a little bit different than what we usually do. So I was explaining to them what I was doing and as $I$ was setting it up. And apparently -- I felt as if $I$ was far enough away from my workbench not to introduce my DNA, but apparently I was incorrect.
Q. Now, your DNA did not come up on the bullet, did it?
A. No.
Q. It only was in the control?
A. That's correct.
Q. Do you have an opinion, to a reasonable degree of scientific certainty, whether Teresa Halbach is the source of the DNA on Item FL, the bullet?
A. Yes.
Q. And what is that opinion?
A. I believe she is the source of the DNA on that bullet.

ATTORNEY GAHN: I would ask if Detective Wiegert would, please, bring to Ms Culhane what's been marked as Exhibit 324, and this would be the buccal swab of Steven Avery.

Your Honor, before I go any further, I think we have some considerable more testimony
for the rest of these samples. Would you like to break now?

THE COURT: I think we'll go another 15 minutes to kind of split the afternoon equally in two.

ATTORNEY GAHN: Okay.
Q. (By Attorney Gahn)~ Detective Wiegert has brought you what has been marked as Exhibit 324 , and that is what you identified as the buccal swab of Steven Avery?
A. Yes.
Q. And once again, that's what's called a standard, correct?
A. Correct.
Q. And what are standards used for?
A. As reference samples to compare to the evidence samples.
Q. Using the DNA testing procedures that you described this morning, did you develop a DNA profile from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does the next slide correctly depict the DNA profile that you developed from Steven Avery's buccal swab?
A. Yes, it does.
Q. And would you describe for the jurors your findings?
A. These are the same genetic markers that I examined when I looked at the evidence samples and the standard from Teresa Halbach. And, again, at each one of these markers, Steven Avery's sample had a specific type. The amelogenin marker is $X Y$, which is different from Teresa because this is a male individual. And he has the X and Y chromosome.
Q. We heard testimony yesterday that a number of swabs were taken from the garage floor of Steven Avery. And did you receive, at the Crime Lab, swabs that were taken from the garage floor of Steven Avery's garage?
A. Yes, I did.
Q. And did you assign Crime Lab designation numbers G, I1, J, K, O, and $P$ to six of the swabs from the stains on the garage floor of Steven Avery's garage?
A. Yes, I did.
Q. And did you test those swabs from Steven Avery's garage floor --
A. Yes.
Q. -- for a DNA profile? And did you obtain a DNA
profile?
A. Yes, I did.
Q. And does the next slide correctly show the DNA profile that you obtained from the six swabs of blood from the garage floor?
A. Yes, it does. And, again, you can see that the types are consistent throughout all of the markers that we looked at.
Q. Now, did you receive other items? We have had testimony in this case that blood stains from the sink or the vanity in the residence of Steven Avery were taken and sent to the Crime Lab; do you recall that?
A. Yes.
Q. And do you recall submitting those to DNA testing?
A. Yes.
Q. And did you develop a profile from those submissions?
A. Yes, I did.
Q. And what was the profile you developed?
A. It was consistent with Steven Avery's profile.
Q. And I'm going to show you the next slide. And this has been identified as the Grand Am, the 1993 Grand Am owned by Steven Avery. Did you
also examine this at your Crime Lab?
A. Yes, I did.
Q. And on the next slide, can you point out to the jurors, did you locate any bloodstains in that vehicle?
A. Yes, there were bloodstains on the gear shaft here and along the console.
Q. And did you do presumptive tests on those bloodstains?
A. Yes, I did.
Q. And did you eventually do DNA testing on those bloodstains?
A. Yes.
Q. And what were your results?
A. The types were consistent with Steven Avery.
Q. We had testimony a few days ago that there was a swab taken of the release lever of the hood latch of Teresa Halbach's RAV4. That was identified as Exhibit 205.

