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SC Court of Appeals

IN THE STATE OF SOUTH CAROLINA
In the Court of Appeals

APPEAL FROM MARION COUNTY
Court of General Sessions

Appellate Case No. 2023-000408

The Honorable William H. Seals, Circuit Court Judge

State of South Carolina……Respondent,

v.

Isaac Kareem Hemingway ……Appellant.

RECORD ON APPEAL
VOLUME II OF III

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(State's Exhibits

- **No. 52 – disk;**
- **No. 62 – CD;**
- **No. 60 – disk – are all on file with this Court.)**

Q Thank you. If you could move on to 18.2?
A So the DNA profile developed from 18.2 is attributable to Maisha Burch. And then I also attempted Y-STR testing on this item and the partial Y-STR profile developed is insufficient for interpretation.
Q Okay, very good. And we're almost through getting there item 24?
A Item 24 were right fingernail clippings from Andre Legette, so I perform DNA analysis on this item. I determined that the profile I developed was suitable for comparison and I interpret it as a mixture from two individuals. Just like the fingernail scrapings I talked about with Maisha Burch, it is an item of evidence that is off of a person. So I can assume the person that it was taken from on the profile, so I did that in this case. So I'm assuming that Andrew Legette is contributing to the mixture. So Andrew Legette and the person of interest contributed to the mixture versus Andrew Legette and an unidentified unrelated individual contributed to the mixture. Maisha Burch, Stephanie Reed, Issac Hemingway, Jessica Dixon, Lakela Graves and Jerome McCullough are excluded as contributors to the mixture under the listed propositions.
Q Okay. And then we can in kind of rapid succession go to 31, 33 and 34 if you like?

A So 31 it was hair removed from the body bag of Maisha Burch and I did not perform analysis on that item.
Q And why is that?
A I would have to refresh my memory, but I believe our crime scene agent told me that it was not necessary to perform DNA analysis on that item.
Q Okay, very good. And 33?
A And 33 is the right fingernail clippings from Maisha Burch and the DNA profile developed is attributed to Maisha Burch. I also performed Y-STR testing on this item and the partial Y-STR profile developed is insufficient for interpretation.
Q Okay, very good. And does that conclude your results your analysis of the evidence in this case?
A I got the left fingernail scrapings left.
Q Don't let me jump the gun.
A So item 34 was the left fingernail clippings from Maisha Burch and it's the same results the DNA profile developed is attributable to Maisha Burch and the partial Y-STR profile developed is insufficient for interpretation.
Q Okay, very good. Now, we just went through your report, but I want to show you State's Exhibit 61 if I could and tell me if you recognize that particular item?
A So, yes, State's Exhibit 61 is a copy of my report.

MR. WHITE: Okay, very good. Judge, at this time I move State's Exhibit 61 into evidence.

THE COURT: Any objections?

MR. BROOKER: For purposes of this hearing only.

THE COURT: You have an objection for the purposes of this hearing?

MR. BROOKER: No, I have no objection for the purposes of this hearing only.

THE COURT: Okay, so you're not consenting to it yet? You making it a court's exhibit?

MR. BROOKER: It's a court's exhibit for this for this pretrial motion.

THE COURT: Certainly.

(WHEREUPON, State's Exhibit No. 61 was admitted into evidence for pretrial hearing only at this time.)

BY MR. WHITE:

Q Now, as far as your report is concerned is that the last time anybody sees it or is it peer reviewed?

A So, yes, before the report is issued and available to Solicitor's office or the investigating agency, my case file along with the report which it goes through two different types of reviews, which is also part of our quality system. It goes first through a technical review and then an administrative review. These are both

performed by another qualified DNA analyst and it's two separate individuals.

Q And was that done in this particular case?

A Yes, it's done on every case.

Q And, again, we're dealing with STRmix for the most part on all of these items of evidence, is that right?

A Yes, as far as the interpretation goes, yes.

Q And the -- and tell me one more time the method, so the STRmix is the interpretation. What was the method?

A STR PCR DNA analysis.

Q And I want to go over it one more time just to make sure that I got it covered. In both method and interpretation, these items or these scientific methodology is published and peer reviewed?

A Yes, sir.

Q It is a consistent -- the consistency of the method is it scientifically reviewed?

A Yes, it is.

Q Is it accepted across the country?

A Yes, it is.

Q Is it accepted across the world?

A Yes, sir.

Q Is it used in the FBI lab?

A It is.

Q And how long has SLED been using STRmix?

A Since fall of 2018. People started to sign up for STRmix the majority of the lab is more towards the beginning of 2019.
Q And were you there when -- so were you there when STRmix was actually brought on?
A Yes, I was.
Q And how were you -- you know, one of the first trained in STRmix at SLED?
A So we had a four-day training by two individuals that help with our validation John Buckleton was one of these individuals. John Buckleton is actually one of the developers of STRmix. And then another guy -- I'm blanking on his name, but they both came. He's from London. They both came in to do an in-house training for four days, that's all we did for the over eight hours a day for those four days.
Q And you been using it since, correct?
A Ever since, yes, sir.
Q And how many times do you think you used STRmix to interpret DNA?
A I don't know.
Q More than 500?
A Probably more like a hundred, 200. I want to say an average -- I don't know. I probably average a hundred cases a year and we been doing it for three years, so

definitely in the hundreds.
Q Okay, very good. And that's all the questions I have for that, but I do have some questions and I want to get you to identify some of these items of evidence. But I wanted to ask you briefly as it pertains to Issac Hemingway's DNA the likelihood that it is in the areas that it was retrieved by crime scene knowing that his biological children lived in the home would that change your analysis in any way?
A It will depend. I did not know doing this case -- performing this case that there were biological children in the home. Sometimes related individuals can interfere, but most of the time when I have seen it's when we're trying to compare a child of two individuals and not a father of a child and mother.
Q Let me show you these particular pieces of evidence and let me ask you if you recognize them. If you'll just call out the name and tell me -- or the exhibit number and tell me what those items are?
A All right. So State's Exhibit 59 is our SLED lab item 18, which were the fingernail scrapings from Maisha Burch. So the next State Exhibit item 58 is SLED number or SLED container A. So inside you can kind of see it's several envelopes each envelope is a different item. So I can tell you that item one which is the swabs from the

front door exterior door handle of residence. Item five which was swabs from the back screen door interior door handle of residence. Item seven from which was two swabs from wall of hallway front side of house. Item eight which was swabs from wall of hallway back of house side. That was all in that container to State's Exhibit 58. So State's Exhibit 57 was our SLED item 14 which were the fingernail scrapings from Andrew Legette. State's Exhibit 56 is our item nine which was the white tissue from near TV. State's Exhibit 55 which is item 15. It is the buccal swab from Andrew Legette, that's State's Exhibit 55. State's Exhibit 54 which is our SLED item ten was the hair from the front near -- from floor near front door. And State Exhibit 53 which was SLED item 19 and that's the buccal swab from Maisha Burch.

Q Okay, very good. And you received all these items in your laboratory?

A That is correct.

Q How were they sealed -- are they sealed by you?

A So when it is submitted, the submitter puts inside a heat-seal pouch. It is sealed at the top by whoever puts it in the pouch initially and they initial and date their items. And this is a horrible example because I didn't actually open this item, but I had this one in my custody, but I did not. So if I opened it, I would make a cut away

from this cut up here. And then when I went to seal it and I would seal it and date it and initial it. So on the other items, my initials and date are on it. So here's an example of where my initials and date are on my seal.

Q But you received all these items and analyze all these items and they are elicited in your report?

A Except for our lab item 15 which is that front one I use as an example. I received it, but I did not open it and analyze it.

Q I understand.

MR. WHITE: Judge, I would move State's Exhibit 53, 54, 55, 56, 57, 58 and 59 into evidence.

THE COURT: Any objections?

MR. BROOKER: No objection for the purposes of this hearing.

THE COURT: Let's make a court's exhibit, so you can admit them in at trial.

(WHEREUPON, State's Exhibits Nos. 53, 54, 55, 56, 57, 58 and 59 were admitted into evidence for purposes of this pretrial hearing only.)

MR. WHITE: Beg the Court's indulgence one minute, Judge.

(WHEREUPON, a pause in the proceedings.)

MR. WHITE: Judge, that's all I have. Thank you, Ms. Boehm.

THE COURT: Cross-examination.

MR. BROOKER: Thank you, your Honor.

CROSS-EXAMINATION IN-CAMERA

BY MR. BROOKER:

Q Ms. Boehm, just a couple questions, I want to first start off by saying is is that whenever you are called to testify -- whenever you are called to testify as an expert at the trial, you're not -- you don't exhibit any bias for one side or the other, do you?

A No, sir. My job is to tell the jury or the Court what my job and role was and to explain the significance of my results.

Q So you're simply testifying to the science?

A That is correct, yes, sir.

Q Now, I want to ask you at least some questions before I actually get to the analytical report. And I specifically want to ask you questions in reference to -- starting off by -- I think in most of these -- I think in most of the -- only ask this question in general instead of in specific is is that how can you determine how many contributors there are to a DNA mixture?

A So there's lots of factors that go into it. A lot of it is thorough training. So each person can have up to two results because we two sets of chromosomes. So we have two different numbers as a DNA profile results or we

can have one. That one actually two sets of the same number, but appears as one number on our results. So the first thing I look at and see at every location how many DNA types I have at each location. So if it's more than two at more than two locations, it's an indication of a mixture. So if I determine that there's more than two at more than two locations, I'll determine that it's a mixture. Then I need to figure out how many people did contribute to this profile. So I'll first add up or look at every location to determine how many test results I had at each location. So if I have four results, it could be a mixture of two people. If I have -- up to mixture of two people. If I have five or six, it would be a mixture of three people so on and so forth. Another thing we have to take in account is that some individuals have the same DNA type at locations. So our results are shown in peak height or in peaks. So we can determine based on the peak height of the test results whether it was from one person or maybe more than one persons contributing to that number. So based on the amount of test results we get at location across the profile and the peak heights at each location for each number, we determine how many contributors there are.

Q Okay. And, of course, when you're looking at peak heights, generally the peak height is affected by the --

by the -- I guess, you might say is that how much DNA is available usually a small amount of DNA is available, and, of course, is is that the peak heights are going to be smaller. The peaks are going to be smaller?

A Yes, in a way. So if it's a low amount of DNA, we cannot target the ideal amount of DNA. Then, yes, those peak heights may be smaller or if we have mixture one person maybe contributing a lot. So we may have a couple big peaks and then smaller little peaks because those are essentially minor contributors contributing less DNA to the sample.

Q Okay. And so when you're looking at that graphic, you're looking at peak heights in order to determine exactly how many contributors is is that part is -- I would say that part requires interpretation, is that correct?

A Yes, so when I'm doing that what I'm trying to determine how the mixture determining whether it's suitable for comparison at all. So, yes, that would be part of the interpretation.

Q So that's not done by a machine. So that is your looking at this thing, and, of course, based upon your training and experience trying to interpret what these different peak heights mean?

A Yes, yes. So during the process, I input that into

the statistics STRmix process. So, yes, I come up with that number and my reviewers agree to that number during the review process.

Q And that's the other question I was going to ask is is that is it possible for experts to disagree with respect to what those peak heights mean and whether or not there's two contributors, three contributors or even more?

A Yes, there definitely is and can be disagreement. However, you put into the system there's also -- during STRmix, we have to look at the results of the deconvolution. So that's the part of STRmix that's trying to determine what profiles contributed to the mixture. And if those diagnostics are off, then it's a clear indication that maybe the number of contributors is wrong.

Q Okay. And another thing I want to ask you about is is that that whenever you have a mixture, are you capable of distinguishing -- I know that whenever you have a mixture, and, of course, is is that I'm trying to do a little bit of research, so bear with me with my use of the terms are wrong. But, of course, when you have a mixture and, of course, is you're looking at these DNA markers or either these or either these alleles -- can you explain what allelles mean? You ever heard of that term?

A Absolutely, sir. So allele is the test result. So

it's a scientific word use for every location that we test, there's multiple allele possible alleles, so the test result would be the allele.

Q Okay. And, of course, is some people I know -- I use to refer to them as markers and some people refer to them as markers. If I refer to them as markers, you understand what I'm talking about?

A Yes, sir.

Q Okay. All right. So when you're looking at this -- when you're looking at this partial profile, and, of course, you're looking at the alleles within that partial profile. Is how can you distinguish if there's a mixture of three or more people how can you distinguish which alleles belong to which person? If there's three people, how can you can say, well, okay, these alleles belong this person, person one. These alleles belong to person two. These alleles belong to person two. These alleles belong to person three. Can you make that distinction?

A Not what we're currently doing with STRmix because STRmix does that, but it factors in all the possibilities. So if I say it's three contributors in this mixture, STRmix is going to say, okay, for a contributor one it looks like they're contributing somewhat percent of the profile. And they're going -- and it's going to say I think it could be any of these combination possibilities

that also accounts for our dropout. So if it's a low level mixture, some of the test results may not be tall enough for us to see, so it also accounts for dropout. But what STRmix is doing it's determining based on the profile I think contributor could be any of these options. The second contributor could be any of these options. And third contributor could any of these options. So I don't specifically I will review it to make sure it makes sense and that I agree with the software, but I'm not saying, you know, contributor ones A and B. Contributor two is B and C. Contributor three is A and D or something like that.

Q That's not possible right now with current technology, is it?

A With STRmix and the way we're doing it, no.

Q Okay. And I guess another way of putting that is is that let's say for instance is that if you had a profile -- if you had a partial profile use this as an example partial profile that has three contributors and it had -- let's say you had ten -- let's say you had ten alleles. So using that example partial profile or mixture involving three people, and, of course, is is that partial profile has ten alleles or ten markers. And what I'm asking you is is that I want to make sure that this is clear on the record is is that you can't say, well, you

know, of these ten alleles seven of these alleles belong to Mr. Hemingway. And then one belongs to the other contributor and then two other ones reaching a total of ten, you can't say how many alleles that Mister -- using that as an example Mr. Hemingway contributed -- how many of those alleles that Mr. Hemingway contributed to that mixture, that partial mixture?

A So we're not saying that at all ever. So what our calculations is is the DNA profile developed from the person of interest can the DNA profile I developed from the unknown, the item of evidence, be explained because person of interest contributed to that profile or not. We're not saying and we never have said that these alleles from this mixture go with this person.

Q So theoretically if you had three person -- you had a mixture with three persons theoretically one of those three persons could have contributed only one allele and the other two contributed the other nine?

A So if you are talking about ten markers at across the profile not at one location, that's where I'm all clear.

Q I'm sorry say that again?

A Is it ten locations or ten markers across the entire profile or is it ten markers at one location?

Q No, ten markers at one location. And I don't know whether or not I want to make sure that we're talking

about the same thing. I'm talking about a partial profile. First of all, partial profile that is a mixture of three persons. And I'm using the example let's say if they had ten beliefs that you're looking at, it's not a complete profile. And so what I'm saying is is that when you're looking at those ten alleles, those ten markers is is that you can't determine, you know, how much one particular individual contributed -- how many alleles one particular person contributed versus the other two?

A If I'm understanding your question correctly, so I'm going to explain it the way I think you're asking. So if I have a partial profile and I have ten test results total across the entire profile, is that correct?

Q Yes.

A Okay. So -- and your question was can I tell if so and so contributed certain particular numbers or test results?

Q Yes, can you tell -- if you got three people can you tell how many each person -- how many alleles each person contributed?

A No, so we're not doing that. So what we're comparing is it possible that the DNA profile exist because so and so contributed to it. I'm never saying that so and so contributed and these are his alleles or her alleles.

Q Okay. And you're not doing because you can't do

that, right, the technology doesn't exist for you to do that right now?
A Not what we're doing in our lab.
Q Okay. Now, another thing that I want to talk with you about, and, of course, is is that this is a little bit different and then eventually I'll get into this is is that you test what you receive, right? You're limited to testing whatever samples that you receive from the crime scene, right?
A That is correct.
Q Okay. So you're not involved in the collection process, is that correct?
A From the outside agencies, no.
Q From actually the crime scene. You're not part of the collection process from the crime scene?
A Right. So for like in this case, I did sub items and that was directly involved in either swabbing the hair or cutting the hair, but collecting it from the actual scene, no, I'm not involved.
Q Okay. And because you're not collecting it from the crime scene yourself, you're relying on the technicians collecting it from the scene to properly collect it because would you agree with me that DNA is not properly collected and it be contaminated?
A It is very possible.

Q It is very possible?
A It's possible.
Q Would you also agree with me is is that the reason why -- one reason that's possible is is that human beings we constantly shed DNA whenever we're talking the small particles of DNA that is being released from our mouth, whenever we touch things we can leave skin cell DNA on surfaces, whenever we sneeze then, of course, we can deposit DNA, is that correct? So DNA is easily deposited, is that correct?
A It can be, yes.
Q Okay. So if you have an analyst that actually goes into a crime scene and if that analyst doesn't properly collect that DNA, it is possible that the analyst could contribute to the actual sample that the technician is collecting?
A So, yes, so we have all our staff at SLED as well as many collectors from other law enforcement agencies, we have all their DNA profiles on file. So every time that I develop an unknown profile, I compare it to that data base. So I can compare it with me with everyone, all of our crime scene agents. Anyone who's in our data base to make sure that it is truly unknown item contaminated or anyone affiliated with the case did not contaminate. So we do have those safeguards in place.

Q So did you do a comparison in this case with the two crime scene technicians who collect the evidence?
A With Todd Schenk and Delilah Jackson, yes, I did. Yes, sir.
Q Okay. Now, another thing that affects the reliability of the DNA testing is that how much DNA. And this just -- I'm going to go into at least -- go into at least -- going to be more specific and talk about this case instead of talking about it in general. And I'm going to specifically -- do you have your analytical report with you?
A I do.
Q Okay. And I'm going to take you to I think -- to I think page three, item of evidence three, is that correct?
A Okay.
Q That's a swab from the back door or exterior door handle of the residence?
A Yes, sir.
Q And, of course, I think you said that that from the sample that was taken that you were able to develop a partial profile, is that correct?
A That is correct.
Q Okay. And I think that partial profile was a mixture -- your interpretation was that it was a mixture of three individuals, is that correct?

A Yes, we are required to state whatever our assumptions in stating how many people we're interpreting is is one of our assumptions, so, yes, in this profile. I interpret it as three.

Q That's the assumptions you made by -- what we talked about before when you're looking at that graph or looking at the peaks and interpreting the peaks?

A That's correct.

Q Okay. Specifically for this item, do you know how many alleles did this profile contain, this partial profile contain?

A I can count them if you like me to, but not off the top of my head.

Q Okay. How can you count them do you have it with you?

A I do.

Q Okay. Sure.

A Would you like me to count them? So the profile resulted in 56 alleles that are not gender identifying markers. And then four alleles at the gender identifying markers.

Q Four alleles at the gender identifying?

A So, yes, one at the -- the Y (inaudible) XY that's male female and then one at the other DY location.

Q Okay. So it's four gender identifying, and then, of

course, 56 altogether?
A Not including those four. So it be 60 including.
Q So total 60 altogether but 54 ---
A 56.
Q --- gender identified. And, of course, looking at proposition set number one. And I think it says that Andrew Legette and two unidentified unrelated individuals, and, of course, it says that there's is a 50,000 times more likely that Andrew Legette and two unidentified unrelated individuals contributed to the mixture than if three unidentified individuals contributed to the mixture?
A Yes, the DNA profile is approximately 50 times more likely.
Q With that likelihood ratio, can you tell the Court whether or not yes or no did Andrew -- is that Andrew Legette's DNA?
A No, but I'm unable to say that for any profile.
Q You can never because you're dealing with probabilities likelihoods. This is -- you're dealing with the probabilities that he contributed to the mixture. You can't say for certain that he -- that that's his DNA, is that correct?
A Right, I am saying -- I'm making comparisons and with two scenarios. So I have this profile and my first scenario is the person of interest contributed to the

profile versus the complete opposite. Someone else did it. So whatever one's giving more weight is the likelihood. So there's more weight to whichever scenario you have the first scenario or the second scenario.

Q But if I ask you does that mean that he is a contributor your answer would be?

A That there is ---

Q I know you talk about likelihood ratios. I'm asking you can you say whether or not he's a contributor?

A I can say that there is strong support that the DNA profile from the evidence exist because it's best explain by Andrew Legette and two unidentified unrelated individuals contributed to the mixture?

Q I think I know what's going on here. I think the answer is, no, you can't ---

MR. WHITE: I think the answer was what the answer was.

THE COURT: You can ask a question.

MR. BROOKER: And I am asking one your Honor. She can disagree with me if she wants to or not.

THE COURT: Just ask her a question.

BY MR. BROOKER:

Q Can you say that Andrew Legette is a contributor? I'm not talking about -- I know we're talking about -- and I understand what likelihood probability is, but I'm

asking you a definitive question can you definitively say he's a contributor?

A I can only show support to the scenarios. That's how DNA interpretation works.

Q Now, we're still dealing with item three, and, of course, sub set two, of course, says that sub set two says that the hypothesis that Issac Hemingway and two unidentified unrelated individuals contributed to the mixture. That probability ratio is that there is one billion times more likely if Issac Hemingway and two unrelated individuals contributed to the mixture than if three unrelated individuals contributed to the mixture. And I'll ask you the same question. I believe I get the same answer. Can you definitively say that Issac Hemingway is a contributor?

A No, we cannot say that, that's not what DNA interpretation states for any results.

Q So can you -- and I guess another way to ask you that is that can you include him as a contributor?

A I can't exclude him.

Q You can include him and you can't exclude him?

A So he is -- so there's very strong support that the DNA profile exist because he and two others are contributed to that profile.

Q So you can't exclude him?

A Likelihood ratio did not exclude him.
Q So can you include him?
A Right, he's included with that likelihood ratio.
Q I know that you said he's included with that probability issue?
A I don't understand the question.
Q Can you definitely include him? Can you definitely include him as a contributor?
A So based on the comparison I made, there is very strong support that him and two unidentified unrelated individuals contributed to that mixture?
Q Proposition number three. And, of course, Andrew Legette -- and I'll ask you the same thing because basically I'm going to be asking you the same questions. And I suspect you'll be giving me the same answer. But I'm sorry, but I need it for the record says Andrew Legette proposition three, of course, was still dealing with item number three, which is the back door handle exterior door handle to the residence. And sub set number three Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the DNA, that's the hypothesis. And, of course, it says 2.3 quintillion times more likely if Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if three unidentified unrelated individuals

contributed to the mixture. Now, I'll ask the same question for the record. Can you exclude him from the mixture Issac Hemingway?

A No, Issac Hemingway I did not exclude him from the mixture.

Q And you include him definitively as a contributor to the mixture?

A Based on the scenario that you -- that we're talking proposition three. There is very strong support that the DNA profiled I developed is best explained by Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the mixture.

MR. WHITE: And, Judge, if that's the route we're going and it seems that is the route we're going, I would argue that that's been asked and answer. I asked her on direct the very same question and now he's trying to elicit different response.

THE COURT: I think tomorrow during cross-examination I don't have any problem with asking that. However, but for the purposes of this hearing, I think we all understand it. I do. She does. I think that you do.

MR. BROOKER: The reason why I'm doing it your Honor is is that because if there is a conviction, then, of course, is if the record is not complete, then the

Court of Appeals is going to turn it on me.

THE COURT: I'm going to let you ask it tomorrow. I don't think you need to ask it for this hearing over and over again.

MR. BROOKER: Okay.

BY MR. BROOKER:

Q And, of course, I think proposition set number four, set number four is dealing with the same item three. It says Maisha Burch and two unidentified unrelated individuals 50 times more likely if three unidentified unrelated individuals contributed to the mixture than if Maisha Burch and two unidentified individuals. So it's more likely that two -- it's more likely that Maisha Burch and two unidentified individual contributed to the mixture under subset four?

A No, sir.

Q Okay. I think I read that wrong. It's more likely that three unidentified individuals contributed to the mixture, is that correct?

A Yeah, so it's better explain by the second hypothesis which is three unidentified unrelated individuals contributed to the mixture.

Q But does that exclude Maisha Burch?

A Does not.

Q Okay. Because that include Maisha Burch?

A No, it's moderate support to exclude her, but it's not an outright exclusion.
Q And that's what I'm trying to ask is whether or not these are out right exclusions, that's what I was asking?
A For this likelihood ratio for this proposition set, you are correct it is not an outright exclusion.
Q For the other ones that we talked about was there an outright exclusion -- outright inclusion?
A Will you restate that question.
Q I'll withdraw the question. Subset five and I will go through subset five. I think for item three let's go to page five item seven. And I think this is the swab from the wall of the hallway on the inside of the residence, is that correct?
A It was described to me as swabs from wall of hallway front of house side.
Q Okay. And we're dealing in this -- and we're dealing with a -- I think in subset one I think you said we're dealing with a mixture of two individuals?
A I interpret it as a mixture of two individuals.
Q That's what your interpretation was. Okay. And, of course, under the subset one it says Maisha Burch -- the hypothesis is Maisha Burch and two unidentified unrelated contributed to the mixture. And your conclusion was there is six times more likely that Maisha Burch or an

unidentified unrelated individual contributed to the mixture than if two unidentified unrelated persons contributed to the mixture. Okay. I think you said that is was -- using your chart on the back how would you classify that support for that hypothesis?

A So for the DNA profile developed from the -- item seven the unknown it is weak support that Maisha Burch and an unidentified unrelated individual contributed to the mixture versus the two unidentified unrelated individuals contributed to the mixture.

Q But it does not exclude her?

A It's more towards the inclusion if anything.

Q So more towards the inclusion?

A Right, it supporting the first proposition set, which is she is included.

Q Means that there's a possibility, but there's not an absolute -- you can't say that she absolutely was a contributor?

A I cannot.

Q Okay. Same thing for subset two it's a hundred times more likely if Issac Hemingway and an unrelated individual contributed to the mixture than if two unrelated individuals contributed to the mixture and you classify that support as based upon your chart as -- is it moderate?