ATTORNEY GAHN: Will you find that exhibit, please, Detective Wiegert.
Q. Can you identify that exhibit, Ms Culhane?
A. Yes, this is our item designation ID, and it has our laboratory bar code item designation and my initial and date on it.
Q. And that contains a swab from the hood latch of Teresa Halbach's RAV4?
A. Yes.
Q. And did you perform DNA testing on that hood latch --
A. Yes.
Q. -- swab? Do you recall, when you looked at the swab, did you notice any condition to it, as far as color?
A. It was discolored, but it did not have the appearance -- it was not a reddish-brown discoloration consistent with blood.
Q. So it did not appear to have blood on the swab?
A. Correct.
Q. But you proceeded with DNA testing on the swab, nevertheless?
A. Yes.
Q. And did you develop a profile from the swab of the hood latch of Teresa Halbach's RAV4?
A. Yes, I did.
Q. And I'm going to show you the next slide and ask you, do your notes and your records reflect these as your findings?
A. Yes, they do.
Q. Could you explain what your findings were to the
jury.
A. Looking at the same genetic markers, these are the types that were developed from the swab that was reportedly taken from the hood latch of the RAV4.
Q. And this is what you would call a full profile; is that correct?
A. Yes.
Q. What does that mean when you say it is a full, complete profile?
A. A full profile indicates that you have gotten results at all 15 different markers that we look at. If this was a partial profile, such as in the charred remains, I would be missing types at some of these markers.
Q. Did you compare this profile that you found on the swab of the hood latch of Teresa Halbach's RAV4 with the DNA profile that you developed from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this next slide correctly display your findings?
A. Yes, it does.
Q. And would you please describe your findings to the jurors?
A. At each one of the markers, the types from the swabbing on the hood latch were consistent with the types from Steven Avery's buccal swab. If you look at all the numbers for all of the markers, they are consistent with the entire profile.
Q. Now, you testified before that you received a number of standards at the Crime Lab, did you?
A. Yes.
Q. In other words, you received buccal swabs from Allen Avery, Brian Dassey, Brendan Dassey, Barb Janda, Bobby Dassey, Earl Avery, Chuck Avery and Delores; is that correct?
A. Yes.

THE COURT: Mr. Gahn, excuse me, after you
wrap up this portion of the hood latch, I think we'll take our break.

ATTORNEY GAHN: Yes, your Honor. Fine. Thank you.
Q. (By Attorney Gahn)~ Did you develop DNA profiles from all those standards of reference samples?
A. Yes, I did.
Q. When you would come up with a profile from an evidentiary item like the hood latch, did you compare the profile from the hood latch with all
the other standards?
A. Yes, I did.
Q. And what were the results?
A. They were inconsistent. The profile from the hood latch was not consistent with any of the other standards that I examined.
Q. But the profile from the hood latch matches Steven Avery?
A. That's correct.
Q. And do you have an opinion, to a reasonable degree of scientific certainty, whether the DNA profile that you developed from the swab of the hood latch of Teresa Halbach's RAV4, that Steven Avery is the source of that profile?
A. Yes.
Q. And what is that opinion?
A. That he is the source of that profile.

ATTORNEY GAHN: Thank you.
THE COURT: All right. Thank you. Members of the jury, we're going to take our afternoon break at this time. We'll resume a little before 3:00. I will remind you, again, not to discuss the case at any time during the break.
(Jury not present.)
THE COURT: Counsel, let's report back a
little before 3:00.
(Recess taken.)
THE COURT: Counsel, before we bring the jury back in, $I$ just wanted to get some idea of the agenda for the rest of the day. Mr. Gahn, how long do you think you will be with direct?

ATTORNEY GAHN: I think at least a half hour, possibly 40, 45 minutes. But I don't think not before a half hour, $I$ don't believe.

THE COURT: All right. And, Mr. Buting, I take it you may well not complete your cross-examination, but you wish to get started?

ATTORNEY BUTING: I wouldn't even come close to completing the examination. Normally, I guess I wouldn't mind starting and finishing it if it was the next day, but I think with a whole break of a weekend, it might be easier, if the Court didn't mind ending a little early today, if we would just start fresh with cross on Monday morning.

THE COURT: Okay. Before I answer that, does the State have any shorter, quicker witnesses.

ATTORNEY KRATZ: I'm finding out right now, Judge. We have some examination with Mrs. Halbach, Karen Halbach, that we would be happy to put in today.

ATTORNEY BUTING: Could we approach for a moment, please.

THE COURT: Go ahead. (Side bar taken.)

THE COURT: All right. Before we go back, I should announce we just had a side bar conference and I think the feeling is that if the direct examination ends a little early today, we'll probably simply let the jury go home a little early.

There was a side bar earlier this morning where counsel asked the Court if the other jurors knew why one of the jurors was missing today. And the answer to that is, yes, they learned that this morning when they were leaving on the bus. And that was the purpose for that brief side bar we had earlier today. All right. At this point we'll bring in the jury. (Jury present.)

THE COURT: You may be seated. And, Mr. Gahn, you may resume your direct examination of the witness.

ATTORNEY GAHN: Thank you, your Honor.

## DIRECT EXAMINATION CONTD.

ATTORNEY GAHN: I would ask if Detective Wiegert could retrieve Exhibit 211, which is the

Toyota key. Please take that to Ms Culhane. BY ATTORNEY GAHN:
Q. We have presented you with an exhibit that has previously been marked as Exhibit 211, and previously identified as a Toyota key that was found in Steven Avery's residence. And I ask you, do you recognize that key?
A. Yes, I do.
Q. And how do you recognize that key?
A. It's the Toyota key that I examined. There was a -- This is the same keyring that it was attached to.
Q. We also have, on the next slide, a photograph that -- is that key that you have in front of you, Exhibit 211, the key that is in this photograph?
A. Yes, it is.
Q. There is also another item in that photograph, and does that help you identify the key?
A. Yes, it does.
Q. And, please, explain that to the jury.
A. This is the packaging that the key was brought to the laboratory in. Again, this is our bar code tracking system in the laboratory. And this is our item designation $C$, and my initials, and the
date.
Q. I'm going to show you what has been marked as Exhibit 316 and ask you if this photograph, which you are being shown, is the photograph that is depicted on the large screen?
A. Yes, it is.
Q. And now, $I$ would like to go to the next slide. And this is a slide of the key that you have in front of you; is that correct?
A. It appears to be, yes.
Q. When you received this key, how did you process it, Ms Culhane?
A. I received the key. It was in a sealed brown paper bag. I opened it up. I had gloves on. And I held the metal part of the key in one hand and I swabbed the black -- I should show you up here -- this black rubberized part of the key, with a sterile cotton swab. And I did it in very much the same way that I swabbed the Pepsi can that we looked at earlier.

At this point, there were no visible indications of any staining, so I was primarily interested to see if I could recover DNA that had been left behind by possibly touching. So I swabbed all of the surfaces, the front and back,
and the edges of the key, and that's what I did my analysis on.
Q. After you did the swabbing of the key, did you do anything else with the key?
A. Yes, I did.
Q. Please explain to the jurors what you do with the key.
A. I took the key to see if it fit the vehicle. So I put the key into the ignition. I still had, of course, gloves on, during this entire process. I put the key into the ignition and turned the ignition. It did turn the ignition, but it did not crank the car. And I later learned that that was because, I believe, the battery had been disconnected. But it did actually turn completely over. I also locked, I believe it was the front driver's side door, and used the key to unlock the door.
Q. The buccal swab that you took of this key, did you submit that to DNA testing?
A. Yes, I did.
Q. And were you able to develop a profile from the swabbing of Item $C$, the key to Teresa Halbach's car?
A. Yes.
Q. And does this slide clearly and correctly show your findings?
A. Yes, it does.
Q. Would you explain to the jury your findings.
A. Again, we looked at the same 15 markers. And at each one of these markers I developed a type. And that is the profile that characterizes the swabbing that I took from the key.
Q. And, again, this profile that you developed from the key, is that a profile that came from a male individual?
A. Yes, it is. And that's -- We have an $X$ and a $Y$ chromosome which indicate the male individual.
Q. And did you compare the profile that you developed from your swabbing of this key with the DNA profile that you developed from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this next slide correctly show your findings?
A. Yes, it does.
Q. And, again, would you explain your findings to the jury.
A. The same 15 markers, these are the types at each one of these markers. And you can see at every
type, the type from the evidence -- or the profile from the evidence sample is consistent with the profile from Steven Avery.
Q. And, again, Ms Culhane, the profile that you developed from Item $C$, the key, is that what you refer to as a full, complete DNA profile?
A. Yes.
Q. And why is that, again?
A. Because we have types at each one of these markers. There are types present at each one of the markers.
Q. And, again, did you compare this profile with the DNA profiles that you developed from all the standards that were submitted in this case?
A. Yes, I did.
Q. In other words, did you compare the DNA profile that you found on Item $C$ with the DNA profile from the buccal swab of Allen Avery?
A. Yes.
Q. And Brian Dassey?
A. Yes.
Q. And Brendan Dassey?
A. Yes.
Q. And Barb Janda?
A. Yes.
Q. And Bobby Dassey?
A. Yes.
Q. And Earl Avery?
A. Yes.
Q. And Chuck Avery?
A. Yes.
Q. And Delores Avery?
A. Yes, I did.
Q. And did the DNA profile that you developed from Item C, the key, match any of those standards?
A. No, it did not.