A That's correct.
Q Okay. And does that definitely include him?
A There is moderate support that Issac Hemingway and an unidentified unrelated individual contributed to the mixture -- the profile is best explained with that proposition.
Q Okay. But you can't speak in terms of effectiveness, is that correct?
A I'm sorry I didn't hear that last one.
Q Definitiveness?
A That is correct.
Q That's all I am asking. And subset -- I think we're still on number seven. We still on item seven. I'll move a little bit faster. Subset three talks about Maisha Burch and Issac Hemingway contributed to the mixture. It says that it's three times more likely if two unidentified individuals contributed to the mixture than if Ms. Burch and Mr. Hemingway did, is that correct?
A I believe you stated it right, but I'm just going to state it again for the record. The DNA profile is approximately three times more likely if two unidentified unrelated individuals contributed to the mixture than if Maisha Burch and Issac Hemingway contributed to the mixture.
Q Okay. And I guess in layman terms what does that

mean?
A Sorry I didn't hear that.
Q In layman's term what does that mean?
A So it is moderate support for that second scenario that the DNA profile that I developed is better explained that by two unidentified unrelated individuals contributed to the mixture than the combination of Maisha Burch and Issac Hemingway contributed to the profile. So, again, every time we have an inclusionary or likelihood ratios that are supporting our first proposition set, we then combine them to see if that profile can still be explained by both of them contributing to that profile. And in this case there's moderate support that it was two unidentified unrelated individuals contributing to the mixture versus the combination of both of them.
Q Yes, ma'am. But you can't definitively exclude Burch and Hemingway from that scenario that set?
A Based on that likelihood ratio, it was not -- that combination of comparison was not excluded.
Q And subset five I think it's 11 times more likely I think for Stephanie Reed an unidentified individual contributed to the mixture, 11 times more likely that two unidentified individuals contributed to the mixture, is that correct?
A The DNA profile is approximately 11 times more likely

if two unidentified unrelated individuals contributed to the mixture than if Stephanie Reed and an unidentified unrelated individual contributed to the mixture.

Q But that doesn't definitively exclude the possibilities of Stephanie Reed contributing?

A That's correct.

Q Some thing with subset six. Jessica Dixon and an unidentified unrelated individual 26 times more likely that two unidentified unrelated individuals contributed to the mixture?

A Yes, that is moderate support that two unidentified unrelated individuals contributed to the mixture than if Jessica Dixon and an unidentified unrelated individual contributed to the mixture.

Q That doesn't exclude her. And let me ask you a quick question. Why do you have all of these proposition sets? I think for number seven I think we have -- for number seven item seven that we are examining, we have eight proposition subsets. Why do we need to have eight proposition subsets?

A Because I had seven known contributors to compare to. So typically it would be a proposition set for each known contributor. The eighth one is for the combination of those two known contributors together. If I have similar -- not similar, but the same results for multiple

comparisons that I did, I can condense it all into one proposition set or one of the proposition sets. And I do a statement that it's the person of interest. And what I run for my comparison. And then I can exclude all of them together, but for this item, there is eight different comparisons with eight different likelihood ratios, that's why there's eight different proposition sets.

Q And in those eight proposition sets, you can't definitively include anybody or definitively exclude anybody, is that correct? In the eight proposition sets for number seven item seven?

A I did not definitively exclude anybody. However, there were likelihood ratios supporting the first scenario which would be a particular person contributing to the mixture and an unidentified individual.

Q But that doesn't mean it's going to be -- that they contributed? It's a probability that they did?

A The DNA profile is best explain by that first scenario versus the other scenario I compared.

Q And, of course, is I'm going to go to the only other one I think that involves Issac Hemingway. And, of course, I'm asking you some questions. And then, of course, we should be done. I want to get to the -- if you can indulge me for just a second. 18.1 this is the only other one I think that was Issac Hemingway subset number

one. I think you said that two individuals, is that correct? Your interpretations of two individuals?

A For proposition set one.

Q Yes, proposition set one for 18.1?

A Yes, sir. I interpret the mixture originating from two individuals.

Q Okay. And, of course, your hypothesis is Maisha Burch, Issac Hemingway contributed to the mixture and that there's a 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture?

A That's not correct.

Q And I'll ask you the same question just for the record. Can you definitively include or -- can you definitively include Issac Hemingway ---

MR. WHITE: Judge, just for the record so the record is clear, she answered that that was incorrect.

THE COURT: That's right.

BY MR. BROOKER:

Q Okay. I'm sorry. Did I read that wrong?

A You did.

Q Okay. 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and an unrelated individual contributed to the

mixture. I read it right that time?
A Yes, you didn't say the first part of the sentence, but, yes, the latter half.
Q Yeah, the DNA profile?
A That is correct.
Q Okay. And just very quickly does that definitively -- is Issac Hemingway definitively included?
A There is moderate support that the first explanation of Maisha Burch and Issac Hemingway contributed to the mixture is 270 times more likely. It's moderate support for that scenario versus opposite scenario, which is Maisha Burch and an unidentified unrelated individual contributed to the mixture.
Q Now, I want to ask you a couple questions in reference to -- I know that there was a couple of times in which you said that -- I know that when you have a mixture that you're looking at is there a standard that you have to determine whether or not the mixture is not appropriate for interpretation?
A We have a protocol we must follow.
Q And under what circumstances -- what is that protocol says about when you should not interpret or attempt to interpret, you know, DNA profile, but it's unsuitable for interpretation?
A So I don't have it memorized. And I look at it every

time I do comparisons, but there's different factors that come into play for single source or mixtures. It has a set of I believe two test locations that exhibit peaks above a threshold for single source. And it's eight -- I believe it's eight for mixtures.

Q It's eight for mixtures?

A I believe so.

Q So it had to be at least eight for mixtures?

A Different locations.

Q At different locations. And, of course, at least two for single ---

A Yes, sir.

Q --- at different locations. Now, I'm almost finish. And I want to ask you to kind of define, so hopefully we understand what touch DNA is. What is touch DNA?

A Okay, so touch DNA is what we call any time you touch or handle an object. Touch DNA we call that as our touch DNA requests. What we are looking for is any cellular material that contains DNA that is left behind while handling or touching an item.

Q Now, in the items that you were dealing with, I think in -- I think we just went over, and, of course, is is that that was item three, seven, 18.1. Were you dealing with touch DNA? Was those partial profiles developed from touch DNA?

A Well, so for items three and seven, I believe so. I did not do any serology testing or was there a body fluid request. For item 18.1 is a little bit different because it's fingernail scrapings, so top of her fingernails. So it could be DNA collected from whatever she touched could be under her fingernails scraping as well as her DNA is under from it being on her body. So it's not necessarily that ---

Q So you can't determine whether or not it's touch DNA?

A It's possible that it's touch DNA, but it could be from other sources of DNA that -- because I did not test her body fluid.

Q That's what I'm saying is is that you can't determine whether or not it's touch DNA or not?

A Right.

Q Is that correct?

A That's correct.

Q Non-exclusion DNA what is non-exclusion DNA?

A I don't know what you're referring.

Q All I'm asking -- well -- just strike the question. And I think you talked about random match probability and could you explain again to me what random match probability is? You said that that's what y'all use to use?

A Well, we still do use it on specific amplification

kits. So what I've talked about and did in this case is two different amplification kits. It's called GlobalFiler is our normal every day one that we do on all DNA. And I also did Y-STR testing that I use with Yfiler Plus Amplification kit. We also have the ability to use Minifiler another amplification kit test autosomal DNA. However, it's used for degraded cases or samples that are degraded. And we typically we use those in body ID's and stuff like that. It was determine by SLED not to validate STRmix with Minifilers since we don't use it two often. So we still use random match probability on DNA profiles we developed using the Minifiler Amplification kit.

Q And I know that you said that these probability profiles is it generated by software?

A Are you referring to the likelihood ratios?

Q The likelihood ratios -- I'm still use to saying probability. Likelihood ratios is this generated by software?

A Yes, we use the STRmix software to generate our likelihood ratios. We do not calculate them by hand.

Q Okay. And that's what I was going to ask you is is that do you know the formula they use of how they do the calculations?

A So I'm familiar with it. Can I state it right now, no. I was definitely trained in it. And why they came up

with that formula during a four-day training that intense training we had by the developer who came. He went over reviewed all that with us. We had to do hand calculations, but I can't tell you exactly. It's a complex formula. I can't tell you off the top of my head what it is.

Q Okay, okay. So one more question when the computer -- I know that you said you can't tell us what it is. And what that formula is off the top your head?

A Not off the top of my head. I can look through the paperwork to find out, but not off the top of my head.

Q Okay, okay. Because I know that one of the things I think that you said that you were familiar with State vs. Phillips and I think one of the things that the judge -- that the Supreme Court said in State vs. Phillips is is that it's necessary that an explanation is given as to how these likelihood ratios are calculated. Is that something that you come up for us -- that you can find for us?

A I could, yes.

Q Okay. One more question with respect to the software. The software that y'all use is that the only software that's on the market to coming up with the likelihood ratios?

A No, so there are other probable genotyping software if you're referring to that?

Q Yes.
A There's also other programs to calculate likelihood ratios. We use a separate one for our paternity statistics that are likelihood ratios. We use Hopstats (sic) which is created by the FBI for those likelihood ratios.
Q Okay. One more question with respect to the calculation likelihood ratio. Whenever the computer generates the likelihood ratio, I think you said that you do not go and do it on yourself. What's the quality control procedure that y'all have in place to confirm that the software is actually working properly and is not generating an inaccurate probability ratio based upon the mathematical formula?
A So that is all done in validation studies before we brought it online to use for case work. So all of that studied was done with our validation studies to prove that it's working correctly as expected. Also during our proficiency test, you can tell based on the results for that that is still working correctly.
Q And I understand exactly what you're saying, but that's not what my question is. Let me see if I can ask you a better way. I understand that you said that the formula has been validated, is that correct? The probability ratio formula has been validated is that what

you're saying?
A The formula -- well, all of it. The whole calculation has been validated.
Q And what I'm asking is is that let me put this in simplicity. Sometimes when I get on my computer sometimes it works exactly the way it suppose to be. Sometimes it does not. And sometimes it gives you an error. I have to reboot it. And what I'm saying is is that when you're using this software -- you're depending on this software to generate a likelihood ratio and the software spits out and says it's -- you know, 270 times more likely say how can you determine at that moment for this particular -- for this particular analysis that you're doing that the software is not malfunctioning and making a mistake because as we all know is that computers and software is not infallible. So I'm saying is that how do you then go back and says, well, we have a quality control procedure in place to ensure that that number that the computer generates that the software at this moment is working properly. And, of course, is is that that equation is -- that mathematical equation is correct. So what do you have in place for that?
A So if I understand your question correctly, there are signs of error like the computer if it wasn't working or running at all easy to see because we would get no output

file. We also through our review process. So I do a initial review to see -- to make sure that all of my data and statistics make sense and as what I expected. If I'm putting something that's a single source profile, I'm expecting and I can visually include a person or can't exclude a person. I expect a really high likelihood ratios. So based on my expertise and what I'm guestimating, I don't know if that's the right word. Assuming -- expecting expecting is the better word. If it's in that ballpark, then I know that I also worked correctly. And I have two reviewers that also agreeing with the interpretation. The statics in my reporting.

Q And one more question along this line. Do you ever just simply run it twice to see whether or not the result comes out the same? The statistical probability ratio comes out the same. So if you run it through the software once, then you get 270. You ever just run it through the software a second time to see whether or not you will also get 270?

A Not on case work, no. Validation studies that probably was done, but not in case work.

Q And that's what I'm asking in case work. Did you do that for these particular probability ratios that you generated for this kind of report?

A No, sir, I did not.

Q Okay. And, of course, is is that you said that you didn't go back and do the mathematical formula by hand to validate the correctness of the software, is that correct?
A For this case or during the validation studies?
Q No, for this case. Right now I'm just talking about just this case not the validation study. I'm talking about just this case?
A No, I did not. I feel like that be even more prone to errors if I had to hand calculate it as well.
Q Now, leave that alone, and, of course, is is that the other thing I'm asking you is is that children -- I think you said is is that you were not told when you were doing the analysis on this DNA and specifically is is that you were not told that there were potentially I think four kids in the home that Issac Hemingway had four kids that was in that home?
A No, I was not told that.
Q Okay. Now, if he is the biological father -- and I think one of the children in the home was a boy. Of course, is is that I think the other three were girls or four were girls. Let's talk about the male child first. Assuming that Issac Hemingway is the biological father of the male child would his alleles -- if you look at the complete profile for the child, the male child, and, of course, complete DNA profile but from Issac Hemingway, if

he is the biological father, would those alleles, I guess, on a specific point on the DNA molecule would those alleles be identical?

A So you get half of your DNA from your mother and half from your father. So half of the child's DNA -- if he is the biological father would be the same.

Q Okay. So and the reason why I'm asking you that is is that so if you get a DNA marker from the back door, how can you determine whether or not that the DNA that's collected from the back door in this particular situation did not belong to the male child and did belong to Issac Hemingway if they share the same male DNA markers?

A Just male DNA markers or the entire across the whole DNA profile?

Q Well, let's talk about them both. Let's talk about the male DNA markers and the entire profile?

A So for male DNA markers, it is pass along for males from generation to generation. So any male in the line, the blood line is going to have the same Y-STR profile or the male identifying markers that I test with Globalfiler. So those would be the same from father to son or to dad all in the same biological line. So there is no way to tell which male it came from.

Q So there's no way to tell whether or not the DNA on the back door was from the child or either from Issac

Hemingway the father?
A So I didn't do Y-STR testing on the door -- the back of the door. I did autosomal DNA testing on that.
Q Okay. Let's talk about that?
A All right. So the child and the father are going to share half of the DNA are the same. And the other half of the child would be from the mother. What is your question again? I'm sorry.
Q Because these partial DNA strands. Can you in any way conclusively determine that that DNA came from Mr. Hemingway as oppose to his child?
A I can't say that it conclusively came from anybody no matter if there's a child involved or not.
Q So the DNA on the back door that you are examining that could from the child?
A I would have to have that child's profile to compare.
Q So was it an error not to have that child's DNA profile to see whether or not you can eliminate that child as being the contributor or what the probability likelihood that the child was a contributor to that profile on the back door? Was it error to have the DNA profile of the child so that you can use in your analysis?
A That was a determination by the investigators. Again, I didn't know there were children. I can -- I made comparisons to all the known standards submitted in the

case. If a child was submitted, it -- like I said because relatedness it may be hard to determine if mom and father are contributing to the profile. It's really hard to say if a child's contributing as well because their DNA is from mom and dad. So if mom and dad are possibly on it, it's hard to tell if another person's on it. It could look like it's a mixture of two people when it's mom and dad and child because they all have the same DNA.

Q You can't tell the difference, is that correct? You can't tell the difference between the child's DNA, mom and dad's DNA?

A I tell the difference between a child's DNA and a mother's DNA. However, if it's a mixture, it's hard to make it comparison sometimes. It really depends on the profile and the amount of DNA that's there. But sometimes it's hard to make a comparison of a child. And we just say due to the relatedness -- possible relatedness no interpretation would be offered.

Q If you had known about the male child or the children in the house, would you have requested to have their DNA for comparison?

A Probably not. And I don't typically ask about children. It's not my part of the investigation. Again, I'm doing the DNA. I comparing it to whoever they deem is important to compare to the profiles. However, that's not

my decision.
Q You just analyze whatever they give you?
A That is correct, sir.
Q Okay. Now, you might be surprised to know I'm almost finished. I want to ask you another line of questions in reference to touch DNA, and, of course, is is that touch DNA is transferable, is it not?
A I don't understand your question.
Q Touch DNA can be transferred so -- if I were to shake your hand, is it possible for you to transfer DNA from your hand to my hand?
A Yes, any DNA is possible to transfer. It doesn't have to be touch DNA. If I touch a blood spot and then touch another spot, I can move the blood from here to another spot. So any DNA whether it's touch or any body fluids it be transferred by the handshake or object.
Q But two or three samples in this particular case we're talking about touch DNA, right?
A Yes, sir.
Q Okay. So and if touch DNA is transferable, can you determine whether or not the DNA that you're analyzing was contributed by a specific individual or whether or not it was -- it was what's called a -- I think it's called a second source is that what they call it a second source?
A Secondary transfer.

Q Secondary transfer that's it.
A So the down fall of DNA is that I can tell you that the DNA profile is there, I can't tell you how it got there. I can't tell you if someone touched it or someone touch something that touched. We can't determine how it got there or when it got there.
Q So the DNA that was found on the back door, you can't determine whether or not that DNA was the -- I guess the -- you can't determine whether or not any particular person who your probability ratio may suggest that could be a contributor, you can't determine whether or not that DNA was contributed by that person or either whether or not it was the secondary or is it a secondary transfer?
A Again, I can't tell you how it got there just that the DNA profile is there.
Q Okay. Same thing with the other DNA that you analyze. I think the DNA on the wall I think was -- could you determine whether or not it was -- that was from a secondary transfer?
A I cannot. I can't tell you how it got there at all.
Q The DNA I think from the nail clippings of -- I think it's 18.1?
A Fingernail scrapings.
Q Yeah, yeah, same thing with that. Can you determine whether or not that was a secondary transfer that she may

have picked it up from secondary source?
A Again, I can't tell you how the DNA got there or not, but if it was from a secondary person, you would expect to see another person's profile in it most likely. But, again, I can't tell you how DNA gets anywhere just that it's there.
Q Okay. Because DNA is transferable it can travel. One more question. How long do DNA -- the age of DNA how long DNA has been a specific place. Can you age DNA? Can you tell how long DNA has been at that particular location?
A No, I can't tell you and how it got there or how long it's been there.
Q Okay. So you don't know whether or not it's been there -- you can't tell whether or not it's been there three days ago, five days ago or seven days ago?
A That is correct.
Q And that would apply to this particular case the DNA that you analyze in this particular case, you can't age it? You can't tell, you know, how long it's been there?
A That is correct.
MR. BROOKER: No further questions, your Honor.
THE COURT: All right.

REDIRECT EXAMINATION

BY MR. WHITE:

Q Just real quick, I know you ready to go, Ms. Boehm. I just wanted -- you brought up something that I wasn't aware of, so I just want to touch base with that real quick. When it comes to the fingernail scrapings, are you saying that if someone touched something, it's transference, right, touch DNA blood or what have you. And then transferred that underneath the fingernails. You would not only see the transference DNA, but you would also see the DNA of the person who transferred it under the nails?

A In my opinion, I would believe that you would.

Q But it seems like kind of common sense?

A Right, and, again, if it was blood, I would expect more of a profile. Blood has lots of DNA in it, so I would expect a lot of foreign DNA to the individual whose fingernail scrapings it is and possible if it's transferred by another person possibly the other person's DNA as well.

MR. WHITE: Okay, very good. Thank you, Ms. Boehm.

THE COURT: You through?

MR. BROOKER: I think I'm through, your Honor.

THE COURT: Thank you.

(WHEREUPON, the witness leaves the witness stand.)

THE COURT: Tell you what, I'm going to going to give the State two minutes to weigh in on the 702 and 403 analysis and I'll give you five minutes.

MR. WHITE: Judge, as for the 702, I think we've clearly established all the factors that need to go into that. We went through publications and peer reviewed Ms. Boehm aptly covered that. Application of the method to the type of evidence in this case. I mean, she was there when they started the STRmix process and she was at the forefront of developing that at SLED. She described how she applied that to the evidence in this particular case. She went into great detail on both direct and cross about the quality procedures used in ensuring reliability. Obviously, it's peer reviewed on the front end. There was a lot of quality control procedures put in place. And the consistency this is used throughout the country, throughout the world at the FBI level. And, Judge, she makes sure that in each and every case that it's consistent by going through a peer review process. I think clearly she's established that part of the process. Did you want me to touch on 403?

THE COURT: If you want to.

MR. WHITE: And in 403, Judge, I think this is distinguishable from Phillips in a lot of regards and the facts and also in the methodology. This is a completely

different interpretation process. This is STRmix that was with random probability matching completely different interpretation used in State vs. Phillips as oppose to here.

As far as the facts in this case, they are also distinguishable. In Phillips, he admits to touching the gun. So the probative value of those -- and, again, those items in there were very level items as far as probability. Here we got a little bit higher likelihood, but anyway here is distinguishable. And Mr. Hemingway says he never was inside the home. So the total value is much higher if he were to say I was inside the home maybe it be much lower, but he's adamant I was never in those locations where the items were found, so I think that increases probative value.

And, Judge, furthermore even though the items recovered in the hallway and we're specifically talking about front of the hall swab and underneath the fingernails, they were 100 times more likely and 270 times more likely respectively. That probative value is extremely increased by the fact that probably 20 yards away there is a high likelihood of his DNA on the back doorknob. I think that increases the probative value of the evidence that is recovered inside. I think that's why this is distinguishable and why it should be submitted to

the jury.

THE COURT: All right, thank you. All right, you got five minutes.

MR. BROOKER: Thank you, your Honor. Your Honor, this is I think 100 times worse than State vs. Phillips and I will explain the reason why. First, I'll talk about State vs. Phillips. And, of course, is is that why that wouldn't -- it wouldn't be admissible even under State vs. Phillips. I think one of the things that when you look at in State vs. Phillips, and, of course, is the Supreme Court I think did a wonderful job in going through the -- and, of course, they started off by saying in 1980s, and, of course, is is that, you know, this DNA science was developed. And, of course, is is that it was developed by traditional DNA blood and semen. And, of course, is is that when you were using blood and semen, of course, you were using high quantities of DNA that, of course, is is that the science was almost infallible is is that, you know, scientist could basically says is is that, yes, this is DNA or no it's not. But, of course, is is that they went on to talk about how the science has advanced. Of course, is is that right -- I think it was the 1990s. And, of course, is is that they develop technology where they can start using what they call high frequency DNA or basically is is that they can take DNA

from skin cells, take DNA from traditional sources that otherwise that always was there in 1980's, the 70's and 60's, but could not be examined because of the technology.

But, of course, is is that that sort of DNA is not as strong as the traditional DNA because you're looking at partial profiles. And, of course, is is that you can't say whether or not the DNA belongs to the person or not. You're dealing with probabilities. So a person cannot be excluded nor can a person be definitively included. You're talking about a mathematical probability, a likelihood, an educated guess that's done by a computer. Computers make an educated guess based upon all of these factors what is the probability this is your DNA. Now, what makes this a hundred times worse State vs. Phillips and I'll get to that because my time running out is is that ---

THE COURT: Two minutes 27 seconds.

MR. BROOKER: Okay, your Honor. Because in State vs. Phillips in this particular situation what makes this a hundred times worse is is that the DNA is is that the DNA profiles that they developed from the samples that they took from the scenes and they compared those to Issac Hemingway like the analyst says is is that Issac Hemingway's DNA is going to be identical to that of his kids, which means his kids going to have -- the kids are

going to have mom and dad's DNA. And because the kids going to have mom and dad DNA, and I think analyst says is that that DNA that they took from the back door, the DNA that they took from the wall, the DNA that they took from the fingernail clippings they cannot determine whether or not that DNA belong to the father or the child.

It is possible to make a determination because they shared the same DNA. And she said that when she did this she had no idea that there was children in the home. And I think you heard her said I just analyze what they give me. So there is absolutely no way in the world to determine whether or not the DNA that we're talking about here today belongs to the kids because the kids and Issac share identical DNA and that is the problem. There's no way to get around that, that's what makes it a thousand times worse. You can't tell whether or not this is Issac's DNA in the samples or the kids. So it renders all of this statistical analysis as to whether or not all this statistical analysis it is absolutely useless. It's garbage. It says nothing about whether or not that DNA is his because you can't exclude his kids who share the exact identical DNA.

MR. WHITE: And I got to respond quickly, Judge.

THE COURT: I don't need it. I don't need it. You all just bear with me. I'm going to walk through a

702 analysis and then I'll get into a 403 analysis. Then I'm going to talk about State vs. Philiips. First of all, under 702 analysis, I ask myself is the subject matter beyond ordinary knowledge of a jury, of course, it is. It's DNA. Well, we only have an expert in this room, she's testified right here, so that's met. Does expert have the requisite knowledge and skill to be qualified as an expert in DNA.

She talks real fast at the very beginning, so I didn't quite catch it, but I know that she's been a DNA analyst for either 14 or 17 years somewhere in that period. She went to a university in Virginia didn't quite catch which one she went to, so she has the education. She has the experience. She graduated from college. She was a private DNA lab analyst for two and a half years. Then she went to SLED. She went through all their protocol, all their testing, all their educational purposes and so forth and so forth. So, yeah, I think she does have the requisite knowledge and skill to be qualified as an expert.

The third prong is the substance of the testimony reliable. And she went through all four of those factors in great detail. She stated that there were many publications and that there were peer reviews of the DNA analysis.

The second prong is prior applications of this in past trial. She's testified in the past 83 times. And I've had her in trials many times myself. The quality control procedures used to ensure reliability. She went into great detail SLED lab accrediting process and that in great detail. I think that was met as well. And then the consistency of the method being recognized with scientific procedures. And it's recognized throughout the United States, South Carolina, the nation, FBI et cetra, et cetra, et cetra.

I think under 702 she's clearly qualified to testify as an expert and give her opinions. Under 403 analysis, I find that the testimony is very relevant and that in this case it substantially outweighs the danger of unfair prejudice, confusion of the issues or misleading the jury.

Now, in regards to the State vs. Phillips analysis, I think this case is very different. This case is very streamed lined, very down to basics of DNA expert testimony and how it applies at trial. In State v. Phillips, there were several failures on behalf of the State that led to the reversal.

First, the State failed to present the testimony of an expert witness at the hearing, but we have it here. Secondly, the State presented an incomplete factual and

scientific basis for the admission of the expert's opinion. We had that here clearly. Third, the State did not explain to the jury the complicated DNA concepts involved. We did have that explained today and it was flushed out in detail by the defense attorney. And then the fourth thing that took place in that trial is that the Solicitor mislead the trial court with some facts. So the appellate court took all of that into consideration and used all of that to have a reversal of the trial court judge. This is much more plain. This is much more basic. This is much more streamlined than I think that she is an expert. I think she can testify. I think she can give an opinion. And I've given my 403 analysis, so I do think it comes in tomorrow. So everybody be back at 9:30.

(WHEREUPON, the proceedings were concluded for the day to be reconvened on February 27, 2023.)

THE COURT: All right. Before we begin, I do want to go over one thing with you where we left off on Friday. On Friday, I ruled that the mention of the child support bench warrant in the defendant's second statement does come in. However, Friday I was tired like you all and probably didn't give a good rationale as to why I'm letting that in. So I want to take a little more time and get more specific about why I would allow that to come in.

The first thing I did is I looked at a 403

analysis. Ordinarily, if the State was not attempting to prove that child support was motive in this case and it just came up that he was picked up on a child support bench warrant, under those scenario I would not let in. It's probably not relevant and has nothing to do with the case. He's probably just trying to prejudice the defendant, confuse the jury what have you. But in this case, we have the State from the very beginning from its opening on alleging that the motive for the killings was to avoid child support. So if there is a child support bench warrant and he's picked up on that, it becomes extremely relevant. And in my opinion, it's relevant outweighs any prejudicial effect that it might have. So I think it is very pertinent in this case and that was a big part of my reasoning for letting it in.

But then I went a little further and I looked at Rule 404 and 404(a) says that character evidence is generally not admissible. However, if you go to 404(b) it states that evidence of other crimes wrongs or acts are not admissible to prove the character of a person in order to show action and conformity therewith. However, 404(b) has an exception for motive and that's the whole crux of the State's case is that child support was the motive for the killings. So I think it passes 403 and it passes 404(b) as well.