ATTORNEY GAHN: At this time, I'm going to ask Detective Wiegert if he can, please, retrieve for me the photograph of the RAV4 -- I'm looking for the photograph, I'll give you a exhibit number in just one second -- Exhibit 290, 294, 291, and 292, please.
Q. Ms Culhane, would you find Exhibit 290.
A. 290?
Q. 290 .
A. No, I have 291, 292 and 294.
Q. Do you have that?
A. Yes, I do.
Q. And I apologize for the delay here. Is that photograph depicted on the large screen here?
A. Yes, it is.
Q. Now, you previously testified that you took cuttings which you identified as Item A-6 from the RAV4?
A. Correct.
Q. Can you show the jurors where it was you took the cuttings?
A. In the front driver's seat, right about here.
Q. And those were the cuttings of a stain that you had tested for blood with the presumptive test?
A. Yes.
Q. And I also believe that you testified earlier that you collected your Item No. A-7 from the center console area of the RAV for, would you point that out to where that was for the jurors.
A. Right along the floor here by the console.
Q. Okay. And did you perform DNA testing on those two evidentiary samples?
A. Yes, I did.
Q. And did you develop a DNA profile for the blood stain on Item A-6?
A. Yes, I did.
Q. And according to your reports, does the next slide correctly depict the DNA findings?
A. Yes, it does.
Q. And, again, would you explain those to the jurors.
A. Again, these are the same 15 markers and these are the types at each one of these markers that were developed from the cutting of the stain in the driver's seat of the RAV4.
Q. And, again, is this what you consider to be a complete full DNA profile?
A. Yes.
Q. And did you also compare this profile to the DNA profile that you developed from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this slide correctly display your findings?
A. Yes, it does.
Q. And would you explain your findings to the jury?
A. Again, this is the profile developed from the evidence sample. You can tell it's from a male individual. All of the types are consistent with each one of the types, at each marker, from the reference standard of Steven Avery.
Q. And the DNA profile that you found in Item $A-6$, the bloodstain, did you compare that to the other standards that you received at the lab?
A. Yes, I did.
Q. And how did this profile compare to the other standards?
A. It was not consistent with any of the other standards that I examined.
Q. It was only consistent with the DNA profile of Mr. Steven Avery?
A. That's correct.
Q. Did you develop a DNA profile from your Item No. A-7, which were the blood crusts by the center console?
A. Yes.
Q. And does the following slide show your findings?
A. Yes, it does.
Q. And would you explain those to the jurors.
A. Again, at each genetic marker, these are the types. At D-5, this asterisk here indicates that there was a peak there, a visible peak, but it was below the parameters of our system. So that would not be included in the statistical interpretation of this sample -- of this profile.
Q. Now, that's only not included in the statistical analysis, correct?
A. Correct.
Q. Now, the fact that that asterisk was there, did
not have any impact in your interpretation of this profile as it compared to Steven Avery, did it?
A. No.
Q. And did you compare this profile to Steven Avery's profile?
A. Yes, I did.
Q. And does this slide correctly show your findings?
A. Yes, it does. And, again, you can see that the profile is consistent with Steven Avery at every genetic marker.
Q. Do you have an opinion, to a reasonable degree of scientific certainty, whether Steven Avery is the source of the blood stain on Item $A-6$, which was the stain found on the driver's passenger seat?
A. Yes, I do.
Q. And what is that opinion?
A. That Steven Avery is the source of that profile.
Q. And do you have an opinion, to a reasonable degree of scientific certainty, whether Steven Avery is the source of the DNA profile that you found on Item A-7, the blood crusts by the center console?
A. Yes, I do.
Q. And what is that opinion?
A. That Steven Avery is consistent with that profile.
Q. Do you have Exhibit 293 in front of you?
A. No, I'm sorry, I don't.
Q. I'm sorry. Do you have that now?
A. Yes.
Q. Is that photograph the same photograph that is up on the big screen?
A. Yes, it is.
Q. Now, you previously testified that you collected a cutting which you identified as Item A-9 of a bloodstain from the front passenger seat of Teresa Halbach's RAV4. Can you show the jurors where that cutting was, once more.
A. Yes, right in this area here.
Q. And did you perform a DNA test on that cutting?
A. Yes, I did.
Q. And according to your reports, does the following slide correctly display your results?
A. Yes, it does.
Q. Could you explain them to the jurors.
A. These are the exact same markers that we looked at in each sample. And, again, there are types at each one of these markers, and XY depicting a male individual.
Q. And, again, is this what you call a complete full profile?
A. Yes, it is.