Then I look at it from a Denno hearing perspective and we eliminated all of the second statement whereby he was not under Miranda warnings. And I found that he gave after he was properly Mirandized to freely voluntarily statement. So I think under 403, 404 and the Denno hearing it does come in and that's my rationale for why it comes in. So I just wanted to clear that up. Friday we were all burned out. Yes, sir.

MR. BROOKER: May I add something your Honor in reference to that rationale?

THE COURT: Yes, sure.

MR. BROOKER: Your Honor, the only problem that we think that creates a problem with rationale is is that this was a bench warrant -- this was a bench warrant that was served 11 months after her murder. She was murdered in January of 2021. This is a bench warrant that was December 1 of 2021. So this is not a bench warrant that -- if they were claiming that this was a motive for the murder, this occurred after the murder and not before. The only thing that would have motivated him prior to the murder using their theory would be one things that existed prior to the murder. And two is is that thing that he was aware of prior to the murder. That's the problem with this bench warrant. It's 11 months later this bench warrant.

And I think also we have evidence, and, of course, I talk with this in reference to Mr. White is is that and also talk with the clerk that bench warrant that they're talking about that bench warrant was extinguished in July of 2020, so that bench warrant wasn't even active at the time in which he was arrested. And, of course, they may have arrested him assuming that there was a bench warrant present, but there was actually no bench warrant present. Of course, if your Honor would give me just a second, I can find the document that the clerk's office give to us. I think Mr. White has it also. We discussed this yesterday -- Tuesday showing that there was no bench warrant. Even though they may have been under the impression that it was, but it actually terminated in July of 2020.

THE COURT: All right. Any reply to that?

MR. WHITE: Judge, I respect the Court's decision and I agree with your analysis.

THE COURT: And I think even if the State is wrong, they can still use deceit and they can still lie during the statement. And I think all that makes real good cross-examination. And if you want to recall child support, you certainly can, but child support was an issue before, during and apparently continuing even after. So I think by now it pretty much stays the same.

MR. BROOKER: Thank you, your Honor.

THE COURT: All right. You ready?

MR. WHITE: Now, the only thing other thing, Judge, I want to discuss the scheduling. This morning we have Agent Barkdoll who's going to testify what I enter and publish the second statement. And, Judge, just so the record is clear, the second statement does not have the initial part pre-Miranda edited, but I will do that manually. I would publish it from the time that Miranda is given, so I just want to make that clear for the record. From scheduling standpoint, this is right at two hours long. So I'm going to talk to Agent Barkdoll for a little bit. And I'm going to get into the video. Judge, would be it suitable amenable to you, Judge, for me to maybe an hour in to pause it and give the jury a bathroom break or you want me to just go through it?

THE COURT: Why don't you keep on going. I'll tell them if they need it will be long. If they need a break, just to waive their finger.

MR. WHITE: That sounds good. And, Judge, I just want to remind the Court this is also right before publishing this video we were going to request that same jury instruction that you gave them on the first interview.

THE COURT: Okay. All right. Anything from the

defense?

MR. BROOKER: Nothing from the defense your Honor.

THE COURT: Thank you.

MR. BROOKER: Other than the fact your Honor, we just renew all of our previous objections with respect to the video.

THE COURT: Thank you.

(WHEREUPON, the jury came into open court.)

THE COURT: Okay. If you will call your next witness.

MR. WHITE: At this time the State would call Agent Jarad Barkdoll.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: I do.

THE CLERK: Thank you.

WHEREUPON,

Jarad Barkdoll,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Agent Barkdoll, good morning.

A Good morning.

Q Would you tell us where are you employed?

A I'm employed as a lieutenant with the South Carolina Law Enforcement Division also known as SLED. I'm assign to the Pee Dee region investigative services unit as a supervisory special agent. The Pee Dee region consist of 12 counties. One of those counties is included Marion.

Q And how long you been employed in that capacity?

A I have been at SLED since 2017 and I was promoted to lieutenant in 2021.

Q And back when this occurred in January of 2020, what was your role with SLED at that time?

A I was a special agent regional agent.

Q And how did you become involved in this particular investigation?

A I was notified that Marion County sheriff's office had requested SLED assistance and I responded.

Q Now, when an agency request assistance from SLED, what is your role in that capacity as an assisting agent?

A SLED is an assisting agency. We provide manpower and forensic services for local departments. The best way I can describe it is if you call 9-1-1, your local departments, your sheriff's offices, your local police departments will give you first responders that arrive on scene. If they need additional assistance, they often utilize SLED resources to help them with their investigation.

Q So you arrived on scene to observe and assist the agency who's running the investigations any way they need help?
A That's correct.
Q Now, did you do that here did you arrive at the home of Maisha Burch on January 13 of 2020?
A I did.
Q And when you get on scene what, if anything, did you find?
A When I arrived on scene, the first thing I notice was that Marion County had set up crime scene tape around almost one side of the block around Maisha Burch's residence. There was a large crowd of people from the community that were outside and there were several law enforcement officers that were present at the scene.
Q Now, did you have an opportunity to enter the residence?
A I did.
Q And are you familiar with Todd Schenk that works for SLED?
A I am.
Q And is he crime scene tech or crime scene agent?
A Yes, sir.
Q When he gets there, did you do what's commonly referred to as a walk through with him?

A I did. Typically, when I arrive on scene, the first thing I do is make sure that the scene is secure. And with our crime scene responded to the scene, I wanted to make sure that Marion County had obtained a search warrant to search the residence because I know that our crime scene will not process the scene without a search warrant. I did that. And I wait for crime scene unit to arrive on scene before I entered the residence.

Q And when you were inside the residence at any time did you touch anything?

A I did not.

Q Did you collect any evidence?

A I did not.

Q Did you process any evidence?

A I did not.

Q No time at all that you were inside that crime scene, around that scene did you touch any evidence that was sent off for SLED analysis?

A I did not.

Q Now, once you left the scene, Agent Barkdoll, at some point did you and Investigator Hotaling start to interview folks connected and some possible suspects?

A Yes, sir, as information came in during our investigation, we followed up with interviews.

Q And on I believe it was January 15th, so two days

after Ms. Burch was found, did you have an opportunity to interview the defendant Issac Hemingway?

A I did.

Q And were you present -- I think we watched that last week that interview. Were you present in that room when he was interviewed?

A I assisted Detective Reggie Hotaling with the interview.

Q So even though we can't see you, your voice was the second voice that we heard, is that right?

A That's correct.

Q Now, after that interview concluded, it's my understanding that you obtained a search warrant of the cell phone of Issac Hemingway, is that correct?

A That is correct.

Q And what was the cell phone number connected to that search warrant?

A Issac Hemingway's telephone number was identified as 843-625-0880.

Q So you was also to identify the telephone number of Maisha Burch?

A I was.

Q And what was that?

A Her number was 843-260-2411.

Q And the telephone number of Latosha Baines, who is

the defendant's girlfriend, were you able to ascertain that cell phone number?
A I was.
Q And what was that?
A It was four -- I'm sorry 347-821-6987.
Q And the last one that I'm going to ask you about the cell phone belonging to Kareema Hemingway were you able to identify that telephone number?
A I was.
Q And what was that?
A It was 843-617-5677.
Q Thank you, Agent Barkdoll. Now, at this point are you aware that items of evidence have been collected and are being process at SLED?
A It was, yes, sir.
Q And at this point you are also waiting on that evidence to come back as well as the information from the cell phone, is that right?
A That is correct.
Q Now, what, if anything, other than that, did you do in this investigation?
A After obtaining a statement from Issac Hemingway, I took the information that he provided to me and I traveled to Conway, South Carolina to canvas the area for any additional information that I could obtain about this

regarding his statement.
Q Were you trying to verify things that he mentioned in the statement?
A I was.
Q Were you able to do that?
A What I did was I canvas the area. Mr. Hemingway described to us his time line of evens of what he did that weekend. And I went to the Family Dollar to check to see if there was any surveillance camera to corroborate his statement. The Family Dollar did not have surveillance cameras, but there was a Food Lion next door that was adjoin to the Family Dollar. And I was able to obtain the surveillance footage from Food Lion.
Q Were you able to identify Mr. Hemingway on that footage?

MR. BROOKER: Objection, your Honor. May we approach?

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record began.)

MR. BROOKER: He can't comment on evidence that is -- that is not in evidence. If he's intending to put the video in evidence, then, of course, he can comment on it, but other than that, he can't tell him what he saw on that video if that video is not in evidence.

MR. WHITE: I don't think that there's a rule that states that.

THE COURT: It will be like him walking down the street and saying did you see so and so, that's direct evidence that he saw. You can question him as to whether or not the video is accurate.

MR. BROOKER: You're right if he saw something, that's direct evidence.

THE COURT: That's what they're doing here. Did you see him on the video.

MR. BROOKER: He is talking about -- he is talking about secondary evidence, which means is is that he is commenting on video that he didn't make. He's commenting on video that he didn't authenticate, that has not been authenticated.

THE COURT: We're not bringing in the video.

MR. BROOKER: And that's the reason why you can't talk about what's on the video because you're not bringing it in. It has not been authenticated, and, of course, is is that I don't know how a plain way to put it, but you can't comment on evidence -- comment on something that is not into evidence.

MR. WHITE: And I think you clearly can. I mean, people talk about ---

THE COURT: What they saw or heard or did,

that's direct evidence.

MR. WHITE: Yes, sir.

THE COURT: You can cross-examine about the video, but he's not saying what somebody else said. It's not hearsay. It's just what did you see is all he asked.

MR. WHITE: Yes, sir.

MR. BROOKER: And I'll say this and I'll sit down, your Honor. But the only difference is is that he didn't personally see this. He is actually looking at a secondary source. And, of course, is is that second source is subject to manipulation. There is no testimony with respect to the authentification of that secondary source. There's nobody here from the Food Lion to say yes that is our video and that is the ---

THE COURT: We're not putting the video in.

MR. WHITE: That is right.

MR. BROOKER: He is testifying to something that's not authenticated. Testifying to something that's not in evidence, that has not been authenticated and that's the problem. If it was direct evidence, if he had directly saw it, you can testify to anything that you see, but this is a secondary source. So he didn't see this. He is looking at -- he is looking at a video tape of something he didn't actually witness. He's testifying about a video tape of something that he did not actually

witness. And we don't know -- we don't know and, obviously, this Food Lion's video tape. We don't know what happens to that video tape or Food Lion do. Do they manipulate it, do they chop it up, do they take out and that's the problem with testifying to something to something that's not into evidence, but I'll say that as long as my objection is preserve for the record.

THE COURT: You can cross-examine on that.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record has ended.)

BY MR. WHITE:

Q Agent Barkdoll, were you able to identify Mr. Hemingway on that video?

A I was not due to limitations of the camera. I couldn't determine whether he was there or not.

Q Very good. Now, Agent Barkdoll, you mention it before, but you're waiting at this point for cell phone records to come back, is that correct?

A That is correct.

Q And you're waiting on SLED analysis to come back, is that right?

A That is correct.

Q And one of those items of evidence is DNA evidence, is that correct?

A That is correct.
Q Now, at some point in the future and I believe it's December 1st of 2020, so that same year. Do you -- is Issac Hemingway taken into custody?
A He was.
Q And is he read his Miranda rights?
A He was.
Q Is a second interview then conducted of Issac Hemingway?
A Yes, sir.
Q At the point of this interview, do you have cell phone records back?
A We do.
Q Do you have DNA analysis back?
A We did.
Q I want ask you I'm going to show you that video and try to move it into evidence and attempt to publish it for the jury. I want to ask you about a few things before we play it. The first is I want to ask you about interview tactics. Are you familiar with interrogation tactics?
A I am.
Q And did you use any interrogation tactics when you were interviewing Issac Hemingway?
A I did.
Q And what interview tactics specifically did you use?

A My job as an investigator is to gain the truth. And there are times when attempting to build repour with an individual and that could be a victim, a suspect or a witness. I have to show compassion and empathy for that person to build that repour. And there are times when I may agree with the statement provided by a subject that necessarily actually agree with, but to continue to gain trust and to build repour and to get truthful information that sometimes that's stuff that we have to do.

Q So sometimes you agreed with him even though you don't necessarily agree?

A That is correct.

Q Now, I want to one last question before we try to get this -- play this video. The cell phone records as they came in from Verizon and you guys bring it up in this interview. The times that are mentioned are those eastern standard times?

A They were not.

Q After the interview, are those records sent to SLED and your cellular analysis expert to convert those times to eastern standard time?

A They were.

Q Now, I want to show what's been marked for identification as State's Exhibit 62. Agent Barkdoll, if you could, tell me if you recognize that particular item?

A I do.
Q And what is this item?
A That's the interview of Issac Hemingway on December 1st 2020.
Q And it was audio video recorded?
A It was.
Q And, again, you were present in the interview room, correct?
A I was.
Q And you did some of the questioning with Investigator Hotaling.
A Yes, sir.

MR. WHITE: Judge, at this time I move State's Exhibit 62 into evidence.

THE COURT: All right.

MR. BROOKER: We maintain previous objections, your Honor.

THE COURT: Thank you. All, right, State's Number 62 is in evidence.

(WHEREUPON, State's Exhibit No. 62 was admitted into evidence.)

MR. WHITE: Thank you, Judge. At this point I ask for permission to publish.

THE COURT: Members of the jury, again, certain parts of this video has been redacted at my request. You

are not to use that in your deliberations at any form or fashion. It's not to be used for or against the State or for or against the defendant, that's just what I said comes in. So what you see is what you see.

MR. WHITE: Thank you, Judge.

(WHEREUPON, State's Exhibit 62 a video is being played for the jury.)

MR. WHITE: Judge, may we approach for just one minute.

THE COURT: Sure.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record.)

MR. WHITE: Judge, it's right at noon now. I have got maybe three or four more questions of Agent Barkdoll. I was going to suggest maybe I ask those questions and then we break for lunch and then come back with cross.

THE COURT: Is that okay with you?

MR. BROOKER: That's fine.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury ends on the record.)

BY MR. WHITE:

Q Agent Barkdoll, just a couple questions and then

we'll take a lunch break. Now, obviously, that was you in the video, correct?
A It was.
Q And then you also were present at the first interview, is that right?
A I was.
Q Did you notice discrepancies between what he said in the first interview and what he ultimately said in the second interview?
A I did.
Q I want to touch on just three of them. I know there more than that, but I just want to touch on three of them. And then, again, we'll take a lunch break. And that first interview did he indicate that Maisha Burch was a good mom?
A He did.
Q And in the second interview does he kind of change his stance on what kind of mom she is?
A He did.
Q And in that first interview, does he indicate that he had no problem whatsoever paying child support?
A He had no issue with paying child support.
Q In the second interview, did he indicate that he had a major problem paying child support?
A He did.

Q And in that first interview, did he indicate at that like midnight point -- and, again, I want to ask you those times that you're going over as far as his cell phone records are concerned, those needed to be transferred into or converted rather into eastern standard time, is that right?

A Yes, sir, the times were off. They needed to be converted to eastern times standard.

Q And that was done by Chris Johnson at SLED, is that right?

A It was in our fusion center.

Q And he'll be available to testify and clear that up this afternoon. But when it comes to that 12 o'clock time in that first interview, did he say that he had spoken to her at that time about the kids?

A He did. He said that he had spoken to her sometime between 12:40 and 12:50. And I think he even said an exact time was 12:53 am that he had spoke to her briefly about the kids.

Q And then in the second interview does he deny speaking to her at all?

A He said that he received a missed call and did not speak to her because he was in bed.

MR. WHITE: Judge, I have nothing further.

THE COURT: Members of the jury, let's take a

break until 1:30, be back at 1:30.

(WHEREUPON, the jury was excused for a lunch beak.)

THE COURT: Mr. Barkdoll, you cannot talk with any of these lawyers about your testimony, come back at 1:30 and sit right there.

(WHEREUPON, the witness leaves the witness stand for lunch break.)

THE COURT: See you back at 1:30.

MR. WHITE: Thank you, Judge.

(WHEREUPON, a lunch break was taken.)

THE COURT: All right, you ready?

MR. WHITE: Yes, sir, Judge.

THE COURT: You ready?

MR. BROOKER: Yes, sir.

THE COURT: Go ahead and bring the jury in.

(WHEREUPON, the jury came into open court.)

THE COURT: Okay. All right, cross-examination.

MR. BROOKER: Thank you, your Honor.

CROSS-EXAMINATION

BY MR. BROOKER:

Q Is it Barkdoll?

A Yes, sir.

Q Okay, I want to mark sure I pronounce it correctly, okay. Agent Barkdoll, I want to start off by directing

your attention I think to February -- I think it was February 12th excuse me -- February 13th of 2020 was the day in which you were called out to the murder scene, is that correct?

A That is not correct.

Q February -- I'm sorry January 13th 2020?

A Yes, sir.

Q Okay, that was the day that you were called out to the murder scene, is that correct?

A January 13th 2020.

Q Yes.

A Yes, sir.

Q That's the day you were called out to the murder scene. And now I know that you testified on direct examination that in your role as a SLED investigator, y'all primarily provide, I guess, support for the investigating agency in this case which was Marion County sheriff's department?

A That is correct.

Q Okay. And I think that the lead investigator in connection with this murder was Detective Hotaling who has already testified, is that correct?

A That is correct.

Q And I think you testified that when you first arrived on the scene that there was a number of law enforcement

officers that's already there and that they had roped off the crime scene?
A That is correct. There was a number of law enforcement on scene when I arrived.
Q Okay. And I think it was your testimony that yourself along with Investigator Hotaling walked into the crime scene?
A I didn't enter the crime scene until our crime scene agents arrived on scene. And then once they arrived, they went into the crime scene. We did initial walk through and followed them as they were assessing the scene.
Q So you didn't walk in with Hotaling prior to the investigation unit arriving?
A No, I did not. I didn't walk in until our crime scene arrived, that's my standard procedure.
Q Okay. Were you wearing gloves?
A I do not recall if I was wearing gloves.
Q Were you wearing any sort of facial covering?
A I was not wearing any facial covering.
Q Now, you went in I think you said -- you said you went in with Investigator Hotaling?
A With our SLED crime scene.
Q Yes. Was Investigator Hotaling wearing any gloves that you can recall?
A I don't recall if he was wearing gloves.

Q Was he wearing a face covering?
A I do not believe he was wearing a face covering.
Q Okay. And just to make certain prior to you arriving on scene, you would have no idea how many officers or who entered the home prior to you arriving on scene?
A That is correct.
Q Okay. About how long were you there at the scene?
A I was on scene for several hours. I don't remember exactly the number of hours that I was on scene. It was several hours.
Q Okay. And I think it was your testimony at some point in time that approximately two days later you were apart of an interview yourself and Investigator Hotaling with Issac Hemingway?
A On January 15th 2020 Detective Hotaling interviewed Issac Hemingway.
Q And you were in the courtroom when that interview was played to the jury earlier?
A I was.
Q This week?
A Yes, sir.
Q Okay. I want to ask you a couple of questions in reference to that interview. During that interview, Issac Hemingway advised you and you correct me if my recollection is wrong, but I'm specifically talking about

directing your attention to February -- January 12th of 2020. During his interview on January 12th 2020, did he not tell you that somewhere around about 12 o'clock time not exactly, but in that area that himself along with his girlfriend and his girlfriend's son went down to Maisha Burch's residence to pick up his children?

A January -- we interviewed him on January 15th -- January 12th.

Q Yeah, this is the Saturday. This is the Saturday. I'm talking about the Saturday. If you -- do you remember the interview?

A I do.

Q Okay. Do you remember talking with him about that Saturday January 12th 2020, that's the day in which he picked up his kids from Maisha Burch. Do you remember?

A Yes, sir, I do.

Q Okay. Did he tell you that he traveled down there? Did he tell you that he made two trips down there to pick up his kids?

A He did. He traveled with Michael Boone and Latosha Baines' son on both trips.

Q Okay. And the first trip did he tell you that he picked up his -- three of those children, but did not pick up Kareema, which would have been the fourth child that he was going to pick up that day?

A That's correct. He picked up Ivy, Tristen and Mariah before picking up Kareema later that day.
Q And the reason why he didn't pick up Kareema was because Kareema had I think community service as a result of some sort of DJJ case that she was involved in where she gotten into a fight?
A I don't recall if it was in relation to DJJ, but I know that there was some reason that she had community service at a local church.
Q She had community service. And that's the reason why he didn't pick her up during the first trip?
A That was my understanding from Mr. Hemingway.
Q Okay. Now, I think he then told you that he left and returned after he got the first children, that he left and returned back to Conway him, his girlfriend, his girlfriend's son and the kids, is that correct, the three kids?
A That is not correct. His girlfriend did not come with him to pick up the children. It was just Mr. Hemingway according to Mr. Hemingway him and his girlfriend's son came to pick them up. And then they took them back and the three children stayed with Latosha in Conway.
Q So it's your recollection that he said his girlfriend didn't come the first time?

A That is correct.
Q It's your recollection that he said that him and his girlfriend's son came?
A That is correct.
Q Okay. Now, I want ask you this. We just played the second video. I think that's the interview from December 1 of 2022?
A That would be correct.
Q And the December 1 excuse me -- December 1, 2020 interview he did say that -- didn't he tell you the same thing pretty much that him -- and I don't want to bog down about the girlfriend or not, but him, his girlfriend's son came down to pick up the kids on that first trip?
A I believe he said that him and his girlfriend's son came to pick the three kids up the first trip, but he couldn't remember who came with him the second trip. He may have been by himself on the second trip to come and pick up Kareema.
Q I'm going to get to the second trip. I want to concentrate on the first trip. So in the December interview around 11 months later, he pretty such said the same thing that he whether it be his girlfriend or his girlfriend's son talking about first trip came and picked up his three youngest kids?
A He essentially said the same thing.

Q Okay. And that was pretty much consistent?
A I would say that's consistent.
Q Okay. You know, other than the question of whether or not his girlfriend's traveled in the first trip or not, is that correct?
A That's correct.
Q Okay. And, of course, is it also consistent between those two interviews that he said that once he picked up -- this is the first trip. We're still on the first trip. That Saturday that when he picked up the first three kids on that Saturday, that they all returned back to Conway, is that correct?
A That is correct.
Q Okay. So no inconsistency there?
A No, inconsistency.
Q Okay. And I think he said during the first and second statement the statement that he February excuse me -- in January of 2020 and the statement that he gave in December of 2020, he said that when it was time to come back to Centenary to pick up Kareema, that he either his -- and I don't care about whether or not I think he said he couldn't remember whether or not his girlfriend's son travel with him. But he said that he came back, and, of course, he picked up Kareema later that afternoon, is that correct?

A That's correct.
Q So any inconsistency between the first statement and second statement about that?
A No, inconsistency on that.
Q Okay. Now, his testimony was that after he picked up Kareema that they left Centenary and on their way back to Conway they stopped by his father's house and so his father could talk with Kareema about the trouble she had been getting into. Is there any inconsistency between the first statement and the second statement about that?
A It was essentially consistent except for the second interview that we did in December of 2020. He couldn't remember who went with him in that trip to his father's, but in the first interview in January 2020, I believe he said that Latosha son was with him on that trip.
Q Okay. Okay. But other than that, is it consistent that he came back to Marion excuse me -- came back to Centenary to pick up Kareema and that on his way back to Marion excuse me -- back to Conway that he stop by his father's house so that his father could talk with Kareema about the trouble that she been getting into?
A In both statements, Mr. Hemingway said that he took Kareema to visit his father after he picked her up.
Q Okay. And then, of course, in both statements he testified that after his father talked with Kareema, that

he traveled -- that they travel back to Conway to his home, is that correct?
A That is correct.
Q No inconsistencies between the two statements there?
A No inconsistencies.
Q Okay. And it's my understanding is is that it was his statement that after they got back to Conway that the next time they left the house was somewhere around about nine to ten o'clock when he, his girlfriend, and, of course, his girlfriend's son left to play cards -- to go to a friend's house to play cards, is that correct?
A That's correct.
Q Is there any inconsistency between the two statements between those two statements regarding that fact?
A No inconsistencies on that statement.
Q Okay. And I think his statement was that he left the three smallest children home with Kareema, and, of course, with his girlfriend's daughter to babysit them why they went to play cards, is that correct?
A That's correct.
Q No inconsistency there?
A No inconsistency.
Q And then, of course, his testimony was that when they went to Antwan Kelly's house to play cards I think he said that somewhere around -- that they were there until around

12 to one o'clock, is that correct?
A I believe in the first interview he said he was there around 12. And then the second interview he gave a range between 12 and one o'clock.
Q Okay. Okay. So no inconsistencies that they went to Antwan Kelly's house to play cards?
A No inconsistencies that they went to Antwan Kelly's house. First interview, he said he left around 12 o'clock. Second interview he said he left between and one.
Q Okay. Are those two statements inconsistent around 12 and possibly between 12 and one. Are those two inconsistent statements?
A They're close.
Q Okay. And then, of course, his testimony was that after he left Antwan Kelly's house that he, his girlfriend, and his girlfriend's son returned back to home, is that correct?
A That is correct.
Q He told you that in both statements, is that correct?
A That's correct.
Q Now, I want to talk with you about something that you said on direct examination following the first interview. Okay. On the first interview -- on the first interview, you said that after Issac Hemingway told you these things

where he was that Saturday night going into that early Sunday morning January 12th to January 13th, you said that you went to canvas the area to, I guess, check on or confirm what he had told you in that first statement on January 15 of 2020, is that correct?

A That is correct.

Q Okay. Now, he mentioned a number of people in that first statement, is that correct?

A He did.

Q Okay. He mention being with his girlfriend in that first statement, is that correct?

A He did.

Q He mentioned also being with his girlfriend's son Michael Boone in that first statement, is that correct?

A That is correct.

Q He mention also visiting Antwan Kelly during that first statement, is that correct?

A He did.

Q Okay. And, of course, I'll get to this later. But once I go into Sunday morning, he also mentioned I think that Sunday morning that he went to visit Blake Johnson, a friend of his, sometime that Sunday morning, is that correct?

A That's correct.

Q Okay. Now, when did you interview -- I want to talk

with you about your interview of those people. When did you interview Latosha Baines his girlfriend?
A I did not interview Latosha Baines, the girlfriend, but that was not something I was not requested to do.
Q Who interviewed Latosha Baines his girlfriend?
A I don't know who interviewed Latosha Baines. I'm sorry I do not know who interviewed Lastosha Baines.
Q Okay. Do you whether or not anyone did interview her?
A On December 1st 2020 during the interview with Mr. Hemingway, a Marion County deputy interviewed Latosha Baines or at least spoke to Latosha Baines.
Q Do you know whether or not that interview -- that allege interview was recorded?
A I do not know if the interview was recorded or not.
Q Was that interview ever part of your file in connection with this investigation?
A Latosha Baines interview was not apart of my file.
Q So you never seen it before?
A That is correct.
Q Okay. You don't know what questions were asked, is that correct?
A That is correct.
Q Okay. You don't know whether or not her statement was consistent with that of Issac Hemingway?