Q. And did you compare the profile that you developed from the bloodstain from the front passenger seat of Teresa Halbach's car with the DNA profile that you obtained from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this next slide show your findings?
A. Yes, it does.
Q. And would you explain them to the jury, too, please.
A. This is the profile developed from the cutting in the passenger -- the front passenger seat. And this is the profile from Steven Avery's buccal swab. And you can see it's consistent at all of the 15 genetic markers.
Q. Do you have an opinion, to a reasonable degree of scientific certainty, whether Steven Avery is the source of the bloodstain that was found on Item 9 on the front passenger seat of Teresa Halbach's RAV4?
A. Yes, I do.
Q. And what is that opinion?
A. That Steven Avery is the source of that stain, A-9.
Q. All right. Now, you also previously testified that you collected the swab from what was Item A-10, that is the $C D$ case that was on the front seat of Teresa Halbach's car, correct?
A. Yes.
Q. And did you develop a DNA profile from the blood stain on the CD case?
A. Yes, I did.
Q. And does the next slide correctly show your findings?
A. Yes, it does.
Q. Did you compare this profile with the profile that you developed from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this next slide correctly show your findings according to your reports?
A. Yes, it does. Again, you can see all of the types are exactly the same through all the genetic markers.
Q. And do you have an opinion, to a reasonable degree of scientific certainty, whether Steven Avery is the source of the blood that you found
on the CD case in Teresa Halbach's SUV?
A. Yes, I believe he is the source of the blood stain, Item A-10.
Q. Ms Culhane, do you have Exhibit 294 in front of you?
A. Yes, I do.
Q. And does that photograph -- is that depicted on the large screen here?
A. Yes, it is.
Q. Now, you previously testified that you collected a bloodstain from the paneling of the rear passenger door. And would you point out to the jurors, one more time, where that bloodstain was?
A. This area right here.
Q. Yes. And you designated that as Crime Lab designation Item $A-12$; is that correct?
A. Yes.
Q. And did you perform DNA testing on Item A-12?
A. Yes, I did.
Q. And did you develop a DNA profile from the testing of that bloodstain?
A. Yes, I did.
Q. And does the next slide correctly show your findings?
A. Yes, it does.
Q. And, again, did you compare the profile, the DNA profile that you developed from the bloodstain on the rear passenger door of Teresa Halbach's RAV4, with the DNA profile that you obtained from the buccal swab of Steven Avery?
A. Yes, I did.
Q. And does this slide correctly show your findings?
A. Yes, it does. And, again, you can see, at each one of the markers, the types are consistent.
Q. I would ask you if you have in front of you Exhibit 291.
A. Yes, I do.
Q. And is that photograph shown on the big screen now?
A. Yes, it is.
Q. Now, you previously testified that you collected this bloodstain on the dashboard of Teresa Halbach's RAV4, by the ignition switch; is that correct?
A. Yes.
Q. And this -- you did a presumptive test for blood on that stain?
A. Yes, I did.
Q. And did you perform DNA testing on this bloodstain in Teresa Halbach's vehicle?
A. Yes.
Q. And did you develop a DNA profile from that bloodstain?
A. Yes, I did.
Q. And does this next slide correctly show your findings?
A. Yes, it does.
Q. And did you compare the DNA profile from that bloodstain with the DNA profile of Steven Avery?
A. Yes, I did.
Q. And does this next slide show your results?
A. Yes, it does.
Q. And, again, would you explain what those were to the jury.
A. This is the profile from $A-8$, which is the stain by the ignition. And this is the profile from Steven Avery's buccal swab. And you can see at each one of the markers, the types are consistent.
Q. And, once again, is this what you consider a full complete DNA profile?
A. Yes, it is.
Q. And the DNA profile that you developed from Item A-8, the blood stain found near the ignition of Teresa Halbach's SUV, did you compare that
profile with the profiles that you developed from all the other standards in this case?
A. Yes, I did.
Q. And what were your results?
A. It was not consistent with any of the other standards.
Q. It was only consistent with the DNA profile of Steven Avery?
A. Correct.
Q. Did you arrive at a statistical number for this profile that would reflect how often, or how rare, or how common, this profile would be in the population?
A. Yes, I did.
Q. And I would ask if this slide correctly displays that statistic?
A. Yes, it does.
Q. And could you explain to the jurors what that statistic is?
A. This number tells me that the probability of another unrelated, random person in the population, having the same profile as the evidence samples that we just talked about, is 1 person in 4 quintillion in the Caucasian population, 1 person in 898 quintillion in the