A That's correct. I didn't speak with Latosha Baines.
Q Now, you been investigating for long -- at this time how long you been an investigating?
A I been in law enforcement since 2014. I started at SLED in 2017.
Q Okay.
A At the time roughly three years.
Q Roughly three years as an investigator?
A Yes, sir.
Q And, of course, I'm assuming that when you made the statement that after you got Issac Hemingway's first statement, that you were going to canvas the area to check it out. I'm assuming, you know, that its detective 101 that when someone tells you something that you go and try and either confirm that what they're telling you is the truth or either disprove what they're telling you. So you go talk to the people that he's claiming to be with, is that correct?
A When I canvas the area, I was requested to gather entail and surveillance video footage. I was not asked by the Marion County sheriff's office to interview any witnesses.
Q Even though you may not have been asked to interview witnesses as a detective, is that a standard thing to do is when he says I was with this person is to go talk to

that person to see whether or not that person statement is consistent with what his was? Isn't that standard?
A That would be standard. But in this case, I was in an assisting role and the Marion County sheriff's office did not ask me to conduct any interviews.
Q Okay. So you're saying if it didn't happen, it ain't your fault?
A I'm not saying that, sir. As a SLED agent, we are assigned to cases to assist local law enforcement and I did what I was asked to do.
Q Okay. With this experience, did you ever say to Detective Hotaling that, hey, detective, we need to go talk to Latosha Baines. Did you ever say that to Detective Hotaling?
A Did I ever say that to him?
Q Yes.
A It was something that we discussed during the investigation.
Q But y'all -- neither one of y'all went and talk with her?
A I did not speak with Ms. Baines.
Q Okay. Now, he also indicated that he was with Michael Boone and said that Michael Boone may have traveled at either with him the first time he went to Marion and or second time when he went to Marion to pick

up the kids. So did anyone go to speak with Michael Boone to try to figure out whether or not Michael Boone could verify these statements that they actually happened?

A I know that an investigator for the sheriff's office attempted to find Michael Boone on December 1st and they could not find him.

Q Okay. Now, you've already had -- you got warrants to arrest on December 1st. I'm talking about prior to that. Prior to December 1st, that's the date in which you arrested Issac, didn't you?

A That is correct.

Q That's the date in which got warrants, didn't you?

A Well, Marion County sheriff's office obtained the warrants for Mr. Hemingway.

Q And I apologize. I don't mean you personally. I guess I'm talking about this investigative team, okay. I guess, I'm including you as apart this investigative team as an assistant. So I'm not talking about you personally, okay. So prior to the investigative team getting warrants for Issac Hemingway's arrest, no one talk with Michael Boone, is that correct?

A That is correct.

Q Has anyone ever talk with Michael Boone to your knowledge?

A To my knowledge, I do not know.

Q Okay. And, again, detective 101, again, you think it was -- it's proper procedure to talk with all of those persons that he claimed to be with. And if so, do you have an explanation as to why someone didn't go talk to Michael Boone?

A I do not have an explanation for why somebody did not go talk to Michael Boone. As far as my role in the investigation, I was with the Marion County sheriff's office for the first few months of the investigation. When they called me and asked for my assistance, I respond to assist them with what they needed.

Q Okay. But you were in the investigation from the beginning to the end, is that correct?

A When they called me, I responded and I assisted them with what they needed.

Q Okay. And what I mean by that from beginning to end is is that you were there on the first day the investigation which was January 13th of 2020, is that correct?

A That's correct.

Q You were there on the last day of the investigation which was December 1, 2020, the day in which they arrested Issac, is that correct?

A I was there when they arrested Issac Hemingway because they called and asked for my assistance for an

interview.
Q Okay. Do you think someone should have talk with Michael Boone?
A As an investigator, it's important to talk to everybody that name comes up. It would have been important to talk to Michael Boone.
Q Okay. And I'll ask you one more question with that and I'll leave it. I know you said that you don't know whether or not anyone talk with Michael Boone, but just make sure is there anything in your investigative file that you have that you are aware of -- anything in your investigative file that indicate someone in the investigative team talk with Michael Boone?
A I have nothing in my investigative file that indicates that somebody talk with Michael Boone.
Q Okay. Now, I think the next person that he talked with -- well, let me ask you this. I think he said that he picked up -- were you in the courtroom when Kareema Hemingway testified?
A I was.
Q Okay. Now, Kareema was his daughter that he picked up on the second trip, is that correct?
A That is correct.
Q And were you able to hear what she testified to?
A I did.

Q I apologize. I didn't mean to talk over you.
A I'm sorry.
Q Were you in the courtroom and able to hear what she testified to earlier this week -- last week?
A I did.
Q Okay. Now, did anyone go from the investigative team yourself, Hotaling or either anyone else go to Kareema Hemingway and talk with Kareema Hemingway to try to figure out what Issac Hemingway was saying was actually true?
A I did not speak with Kareema. And I do not know if a Marion County deputy spoke with Kareema.
Q Is there anything in your investigative file that indicates that a Marion County investigator or any investigator part of the investigation team talked with Kareema?
A I do not have anything in my file that somebody talk to Kareema.
Q Should she have been talked with?
A As part of an investigation, it's important to talk with everybody that's name came up. And it would have been important to talk to her.
Q Okay. Now, so I think later that night I think he said that he to -- I think Issac Hemingway said that himself, his girlfriend Latosha Baines, and, of course, his girlfriend's son Michael Boone around nine or ten

o'clock they left to go to Antwan Kelly's house. Did anyone go to talk to Antwan Kelly?

A On December 1st 2020, a Marion County investigator from my understanding went and spoke with Antwan Kelly.

Q Now, when you went and talk with Antwan Kelly, would that have been the time in which y'all went down to Conway to arrest Issac Hemingway?

A A Marion County investigator spoke with Antwan Kelly on December 1st 2020, that would have the day that we arrested or that Marion County arrested Issac Hemingway.

Q Did anyone speak with him in the 11 months prior to that to try to confirm he told you this on January 15th two days after, two days after the murders? Did anyone in that 11 months go down to Conway and try to find Antwan Kelly to speak with him to confirm whether or not Issac, his girlfriend and his girlfriend's son went to his house to play cards?

A I do not speak with Antwan Kelly during the entire investigation. And I'm not sure if anybody spoke with Antwan Kelly up until December 1st 2020.

Q Okay. Now, if someone did I think you said on December 1 of 2020 the date that y'all went down and arrested Issac, you said that someone spoke with Antwan Kelly at that time?

A That is correct.

Q Okay.
A That's my understanding.
Q Okay. Okay. That's your understanding. Is there a record of that do you have a recording of that interview?
A I do not have a recording of that interview.
Q Is a recording of that interview -- when I say do you have a recording of that interview, let me ask that in a different way. Is is that as far as your knowledge is a recording of that interview anywhere in the investigative file?
A The recording -- if there is a recorded interview, it is not in my file. I can't speak for Marion County's file.
Q Okay. But you never seen one?
A No, sir.
Q Okay. So if you've never seen one, do you know what he said during this alleged interview?
A I do not know what he said.
Q And I'll ask you this again about Antwan Kelly. Do you think it would have been important to speak with him within 11 months leading up to Issac Hemingway's arrest for this -- for these murders?
A Like I said before, during investigations it's important to speak with everybody that name comes up in the investigation and it would have been important to

speak with Antwan Kelly, but, again, that's not something that I was requested to do.

MR. BROOKER: If you could indulge me for just a second, your Honor. I apologize. I'm looking up another name.

BY MR. BROOKER:

Q Savion Frazier were you in the courtroom when he testified?

A I was, yes, sir.

Q And Savion is the son I think of -- is it Stephanie Reed?

A Stepanie Reed, yes, sir.

Q And I think Savion testified that sometime after midnight, sometime after midnight I think on February excuse me -- January 12th that Saturday night leading into that Sunday morning the 13th. He testified that sometime around midnight that he heard a vehicle drove past his house and past I think Ms. Burch's house and kind of circled the block. And then stopped at that school -- that abandoned school, the parking lot of that abandoned school. Did you hear him make that statement?

A I heard him make that statement in the courtroom.

Q Before that time before he -- I think he said you correct me if I'm wrong, it was his testimony that when that car stopped and he said it was a car. When that car

stopped, he said that that car was there for about 15 minute before he heard it leave again, is that correct?
A If I remember correctly, I don't think he knew what kind of vehicle it was. He just knew it was a vehicle. I don't think he said it was a car, but I may be incorrect on that. But I don't recall him saying it was a car said it was a vehicle. He saw a vehicle.
Q We'll let the jury be the judge of that. I thought I heard him say a car and that's what I wrote down. But let's not get bogged down on that, but did you hear him say that car, vehicle whatever you want to call it, that it was there for about 15 minutes?
A That's correct.
Q Before then left?
A That's correct.
Q Okay. Now, prior to that statement, were you aware of Savion Frazier?
A I was not.
Q Did you ever heard of his name before?
A While I was assisting the sheriff's office that name never came up that I recall.
Q Okay. Is that apart of your investigative file any place that you're aware of?
A I'm not aware of it being in my file. I don't recall that name.

Q That information and I'm asking you this question that information that Savion said that's very important information, is it not?
A That's correct.
Q Because not saying that it is, but if there was some car that pulled up near where Maisha Burch's house was sometime after midnight and stop there for 15 minutes, it's potentially that could have been the assailant, is that correct?
A That could be it. It could be the person that did it.
Q Okay. And certainly you would want to try and see if you can track that person down or track that vehicle down to determine that, is that correct?
A That's correct.
Q Okay. But that never happened in this case, is that correct?
A Mr. Frazier's name never came up during the investigation while I was apart of it.
Q And because it was and because you didn't know about this car, I'm not blaming you, but because you didn't know about this car, you never were able to try and see if you can identify it and track it down, is that correct?
A That's correct.
Q Now, when Issac Hemingway -- I think Issac said

somewhere around between 12 and one that he returned -- that he returned back to his -- that he, his girlfriend and his girlfriend's son returned back to their apartment, is that correct?

A In the second interview, he said that he return -- he left Antwan Kelly's around 12, one o'clock and returned to their apartment.

Q Yes, sir. Is that correct?

A That's correct.

Q Okay. And, of course, is it's my understanding were you in the courtroom when Kareema testified?

A I was.

Q Did you hear Kareema testified that -- that her father, Issac Hemingway's girlfriend Latosha and Latosha's son, Michael, left between nine and ten to go play cards?

A I don't recall. I don't recall what she said.

Q Were you in the courtroom when she said -- when she said that when they returned somewhere around 12, that she was awake?

A I recall her saying that, that's correct.

Q So she was saying that when they returned sometime around midnight she said that she was awake, is that correct.

A That's correct.

Q Now, I think Issac Hemingway testified that when they

got from Antwan Kelly's house that night, that they did not -- that he didn't leave the house until Sunday. Sometime Sunday morning. Sometime Sunday morning. I think he specifically said between ten or 11 on one of these interviews. I don't know which one between ten and 11. And he went to Blake Johnson's house. Do you remember that?

A I remember that, yes, sir.

Q Okay. He said he was at Blake Johnson's house for a couple of hours before he left to return home?

A He went to -- after Blake Johnson's house, he went to the Family Dollar to pick up groceries.

Q Yeah, and that's correct. He stopped by the Family Dollar to pick up some items before he returned home?

A That's correct.

Q Is that correct? And then he testified that once he returned home that he was back at home, and, of course, played with the kids or spend time with the family until it was time to take them home, is that correct?

A That's correct.

Q And he said that pretty much that in both statements, is that correct, that time line? That he went to Blake Johnson's house on Sunday morning that stayed a couple hours then left, stop by the dollar store. And then once he returned home after the dollar store, he was at home

until it was time to take the kids back to Centenary?
A I believe the only inconsistency in the two interviews was that in the first interview he said he woke up at seven a.m. I think he described it as the sun peeking is when he woke up. And in that second interview, he said that he woke up around nine.
Q But it's consistent that he said that that morning -- it's consistent that he said that that morning he left to go visit Blake Johnson?
A The sequence of events when he said that he went to Blake Johnson's house, then went to the Family Dollar to pick up food and then came back home would be consistent.
Q Okay.
A The only difference would be the time of when he woke up in the morning.
Q Yeah, I see fuzzy on the time. One time he may have said something slightly different. And the first statement that he said the second statement as with regard to the timing, is that correct?
A Of when he woke up, yes, sir.
Q Okay, of when he woke up. Okay. Now, Blake Johnson did you ever go try to find Blake Johnson?
A I did not try to find Blake Johnson. I believe Detective Hotaling attempted to find Blake Johnson.
Q Okay. Now, in that first interview -- in that first

interview, he gave a detailed step-by-step direction of how to get to Blake Johnson's house. And that first interview he either described the home and said it was -- I think he said it was some sort of I think white trailer. And, then, of course, described he drove some sort of van either a caravan or blue caravan or something like that. He gave a specific description turn by turn description as to how to get to Blake Johnson's house in that first statement. Do you remember that?

A I did.

Q Did anyone follow that step-by-step instructions directions to try to get to Blake Johnson's house?

A I know I didn't. I wasn't asked to do that.

Q Okay. Now, did you ever said to Detective Hotaling or either anybody on the investigative team that, hey, we need to follow these directions, go out there so we can talk to Blake Johnson. Did you ever say that to Detective Hotaling?

A I know that there was a lot discussion in who we need to speak to and what was important for the investigation. I don't recall specifically talking about Blake Johnson and going to finding him. I don't recall that.

Q And anywhere in your investigative file, do you have any knowledge as to whether or not anyone went out and spoke with Blake Johnson?

A There's nothing in my file that anybody went and spoke with Blake Johnson.
Q In your professional opinion as an investigator, do you think somebody should have went out to try and speak with Blake Johnson?
A Just like I said in investigations, it's important to speak with everybody that name come up. In this case, I remember speaking about a lot of different people. And a lot of people that we need to speak to. And it would have been important to speak with Blake Johnson to get an idea of what Issac Hemingway did that morning. I know that Detective Hotaling said that he attempted to find him and could not locate him.
Q Were you in the courtroom when Detective Hotaling said that I think he said his efforts were -- he tried to locate him on Facebook. And that he tried to identify him through DMV?
A I believe's that's what he said, yes, sir.
Q Okay. Okay. Do you know of any other efforts other than that?
A No, sir.
Q Okay. Now, I want to talk with you a bit about that second interview and specifically about some of the things that were said during the second interview. If you can indulge me for just a second, I'm trying not to ask you

any questions that, you know, that are irrelevant. During that second interview, I think Issac Hemingway said something to you that he didn't fully stated or clarified during the first interview. I think there was a question as to whether or not I think you told him that when he went on the first trip, that he end up going into the front room of the house because Ms. Maisha Burch had asked him to come in to have a conversation with Tristen about him hitting his sisters. Do you remember that?

A I do.

Q Okay. And do you remember when Kareema testified that Kareema said that he entered the house to talk with Maisha Burch about Tristan behavior. Do you remember Kareema testifying to that?

A I do.

Q Now, I want to ask you some questions. At some point in time y'all confronted Issac about DNA evidence, is that correct?

A That's correct. We confronted him with the DNA report.

Q Okay. And so that's what I want to get into now. Now, are you a trained as a DNA analyst?

A I am not a DNA analyst.

Q Okay. Were you trained to interpret DNA analytical results or DNA analytical reports?

A As far as I'm reading the report.
Q I can rephrase that if you want me to.
A Because I read the report and I saw the results.
Q Yeah, you read the report and you saw the results. Are you trained in interpreting those results and what they mean?
A Am I trained in interpreting the results?
Q I'll rephrase it.
A Okay.
Q Are you trained on how to interpret the results of the DNA analytical report?
A As far as from an analyst side or what they put? Because how they report the results is pretty easy to read and understand.
Q Okay. And I guess very simply is are you trained in understanding what that stuff means when you read it?
A I am not a DNA analyst. I'm not an expert in DNA.
Q Yeah, I know you that. You already testified. I'm talking about you training and understanding what the report means when you read it?
A I had my own interpretation of what it said.
Q Okay. Did you ever contact the DNA analyst and said to the DNA analyst what in the heck does this stuff mean? Did you ever contact that analyst?
A In this case, no, but in other cases, I have.

Q But you didn't do it in this case?
A Not in this case.
Q Okay. So you went with your own untrained interpretation?
A I went with how I interpreted the report.
Q Okay. Now, let me ask you a couple things about that. And I wrote down some things specifically because I want to ask you. During the course of the interview, I think Detective -- I think it was Detective Hotaling said something to the effect that your DNA is on the back door can't be anybody else's DNA. Do you remember him making that statement to Issac Hemingway?
A I do.
Q Do you adopt that statement? Is that your belief or your interpretation?
A My interpretation of the DNA report was that Issac Hemingway's DNA profile contributed to the DNA profile that was found on the back door.
Q Okay. But -- and I won't to get into the interpretation. That's why I will not get into interpretation. We'll have the DNA analyst for that. But do you adopt that interpretation that was made -- that interpretation that was made by Investigator Hotaling ---
MR. WHITE: Judge, I think that's asked and answered at this point. He's just trying to ask in

different ways to elicit a different response, but clearly Agent Barkdoll responded to exact question a few moments ago.

THE COURT: Go ahead.

BY MR. BROOKER:

Q I'll ask this again and I'm going to move on. And if you can answer with a yes or no question please do. Do you adopt that interpretation when Detective Hotaling says the DNA on the back door can't be anybody else's DNA except yours. Do you adopt interpretation?

A I read the DNA report and my interpretation of the DNA report is is that DNA profile was developed from the buccal swab we took from Issac Hemingway on January 15th 2020. And it was compared to the DNA swabs that were collected at the scene. And Issac Hemingway's DNA contributed to the mixture of DNA on the back door.

Q So it's your interpretation that Issac's DNA was on the back door?

A That is my interpretation.

Q That's all I need. Then, of course, is is that I think Detective Hotaling said -- and your DNA also was on the wall on the inside of the house. And I'll move quickly. Do you adopt that interpretation?

A It was in the DNA report.

Q So it's your interpretation that the DNA found on the

wall of the home that Issac Hemingway's DNA was within that mixture?

A That is my interpretation of the report.

Q Now, I also want to ask you about some specific things that you made when you join in on the questioning. You stated that Issac Hemingway that there is no doubt in your mind that your DNA is on the back door. You remember saying that to him?

A I did.

Q Okay. Was that your interpretation of the DNA?

A When I read the report, that is interpretation I had of the DNA evidence.

Q You said that there was no doubt that that's your DNA on the wall on the inside of the home, was that your interpretation?

A It is.

Q And you said that there was no doubt that that's your DNA underneath the fingernails of Maisha Burch?

A That's my interpretation.

Q Now, also in addition to both you and Detective Hotaling that both of you told Issac Hemingway that it was absolutely positive that the DNA from the back door -- I want to get this clarification, I'm going to move on to something else. That you and Detective Hotaling told Issac Hemingway during that interview that it was

absolutely positive that that was his DNA on the back door, that that was his DNA on the wall, and that was his DNA underneath Maisha Burch's fingernails, is that correct?

A Based on the report, his DNA profile contributed to the mixture found in those locations.

Q Okay. Now, also I want to talk with you about -- let me find the specific quote. I want to ask you about this as well too, give me just a second so I can find out it. Now, there was a point during the interview where Detective Hotaling also talked with Issac Hemingway about cell phone records. Do you remember y'all having a conversation about his cell phone records?

A I do.

Q Okay. Do you remember Detective Hotaling telling Issac Hemingway that we know it's you because your cell phone signal was pinging off the house in Centenary that night? You remember him telling Issac Hemingway that?

A I do.

Q Okay. Do you adopt that statement?

A Law enforcement officers are allowed to use deception or trickery to elicit a response.

Q So well let me ask you this question was that question true? Was that statement true?

A I don't believe that his cell phone pinged in

Centenary, but, again, law enforcement officers are allowed to use deception and trickery to elicit a response from somebody.

Q Okay. They allowed to lie, is that correct?

A They're allowed within reason to lie to elicit a response.

Q So I want to make this clear and then I'm going to move on. So in your file and I want to make clear to the jury, in your investigative file, you don't have anything that indicated that Issac Hemingway's cell phone was pinging off cell phone towers in Centenary in the early morning hours -- midnight January 12, 2020 or the early morning hours of January 13, 2020. You don't have anything in your file indicate his cell phone pinging off cell phone -- pinging off a cell phone tower in Centenary, is that correct?

A In my report, I have -- I obtained -- I documented my report that I obtained a search for Issac Hemingway cell phone records from Verizon. After I obtained those records, I provided them to the Marion County sheriff's office for evaluation. There's nothing in my report about a cellular analysis. I know that they had sent off those records to the SLED fusion center to conduct the cellular analysis of those phone records.

Q So did you get back any cell phone analysis from

SLED, is it in your records?
A It is not in my records, but I know the State as a cellular analysis report.
Q Now, and the jury heard this, but isn't it true that after y'all threw all of this at Issac Hemingway, y'all battered him -- and let me rephrase that. I don't want to -- I'm going to take that back. I'm not going to say battered, but y'all consistently told him -- after y'all consistently told him on numerous occasions during that interview, it's your DNA on the back door. It's your DNA in the house. It's yours underneath her fingernails. He consistently said that that's not possible. I wasn't there. It could not have been my DNA, is that correct?
A Yes, he denied it being -- he denied that his presence was in that house in those locations.
Q He never wavered during the multiple times in which y'all told him it is your DNA and you did it. He never wavered on his denial, is that correct?
A He continued to deny it when we confronted him with the DNA evidence.
Q Okay. Now, I ask one more, again, I don't want to be dishonest, but I'm close to the end. Now, in that interview at the very end of that second interview that December 2020 interview when Investigator Hotaling told Issac that we have warrants for your arrest and they read

the warrants to Issac Hemingway. I want to ask you about one specific thing?

MR. BROOKER: You can indulge me for just a second, your Honor.

BY MR. BROOKER:

Q I'm going to ask you about because it was apart of the interview and the jury heard it. When the officer came in to serve him with the arrest warrant, the officer read the search warrant excuse me I'm sorry -- the arrest warrant. And that officer said that on January 12th at approximately two a.m. in the morning, that Issac Hemingway killed Maisha Burch and Anthony Legette. I want to ask you about that two am in the morning on January 12th. Do you know how you came up with two am in the morning as the time of death?

A I don't know how he came up with that. I didn't prepare the arrest warrant.

Q Okay.

A And it was Andrew Legette.

Q I'm sorry Andrew Legette. I think he read in that -- did you hear that when you listen to the video that the officer reading the report reading the arrest warrants says that on about January 12th at two a.m. in the morning?

A Yes, sir.

Q You remember hearing that?
A Yes, sir.
Q Okay. Now, I know you said that you didn't prepare the warrants and you said that you don't know where that two -- that January 12 two a.m. time of death came from, is that correct?
A It would be mere speculation for me to say what -- why he put two a.m. in there. I don't know. I didn't prepare the warrant.
Q And trust me I'm not going to ask you to speculate. I just want to probe what your knowledge is of it that's all. And your answers to some of these questions might be I don't know. Now, I think you correct me if I'm wrong, I think I was told that on the 13th -- on January 13th when these bodies were discovered that the Marion County coroner came out -- was it Mr. Richardson?
A I believe that he responded first, but he wasn't on scene when I arrived. I think it was the assistant coroner that was on scene when I was there. I don't recall his name. I don't remember his name.
Q Yes. Are you aware that both of them came out to the scene that the coroner and the assistant coroner?
A It was word of mouth. I was told that Mr. Richardson, Coroner Richardson was out there prior to my arrival, but I don't recall seeing him.

Q Okay. Did you ever see the -- I think it's the crime scene log?
A I haven't seen the crime scene log.
Q Okay.
A I've heard you discuss it.
Q His name is on the crime scene log, is it not?
A Can I please see it?
Q You certainly can. Of course, I'm referring to Defendant's Exhibit 3.
A Jerry Richardson, yes, sir, he's on the crime scene log.
Q Yeah. And I think you also said the assistant coroner was there as well too. Is his name anywhere on that crime scene log?
A Deputy Coroner Jim Gray, yes, sir.
Q So both of them were there?
A Yes, sir.
Q Okay. And I know I think at this time I think -- I think back in 2020 the time of the crime scene, I think you said you been in correct me if I'm wrong, you said you had been an investigator for roughly three years -- three or four years?
A I started with SLED in 2017, so it was roughly three years.
Q Three, four years you been an investigator?

A Yes, sir.
Q Okay. Now, is it -- normally, whenever -- and how many murders have you done up until that point?
A I responded to various types of death investigations in my career. I don't know an exact number of murders that I responded to, but I've responded to several crime scenes.
Q Yes, sir. And up until that particular period of time, had you ever been the lead detective on one? And I'm talking about the time in which you responded to this crime scene in January of 2020. Had you ever been a lead investigator in a murder case?
A Yes, sir.
Q Okay. All right. So now my next question is can you tell me if I'm wrong? Is it customary for the coroner when he comes out to prepare a report?
A Yes, sir, a coroner normally typically prepares a report.
Q Okay. Because it's the coroner who pronounces death, is that correct?
A That's correct.
Q Okay.
A Based off the pathologist autopsy.
Q Certainly and prepares a death certificate and all of that good stuff, is that correct?

A That's correct.
Q All right. Was the coroner's report prepared in this case?
A I do not know.
Q Do you have a coroner's report in your file?
A I do not have a coroner's report in my file.
Q Okay. Do you know whether or not someone went to the coroner and said to the coroner, hey, can you provide me an estimate of time of death?
A I do not know.
Q Did you do it?
A I did not do that.
Q Did you know whether or not anybody on the investigative team did that?
A I do not know.
Q Okay. Now, explain to the jury why it's important to know the time of death?
A But it gives you a general idea of when the incident occurred, that would be probably the best answer.
Q Okay. And also if you know when the incident occurred, then, of course, is is that you can narrow down, I guess, a -- whenever you are looking at potential suspects, the reason why it's important the know a time of death is because you want to know where they are when this person was murdered, is that correct?

A That would be fair to say, yes, sir.
Q Okay. So you said didn't have a coroner's report. The pathologist testified I think last week, is that correct?
A That's correct.
Q I think Friday I believe if my memory serves me correct?
A I believe she was the last witness.
Q Testified on Friday. As apart of your investigation, did you or either anyone on the investigative team ask the pathologist to try to calculate a time of death?
A I did not ask the pathologist being I was assisting in the investigation and the Marion County sheriff's office was the lead agency deferred to them.
Q Okay. You didn't?
A I didn't.
Q Okay. Do you know whether or not anybody -- nobody on the investigative team did?
A I do not know.
Q Is there anything in your file -- in your investigative file where there's an estimate of the time of death?
A There's no estimated time of death in my file.
Q Okay. And the reason why I ask you that question is is that the last time someone seen or heard from her was

on Saturday night maybe early Sunday morning, is that correct?

A I believe that Mr. Hemingway said in the first interview he spoke to her around 12:40, 12:50 that Sunday morning.

Q Yeah. And I think in the second interview he says that he didn't speak with her, but he received a call from her?

A A miss call.

Q A miss call from her.

A He was in bed and didn't speak with her.

Q So other than that, is it your understanding that that's the last time someone may have heard from her would have been that call?

A That was -- as far as our investigation, that was the last time that we had learn that somebody possibly had spoken to Maisha.

Q Okay. And the reason why it's important is is that about somewhere around Saturday midnight or early Sunday morning -- midnight until her body was discovered along with Mr. Legette's -- Andrew Legette's I think somewhere around about 12 o'clock. I'm not being precise on that. Somewhere around about ten o'clock in the morning on January -- on January 13th that Monday morning, okay. So that's the period of time that we have here right from the

last time that someone spoken with her that Saturday night early Sunday morning until her body -- that Saturday night early Sunday morning until her body was discovered on Monday, is that correct?

A So the last time we believe somebody potentially spoke to her was around midnight on Sunday. And then when her body was found would have been Monday morning.

Q But do you have any evidence that anybody communicated with her after that time, after that midnight Saturday until her body was discovered Monday morning?

A No, I don't believe we did.

Q You don't believe you did?

A No.

Q Okay. And you don't have scientific -- you don't have a scientific estimate as to when she died during that period of time?

A I don't determine time of death. I wouldn't begin to know how to estimate somebody's time of death.

Q And I understand that. And I'm not asking you personally. I'm saying is is that you don't have that from somebody, you know, who is qualified to estimate the time of death, is that correct?

A It's not in my file.

Q Okay. And as far as you know it doesn't exist as far as you know?

A As far as I know to my knowledge. I don't know if there's a coroner report or not.

MR. BROOKER: If you can indulge me for just a second, your Honor. I want to make sure that I don't have any further follow-up questions for the detective, give me just a second.

(WHEREUPON, a pause in the proceedings.)

MR. BROOKER: No further questions for the detective.

THE COURT: Redirect.

MR. WHITE: Thank you, Judge.

REDIRECT EXAMINATION

BY MR. WHITE:

Q Agent Barkdoll, just a few questions for you. You know, Mr. Brooker glossed over somethings that I want to cover with you. On that first interview, was it clear that he painted Maisha Burch as a good mother?

A He did.

Q And is it clear that in the second interview he painted her as a terrible mother?

A That would be my interpretation.

Q And you mentioned it earlier in that first interview he says around midnight sometime after he spoke to her -- he actually talk to her on the phone, is that right?

A That's correct.

Q And then in that second interview he indicated that there was just a missed call? He missed the call?
A That is correct.
Q But we know from your search warrant that produced the cell phone records that they did in fact speak around midnight that would be Saturday night, Sunday morning. We know that they did talk, is that right?
A That is correct.
Q And based on the entirety of the records and the investigation, Mr. Hemingway would have been the last person to speak to her alive, is that right?
A That's correct.
Q Based on your search warrant and the evidence that it produced, are you also aware -- let me ask you this first. The first interview he says that he woke up around 7:30 a.m. on Sunday morning, is that right?
A Around seven, around seven.
Q And on the second interview, he said he woke sometime just a little bit after that, is that right?
A I believe he said nineish, around nine.
Q He indicated from the time that he climbed in bed until that time, that he was in bed with his girlfriend Latosha Baines, is that right?
A That is correct.
Q And in that first interview he says he slept through

the night and woke up seven a.m., is that right?
A That's right.
Q But isn't it true that at 4:49 a.m. twice his cell phone calls Maisha Burch and he star 67 number each time, isn't that right?
A That is correct.
Q And star 67 he's blocking his own number, is that right?
A That is right.
Q And although he claims to be in bed with her, isn't it true that the cell phone records that your search warrant produce indicate that she is calling him, she being Latosha, is calling Issac Hemingway at 4:59 a.m., is that right?
A That is correct.
Q And she's calling him again at 5:05 a.m., isn't that right?
A That's correct.
Q And then I believe again 6:11 a.m., is that right?
A That's right.
Q And then if I'm not mistaken, he then calls her at 6:39. And that's a lot of phone calls back and forth from two people who are in bed together, isn't it?
A I would agree.
Q Now, in that first interview -- well, let me piggy

back off that, I think he also indicates that in that first interview he doesn't mention it, but that second interview he says his girlfriend, Latosha, has a 360 tracker on him, is that right?

A That's correct, that's what he said.

Q Talk about that. In that first interview, he's says got absolutely no problem paying. He's happy to do it. The second interview he indicates it was a major issue, is that right?

A Yes, sir.

MR. WHITE: Beg the Court's indulgence one moment.

(WHEREUPON, a pause in the proceedings.)

BY MR. WHITE:

Q Ever in your investigation, did you ever discourage people from coming forward?

A No, we did not.

Q And you testified that all these folks that Mr. Brooker asked you about, you're not aware if they were interviewed or not. You're just saying you didn't personally interview them, is that right?

A That is correct.

MR. WHITE: Agent Barkdoll, that's all I have for you. I appreciate it very much.

MR. BROOKER: Just very quickly.

RECROSS-EXAMINATION

BY MR. BROOKER:

Q On the last question, I think you were asked -- in your entire career as an investigator, you were asked whether or not you ever discouraged people from coming forward, is that correct?

A That's correct.

Q Okay. Would you agree with me is is that it's not your job just to sit back and wait for people to come forward. It's your job as an investigator to seek out these people to try and figure out what happened, is that correct?

A I would agree with that.

Q It's your job when you have the names of these people is to not wait for these people to get in touch with you, but for you to go get in touch with these people, is that correct?

A I would agree with you, but also when we spoke to these people if they mention people, they should have those people see about coming forward to talk to us to provide us with information, so it kind of work both ways.

Q So it's your job is -- I want to make sure -- your job is is that the people that you talk with that if they provide you with names, it's their names -- it's their job also is to provide the exact location of those people so

you don't have to do any work to track them down?
A No, what I'm saying is is it's a two-way street. You know, we're out there trying to gather information, but if people have information that could help, they also -- we're never going to shy away from people coming and speaking to us as well. So while we're out there trying to talk with people if there are people that have information, we welcome with open arms.
Q And I'll ask you another very quickly -- is you were asking questions about the interpretation of cell phones. Are you a cell phone expert?
A I'm not, no, sir.
Q Okay. Is there a cell phone expert in this case?
A I'm sorry.
Q Was there a cell phone expert in this case?
A Yes, sir.
Q Okay. And it's your understanding that that cell phone expert is going to be the one who is going to testify with respect to the cell records?
A I can read cell records of when people made phone calls. I can't plot locations, but I can read a cell phone when somebody made a phone call.
MR. BROOKER: No further questions.
THE COURT: You may step down.
(WHEREUPON, the witness leaves the witness

stand.)

THE COURT: We need a ten minute break or you want to go into the next witness?

MR. WHITE: Judge, a ten minute break might be good because I have some stuff I need to hook to the TV, so I just got to roll it and hook it up real quick.

THE COURT: Let's take a ten minute break.

(WHEREUPON, the jury retire to the jury room.)

(WHEREUPON, a break was taken.)

THE COURT: Bring out the jury.

(WHEREUPON, the jury came into open court.)

THE COURT: Call your next witness.

MR. WHITE: Thank you. Judge, at this time the State would call James Green.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: I do.

WHEREUPON,

James Green,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Green, where are you employed?

A I'm employed by the South Carolina Law Enforcement Division commonly referred to as SLED.

Q And how long have you been employed at SLED?
A Since June of 2005.
Q And in what capacity are you employed?
A I forensic firearms examiner in the forensic services laboratory.
Q What kind of education, experience, training does one have to obtain to achieve a firearm analyst?
A A bachelors is required. I have a bachelors and a master's both from Charleston Southern University. And once I was hired by SLED, I started the SLED firearm and tool mark course and instruction or COI as we call it. It's about a three, three and a half year course instructions studying under court qualified firearms examiners and an apprentice type fashion learning to do what I do now.
Q And have you ever been qualified in state or federal court as an expert in firearm and firearm analysis?
A Yes, sir.
Q About how many times would you think?
A It's actually 106. 104 times in state court and twice in federal.

MR. WHITE: Judge, at this time I'd move Mr. James Green as an expert in firearm and firearm analysis.

THE COURT: Any objections?

MR. BROOKER: No objections.

THE COURT: Motion granted.

BY MR. WHITE:

Q Now, I'm going to get right to it, Mr. Green. Were you ask to analyze firearm and firearm materials in this particular case?

A Yes, sir.

Q I'm going to show you what's been marked as State's Exhibit 69. If you could, tell me if you recognize these items?

A Yes, sir, State's Exhibit 69 is actually SLED laboratory case number L20-00545 container C. And this inside here -- the heat seal is still intact -- it's still sealed from when I sealed it when I finished. And it contains the fired bullets I examined in this case.

MR. WHITE: Judge, I move into evidence State's Exhibit 69 into evidence.

THE COURT: Any objections?

MR. BROOKER: No objection, your Honor.

THE COURT: State's Number 69 is in evidence without objection.

(WHEREUPON, State's Exhibit No. 69 was admitted into evidence.)

BY MR. WHITE:

Q Mr. Green, these in fact the projectiles that were

recovered from the autopsy of Maisha Burch and Andrew Legette?

A That's what was indicated on the packaging, yes, sir.

Q And before I get into your analysis of those fire projectiles that were recovered, I want to ask you about a firearm that was recovered in this case. It was actually turned over in this case by a suspect that was ultimately excluded. What, if anything, did your analysis return as it pertains to that firearm?

A The firearm that was submitted to me was a German didn't have mate per se, but it was made in Germany. It's a .22 short caliber revolver that had differing riffling specifications then those on the bolts I examined. So I concluded once I test fired the gun, we do that because we'll get test bullets to look at versus evidence we look at microscopically through a comparison microscope. And we shoot test with being submitted firearms when we know they're fired by that gun because we shoot them ourselves. But once I did that, I was able to just simply count the riffling specifications was wrong. So the firearm that was submitted in this case to me for examine did not fire any of the bullets that were obtained from the autopsies.

Q And despite not knowing which gun or having the gun that fired these projectiles, what could you tell us about these projectiles that were recovered from these two

individuals?
A Based on what we call the OPCs of the observable physical characteristics, we're able to determine a caliber or like a family of calibers. In this instance, all the projectiles were nominal .22 ren fire. Some of them were so damaged I could only say .22 short, .22 long or .22 long riffle. However, one I was able to say .22 long riffle. And we do that based on the OPC's which I spoke about a second ago. It's the weight and the diameter of the bullets, which would give us those OPC's to let us determine what caliber they may be.
Q And the caliber was what again?
A Five of them were so damaged I could only say .22 short, .22 long or .22 long riffle. One I was able to say it was .22 long riffle. And then we are able to put those rifflings specifications, the widths, the lands and the groves into a searchable data base provided to us by the FBI. And it gives us the list of possibly firearms that could have fired them.
Q And all those possible firearms, do they make revolvers?
A Yes, sir, on this list all were revolvers.
Q And I want to ask you when you fire a revolver -- and this might seem like self-explanatory thing, but I just want to make sure that perhaps some people on the jury who

may not know. When you fire a revolver, does it expel a shell casing?

A If it's working properly, no, it does not.

Q Now, if I -- earlier in this trial the defendant's daughter testified to a gun she saw in the possession of the defendant. She gave a description of the gun. If I give you the same description, could you then tell me what kind of gun it would be?

A Possibly, yes, sir.

Q All right. Here I go, ready. She described it as folding out to the side, spinning, put the bullets in it, spins and you close it back. Base on your expert opinion what type of gun would that be?

A That would be a revolver.

Q And of the types mentioned and in your expertise speaking about .22 caliber revolvers. Do any of those fire more or hold more than six bullets?

A Yes, sir. There are .22 revolvers some hold six, some hold seven, some hold nine. And there's one or two that will hold 12 in the cylinder.

MR. WHITE: Thank you, Mr. Green. That's all I have for you. Please answer any questions the defense may have.

CROSS-EXAMINATION

BY MR. BROOKER:

Q I'll just come around here so you can see me.

A Yes, sir.

Q Mr. Green, I want to ask you a couple of questions and if you can't hear me, just let me know and I'll certainly speak up.

A Yes, sir.

Q Okay. Now, I think what's been identified I think as State's Exhibit Number 69. I think that was the projectiles, is that correct?

A Yes, sir.

Q And these were the projectiles that you were given to examine, is that correct?

A Yes, sir.

Q And did -- you were also sent a gun that was taken from a suspect in this case, is that correct?

A Yes, sir.

Q Okay. And I think your testimony was that you test fired that gun for purposes of comparisons?

A Yes, sir.

Q Okay. Did you prepare a report for your results?

A Yes, sir, I did.

Q Do you have that report?

A No, sir, I do not not with me.

Q I can give you a copy of it. Give me just a second,

and I will give you a copy and see if you can identify it for me. Just take a look at it and make sure that what I handed to you is your report?

A Yes, sir. This is a report that I issued when I initially worked the case in the absence of the revolver. So when I issued this report, the revolver had not yet been submitted.

Q Okay. Did you prepare another report?

A Yes, sir.

Q Where is the other report?

A It was issued in December of 2020.

Q The report that I gave you I will take a look at is that the first report?

A Yes, sir.

Q If you can give me just a second. You indulge me for just a second. I'm trying to familiarize myself with your second report?

A Yes, sir.

Q I think your testimony was that the bullets that you were -- the bullets that you removed or the bullets that were sent to you -- and, of course, these are items 22, 27, 28 excuse me -- 27, 28, 29, 30 and 38. Those were the projectiles that were recovered from the victim's body, is that correct?

A Yes, sir. When evidence is submitted to SLED, I

don't go to autopsies. I don't collect the bullets. So if in my descriptions I say where they came from, that's only so whoever the investigating agency knows is -- knows what it is when I refer to item 28 or SLED item 29. So anything in quotation marks in the report is just what it was said to be listed as or where it came from.

Q Okay. And I think you indicated that you were sent one gun. And, of course, that gun was a .22 caliber, I think, German manufacture .22 caliber?

A Yes, sir.

Q A pistol, is that correct?

A It's a .22 caliber revolver, yes, sir.

Q Revolver. Okay. And, of course, you said that with respect to projectiles 27 -- some of the projectiles that was two damaged in order to make a comparison?

A Yes, sir.

Q Which one of the projectiles that were too damaged in order to make a comparison?

A Well, I was able to compare all of them. So just let me -- I don't know if I'm confused with the question or you're confusing ---

Q Well, you go ahead and explain it in your own language?

A Okay. All of the bullets -- so SLED items 22, 27 through 30 and 38, which were State's Exhibit 69. I was

able to compare all of them. Five of the six bullets were unsuitable and thus our conclusions. We have four conclusions positive fired by, negative not fire by, inclusive fancy word for I don't know. There's a whole host of reasons why and unsuitable. There's no marks on them. It's too damaged whatever the case may be. There's a rarely used one that's unsuitable but inconclusive meaning that I'll never be able to tell you that that was the gun, but there's certain marks like the riffling characteristics lands and groves we could count. So we could possibly say it could have been or it could have been an inconclusive. And that's what we have here. SLED items 22, 27, 29, 30 and 38 were all unsuitable. They were too damaged. And there were just no individual markings on them for me to say, yes, they were fired by the same firearm. But there was enough of the riffling characteristics left over for me to say that all six of the bullets could have been fired by the same firearm or they could have been fired by different firearms.

Q So you can't conclusively say one way or the other whether or not those bullets were fired from the .22 caliber that you were given?

A Well, yes, I can. They were not fired by the revolver that was given to me. The revolver that was given to me had the wrong number of lands and groves in

the barrel. All of the bullets I examined the evidence bullets from the autopsy all had six groves right twist. The gun given to me had eight groves right twist. You can't get a six grove bullet out of an eight grove barrel.

Q And that's what I'm confused at. And if you can clarify it for me, I think you said some of the bullets was tremendously damaged. I think 27. I think -- I'm looking at your first report.

A Okay, yes, it be the first bullet point.

Q Twenty-two, 27, 28, 29, 30 and 38. And I think on that first report it says due to heavy damage and or lack of individual identification characteristics, the results of microscopic comparisons of those items with each other were inconclusive. So I read that, correct?

A Yes, sir. All six bullets were inconclusive with each other. I can't tell you if they were fired by one firearm or be six firearms.

Q Okay. So you can't tell whether or not fired by the same gun?

A Correct. But were not fired by the firearm that was submitted to me, which would be in the supplemental report.

Q Now, the prosecutor talked about another -- talked about -- I think at the bottom of this I think you have list of your report. You have a list of possible firearms

that could have fired. I think projectile 28, is that correct?
A Yes, sir.
Q Okay. And I'm not going to count these, but is it more than 50 potential different type firearms that could have filed projectile 28?
A Yes, sir.
Q Okay.
A In that list which I talk about a few minutes ago data base we have, we put the number of lands and groves, the direction and twist, and we actually measure those lands and groves, put in the data base the FBI gives us for investigative purposes. And it spits out a list that we didn't in turn provide to the submitting agency for investigative lead. So if the agencies have nothing to go on whatsoever, they have a list that we can provide them sometimes when we can get the information of the bullets. The list is not all inclusive, meaning not every gun ever made with those specifications is on there because it's not mandatory or mandated that the manufactures provide their information to the FBI to be put in, so it's voluntary.
Q Okay. Now, were you provided another gun to analyze or was this the only gun that you -- you only provided one gun for purposes of analytical comparison?

A Correct. I received six bullets and one firearm.
Q Okay. No other gun?
A No, sir.
Q Okay. All right. And just one last question. Those six bullets -- those six bullets that were retrieved from the body of these victims, your firearms report does your firearms report identify the identity of the people who shot the guns, who shot the guns who killed these people?
A You got to rephrase that one for me.
Q I will. Does your firearm analytical report identify the assailant who killed those people that you analyze the projectiles that were removed from their body? Does this report identify who those people were? Who those person or persons were?
A No, sir, the only names listed on the report are the victims.
Q Okay. It doesn't identify who the killer was, does it?
A No, sir.

MR. BROOKER: No further questions.

THE COURT: All right. Anything else?

MR. WHITE: No, sir, judge. I ask that Mr. Green be released from his subpoena. Thank you, Mr. Green.

MR. BROOKER: Without objection, your Honor.

THE COURT: You have a good day, Mr. Green.

(WHEREUPON, the witness leaves the witness stand.)

MR. WHITE: Thank you, Judge. At this time the State would call Chris Johnson.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: I do.

WHEREUPON,

Chris Johnson,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Johnson, where are you employed?

A South Carolina Law Enforcement Division also known as SLED.

Q And in what capacity are you currently employed?

A I am lieutenant over one of our SSI units our state surveillance and intelligence unit?

Q And how long have you been in that role?

A I been a supervisor for a little over ten years now.

Q What you guys do in that division?

A So we are based in with our fugitive unit and our intelligence unit. And so out of my team, we are primarily responsible for the State's analysis of cell

phone records, wiretapping, pin registers which are basically a link between us and the phone companies so we can see real time phone calls as they appear pursuant to a lawful court order. And then like I said we also analyze phone records for cell phone tower analysis, call pattern analysis that type thing.

Q And in your training and experience, have you undergone in cellular analysis specifically?

A So I've actually been working in that field for right at 15 years now. And so I've receive training from the FBI's CAST team, which is their Cellular Analysis and Survey Team. I been through training with PenLink, which is one of the software programs we have through their Linkin administrators course, their cell sight analysis course. And then one of their just regular PenLink pin register courses. We've also been -- I've had training through gladiator forensics what they call their ESPA (sic) software, that is the software we currently use. It's also the same software that the FBI's CAST team utilizes for their analytical report. So we kind of try to follow amendment of their policy and procedure.

Q Very good. Now, about how many times do you think you qualified as an expert in state or federal court in the field of cellular analysis?

A Nine times currently.

MR. WHITE: Judge, at this time I'd move Mr. Johnson as an expert in the field of cellular analysis.

THE COURT: Any objections?

MR. BROOKER: No objection, your Honor.

BY MR. WHITE:

Q Now, Mr. Johnson, in this case specifically, were you requested or asked by our office to do just what you were referring to engaging and analyzing cellular data, cellular records?

A Yes, sir.

Q And was that pertaining to telephone number of Issac Hemingway 843-625-0880?

A Yes, sir.

Q And were those Verizon records?

A They were.

Q And what exactly did you do for us on those records?

A So, again, we were able to take those records and utilize our PenLink software our POX software to load them, that way we can take -- one thing that you have to deal with with phone companies and call records especially with the new 4G LTE technology. When those records come in, they come in what is known as GMT time or UTC time. And so typically depending on daylight savings time, those records could be four to five hours ahead of eastern

time. And so instead of us going through typically what could be ten, 20,000 lines of records, that software will take those reports that we received and go and convert that time to eastern time. So it's a little bit easier for us to match it up with our investigation that we're looking at. And then from that point, again, we can take those 25, sometimes $30,000 lines of records, and we can reduce that down to certain time frames that we want to look at entire versus the entire set of records or we can look at just, you know, the pattern from one phone to another. And just look to isolate those records, so, again, we can kind of minimize how much we're having to look at.

Q Now, I'm going to show you State's Exhibit 68. If you could tell me if you recognize this item?

A Yes, sir. This is one of the POX formats that I was able to produce.

Q Now, is that take the Verizon records and adjust for eastern standard time?

A It does, yes, sir.

Q And is that also pulling out from those records a more specific time frame?

A It does. I can reduce the time frame and I can also reduce down to just, you know, one specific telephone number that I'm looking at versus, you know, every phone

call that phone had made.
Q And that's what was done in this case?
A It was.
Q And that's reflected there in that report?
A It is.
MR. WHITE: Judge, I move State's Exhibit 68 into evidence.
THE COURT: Any objection?
MR. BROOKER: No objection, your Honor.
THE COURT: Sixty-eight is in evidence without objection.
(WHEREUPON, State's Exhibit No. 68 was admitted into evidence.)
BY MR. WHITE:
Q In just a minute, I'm going to go through -- and I put this right here for you, Mr. Johnson. And I'm going to go through each and every call in that time frame. And I just want to ask a few questions about it as we go along. Before we get into that, I want to see if you can tell us a little bit about cell phone pings?
A So we actually refer -- it's mapping. So basically every time your phone depending on the company makes a phone call or text message that is basically logged by the phone companies. Depending on the phone companies, I believe AT&T is the only one right now that maintains

location information as far as the tower that's used and the face of the tower. They're the only ones that maintain text message. Verizon only maintains as far as call records as far as CDR cell sites face that type stuff. They only maintain voice calls. Now, there are some reports that are some records that they maintain that you'll see in one of my reports, that's called RTT, which is range to tower information. What that is is the phone company can take a signal and send it out. They're using it for determining what their network needs to look like where they need to have towers and that type thing. But they will be able to send a signal out to that device. And when that signal reaches device and then it returns back to the tower that sent the signal out through a degree engineering that I don't have, it formulates an estimate of what the distance from that tower was. And so law enforcement -- we been able to utilize those reports and utilize those estimates to produce maps as consistent with, again, an estimate of how far off the tower that phone was versus what you'll see on some of the mapping is just cone which is what we call the face of the tower that on those records we can only tell you that that device was in that general direction off the tower. And so it gives you a little bit more clarity a little bit more accuracy.

Q And were you asked to do that in this particular

case?
A I was, yes, sir.
Q So you did that and then you took the call records and you pulled out a specific timeline and transferred it from UTC time to eastern standard time, is that correct?
A Yes, sir.
Q Okay. Now, I want to go through these records, and we'll just kind of go one by one from Saturday on into Sunday. And if at any time that I'm off on these records you let me know?
A Okay.
Q Now, the first being at 12:02 p.m. Saturday, January 11th. Mr. Johnson. As you know 0880 is the number belonging to the Defendant Issac Hemingway?
A Yes, sir.
Q It was just previously testified to that 2411 is that of the victim in this case Maisha Burch?
A Yes, sir.
Q When it says four seconds, that's the call duration. What if anything does that tell you?
A So, obviously, it made a -- well, I can't say it did without -- I'd have to look at the rest of the records to see that there's a tower, but there appears that there was at least a connection with that device and it lasted for four seconds.

Q Now, does that mean that these two individuals talked for four seconds?
A Not necessarily. It could have been that it was a miss call. It could have routed the voice mail. Sometimes the durations can range from zero -- typically, we -- looking at pen registers and that type thing, we typically would not necessarily say that there was a connection unless it's probably upward of 30 seconds say the actual voice conversation occurred.
Q So when it's that low or even lower, is it your opinion that that is a miss call?
A Potentially, yes, sir.
Q All right. And the next is a 12:03 p.m. It's from Issac Hemingway to a new number on the call log, that's 5677 that was previously testified to as defendant's daughter Kareema Hemingway. And, again, is it correct that that's an eight second call?
A The 5677?
Q Yes, sir.
A Yes, sir, that is an eight second duration outgoing call.
Q And then at 12:05 p.m., again, this is Saturday afternoon a call from the deceased Maisha Burch to 0880. This one a lit longer 24 seconds, is that right?
A That is right.

Q And then at 1:06 p.m. we have new a number being added to the call log 6987 previously testified that that is the defendant's girlfriend Latosha Bines. And she's calling Issac Hemingway at 0880, is that correct?
A I do not see that on this one. This only has the 12th on it. We don't have the January 11th.
Q Okay. Well, I will jump forward to the 12th. Well, you had the calls before?
A The 6987 is only showing January the 12th.
Q Okay. And so these calls 1:06 p.m. down to 6:14 p.m. your records reflect those?
A They're not showing them in this particular report looking at the original records they maybe -- it depends on what the filter was set. It could have been filtered for just the 12th and not the 11th for just the telephone number.
Q Okay. Very good. Well, let's jump ahead to the 12th then. Sunday, January 12th at 12:01 a.m. do you indicate a call from the deceased Maisha Burch 2411 to Issac Hemingway 0880?
A Yes, sir, it occurred four seconds incoming call.
Q Yes, sir. And then another call moments later from the decease Maisha Burch to Issac Hemingway?
A Yes, sir, showing the same time, it could have been that it was a routing call.