African/American population, 1 person in 25
quintillion in the southeastern Hispanic
population, and 1 person in 123 quintillion in the southwestern Hispanic population.
Q. And does that statistic also apply to the other bloodstains that you found in the RAV4 that were attributable to Steven Avery?
A. Yes, it does.
Q. Do you have an opinion, to a reasonable degree of scientific certainty, whether Steven Avery is the source of the bloodstain found on the dashboard by the ignition in Teresa Halbach's RAV4?
A. Yes.
Q. And what is that opinion?
A. My opinion is that Steven Avery is the source of that stain.

ATTORNEY GAHN: That's all I have. Thank you, your Honor.

THE COURT: Counsel, will you approach, please.

ATTORNEY BUTING: Sure.
(Side bar taken.)
THE COURT: All right. Members of the jury, at this time, since we kept you late yesterday, we're going to give you a break today.

The cross-examination is going to take more time than we have left today, so we're going to adjourn. I do have a notice, the weekend notice, to read to you. It's going to be a repetition of some information you have heard thus far, and also some new information.

As I previously informed you, the Court's decision not to sequester the jury during the trial is dependent on the jurors not listening to, watching, or reading any news accounts of the case, nor discussing it with anyone, including members of your family, or other jurors.

For these reasons, it is vital that you continue not to listen to any conversation about this case. Do not read any newspaper or internet reports, or listen to any news accounts on the radio or television about the trial.

To assure that you are not exposed to any improper media coverage, the Court has ordered that, for the duration of the trial, you do not watch the local news on television, do not listen to the local news on the radio, and do not read the newspaper, unless you first have someone remove articles about the case.

In addition, do not visit any internet websites or web logs, which include any information about the case. The Court understands that some of you may be working at places of employment during the weekend. Do not discuss the case with any employers, employees, or patrons. Do not volunteer your status as a juror to anyone.

If anyone attempts to discuss this case with you, politely but firmly notify them that you are prohibited from discussing the case in any way. If you are involuntarily exposed to any information about the case, from any source, take steps to immediately avoid any further exposure.

Should you be exposed to any reports or communications from any source concerning the case during the trial, or should you become aware of anything you believe may affect your ability to serve as a juror, you should not discuss your concerns with any other jurors, or anyone else, but should report any such concerns to the jury bailiff immediately.

Now, we have received some reports of stormy winter weather this weekend. Based on the latest information the Court has, whatever we get
should be over by Sunday. But in the event that weather would cause a postponement of Monday's proceedings, you will be called by the jury clerk sometime before 8:00 p.m. on Sunday evening. If you do not receive a call, it means that Court is scheduled to go on as normal on Monday.

Finally, I wanted to let you know that since the Court is prohibiting you from watching any news accounts, or learning anything about the case through the news media, at the conclusion of the trial, each of you will receive a DVD that has a summary of news accounts of the trial as it's gone on. I do that so in the event you are curious about that type of thing, you are not tempted to violate the order I have issued now, but you will have a chance to see it when the trial is over.

And with those admonitions and information about Monday's proceedings, you are excused for the weekend.
(Jury not present.)
THE COURT: You may be seated. Ms Culhane, you may step down, if you wish.

ATTORNEY BUTING: Before she does --
THE COURT: Oh.

ATTORNEY BUTING: I'm sorry. Before she does, maybe we could just -- since she testified about the contamination log that goes back to 2001, I don't know if she -- if you brought it with you today, but if she could be instructed to bring that with her Monday, or if Mr. Gahn has a copy already, he could give it to me. I only have one that goes back to 2004.

THE COURT: Mr. Gahn.
ATTORNEY GAHN: That is fine. We'll produce that, yes.

THE COURT: That's something that can be produced, very well.

ATTORNEY BUTING: And you have the rest of the file, I think, with you and you would bring it on Monday?

MS CULHANE: Yes.
ATTORNEY BUTING: All the bench sheets and what not.

THE COURT: All right. I believe there were a couple other matters the parties wanted to address before we adjourn today.

ATTORNEY GAHN: At this time, your Honor, the State would like to move in some exhibits. I would like to move in Exhibit 309, which is the CV
of Sherry Culhane; Exhibit 310, the protocol for the Crime Lab; Exhibits 311, 312, 313, 314, and 315, which are the five Crime Lab reports.