Q Okay.
A So it's time stamped the same.
Q Okay. And then a minute later at 12:02 a.m. 2411 to 0880 54 seconds?
A Yes, sir.
Q When it shows 54 seconds, I think you previously testified that anything above 30 seconds you assume that that's a connection, is that right?
A I would say there's some type of voice communication. You know, again, it's a little long for a voice mail to last that long. In my opinion, it would be an actual conversation.
Q So in your expert opinion this 12:02 call from Maisha Burch to Issac Hemingway is an actual telephone call between the two?
A Yes, sir.
Q Okay. And from 12:01 and 12:02 do you have cell site information and the pings relating to these calls?
A I believe so. I would have to look at that other report, but I believe they were.
Q Do you recall where these calls were pinging from?
A I don't without having my report to refresh my memory.
Q Okay. Do you have it with you?
A No, sir, I don't.

Q Okay. I'm going to show you refresh your recollection. This is your cell site analysis?
A Yes, sir, at 12:01 and 12:02 that phone was using a signal from a tower consistent with a tower right there near Coastal Carolina University.
Q And was that near the defendant's home?
A It is.
Q Okay. Now, jumping ahead the next call we see is at 4:49 a.m. from Defendant Issac Hemingway to Maisha Burch. The first being 11 seconds and the next being two seconds both of which are star 67. What does that mean that star 67?
A It's blocking the number so that the caller ID will show up blocked or no caller ID or something.
Q Okay, in this particular set of calls, where is it pinging from?
A It is utilizing a tower consistent with downtown Conway back in a southeast or east southeastern direction.
Q Okay. And here's a question the tower that these are pinging from 12:01 and 12:02 is it the same tower or a different tower as 449?
A It is a different tower.
Q Okay. Now, and, again, star 67 is blocking the call of who?
A So it would be the 0880 number block their call going

to the 2411.
Q So as the call comes in to 2411 that person would not be able to see who's calling?
A That's correct, yes, sir.
Q Okay. And then the next series is from 6987 to 0880 to 4:59 a.m. and 5:05 a.m. all ranging from, you know, three seconds, one seconds and two seconds?
A Yes, sir.
Q And that's from the defendant's girlfriend Latosha to Issac Hemingway, is that correct?
A Yes, sir, that's correct.
Q Okay. Now, these calls as they come in are these a different tower as to 4:49? I hate to make you keep jumping around.
A That's okay. I do not believe that one registered the tower.
Q Okay.
A I am sorry. It did register 4:49 at 4:49 and 16 seconds to 4:49 and 32 seconds it was on tower there in Conway. And then it jumps from there to 2:19 p.m. on the 12th.
Q Okay.
A It's a gap with that particular tower.
Q Okay. Very good. And then moving on early Sunday morning hours 5:05 a.m., 6:11 a.m., 6:11 a.m. and

6:39 a.m. Well, starts with 5:05 and 6:11. Again, these are calls from the defendant's girlfriend back to the suspect telephone number, is that correct?

A Yes, sir, they were all indicated as being incoming calls.

Q And now 6:39 suspect number is calling that number back, is that right?

A Yes, sir, 6:39 and four seconds, there's a two second duration of an outgoing call and it's 6:39 and 13 seconds. There's again a two second duration outgoing call.

Q And how about 6:41 a.m. is that the last ---

A Yes, sir, 6:41 and 41 seconds eastern time. The duration of three seconds was again an outgoing call.

Q And I'm going to ask you a very very straightforward but kind of no brainer question, but I got to ask it. These calls 4:49, 4:59, 4:59, 4:59, 5:05 a.m. all having to do with the defendant's number. Are they all before 7:00 a.m.?

A They are.

MR. WHITE: Beg the Court's indulgence. All right. Mr. Johnson, that's all I have for you. I think Mr. Brooker has a question for you. Please answer any questions that he may have.

MR. BROOKER: You Honor, if you can indulge me for just a second.

THE COURT: Yes, sir.

MR. BROOKER: Give me just a second and we'll get started.

(WHEREUPON, a pause in the proceedings.)

CROSS-EXAMINATION

BY MR. BROOKER:

Q I want to start of with State's Exhibit 67?

A This is 68.

Q 68 I apologize. Number 68 and, of course, if my understanding is is that this is a printout of the cell phone records from Verizon pertaining to cell phone number 843-625-0808, is that correct?

A No, sir, it's not a printout from Verizon. It's a printout from our PenLink software which allows us to analyze the records from Verizon.

Q So basically is is that you take the Verizon records, and, of course, entered into your software and your software translate those records into, I guess, this report that's been entered, is that correct?

A That's correct.

Q Okay. That's what I want to make sure. I want you to take a look at that report on the first page and ask you some questions. And, of course, I'm looking at -- I'm going to take you to -- indulge me for just a second. I think this is the first call for January 12th 2020?

A Okay.
Q And that looks like -- is that 12:01 47?
A It is.
Q PM?
A AM.
Q Excuse me AM. So that's 12:01 midnight, is that correct?
A That's correct. Everything that we work with is in military time, but it is the conversion would be 12:01 a.m.
Q Okay. So that's 12:01 a.m.?
A Yes, sir.
Q And so right after midnight, is that correct?
A That's correct.
Q Okay. So it's just a transition from Saturday into Sunday morning, is that correct?
A Yes, sir.
Q Okay. And, of course, that call looks like there's an incoming call. That call was for four seconds, is that correct?
A Yes, sir.
Q And looks like it was an incoming call from 2-0 excuse me from 843-260-41 excuse me -- 4211, is that correct?
A No, sir, it's 843-260-2411.

Q Okay. I'm sorry. I'm sorry if I'm misreading it. And that's the call that's associated with Maisha Burch, is that correct?
A That's what was reported.
Q And, of course -- so just after midnight, you get an incoming call for four seconds?
A Yes, sir.
Q Okay. From Maisha Burch?
A Yes, sir.
Q And I think it was your testimony because it was four seconds that that's probably going to be too short of a period of time to have a conversation?
A Typically. Again, not being there, I can't swear to it, but typically with what we see that would not be indicative of a conversation.
Q Okay. And then, of course, the next call I think it's the identical call. So I think you said that that's probably just the same call?
A Potentially, it's a routing call. And so with them having the exact same time in seconds, a lot of times, you know, when a call initiates, it's going to go out and look for that device. It's initially going to look for it on its home network or there's a lot of different reasons why, you know, it may show up as two routing calls. But that's why we go back and we look. And when the time is

exact and it's exact same phone number, then we can usually deduce that that is a routing call and not, obviously, the same call at the exact same time and second.

Q Okay. And, of course, the very next call which is at 12:02 a.m. Sunday morning, is that correct?

A Yes, sir.

Q And, of course, that call is for 54 seconds?

A Yes, sir.

Q And that call is from a number that was identified as Maisha Burch number?

A Yes, sir.

Q So it appears as if there were a 54 second call from Maisha Burch number to Issac Hemingway's number, is that correct?

A That's correct.

Q And I think you previously testified because it was 54 seconds, you know, that you can't say for absolute certainty, but normally because of the length of time that that would more be indicative of a conversation because anything after 30 seconds you would imagine that the voice mail doesn't last that long?

A Right, typically.

Q Okay. So that appears as if that was the conversation?

A Yes, sir, I would believe so.
Q Okay. Okay. And then, of course, the next time after that that's on this first page is 4:49 16, is that correct?
A Yes, sir.
Q On Sunday morning?
A Yes, sir.
Q 4:49:16 or I should say 4:49 on Sunday morning and that was an outgoing call. And, of course, it was for 11 seconds, is that correct?
A Yes, sir.
Q And then, of course, it has star 69 attach to it?
A Star 67.
Q Excuse me star 67 attach to it. And explain to me again what that meant because I want to make sure that I understand what does that mean?
A So if I dial your number as it normally reads out 843 or 803 whatever, then when your phone rings on a cell phone, it's going to show what my telephone number is that why your caller ID picks and it says, you know, if you got my name entered in your phone, then it tells you that it's Chris Johnson calling you. However, you can enter the star 67 before the telephone number. And it's going to come across as no caller ID or it's going to come across as blocked or whatever that particular phone company uses

to indicate what that is.
Q So at 4:49 in the morning when that calls comes in who's blocking who? I want to make sure ---
A It's an outgoing call from the 843-625-0880 number to the number listed for Ms. Maisha Burch, which was the 843-260-2411.
Q So Ms. Burch -- I want this for the jury. Ms. Burch would have blocked Issac's number?
A No, sir, she would have been receiving the blocked call.
Q She would have been receiving the blocked call?
A Yes, sir, which is from the device that's been identified as belonging to Mr. Issac Hemingway.
Q Okay. Okay. And I want to make sure I understand that. So she would have been blocking Issac's call?
A No, sir, she was receiving the blocked call that would have been made from Mr. Issac Hemingway's device.
Q Okay. Okay. So Issac made a block -- I guess made a -- made a -- I guess sent out a blocked command from his phone blocking her phone?
A His telephone did. I can tell you if he made the call, but his phone did.
Q Okay. Okay. His phone is basically communicating blocking her phone?
A Yes, sir.

Q Okay. Okay.
A It's blocking his caller ID from showing up on her phone.
Q Okay.
A So when her phone rings, it's not showing that it's him.
Q I got you. I got you, but the call was made from his phone?
A Yes, sir.
Q Okay. All right. And that was for 11 seconds?
A Yes, sir, one was four seconds and one was for two seconds.
Q Okay. And I know that you've testified previously is is that because of the short periods of time would those be indicative of a conversation?
A Typically, they would not be. It's possible, but it's not normal.
Q Okay. So it appears as if at least from my interpretation what you're saying that -- and, of course, there two there's 4:49. There's two calls that were made at 4:49. One for 11 seconds and the other one was two seconds. So it's my understanding your interpretation is is that it appears as if that he was attempting to call her phone, is that correct?
A Yes, sir, but the blocked call.

Q With a blocked call. So his caller ID wouldn't show up. Okay. And then, of course, the next call -- the next number or call is listed as 1800 hours?
A Yes, sir, that would be six p.m.
Q So the next call comes in at six p.m. and that's an outgoing call, is that correct?
A It is.
Q Okay. And that's a call that's going to Maisha Burch's number?
A Yes, sir.
Q And that for how long?
A Six seconds.
Q Six seconds. And then, of course, at 1900 hours 1956 hours that would be what seven ---
A That would be 7:56 p.m.
Q 7:56 p.m.?
A Yes, sir.
Q Okay. So on six p.m -- six p.m. in 7:56 p.m. on Sunday afternoon Issac's number would have been calling Ms. Burch's number?
A Correct, yes, sir.
Q Okay. And, of course, is I think the six o'clock was for six seconds. And, of course, the 7:56 p.m. would have been for 15 seconds?
A That's correct.

Q And I think it's your testimony is is that possibly there would not have been any communication because of the duration of the call, but you can't ---
A I would believe not.
Q Okay. And then 12:19 at 12:19 or -- is that 8:19?
A Yeah, it's 2019, so that would be 8:19 p.m.
Q So that be 8:19 pm on Sunday night or Sunday evening?
A Yes, sir.
Q He attempted to call Ms. Burch's number again, is that correct?
A That's correct.
Q And, of course, there was no answer?
A Five second duration.
Q Five seconds, but that's indicative of no communication?
A Not being answered, yes, sir.
Q Okay. All right. Now, what I want to do is that I think you've already got your analytical report and I want to talk with you a little bit about that?
A Okay.
Q I think you testified what your qualifications were, and, of course, is I think you testified that at times as apart of your expertise as a cell phone expert, you know, that your -- that what you do is that you take the information that you received from the cell phone company

specifically cell site location information data as cell phones are pinging off the tower, is that correct?
A Yes, sir.
Q And what you try to do is if you take that information and I'm assuming it includes -- it include longitude and latitude information from the cell phone company?
A So it's not -- it doesn't include longitude and latitude of the device.
Q Okay.
A What it's providing with these particular records from Verizon it tells me the cell ID and it will give me what is known as like a market ID. So you think of that as you live at 123 Main Street and your zip code is 29127. There is one 123 Main Streets all over South Carolina. So if you don't have the zip code, you don't know what town you're in. Same thing with cell phone towers. You have to have the market ID because there's probably hundred different towers that are tower, you know, 1236. And so without knowing the market ID, you don't know where to look for that tower. And so with Verizon, your records will only show the market and the cell ID. And typically it will show what they call the face. And so a cell phone -- typically, a tower is made up of three faces. If you're familiar with compensating, that is what gives us

what we call an azumath(sic). The azumath (sic) is that face of the tower and so an azumath (sic) of zero is off the north side of the towers straight up. That would typically be face one. Face two would typically be at maybe a 120 degrees and so that would be off to the southeast. And so typically you have three faces. Sometimes there are towers. I do not believe there were any in this case that are what we call omnidirectional. An omnidirectional tower is 360 degrees that cast a signal out in all directions. And we can only tell you that that phone utilize that tower. I can't tell you what side of the tower it may have been on. But, again, I don't believe that was the case in any of these records. So to finish your answer, Verizon, again, they only give you the number. And so we have, again, a contract -- it's not a paid contract, but it's a verbal contract with the FBI to include a program called the I-1020 data base. And what that is is a list of all the different cell towers. And so we have access to that as well as with the phone companies. Most search warrant that we use to get these records will include them providing that Excel spreadsheet that has where all those towers are listed. And so at that point we do only utilize the longitude of that tower. They come with an address listed with the towers, but we do not use the address for mapping purposes. If anybody's

familiar with utilizing a GPS, you can put in that address where you're going. And a lot of times the GPS will tell you you've arrived, but your location is still another 100 yards down the road or maybe behind you another hundred yards. So for mapping purposes, we have found that it is most accurate when we use longitude of the tower because I can take that latitude and longitude put into our mapping software or into Google Earth Pro. And I can zoom in to where that latitude and longitude is and I can physically see that tower sitting on the ground. So that I can confirm that that truly is the cell phone tower and it matches to that latitude and longitude that we're looking at, so that we can further confirm that we're starting from a good location when we produce our analysis or where those towers are located.

Q Okay. And I think what we have on the screen is the cellular analytical report. And, of course, did you prepare this report?

A I did.

Q Okay. What I have in my hand this is the report y'all give to me. If you can take a look at this report and confirm this report is the report, the actual report that you prepared? I'm asking you to do that because I'm going to move that into evidence if you confirm that is your report.

A It is.
Q Okay.
MR. BROOKER: Your Honor, at this time ---
MR. WHITE: Can I just take a look at it?
MR. BROOKER: Sure, sure.
BY MR. BROOKER:
Q That is your report?
A Yes, sir.
THE COURT: And what number is that going to be?
COURT REPORTER: Number four.
THE COURT: Four?
COURT REPORTER: Yes, sir.
THE COURT: Defense 4 is in evidence without objection?
(WHEREUPON, Defendant's Exhibit No. 4 was admitted into evidence.)
BY MR. BROOKER:
Q Okay. You have a copy, is that correct?
A Yes, sir.
Q Okay. I'm going to ask you some questions about this report. On the second page of the report, and, of course, I specifically number two is it talks about the methodology that you used in preparing this report?
A Yes, sir.
Q Okay. And it talks about 2.1 is the cell tower

locations?
A Yes, sir.
Q Okay. And then, of course, at your conclusion you said on number four it says a historical cell site analysis was performed on the call data records from a target cell number. And that target cell number would have been a number that we're talking about that's the 843-625-0880 number?
A Yes, sir.
Q That's the number that's been identified with Issac Hemingway, is that correct?
A Yes, sir.
Q Okay. And, of course, is is that so you mapped out -- and you use your own language. You mapped out based upon the communication between the cell phone and the cell tower. You mapped out specifically what cell towers the cell phone was communicating with at certain times, is that correct?
A Yes, sir.
Q I'm going to ask you some questions and indulge me if I take my time and eyes are poor. So I'm going to have to look at these dates and make sure it has. Now, on this first map, it has transaction, and, of course, it says for EC40844059. What are those number?
A So that is the ECI, which is basically that market

ID that I was referring to earlier. So with your LTE networks, the numbers are a little bit longer. So typically your cell ID that includes the tower and it will include the face within that number.

Q Okay. So these provides identification of a specific tower?

A Yes, sir.

Q To put it in more simplistically. And, of course, is is that it appears as if at least on this first map that it's indicating some sort of -- that there was a communication between Issac's cell phone and cell phone tower?

A Yes, sir.

Q And I think the date listed on here is January the 11th 2021 and the time is 4:58 p.m., is that correct?

A January 11th 2020.

Q I'm sorry January 11th 2020 at 4:58 p.m.?

A Yes, sir.

Q Is that military time or we still in eastern standard time?

A That is back in eastern time for the report.

Q You're in eastern standard time. And, of course, is is that at that time that Saturday -- and that's a Saturday, Saturday afternoon at 4:58 where does it indicate his cell phone what tower is his cell phone

pinging off of?
A So, again, that tower is located near Coastal Carolina University and it is consistent with a tower that would have service his residence or the address that was provided I think believe his residence.
Q Okay. And this cell phone tower we're looking at in this first image and I want to just ask this generally how long is a range of this cell phone tower?
A So typically we see towers can reach in South Carolina for the most they reach anywhere from a mile to three miles. If you get up into the mountains of Oconee that corner of the state, we seen towers reach 10 to 12 miles.
Q But if you see on the map, you got two other red dots that are just out past that tower?
A Yes. If you notice in what would have been slides three, it's an example of a network. So typically you're going to see what is called handoff zone. Those that are familiar with cells phone when they first came out unfortunately I was around back then. If you drove down the road and you were on a phone call when they first came out, a lot of times you would lose that phone call. It would drop off. And so, you know, users got extremely agitated with the fact they kept dropping calls. And so the phone companies figured this out that they needed to

increase their network. And so you have these areas where the towers and the signals overlap just a hair. And so what that allows for is as you're driving down the road now, you're phone is constantly searching for that next signal. It wants to know where the strongest signal is because it wants to maintain that connection. Phone companies make money as long as you're happy with your service. And so it's constantly looking. So if it's seeing that the tower that it started the call on, which is typically the strongest signal that it saw, it sees that that tower is getting weaker, but this tower over here is getting stronger, then it's going to jump off and hand off to this next tower. That could be that you're either in that middle zone in that hand off area or depending on your other calls, it may be indicative of that phone driving down the road. But typically because those other two other towers are out there, that particular tower will reach somewhat to those other towers, but it doesn't necessarily always overpower because it doesn't make sense for the phone company to pay for that tower to be turned up, so it's over powering another tower.

Q So theoretically or at least simplistically is is that as you're driving down the road, of course, it's multiple cell phone towers?

A Right.
Q And simplistically is is that in order for you to maintain a better communication, your cell phone is searching with the tower that is closest, that has the strongest signal in order to maintain it?
A That is in your network, correct. You can have two towers side by side, but they're not in your network. And so it's not going to communicate with that tower. It's only going to communicate with another Verizon tower.
Q In this diagram, of course, is is that I think you have this kind of -- you have this kind of red area. What is this red area indicates?
A That's just indicating it's pointing in that direction.
Q It's pointing in that direction?
A Yes, sir, there is no range to tower information on these slides. You'll see as you get further down in the report, there will be a slid that will indicate when it switches over to range to tower information, but that doesn't offer any range.
Q And because this communication I think his cell phone at Saturday -- I think this is afternoon at 4:48 p.m. his cell phone is communicating with this cell tower?
A Yes, sir.
Q Okay. And because it's communicating with this cell

tower is that an indication that he is closer to this cell tower then he are to the other two red dot cell towers?
A It is an indication that it could be closer or it's just the fact that it see that face of that tower as the strongest tower when it started that call.
Q Okay.
A It could that, you know, one thing you have to look at depending on what side of the house you're on, you could connect with a different tower if you're in that handoff area.
Q Certainly, certainly. But certainly he is within the Coastal Carolina area?
A Yes, sir.
Q Within the Conway area?
A Of that tower, yes, sir.
Q Okay. He's nowhere near Centenary, is that correct?
A No, sir.
Q Okay.
A Not that device is not.
Q Okay. I want to take you to the next map. And, of course, this is a little bit later on on Saturday afternoon. I think the first map was 4:58 p.m. on Saturday afternoon. This is 5:36 on Saturday afternoon. And, of course, is is that map -- and, of course, according to this map is this number three is that an

indication that this is where a tower is?
A That is a tower. The number three does not necessarily -- that's not the tower number. So that is a number that's assign by the software that, you know, that was the third tower seen in the transactions. It has nothing to do with the actual call records or anything like that, but it is a cell phone tower. And it's identified as the tower number 159, 596.
Q Okay. Yeah, and I understand you correctly, that three is not a cell phone, but that three is where a tower is located?
A Yes, sir, correct, yes, sir.
Q And, of course, is is that at this particular time, you know, Saturday afternoon at 5:36 his cell phone is communicating with this tower?
A It is. It is communicating with that tower and off that face of the tower is where the signal indicates that it is consistent with.
Q Okay. And because it's communicating with the tower on this side, so would it indicate that his cell phone is some place on this side of the tower?
A Most likely. Again, those lines are not hard fix lines. A cell phone operates off of what is an RF signal. So we know RF signal doesn't go in a straight path. It's affected by buildings, trees, anything like that. And so

the only way to know the actual RF footprint of the tower is to do a drive study, that was not available at that time. And so this is your most accurate depiction of what that signal would have looked like without an RF drive study.

Q So looking at the previous map which he was communicating with the cell tower in Conway, this cell tower is outside of Conway? Is this cell tower going towards, I guess, Marion and the Centenary area?

A I'm not sure. I'm not that familiar with this area without zooming the map out and looking at it, but it is, you know, consistent with the signal on Highway 378 in your Brittons Neck for those that are familiar with the area.

Q Okay, okay. Is Brittons Neck in Marion County South Carolina? Is that in Marion County South Carolina?

A I don't know. I don't know.

Q Okay, that's fine. That's fine. Okay. The next map -- and, of course, this is still Saturday except it's a little bit later. I think the previous map showed 5:36 p.m.?

A Yes, sir.

Q And, of course, this map shows 5:40 p.m., so roughly about four minutes later?

A Yes, sir.

Q Roughly, his cell phone is communicating off of this tower?
A Yes, sir, but it's the same towers before, but it's change the face of the tower like I talked about earlier. It's changed probably north northeast direction.
Q Okay. So it's the same tower, but just a different face of the tower ---
A Yes, sir.
Q --- that it's communicating with?
A Yes, correct.
Q Okay. Of course, I know that you said you don't know the area. I think we still is pointing towards the vicinity of this Brittons Neck area?
A Yes, sir.
Q Is that correct?
A Yes, sir, it appears.
Q And right there in the corner is that Centenary -- now that's at Central Church? Now, these maps not only -- you're not only going based upon Friday and Saturday. On Sunday, you're also showing that his vehicle -- that his cell phone communicated with this tower on Sunday, is that correct?
A Yes, sir.
Q And, of course, is is that for the times on Sunday, it says here at 8:27 -- at 8:27 on Sunday -- 8:27 p.m.?

A Yes, sir.
Q Through 8:28 p.m. that his cell phone was communicating with that very same tower?
A Yes, sir.
Q Okay. Just a little bit later at I think previous time on previous map I think it was 5:40 on Saturday afternoon. And this is 5:47 and 5:58 on Saturday afternoon, and, of course, it's -- is this the same tower that it's communicating with or a different tower?
A No, sir, that is a different tower.
Q Okay. I know that you said you're not familiar with this area. It looks as if this is somewhere close to, is that 501?
A Yes, sir, it looks like it's a little bit northwest of Gallivants Ferry.
Q Okay. And, of course, is is this symbol right here, what does this symbol indicate?
A That was the location that was provided as being where the crime scene occurred.
Q And so this is Centenary, South Carolina, this is where the -- pretty much the area where the victim would have lived at?
A Yes, sir.
Q Victim's house. So at least we know is is that on 5:47, 5:48 that Saturday afternoon, this being the

victim's house, and, of course, is his cell phone would have been communicating off of this tower?
A Yes, sir.
Q Okay. And, of course, again, on Sunday his cell phone was communicating with that very same tower between 8:19 and 8:32 p.m. that Sunday afternoon his cell phone was communicating with that same very tower, is that correct?
A That's correct.
Q Okay. And this is 5:40 pm on Saturday afternoon at 5:40 pm same tower?
A Yes, sir.
Q Sunday afternoon 8:27 pm and 8:28 pm it's communicating off the same tower Sunday afternoon?
A Yes, sir.
Q Okay. And are some of these are these duplicates? I'm not quite sure this seems like a duplicate. This seem like a map we went over previously?
A It may be, yes, sir.
Q 5:47, 5:48 Saturday afternoon it's communicating off of that very same tower?
A Right.
Q And, of course, 8:19 p.m. on -- and 8:32 p.m. on Sunday is communicating off the same tower, that appears to be a duplicate map, is that correct?

A Yes, sir.

MR. WHITE: Judge, can we just approach for just one second.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record.)

MR. WHITE: No, big deal, but you keep hitting the back button.

MR. BROOKER: Is it going back?

MR. WHITE: No, sir, you'll go forward and then you'll go back to. And then you'll go forward and back to. I didn't want to like bring it up because that's what's happening.

MR. BROOKER: Okay. Well, I'll tell you what I'm going to do is get my mouse. I can better roll it using a mouse, than I am with this.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury has ended on the record.)

BY MR. BROOKER:

Q I got a mouse hopefully I'll move a little faster. Okay. All right. Let's go on to the next page. This is Saturday afternoon at 6:14 p.m.?

A Yes, sir.

Q And, of course, at 6:14 pm it's communicating off of

this cell tower?
A That's correct.
Q And, of course, let's see if I can increase the -- see if I can get an indication of a location there we go. Okay. Let me see if I can find where I was before. There we go. Of course, so at 6:14 p.m. it's communicating at this tower. And, of course, is is that this looks like Hannah Pamplico High School?
A Yes, sir.
Q That's what this is indicating?
A Yes, sir.
Q Okay. This is Pamplico, South Carolina here?
A Yes, sir.
Q Okay. Okay. So kind of get a point of reference. So it's communicating at a tower near, I guess, outside of Pamplico, South Carolina, is that correct?
A That's correct.
Q That's at 6:14 on Saturday afternoon?
A Yes, sir.
Q That 6:16 on Saturday afternoon looks as if it's communicating off of this tower and this tower is close to Marion?
A Yes, sir.
Q Okay. So we would assume that his cell phone was somewhere in the vicinity of Marion at this time at 6:16.