Also, I move in Exhibit 316, which is the photograph of the key. And I would move in Exhibits -- Exhibit 317, buccal swab of Allen Avery; 318, buccal swab of Brian Dassey; 251, if it's not moved in already, buccal swab of Brendan Dassey; 319, buccal swab of Barb Janda; 320, buccal swab of Bobby Dassey; 321, buccal swab of Earl Avery; 322, buccal swab of Chuck Avery, 323, buccal swab of Delores Avery; 324, buccal swab of Steven Avery; and 325, the Pap smear for Teresa Halbach.

I would also move in Exhibit 326, which is the bloodstain $A-1 ; 327$, blood stain $A-2 ; 328$, bloodstain A-4; 329, bloodstain A-3; and 330, bloodstain -- I'm sorry, 330 is A-14, the Wild Cherry Pepsi can; Exhibit 331, which is bloodstain A-9; 332, bloodstain A-10; 333, bloodstain A-6; 335, bloodstain A-7; 334, bloodstain A-12; 336, bloodstain A-8; Exhibit 337 the bone and tissue material; Exhibit 277 -- I'm sorry, that is already in, that's the bullet fragment. And I think -- Exhibit 338, which is a
photograph of the bone and tissue.
I would like to move in Exhibit 339, which is a CD Rom of the power point presentation that we used during the testimony. And also a printout, which is Exhibit 340, of the power point -- the slides in the power point demonstration. I would move those into evidence at this time.

And I would further ask that Exhibit 337, which is the bone and tissue, that we be allowed to remove that from the courtroom and allow Deputy Wiegert to return that to the Sheriff's Department to be kept in the freezer.

ATTORNEY BUTING: Couple of things, 316, did we have that one? Did you miss that one?

ATTORNEY GAHN: If not, I would move in 316, which is the photograph -- which is the photograph of the key with the bag.

ATTORNEY BUTING: Okay. I have no objection to any of those exhibits coming into the record. I have no objection to the 337, charred remains, bone and tissue, being withdrawn to be properly stored.

I do want to make clear, though, as to the five reports, 311 through 315, that I'm
not -- by not objecting to them going into the record, I'm not suggesting that I think they should be sent to the jury for any part of their deliberations. So, with that limitation, I have no objection to their admission.

THE COURT: Very well. The Court will order those exhibits admitted. As long as we have got some time left today, do we have an inventory of the exhibits that have been marked but not admitted, and is everyone in agreement?

ATTORNEY KRATZ: Yes, I would like us to do that, Judge. And those that have been identified and not offered, the State intends to do that at this time. Janet, are you able to tell us which ones have not been offered?

THE CLERK: There was an Exhibit 187 that I don't think has been even offered at this point. I don't know what it even is. It was by the State.

ATTORNEY KRATZ: That has not been offered yet?

THE CLERK: Right.
ATTORNEY KRATZ: That's some bloodstains on a door. It's a photograph that has not yet been offered, and I don't offer it at this time. THE CLERK: For the defense, Exhibits 206,

207, which are two photos.
ATTORNEY BUTING: I thought those were received and offered at the end of the day; if not, I would move them in.

ATTORNEY KRATZ: We have no objection, it's of the vanity and of the washing machine. We have no objection to those photos.

THE COURT: All right. 206 and 207 will then be admitted.

THE CLERK: For the State, 208, 209, 210.
ATTORNEY KRATZ: Those are the three photos of the cabinet, the bookcase. Those have been referred to numerous occasions, identified by several witnesses, I would offer 208, 209, and 210.

ATTORNEY BUTING: No objection.
THE COURT: Those exhibits are admitted.
THE CLERK: Defense, a copy of the
statement of Sergeant Colborn, 213.
ATTORNEY KRATZ: 213?
ATTORNEY BUTING: No, we don't offer that, that was simply to be identified for refreshing his recollection, I believe.

THE CLERK: And I think that's the same thing with 216, copy of the report of Investigator Wiegert.

ATTORNEY BUTING: Yes, same for that.
THE CLERK: Then 219 and 220, two photographs, one of the key.

ATTORNEY KRATZ: Yes, we'll offer both. 219 is a photograph of the key, 220 is a photograph of shell casings in a box, both of which were identified by Deputy Kucharski. We would offer both.

THE COURT: Any objection?
ATTORNEY BUTING: As the photographs of the box, I'm not sure he identified them, but I guess maybe he did, but he qualified it as he wasn't sure when it was taken. So with that limitation, yes, they can be received.