They can't give a precise location. This is not GPS data, but it's communicating off of this tower on Saturday afternoon?
A That's correct, that tower is the strongest signal when it started that call.
Q Okay, okay. And there's another tower over here I think, is that correct?
A That is, yes, sir.
Q On the other side of Marion?
A Yes, sir.
Q But it's communicating with the tower on this side?
A Yes, sir, and off that particular face.
Q Okay. And off this particular face?
A Yes, sir.
Q And, of course, is is that it's facing Highway 76, is that correct?
A That's correct.
Q Okay. Is that the Highway 76, I guess, 501. I guess, it changes from 76 to 501, is that the same highway?
A I believe so, but I am not a hundred percent positive.
Q Sure, that is fine. And this is between 6:18 p.m. and 6:19 p.m. on Saturday afternoon his cell phone is bouncing off of this tower that is near 501, is that

correct?
A That's correct.
Q And, of course, is is that it's bouncing off of this face of the tower, is that correct?
A Yes, sir, that's correct.
Q And that tower is facing 501?
A Yes, sir.
Q Okay. And looks as if by 7:15 to 7:20 Saturday afternoon looks as if his cell phone is now pinging off that tower in Coastal Carolina near Coastal Carolina University in Conway, South Carolina, is that correct?
A Yes, sir.
Q Okay. And I think you testified previously this would be kind of near where he lives at?
A Yes, sir, it would be consistent with his residence.
Q It would be consistent with his residence. And this is Saturday afternoon, again, I will repeat that between 7:11 -- 7:11 p.m. to 7:20 p.m.?
A Yes, sir.
Q And, of course, on Sunday his cell phone was communicating with that very same tower on Sunday, is that correct?
A Yes, sir, at the times listed.
Q And on Sunday from looks like 12:01 a.m., so that would be 12:01 am just after midnight?

A Yes, sir.
Q And I want to go back to that call I guess State's Exhibit Number 68. I think you testified that that 12:04 -- I think that around was it 12:01 midnight that there was a call that came in for four seconds?
A Yes, sir.
Q Two calls indicated for four seconds?
A That's correct.
Q And I think you said that those calls may have been the same call?
A May have been the same call, maybe one part be routing.
Q So when that call came in and that call came in to his phone from Maisha Burch's phone?
A Yes, sir.
Q Okay. So we can assume that Maisha Burch was calling him somewhere around that time?
A Yes, sir.
Q At 12:01 just after midnight?
A Yes, sir.
Q Okay. And, of course, at that time his cell phone indicates that that cell phone is in the Conway area, is that correct?
A That's correct.
Q It's not?

A At that time it's still at the Coastal Carolina. I mean, I guess the general Conway area, but there's another tower that's up closer to Conway that we discussed.
Q Is Coastal Carolina closer to Myrtle Beach than it is Conway or it's between Myrtle Beach and Conway?
A I think it's in between. To me, it's closer.
Q Yeah, and I know exactly where it is. It's right there, you know, in between -- I know the area between Myrtle Beach and that Conway area?
A Yes, sir.
Q Right there where the outlet mall is. Everybody may know where the outlet malls is as a point of reference. So it's in that area where the Tanger Outlet mall is?
A I believe so, yes.
Q Not exactly, but in that vicinity?
A I take your word at it.
Q Okay. So -- and then, of course, I think the next call came in at 12:02. And, of course, on your phone records that 12:02 just after midnight at 12:02 on Sunday morning that was another call that came in from Maisha Burch?
A Yes, sir.
Q And that's the call that lasted for 54 seconds?
A Yes, sir.
Q Communication was for 54 seconds?

A That's correct.
Q And I think you testified previously is that would have been indicative of a more of a telephone conversation because of the length of the call?
A I believe so, yes, sir.
Q Fifty-four seconds. Of course, at 12:02 a.m. when that call came in to his phone, again, he was still in the Conway area, is that correct, bouncing off of that tower?
A That particular tower, yes.
Q His cell phone was still in the Conway Coastal Carolina area bouncing off that cell tower?
A Yes, sir.
Q Okay. I think that the next call communication I think it is is that 6:39 p.m.?
A 6:39 am on that tower.
Q On 6:39 a.m. Okay. And his phone was still in the Conway area?
A At that time, yes, sir.
Q Okay. Let me ask you question about a cell phone communication on this call log, but is not on the mapping sheet. If you take a look at the mapping sheet, I think I'm looking at the cell communication, cell communication I think at 4:49 a.m. there's two cell phone communications -- this is Sunday morning -- early Sunday morning 4:49 a.m. There was two cell phone communications

and it listed as outgoing, is that correct?
A Yes, sir.
Q And those are the two cell phone communications at star 67 numbers?
A Yes, sir.
Q Okay. Now, if those two star 67 numbers, if those two numbers -- if those two numbers show up on the call log, why do they not show up on the map?
A If you go to the next slide, it's on a different tower.
Q Oh, it's on a different tower, okay. You've answered my question. Thank you, sir. So as far as Sunday morning 6:49 a.m. ---
A 6:39.
Q 6:39 a.m. I apologize. 6:39 a.m. and there's two 6:39 a.m. it's bouncing off that cell tower in Conway, is that correct?
A The one at Coastal, yes, sir.
Q Coastal Carolina. And then, of course, at 6:41 a.m. on Sunday morning still at that Coastal Carolina cell phone tower, is that correct?
A It is.
Q Okay. And at 9:26 a.m. his phone number is communicating with Conway cell tower?
A At that time, yes, sir.

Q At that time. And let me go to the next sheet and see where you're talking about. Okay, here it is. These are the two calls I think the two star 67 calls that didn't show up on the previous map.
A That's correct.
Q And, of course, the star 67 calls I think one -- both of them came in at 4:49, is that correct?
A Yes, sir, one at 4:49 and 16 seconds and one at 4:49 and 32 seconds a.m.
Q Okay. And one of them -- the first was for 11 seconds, and then, of course, the second one is for two seconds, is that correct?
A That's correct.
Q Okay. And at that time when those star 69 calls came in -- these two calls came in his phone is communicating with a tower -- with this tower I think it's somewhere near Conway?
A Yes, sir, closer City of Conway the downtown area.
Q It's closer to the City of Conway. Okay. And, then, of course, this is -- this is why -- you know why this is on a different map just curious instead of on the previous map over the other ones?
A It's a different tower.
Q It's just a different tower, that's why it's on a different map?

A Different location, yes, sir.
Q Okay. And then, of course, at 2:19:32 p.m. on Sunday afternoon his cell phone was communicating with the same tower on the -- I guess, just on the outskirts of Conway, is that correct?
A That's correct.
Q So the next map -- and I'll go through these a little bit more quicker and try to. Again, we're back Saturday afternoon. This is Saturday afternoon. And I'm assuming it's communicating off of this -- is this a different map -- was a different cell tower is the same cell tower?
A The same cell tower same face that we're looking at ---
Q Is this just a duplicate?
A It's a duplicate. It's just showing the later times where we went to 4:49. It's back to that 6:39 a.m.
Q So ---
A Just showing that movement between that tower out to the Conway tower and then back to this tower.
Q I got you. I got you. So 7:11 to 7:20 he's still bouncing off of the Conway tower?
A The Coastal Carolina tower on January 11th yes, sir.
Q Okay. This is -- this is Sunday afternoon one 1:13 p.m., is that correct?
A That's correct.

Q And from 1:13 p.m, 1:14 p.m. and 3:21 p.m., he was bouncing off of this tower that's -- I think this is near 701 and in Interstate 22?
A Yes, sir.
Q The Conway bypass?
A It appears so, yes, sir.
Q So this is Sunday afternoon. Okay. Later that Sunday afternoon, this is 4:49?
A Those two morning calls. And then you got the 2:19 p.m. in the afternoon.
Q Okay. Is this a duplicate map?
A It is a duplicate of the other one. It's just showing that afternoon call at 2:19.
Q Okay. The 2:19 call. I'm sorry I thought the other one was -- the other map showed the 2:19 call as well, that's why I asked you.
A Most likely I did it that way just to show the progression of time.
Q Okay, okay. All right. So still Sunday afternoon, Sunday afternoon 4:49 close to five o'clock ---
A That's a.m.
Q That morning close to five o'clock in the morning on Sunday afternoon he's in Marion or his cell phone -- his cell phone was bouncing off of a tower near Conway, South Carolina?

A Correct.
Q Okay.
A Again, it's back to that three o'clock. It's just showing that progression of time.
Q Yeah, on previous maps ---
A Yes, sir.
Q --- to the previous map still Sunday afternoon he's bouncing off a map -- his cell phone is near the 22 bypass?
A Yes, sir.
Q And 701 22 bypass in Conway. This is Sunday afternoon at 4:30 p.m., is that correct?
A Yes, sir, 4:31 and three seconds.
Q Okay. Sunday afternoon at 4:30 p.m. he's bouncing off of the tower near Coastal Carolina?
A That's correct.
Q And we've already established that that's near where his residence is?
A That's correct.
Q Okay. Sunday afternoon at 4:14 he's still bouncing off of the ---
A 5:14.
Q Excuse me 5:14 Sunday afternoon bouncing off of cell tower near Coastal Carolina?
A That's correct.

Q Which is near where his home is, is that correct?
A Yes, sir.
Q Okay. A little bit later at six o'clock on Sunday afternoon he is still bouncing off of that same cell tower near Coastal Carolina?
A That's correct.
Q This is Sunday at 7:43 p.m. his cell phone is bouncing off of a tower near -- just on the outskirts of Conway, is that correct?
A That's correct.
Q Okay. Sunday at 756 it's bouncing off of this cell tower somewhere near 501?
A Yes, sir, near the intersection of 847.
Q Yeah, near the intersection of 847 and 501. At eight o'clock on Sunday afternoon his cell phone number is bouncing of off this tower?
A Yes, sir, and zooming out same that faces back toward that same 501 travel path.
Q And then that faces back toward that's 501. And, of course, we could see here it's like it's where the Aynor area is?
A That's correct.
Q And, of course, is is that his cell phone is bouncing off of this tower?
A That's correct.

Q Okay. And this is Sunday afternoon 8:19, 8:20, 8:24, 8:28, and 8:32 p.m. his cell phone number is bouncing of off this cell phone tower?
A That's correct.
Q And your map -- so this Galivants Ferry right here?
A Yes, sir.
Q Okay. Of course, this is where the victim's phone is, is that correct?
A That's an area near where the residence is, yes.
Q Near where the victim's residence is in Centenary, South Carolina?
A Yes, sir.
Q Okay. Somewhere around between 8:28 30 this is where his cell phone is pinging off of?
A Yes, sir.
Q On Sunday afternoon?
A Yes, sir.
Q Okay. Again, this is Sunday afternoon between 8:27 and 8:28 his cell phone number is bouncing off of this cell tower. This facing the cell tower?
A That's correct.
Q And, of course, this is somewhere near 78 -- 378 and 41?
A Right, it's pointing back in that northeastern direction.

Q Okay. Is this the same image I think showed previously?
A It is. If you look at the three different slides together, those times all kind of comingle together and that's most likely consistent with what I'm talking about earlier with that hand-off area being an area in the middle.
Q I got you. Okay, I understand. And about 8:48, 8:48 ---
A 8:42.
Q I'm sorry 8:42 I apologize.
A That's okay.
Q 8:42 on Sunday afternoon his cell phone was pinging off of this tower somewhere on near Marion, is that correct.
A That's correct, yes, sir.
Q Okay. Of course, this was the next day. I think this is that Monday, January 13th at -- looks like at 5:58 and 57 a.m. in the morning looks like his cell phone is bouncing off this tower. And is that the tower -- it's hard to tell because of the map. Is that the tower near Coastal Carolina?
A No, sir, that's one closer toward the downtown area of Conway.
Q It's closer to the downtown area of Conway?

A It's facing back northwest away from town, but the base of the tower is closer towards the town.
Q I got you. I got you. Monday morning at 6:34 a.m. looks like 501 is bouncing off a tower at 501?
A Yes, sir.
Q Okay. And then looks like Sunday morning between 10:04 a.m. and 10:43 a.m. his cell phone is bouncing off of a looks like -- is that the North Myrtle Beach area?
A Yes, sir, it's the north western or northeast the way the maps oriented to North Myrtle Beach.
Q Okay. Now, I want you to take a look at your map. I want to make sure I get this correct. And then, of course, I'm almost finish. Let me go back to where I was. I'm going to ask you a specific question. From your cell site -- and I want to focus you on Saturday night. If you can indulge me for just one second.
A Yes, sir.
Q I'm trying to find the right map for the jury. I think this is the one. When he arrives back in Conway, and, of course, according to this map, he's back in Conway at 7:11 p.m.?
A Yes, sir.
Q Okay. So from 7:11 p.m. on Saturday to until 12 midnight, is there any way in your map where it shows he's pinging off a tower any way in Centenary or near

Centenary?
A No, sir, there was no tower access during that time frame. So I don't have anyway of knowing where that device was at during time frame.
Q Okay. According to these maps, is there anything showing that he was on one of those other towers. I think we saw other towers where he is traveled back towards Centenary, I guess, is -- do you have any mapping software that shows that on Saturday afternoon after 7:11 p.m. on Saturday afternoon that his cell phone was pinging off of any tower other than the tower near the Conway area?
A Yes, sir, I only map what I have usage for. So if there was no usage on the device, I can't map to tell you where it was at.
Q Okay. Is that a yes or no?
A That is the answer.
Q Early Sunday, early morning I think this is after early Sunday morning, 12:01 on Sunday morning do you have any map that shows that his cell phone was pinging anywhere other than in Conway near -- on a tower near Conway, South Carolina in or around Conway, South Carolina?
A Same thing only what is that 12:01 to 12:02 I can tell you where it was at and then I can tell you 6:00 a.m. or 6:30.

MR. BROOKER: You can indulge me for just a second. Let me make sure I don't have anything else for, Mr. Johnson.

BY MR. BROOKER:

Q Let me just ask you one more thing before I sit down, Mr. Johnson.

A Yes, sir.

Q Because I made a note to myself and I'm curious. I want to ask you about I think that's Sunday -- I think on the State's Exhibit Number 8. I think this is on the third page I believe. State's Exhibit 68 I apologize. I'm looking for the call on Sunday. I think Mr. White indicated I think Sunday -- early Sunday morning and you maybe able to locate it quicker than I am. I think it's 5:05 a.m. on Sunday morning?

A That's correct.

Q Okay. And that there was an income calling from the number that's associated with Latosha Burch?

A Okay.

Q You see where I am?

A Yes, sir.

Q And, of course, one of them is one second, the other is two seconds. Okay, do you know what that is is that a call?

A There is an incoming at 4:59 that is one second. And

then there are two calls listed again 5:05 and zero seconds that are both two seconds durations. Again, that would probably be another routing call, but, again, they're listed as incoming. But that small duration doesn't appear to be a voice conversation in my opinion.

Q I know that you said something earlier that there was a distinction between Verizon records and also AT&T records I think you said that they collect text messages?

A That's correct.

Q All of these would just be calls none of these will be text messages?

A They should not be with Verizon's information.

Q Okay.

A I would have to look back at the original records, but I do not believe so.

Q Okay. And then, of course, I think one of them was for two seconds or both was for two seconds?

A The ones at 505 were both for two seconds.

Q One at 5:05. And then, of course, there was one for 4:59, that was for one second?

A Yes, sir.

Q Do you have any idea what that is for such a short period of time one second and two second?

A Again, without looking at the records, I would assume they're both voice calls, but I would have to look back at

the records to confirm. The only thing that Verizon they keep some SMS or text messages, but they don't keep location information.

Q Okay.

A And so I would have to look back at the original records to give you a definite answer.

Q Okay, okay, okay. But at those times -- and obviously because we don't have hers. At those times you can kind of figure out where his cell phone may have been, but you can't tell where hers may have been?

A I did not map hers, no, sir.

Q You didn't map hers?

A No, sir.

Q Okay, okay.

MR. BROOKER: Indulge me for just a second, I may not have anything further.

(WHEREUPON, a pause in the proceedings.)

THE COURT: All right. Any redirect?

MR. WHITE: Just very briefly.

REDIRECT EXAMINATION

BY MR. WHITE:

Q And I'll get you down. I know you been up there for a while. A lot of pings to go through, but correct if I'm wrong, there's a dead period between 12:02 to 4:49 where there are no pings, is that correct?

A Correct, no activity.
Q Is one of those reasons or one of the ways in which there be no activity on a phone is if the defendant turn his phone off?
A It could either be powered off or put in the airplane mode, but it's not seeing the cellular network.
Q So he could have been in Centenary, but just his phone was cut off?
A Yes, sir, I don't have any way of analyzing call records that would tell me otherwise.

MR. WHITE: Very good. Thank you, Mr. Johnson.

MR. BROOKER: Just follow up.

RECROSS-EXAMINATION

BY MR. BROOKER:

Q Early Sunday morning there was cell -- there was cell communication with his -- cell tower communication between his cell phone and cell tower, is that correct?
A I believe that 12 o'clock and at four o'clock in morning.
Q Okay. Let me find it again. I'm not going to be long I promise. I have to ask you this question. Let me make sure for the jury everything is clear. I'll take you back to this map. And this is at 12:01 a.m. in the morning on Sunday morning?
A That's correct.

Q Okay. The reason you were able to map this is because his cell phone is communicating with this tower near Coastal Carolina, is that correct?
A That's correct.
Q Okay. And, of course, I think he says between 12:02 and, of course, but all of the times here where you see that there is a time frame here on this map that means that there's some sort of communication with ---
A At that exact time, yes.
Q That exact time. When a cell phone is not -- when a call is not active, does it register a time when the cell phone tower when it is not being used? The reason why I'm asking you that question is is that -- and I apologize I'm going to let you -- I promise I'm going to let you answer your question. The reason why I'm asking that question is is that the cell phone times that are on these maps that you're using to map out his location are all consistent with cell phone calls being made to or from his phone?
A Correct.
Q So when the phone is on and if there is no cell activity either incoming or outgoing, does it register with the tower?
A It is -- if the device on and in network and there's not phone calls being made, then it is still registering, but it is being captured in a report. The only time it's

captured in a report is when there's actual activity whether there's a phone call. Especially with Verizon it's whether it's a phone call made. Now, in the bottom of my report, there are some range to tower information that are not necessarily reliant just on voice calls, but they are transactions that were logged by Verizon system.

Q Okay.

A But those typically are going still be related to voice calls, but there are times when it is just -- and we don't know Verizon has never been able to explain to us what those transactions are, but they are exact transaction where -- sometimes they correlate with the voice calls, but sometimes they don't, but they are ---

Q And the reason why I'm asking you is is that just because you don't see -- just because you don't see a time of a call and if there's a period in which there is no -- there is no at least I won't say communication between the cell phone -- I know you just said is that there still be communication, but, of course, it's not shown at least on this data that ---

A Because there were no voice calls, right.

Q That Verizon gives you -- is that means the cell phone is off or it's in airplane mode, could it mean that the phone is just not being used?

A Could be, yes, sir. I don't have a way of knowing.

Q Okay. I guess, I want to put this in a simplistic form for the jury. So if I had Verizon Wireless, which I do and right now there is no cell phone communication either someone's not calling me or I'm not calling anyone, during that period of time that may not register on this Verizon Wireless information?
A On this particular part of the report, that's correct. This is just voice calls that were mapped.
Q So if he's asleep and the phone is not being used, then that would be another explanation as to why you don't see voice mails?
A If somebody he didn't call his device or he didn't make a call, then that's correct.
Q Okay. So it doesn't have to be on airplane mood or shut off or anything like that?
A Doesn't have to be. That would just block -- airplane mode and being turned off keeps -- if somebody were to call you, it's still not going to register. If the phone is on and on the network and someone calls, then you may still get that registration and tower typically assign to that call.
Q And the reason why I'm asking that question because I want to make it clear, it's not your testimony that early Sunday morning during periods of time in which there was no incoming or out coming call, you're not telling this

jury that that means that his phone was shut off or either?

A No, I have no way of knowing whether it was shut off, that's just -- that would be one way of explaining why there's a gap in times.

Q I got you. That's what I wanted to make sure.

A Yes, sir.

MR. BROOKER: I don't have any further questions, your Honor.

MR. WHITE: One last question.

FURTHER EXAMINATION

BY MR. WHITE:

Q But to make sure there are no pings on a phone, one option would be to cut the phone off, correct?

A Yes.

THE COURT: All right, sir. You may step down. Thank you.

(WHEREUPON, the witness leaves the witness stand.)

THE COURT: And how many witnesses do you have for tomorrow?

MR. WHITE: One, judge.

THE COURT: We're getting there. All right. I'm going to excuse them for the day. Be back at 9:30.

(WHEREUPON, the jury was excused for the day.)

THE COURT: All right, we'll see you at 9:30 in the morning.

MR. WHITE: Thank you, Judge.

(WHEREUPON, the proceedings were concluded for the day to be reconvened on February 28, 2023.)

THE COURT: If you will go ahead and bring out the jury.

(WHEREUPON, the jury came into open court.)

THE COURT: If you will call your next witness.

MR. WHITE: Thank you, Judge. At this time the State would call Maryann Boehm.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: I do.

THE CLERK: Thank you.

WHEREUPON,

Maryann Boehm,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Good morning, Ms. Boehm.

A Good morning.

Q Thanks for being here with us this morning. If you could, tell us where are you employed?

A I am employed at South Carolina Law Enforcement

Division commonly known as SLED.

Q And in what capacity are you currently employed with SLED?

A I am a DNA analyst. I work in the DNA case work department where I process evidence and known standards, make comparisons and write a report.

Q Now, how does one become a DNA analyst and specifically how did you become a DNA analyst? What is your background, your experience and your education?

A So I received a bachelor of science in integrated science and technology with a concentration in biotechnology from James Madison University, that's in Harrisburg, Virginia. Upon employment, at first started a job at Orchid Cellmark which is a private forensic DNA company. I was trained and worked there for approximately two and a half years. And then in 2005 I began employment at the South Carolina Law Enforcement Division where I went through their in-house training program. It was about a yearlong training program where I had to learn all of the techniques in laboratory processes used at the lab. I then had to successfully complete a series of tests before I was deemed competent to perform DNA analysis on forensic case samples.

Q And how long have you been working after that training period?

A About 16 years. I been at a little over 17 years and the training program's a year long, so 16 years.
Q In that time about how many times have you been qualified and testified as an expert in the of field DNA analysis?
A Over 80 times.
MR. WHITE: Judge, at this time I'd move Ms. Boehm as an expert in the field of DNA analysis.
THE COURT: All right. Mr. Brooker. Any objections?
MR. BROOKER: Subject to our previous objections, your Honor.
THE COURT: Thank you. Overruled. She's an expert. Go ahead.
MR. WHITE: Thank you, Judge.
BY MR. WHITE:
Q Now, in this case, did you in fact analyze evidence for DNA analysis and issue a report of your findings?
A I did.
Q I'm going to show you and it's a lot of evidence, Ms. Boehm. If you could just bear with me. I'm going to show you State's Exhibit 53 through 59 and ask if you will tell me if you recognize those particular items?
A Yes, these are all items I have analyzed.
Q And I'm going to show you also 70, 71, and 72 and ask

you to tell me the same if you could?
A These are also items that I worked as part of this case.
MR. WHITE: Judge, I'd move those particular items and again that's 53 through 59 and 70, 71 and 72 into evidence.
THE COURT: All right, any objections?
MR. BROOKER: Subject to previous objections.
THE COURT: So overruled. 53 through 59 are in in evidence and 70 through 72 are in evidence.
(WHEREUPON, State's Exhibits Nos. 53-59 and 70 through 72 were admitted into evidence.)
BY MR. WHITE:
Q If you could, Ms. Boehm, tell us generally how items of evidence received in your lab and how specifically these were received in your lab for your interpretation?
A So we receive items of evidence from local law enforcement agencies will come to bring items to SLED that are part of a case or our crime scene will go out to the scene of a crime and bring back items for analysis. Both ways either if its crime scene agents or a local law enforcement agent. They will log it in through our evidence control technicians. Evidence control technicians will issue a unique lab number and each item gets it own item number will make sure that the items of

evidence are in a sealed manner. That there's no science of tampering. And then it is stored on secure shelf until it's requested for analysis.

Q And then you are comparing what is called -- and we'll go into it in just a minute known standards against evidence that are collected from a scene, is that right?

A That's correct.

Q And I'm going to show you State's Exhibit 61 and ask you after you render your analysis do you draft a report to show your findings?

A That is correct.

Q I'm going to show you State's Exhibit 61. If you could tell me if you recognize that particular document?

A Yes, this is a copy of my report.

MR. WHITE: Judge, I move State's Exhibit 61 into evidence.

MR. BROOKER: Subject to previous objections.

THE COURT: Overruled, 61 is in evidence.

(WHEREUPON, State's Exhibit No. 61 was admitted into evidence.)

MR. WHITE: And, Judge, permission to publish to the jury.

THE COURT: Yes.

BY MR. WHITE:

Q Ms. Boehm, I'm going to ask you if you could to walk

us through your findings on this report and sometimes I'll zoom in and zoom out and go from page to page. And I might skip around a little bit and just ask you few questions, but, again, this is your report of the DNA analysis for this particular case, is that correct?

A It appears so, yes.

Q And this is the first page and it starts with comparison standards. And I was wondering if you could just tell us what is a comparison standard?

A A comparison standard is a DNA sample that is a sample from a known person, that sample is a sample taken directly off of that individual. So we know the source of that DNA profile.

Q So in this particular case you have several comparison standards, is that right?

A That's correct.

Q And is one of those comparison standards that of Issac Hemingway?

A Yes, sir.

Q Now, I'm going to jump ahead and, again, page two is more of the comparison standards, is that right?

A That is correct.

Q And some of them are buccal swabs. What is a buccal swab?

A A buccal is the swab buccal cells which are the

inside of your cheek. We just take a sterile cotton swab and swab directly in the inside of your cheek to collect as a known standard.

Q And that is being compared against evidence collected from scene, is that right?

A That is correct.

Q And there are some other examples of comparison standards here what are they?

A So as you can see on that first item 25, it's known scalp hair from Andrew Legette. That is hair that is pulled directly off of the individual. The only source of DNA on that hair would be the root, so it needs to be pulled head hair.

Q And so all of these examples or items are comparison standards all of these are being compared again against items collected from the scene?

A Not all of them. So if I had a duplicate in standard, if I have like a buccal swab and a blood standard from the same individual, if the one I run is sufficient for a comparison, then I will not run the other items.