THE COURT: All right. Those exhibits are received.

ATTORNEY BUTING: Could we just go back, though, for a minute, to 214 and 15; were those admitted already?

THE CLERK: I have -- Oh, I have 214 admitted, the transmittal.

ATTORNEY BUTING: Yes.
THE CLERK: 215, I don't have.
ATTORNEY BUTING: Okay. 215, we did not offer, so it should not be admitted. 217, I don't
have marked on here either way.
THE CLERK: That one also has not been offered.

ATTORNEY KRATZ: We did have that identified by Mr. Lenk, that was a picture of the scanner on top of Mr. Avery's bar in his living room. That was identified and we would ask that it be received.

ATTORNEY BUTING: No objection.
THE COURT: All right. That exhibit is received.

THE CLERK: 249, I go to next, but I don't believe that's been offered, that's the electrical cord.

ATTORNEY KRATZ: 249, that's correct, and that has not been offered yet, Judge, nor is it going to be at this time.

THE COURT: All right.
THE CLERK: Then Exhibits 278, 280, 81 and 82 have all been marked and not referred to yet.

ATTORNEY KRATZ: I don't even know what they are.

THE CLERK: They were in the paper bags. I don't know what they were either.

ATTORNEY KRATZ: 278, 280, and 281?

THE CLERK: And 282. They were marked yesterday.

ATTORNEY KRATZ: And I have blanks in my list. So I don't know what they are. We can check before the next session, Judge. That's fine.

THE CLERK: 279 was the rivet.
ATTORNEY KRATZ: 279?
THE CLERK: I have a series of photographs starting at 289 through probably 309, that have not been -- 308 -- have not the been offered or received.

ATTORNEY KRATZ: Mr. Gahn just did that. Those are the photos that were referred to by Ms Culhane, identified by Mr. Groffy this morning, up through 305 at least.

THE COURT: Have those been offered?
ATTORNEY KRATZ: Yes.
ATTORNEY BUTING: I believe they were. That was the photographs with Mr. Groffy this morning, right before lunch.

THE CLERK: Okay.
ATTORNEY BUTING: Certainly, if we haven't--

THE COURT: So those are received?
ATTORNEY BUTING: I think right before
lunch we did move them in.
THE COURT: All right. Those are in.
ATTORNEY KRATZ: That should be it, Judge, that's my list.

ATTORNEY BUTING: Counsel, is there a photograph associated with those electrical wires. I believe that there was something.

ATTORNEY KRATZ: There's two.
ATTORNEY BUTING: Two?
ATTORNEY KRATZ: One is what Mr. Kucharski identified that he saw at the scene, that's been received. And one is what we have been referring to as an evidence photo. And although that was identified and received, I have no objection should counsel want that withdrawn at this time. And until and unless we put in the actual exhibit, that that can be withdrawn at this time. That seems to make the most sense, Judge.

ATTORNEY BUTING: Do you know which photo, 227 and 228?

THE CLERK: I have 228 and 229.
ATTORNEY BUTING: 228 and 229. All right. Let's leave them as is for now. I will probably refer to them with Ms Culhane, and then as I anticipate, when she's unable to link them up in any
way, then we'll probably move to have them withdrawn.

ATTORNEY KRATZ: I'm not suggesting another witness isn't going to eventually get those in. We haven't offered them.

THE COURT: So at this point they have been marked. They are not in.

ATTORNEY KRATZ: That's right.
ATTORNEY BUTING: Okay.
THE COURT: Is there anything else that either party wishes to take up today? ATTORNEY BUTING: I don't think so. ATTORNEY KRATZ: Judge, just a moment. ATTORNEY BUTING: Is there a phone number we could call on Sunday evening? We don't have to say it on the record, I'm just saying ...

THE COURT: We have a number we can give you before you leave today that you can call.

ATTORNEY BUTING: Okay. Great. Thank you.
THE COURT: Actually, let's do this. I
think I have an email list for all of you. If I just emailed it to you, will that do it?

ATTORNEY BUTING: That would be great. ATTORNEY KRATZ: Sure. THE COURT: Let's do that.


ATTORNEY BUTING: Okay.
THE COURT: All right. If there's nothing further, we're adjourned for today.
(End of proceedings.)

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STATE OF WISCONSIN ) ) ss 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 7th day of NOVEMBER, 2007.

Diane Tesheneck, RPR Official Court Reporter

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