Q Now, we going to get into your analysis now, but I ask want to ask you a question. If you would have had comparison standards for all of the biological children of Andrew Legette, would that have changed your analysis as

to Andrew Legette?
A It would not.
Q Excuse me I meant Issac Hemingway. If you had all the comparison standards of the biological children of Mr. Issac Hemingway, would that have changed your analysis as to Issac Hemingway?
A It would not change the comparisons to the evidence from Issac Hemingway.
Q Very good. Thank you. Thank you, Mr. Tucker. All right. So now we're on page three and this is getting into your actual analysis, is that correct?
A Well, it's the items of evidence yes, sir.
Q And I'm going to jump ahead if you could if it's all right with you, Ms. Boehm, to the last page before we get into it. This chart here what are we looking at?
A So in our note section of the report, we have this two charts to help explain the likelihood ratios. So any time I make a comparison to a known standard to the evidence, we generate a likelihood ratio. And the value -- quote a value. The value can be referred to this table to show how much support you should use for that scenario. So it goes from the likelihood ratio of two different table. So the first table is for proposition set one. So for a likelihood ratio to be calculated, we compared two different scenarios. So proposition set one would be a

scenario that the person of interest, the known standard of comparing the two the DNA profile from the evidence is likely to come from that person more if there's a mixture. And then the second table is the alternate scenario that it was somebody else essentially. So there's two different tables. And based on the likelihood ratio, it will either support one of these two scenarios. So the first table would be for supporting the first scenario. And there is five different ranges of likelihood ratios. And I will refer to these when I'm reading my results of how much support based on the table is given. And the second one same thing, but supporting the second scenario that it's somebody else.

Q Very good. Now, I walk through your report. And if you could, Ms. Boehm, if you will tell us as we go along where it falls on the likelihood ratio tables that we just reviewed. Starting first with the items of evidence and that being item number one. What, if anything, you can tell us about item number one?

A So item one was swabbed from the front door exterior door handle of the residence. And I developed a partial DNA profile, but it was not suitable for interpretation. I didn't have enough DNA there to make any comparisons.

Q Okay. And now we're getting into item three which I think was suitable for comparison, is that correct?

A That is correct.
Q And what is item three?
A Item three is swabs from the back door exterior door handle of residence.
Q And what were your results in this particular piece of evidence?
A So I developed a DNA profile it was suitable for comparison. I then determine that it was a mixture originating from three individuals. So then I compared all the known standards submitted in the case to this item of evidence.
Q And what was your analysis from proposition set one?
A So proposition set one has the scenario that Andrew Legette and two unidentified unrelated individuals contributed to the mixture versus three unidentified unrelated individuals contributed to the mixture. And the results for that comparison are that the DNA profile is approximately 50,000 times more likely if Andrew Legette and two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture. So based on that table that we just talked about at the bottom of my report, that would be strong support that Andrew Legette and two unidentified unrelated individuals contributed to the mixture.

Q And then that's just one scenario, is that correct?
A That's correct.
Q And now we moving on to proposition set two and now you're testing a new scenario, is that right?
A Yes. So proposition set two would be another known standard submitted in the case that I'm comparing .
Q And what was proposition set two?
A So I then compared Issac Hemingway and two unidentified unrelated individuals contributed to the mixture versus three unidentified unrelated individuals contributing to the mixture. And the result of that comparison is that the DNA profile is approximately one billion times more likely if Issac Hemingway and two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture and that is very strong support that the DNA developed from the evidence is best explain by Issac Hemingway two unidentified unrelated individuals contributed to the mixture.
Q And going back to that likelihood ratio table, what gets us to very strong support? What number gets us over the edge to very strong support?
A One million.
Q And this is one billion times more likely if Issac Hemingway contributed, is that correct?

A Yes, sir.
Q All right. Let's move on if you don't mind to proposition set three?
A So since I had two inclusionary likelihood ratios on two different individuals, I then combine the two to see if the DNA profile from the evidence can be explain by both of them contributing to the sample, so that's what I did in proposition set three. Have Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the mixture versus three unidentified unrelated individuals contributed to the mixture. And the result of that comparison is that the DNA profile is approximately 2.3 quintillion times more likely if Andrew Legette and Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture. That is very strong support that Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the mixture.
Q And, again, this is a mixture off the back door handle, is that correct?
A Yes, that is correct.
Q And I'm going to ask you one more time and I know you testified to it, but anything over a million is very strong support?

A Yes, sir, that is correct.
Q And this is 2.3 quintillion, is that right?
A That is correct.
Q I mean, that's more people than have ever walked the earth?
A Yes, sir.
Q Be fair to say. All right. If you could move to proposition set four please?
A So then I compared Maisha Burch to the DNA profile, so that Maisha Burch and the two unidentified unrelated individuals contributed to the mixture versus three unidentified unrelated individuals contributed to the mixture. And the results of that comparison are that the DNA profile is approximately 50 times more likely if three unidentified unrelated individuals contributed to the mixture than if Maisha Burch and two unidentified unrelated individuals contributed to the mixture. So that is moderate support that three unidentified unrelated individuals contributed to the mixture.
Q And, again, these are all just scenarios that you're trying to find the highest likelihood or likelihoods in general?
A Yeah, I'm not trying to find the highest, I'm just calculating the likelihood ratios to best explain the DNA profile.

Q Very good. Thank you, Ms. Boehm. And proposition set five? And I know this monotonous, but we got to go through it.
A So I next compared the four additional standards that I had in this case all individually. However, the results were the same, so I was able to combine into one proposition set. So I compared the person of interest and two unidentified unrelated individuals contributed to the mixture versus three unidentified unrelated individuals contributed to the mixture. And Stephanie Reed, Jessica Dixon, Lakela Graves and Jerome McCullough are excluded as contributors to the mixture under the listed propositions.
Q And this is important. This is the first time it comes up. So I want to draw some attention to it. You are able to exclude comparison standards from the items of evidence, is that right?
A Yes, sir.
Q But here you are not able to exclude Issac Hemingway?
A That is correct.
Q And in fact under his proposition set, he had a high likelihood ratio, is that right?
A That is correct.
Q Okay. Now, item five what was your results on item five?
A So the DNA profile developed from item five was a

partial DNA profile insufficient for interpretation, that means I didn't have enough DNA to make any kind of comparisons.

Q Okay. And let's just jump ahead to item seven?

A Item seven which was swabs from the wall of hallway front of house side. I was able to develop a DNA profile suitable for comparison. I interpreted this the DNA profile as a mixture originating from two individuals. So then I compared all the known standards submitted in the case to this item of evidence.

Q Very good. On that particular items of evidence, if you can walk us through your proposition sets?

A So the first proposition set I have is comparing Maisha Burch and an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributed to the mixture. The results of that comparison are that the DNA profile is approximately six times more likely if Maisha Burch and an unidentified unrelated individuals contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture. And this is weak support that Maisha Burch and an unidentified unrelated individual contributed to the mixture.

Q Very good and that leads us into proposition set two?

A So I compared Issac Hemingway and an unidentified

unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributed to the mixture and results of that comparison is that the DNA profile is approximately a hundred times more likely if Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture. And that would be moderate support that the DNA profile is best explain by Issac Hemingway and an unidentified unrelated individual contributed to the mixture.

Q And, obviously, one and a hundred times moderate support is not as high as 2.3 quintillion, right, but I think the important thing is you cannot exclude Issac Hemingway from that swab, is that right?

A That is correct, I could not exclude him from the DNA profile I developed that from item.

Q Okay. And proposition set three?

A So Maisha Burch and Issac Hemingway as the contributors to the mixture since they both had inclusionary likelihood ratios. So Maisha Burch and Issac Hemingway contributed the mixture versus two unidentified unrelated individuals contributed to the mixture. And the results of that comparison is that DNA profile is approximately three times more likely if two unidentified unrelated individuals contributed to the mixture than if

Maisha Burch and Issac Hemingway contributed to the mixture. And that would be moderate support that it's best explain by two unidentified unrelated individuals contributed to the mixture.

Q Okay. And proposition set four?

A I compared Andrew Legette next. Andrew Legette and an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributed to the mixture. And the results of that comparison is that DNA profile is approximately 12 times more likely if two unidentified unrelated individuals contributed to the mixture than if Andrew Legette and an unidentified unrelated individual contributed to the mixture and that also is moderate support. It's better explain by two unidentified unrelated individuals contributed to the mixture.

Q Okay. And proposition set five I think is what we're on?

A Yes, Stephanie Reed and an unidentified unrelated individual contributed to this mixture versus two unidentified unrelated individuals contributed to the mixture. The likelihood the results of that comparison is that the DNA profile is approximately 11 times more likely if two unidentified unrelated individuals contributed to the mixture than if Stephanie Reed and an unidentified

unrelated individual contributed to the mixture. And that, again, is moderate support that the DNA profile is better explain by two unidentified unrelated individuals contributing to the mixture.

Q And proposition set six?

A So I compared Jessica Dixon and an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributing to the mixture. The results of that comparison are that the DNA profile is approximately 26 times more likely if two unidentified unrelated individuals contributed to the mixture than if Jessica Dixon and an unidentified unrelated individual contributed to the mixture. And that is also moderate support that two unidentified unrelated individuals contributed to the mixture.

Q Okay. And proposition set seven?

A Lakela Graves and an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributed to the mixture. And the results of that comparison were that the DNA profile is approximately 27 times more likely if two unidentified unrelated individuals contributed to the mixture than if Lakela Graves and an unidentified unrelated individual contributed to the mixture. Again, this is moderate support that two unidentified unrelated

individuals contributed to the mixture better explains the DNA profile I generated.

Q Okay. And the last proposition on this particular piece of evidence?

A That is Jerome McCullough and an unidentified unrelated individual versus two unidentified unrelated individuals. And the results of that comparison was that the DNA profile is approximately 11 times more likely if two unidentified unrelated individuals contributed to the mixture than if Jerome McCullough and an unidentified unrelated individual contributed to the mixture. Again, that is moderate support that the DNA profile is better explain by two unidentified unrelated individuals contributing to the mixture.

Q Now, I'm going to deal with items of evidence eight?

A So I was able to develop a DNA profile suitable for comparison from item eight. I interpreted as a mixture of two individuals. So then I compared all the known standards submitted in this case to that DNA profile. My first proposition set is Maisha Burch and an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributed to the mixture. And the result of that comparison is the DNA profile is approximately 100 septillion times more likely if Maisha Burch and an unidentified unrelated individual

contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture. I then compared all of the other known standards submitted in this case. They all had the same results, so I lumped them into one proposition set. The person of interest that be known a standard I'm comparing in an unidentified unrelated individual contributed to the mixture versus two unidentified unrelated individuals contributing to the mixture. And Andrew Legette, Stephanie Reed, Issac Hemingway, Jessica Dixon, Lakela Graves, and Jerome McCullough are excluded as contributors to the mixture under the listed propositions.

Q So on the back of the house side, the wall back of the house side Issac Hemingway was excluded as a contributed to that DNA, is that correct?

A Yes, sir.

Q But on the front of the house side that wall, he could not be excluded as a contributor, is that right?

A That is correct.

Q Okay. All right. Let's keep rolling along, Ms. Boehm. Now, we're dealing with nine. If you could tell us about item nine?

A So item nine had a blood request on it. So I first perform a presumptive test to see if there's any blood present on the item and that presumptive test was

negative. So I did not do any further analysis in generating a DNA profile. Since, there was an indication that there was no blood on the item.

Q And the description of item nine is white tissue from near TV, is that right?

A That is correct.

Q All right. Let's move on to item ten?

A So item ten was hair from floor near front door. I further broke up this item into item 10.1 and 10.2. So 10.1 was swab of suspected hair from front floor near front door. I ended up swabbing the hair to see if I could get any touch DNA. So any DNA that's not from the owner of the hair in this case. So I was able to develop a DNA profile suitable for comparison for this item. I would then visually exclude it. Andrew Legette, Stephanie Reed, Issac Hemingway, Jessica Dixon, Lakela Graves and Jerome McCullough as possible contributors to this item. I interpret the DNA profile that I did develop as single source meaning it came from one person, so then I compared Maisha Burch to that profile. So Maisha Burch contributed the DNA profile or the other scenario would be unidentified unrelated individual contributed the DNA profile. And the results of that comparison were that the DNA profile is approximately 350 octillion times more likely if Maisha Burch contributed the profile if an

unidentified unrelated individual contributed the profile. And that would be very strong support that the DNA profile that I developed is best explain by Maisha Burch contributing the DNA profile.

Q Thank you, Ms. Boehm. If we move on to 10.2 if you don't mind?

A So I also performed a cutting of the hair from the floor, so that is item 10.2. I was able to develop a DNA profile on this item as well that's suitable for comparison. I then excluded Andrew Legette, Stephanie Reed, Issac Hemingway, Jessica Dixon, Lakela Graves and Jerome McCullough from as possible contributors. I then interpreted the profile I developed as single source and compared Maisha Burch to this profile. So Maisha Burch contributed the DNA profile versus an unidentified unrelated individual contributed the DNA profile. And the results of that comparison is that the DNA profile is approximately 350 octillion times more likely if Maisha Burch contributed to the profile than if an unidentified unrelated individual contributed the profile. And that is very strong support that the profile is best explain by Maisha Burch contributing to the DNA profile.

Q Thank you, Ms. Boehm. Now, we're going to move on to item 14 and I think if it's all right with you you could probably cover 14.1 and .2 together if you like?

A Yes, sir, so item 14 are the fingernail scrapings from Andrew Legette. The collection is broken up to left and right hand. So I performed analysis on both of those items 14.1 and 14.2. But the results are the same I was able to develop a DNA profile suitable for comparison. However, the DNA profile developed is attributable to Andrew Legette. So we say attributable when it's coming off -- we have the DNA profile of the person coming off of a swab or cutting from that person.

Q Now, moving on to item 18. What is item 18?

A Item 18 are fingernail scrapings from Maisha Burch.

Q Okay. And dealing with item 18.1 is left fingernail scrapings from Maisha Burch and you tell us walk us through the proposition sets on that particular piece of evidence?

A Yes, sir. I was able to develop a DNA profile suitable for comparison. So then I compared the known standards submitted in the case. I interpret the DNA profile as a mixture originating from two individuals. So with fingernail scrapings it's relatively easy assume that the person that came off of DNA profiles there if we visually see her there, so that's what I did in this sample. Then Maisha Burch -- I saw Maisha Burch's DNA profile in the profile from the evidence that it generated, so we call it assuming her. So my next bullet

there is Maisha Burch is contributing to the mixture. I'm assuming she's there came from her body, it make senses. So then I compared Maisha Burch and Issac Hemingway contributed the mixture versus Maisha Burch and an unidentified unrelated individual contributed to the mixture. And the results of that analysis is that the DNA profile is approximately 207 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and an unidentified unrelated individual contributed to the mixture. And that is moderate support that the DNA profiled I developed from the fingernail scrapings is best explained by Maisha Burch and Issac Hemingway contributed to the mixture.

Q And I want to stop right here and ask you some questions about transference. Are you familiar with that term?

A Yes, I am.

Q And transference when essentially when one person touches DNA and transfers it to another place, is that correct?

A That would be correct.

Q When we're dealing with DNA under the fingernails, is it -- would it be more likely to see a mixture originating from three individuals in that scenario because you are touching someone else's DNA. And then you are getting

scratched by the fingernails which would be the person who's fingernails their DNA, the person who transferred it and the actual transferred DNA would all be present under the fingernails, is that your understanding?

A Yes, in my opinion, you would most likely see the person who's also transferring if it's an activity of scratching.

Q But, again, your DNA profile was just a mixture of two individuals, is that right?

A Interpret it as a mixture of two.

Q Very good. If we could move on to proposition set two please?

A All right. So then I compare all the other known standards submitted in the case and they all had the same results so I lumped them all together under one proposition set. So Maisha Burch and the person of interest contributed to the mixture versus Maisha Burch and unidentified unrelated individual contributed to the mixture. Andrew Legette, Stephanie Reed, Jessica Dixon, Lakela Graves and Jerome McCullough are excluded as contributors to the mixture under the listed propositions.

Q So, again, all these DNA standards is comparison standards you were able to exclude all of these underneath her fingernails, is that correct?

A That is correct.

Q But you were not able to exclude Issac Hemingway underneath the fingernails, is that right?
A That is correct.
Q If we'll move on to 18.2 please, Ms. Boehm?
A So item 18.2 where the right fingernail scrapings of Maisha Burch and the DNA profile I developed is attributable to Maisha Burch and it's a single source profile and it was coming from Maisha Burch.
Q Okay. An item 24?
A So item 24 was right fingernail clippings from Andrew Legette. I was able to develop a DNA profile suitable for comparison. I interpret the DNA profile as a mixture from two individuals. And just like the last item I did, I assumed Andrew Legette as a contributor for this item. So Andrew Legette and the person of interest contributed to the mixture versus Andrew Legette and an unidentified unrelated individual contributed to the mixture. And the results of the comparison for all the known standards were that Maisha Burch, Stephanie Reed, Issac Hemingway, Jessica Dixon, Lakela Graves and Jerome McCullough are excluded as contributors to the mixture under the listed propositions.
Q Okay. Now, then you can roll through these as fast and as slow as you want to, but I'll just throw it up there item 31, 33 and 34?

A So item 31 was hair removed from the body bag of Maisha Burch. I was told that no DNA analysis was required on that item. So no analysis was performed on that item. Item 33 and 34 are the right fingernail clippings from Maisha Burch and the left fingernail clippings from Maisha Burch. I performed DNA analysis on both of these items and both are resulting in the DNA profile developed is attributable to Maisha Burch.

Q Okay. Then we've already seen the last page of your report, is that right?

A It's the second to last page flip to the last page.

Q And that concludes your examination of your analysis, is that right?

A That is correct.

MR. WHITE: Beg the Court's indulgence for one moment.

BY MR. WHITE:

Q I'm just going to ask one more question. Then I'll let Mr. Brooker talk to you for a little bit. And I just want to make sure I'm clear because I threw out a different name when I asked you this before we got started. But you had a lot of comparison standards, is that right?

A That is correct.

Q If you had comparison standards on all of Issac

Hemingway's children, would that have changed your analysis as to Issac Hemingway in this report?

A No, sir, it would not.

MR. WHITE: Okay, thank you, Ms. Boehm. Please answer any questions defense may have, okay.

THE COURT: Cross.

CROSS-EXAMINATION

BY MR. BROOKER:

Q Is it Boehm?

A Yes, sir.

Q Okay. Ms.Boehm, I want to ask you a couple questions and at least or you tell me whether or not you know. Do you know the history of DNA evidence? If you don't you can say ---

A I don't know what you mean by the question I'm sorry.

Q Well, traditional DNA evidence, touch DNA evidence is not always been available for analysis, is that correct?

A Well, it's always been available. However, our technology has become more sensitive to where we're able to develop DNA profiles from touch DNA. Touch DNA has always been in existence. However, the past several years is when we actually started having DNA request on touch evidence.

Q Okay. So you're saying is is that I guess, you know, probably since the beginning of man that touch DNA is

always been present, but, of course, it wasn't until recently that you had the technology to be able to take that evidence and analyze it?

A That is correct.

Q Is that correct? And, of course, is is that prior to touch DNA -- I think before touch DNA technology became in existence I'm going to ask you about traditional DNA. I think before touch DNA I think the only thing that that the technology would allow to be analyze would have been traditional DNA like blood and semen, is that correct, where there was sufficient amount of DNA that was contained within the sample?

A Well, we would attempt DNA on any item of evidence submitted in the lab. It would just depend on whether we could develop a DNA profile from that item of evidence.

Q Okay. So developing a DNA profile was what allows you to be able to analyze -- allow you to be able to make a comparison. When you get two samples at least a -- the sample unknown sample. And then, of course, the known sample you get a profile from both of the samples. And, of course, it allows you to then be able to compare the two, is that correct?

A That would be correct.

Q Okay. Now, just a little bit more information. Of course, is is that I done a lot of research in connection

with DNA. And it's my understanding is is that 99 -- approximately 99.9 percent of human DNA is shared among all of us. We have the same DNA?

A Yes, sir, that is correct.

Q Okay. Now, it's my understanding is is that -- so everybody in this courtroom even though we may not be family or have any sort of biological background that we know of is is that we share approximately 99.9 percent of the same DNA?

A That is correct.

Q Okay. And, of course, it's that less than one percent, that's less than one percent of DNA that is unique to us all, you know, that is different among us all. That is the DNA that forensic, I guess, science or forensic DNA analysis it's concern with, is that correct?

A Yes, we are interested in the portions of DNA that differ between individuals.

Q And that's a very small percentage, is that correct?

A Yes, sir, that's correct.

Q And so what you're trying to do is you're trying to isolate that very small DNA that differs between human beings, and, of course, take a look that the DNA for purposes of comparison?

A That is correct.

Q Okay. Now, and it's my understanding is is that once

you locate -- I guess, once you locate that small amount of DNA that is unique, then, of course, is is that what you try to do is develop a profile from that, is that right?

A Can you restate that question?

Q Once you isolate a local -- localize that small amount of DNA that is unique, that unique small percentage of DNA that's unique, that's where you at least forensic DNA analysis, that's where you're developing your profile from, right, that unique DNA?

A That is correct. So the technology we use looks at the portions of DNA that differ between individuals. We uninterested on the DNA that's the same between individuals. So we look at those locations and develop a DNA profile based on those locations that differ between individuals.

Q And of that DNA in order to get a complete profile, how many areas or locon do you take a look at or either DNA markers do you look at in order to develop a complete DNA profile?

A Per at SLED we are not testing 24 locations. Three of those locations are gender based locations that tell us -- gives us an indication it's a male or female. And so the remaining 21 are the DNA locations that differ between individuals.

Q Okay. So you're looking at a total of 24 locations. And for purposes of -- at least our conversations, I'm going to call these markers. You know what I talk about -- will you know what I'm talking about if you call them markers?
A The locations?
Q Yeah.
A Markers, sure, yes.
Q You're looking at 24 DNA markers or locations okay. And that's what a complete DNA profile is?
A Results of all those locations would be a full profile.
Q Yes. Yes. All those locations would be a complete profile. Okay. Now, indulge me for just a second. Now, when you're looking at all those locations, are you looking at, I guess, touch DNA that's taken from the scene is is that most of the time -- well, let me rephrase that. Let me go to the report specifically and refer this specifically to the report. You have your report?
A I do.
Q This is State's Exhibit Number 61. And I think Mr. White ask you about comparison samples. And, of course, buccal swabs. And my understanding is is that comparison samples, you know, are buccal swabs. Those are the samples of DNA that you take from individuals in which

you want to test against the samples that you take at the crime scene, is that correct?
A That is correct.
Q Okay. So example using Issac, so you did get a buccal swab from Issac, is that correct?
A That is correct.
Q And, of course, is you were able to develop a complete sample from the DNA swab that you got from Issac Hemingway, is that correct?
A That is correct.
Q So you have all 24 DNA markers or DNA locations identified?
A I did.
Q Okay. And that would be the same for all other persons. I think in that -- on page one of State's Exhibit Number 64, I think there was a number of people that you developed a comparison sample for. So you were able to develop a complete profile for all of those individuals?
A Yes, with known comparisons most of the time we're able to develop a complete profile because we have lots of DNA. There's lots of DNA in our buccal swabs or in our blood. So it's not uncommon to develop a DNA profile that is complete for those samples.
Q Okay. And for these samples at least for this

particular case all of those individuals you're able to develop complete samples, is that correct?
A That is correct.
Q Okay. Now, and so now you have the profile of these individuals, a complete profile of these individuals. Now, you need to develop a profile of the DNA taken at the crime scene, so that you can compare the two, is that correct or compare them with?
A I do it the opposite way. I first develop a DNA profile from the unknowns determine if they're suitable for comparison and interpretation. And then I look at the DNA profile from the knowns in the case.
Q Okay. But either way you have to develop a profile for both of them, so you can compare them?
A That would be correct.
Q So the standard -- for the nonstandard, and, then, of course, from the evidence at the scene?
A Yes, sir.
Q Okay. And so you already testified that you got a complete profile from Issac Hemingway and all those other persons that contribute to DNA. So let's talk about the evidence that was taken from the scene so we can see whether or not a complete profile was able to be developed from that evidence. I think item number one says a swab from the back door exterior door handle of residence, is

that correct? Item number one I think this is page three?
A Swabs from the front door exterior handle of residence.
Q Okay. All right. And, of course, is I think you testified that that was insufficient for interpretation?
A That is correct. I did not develop enough of a DNA profile to make any kind of interpretation or a comparison.
Q And why would a profile be insufficient for interpretation?
A Not much DNA there.
Q I'm sorry. Go ahead I didn't meant to interrupt you.
A So we -- I follow a strict protocol that was developed at SLED. And there's lots of criteria and then this profile did not generate enough of a DNA profile to be used for interpretation.
Q In order for a DNA profile to be sufficient for interpretation, how many markers must be present in order for that to happen? How many locations that you must be able identify to compare with?
A Well, for our protocol, we use eight locations for a single source profile and then in order for a mixture has to have at least mixture at two places.
Q So it has to have two places for a mixture?
A Of the profile. The profile has to demonstrate a

mixture of two of those markers.
Q Okay, two of those markers. And, of course, I'll go to item number three, item number three is a swab from back door exterior door handle of residence, is that correct?
A That is correct.
Q Okay. I think you've already testified that you were submitted DNA samples from that back exterior door, is that right?
A Will you rephrase that question?
Q I'm sorry. I think you've already testified -- you've already testified that you were able to develop a profile from the DNA that was taken from the back door handle -- the exterior back door handle that's item number three, is that correct?
A Yes, that is correct.
Q Okay. Now, that profile that you were able to develop I think you indicated in your report that it was a mixture. I'm looking at -- you said that the DNA profile was interpreted as a mixture originating from three individuals?
A Yes, that is correct.
Q Okay. So therefore underneath your standards in order to interpret that, there has to be at least two places or DNA markers, is that correct?

A It has the results at eight locations. For this profile, I only had results missing at one location.
Q How many locations did you have at this profile? I'm sorry.
A I had results at 23 of the 24 locations.
Q Okay. And I think 23 of the 24 locations. And I think you said a mixture of three. I want to ask you about the -- how you arrive at that number? And I think you already testified to the fact is that that is an interpretation, that's your interpretation that it's a mixture of three people?
A That is correct.
Q Okay. How do you determine that it's a mixture of three people?
A So based on my training and experience, I look at the profile of each person can have up two results at a location. It's actually -- you get half from your mom -- half of your DNA from your mom, half from your father. So you have two different numbers at each location on your DNA. So in this case or any case, I look at the DNA profile from the evidence and determine how many test results are at each location. So if it's one or two, it be mostly likely a single source. If it's three or four be most likely a mixture of two people. Five and six would be a mixture of at least three people. So I look at

that through the entire profile all 24 markers that I received DNA test results at. I can also look at the peak height, so the DNA results are shown at peaks that's what the data looks like. So if I have a really big peak, it could be two people contributing at that peak. So based on the amount of numbers at each test results at each location and the peak heights at each location will determine how many people I believe made of that DNA profile.

Q Okay, okay. And I want to make sure that I understand that and make sure the jury understands. I think you've already testified that there was 24 locations at sample three that you were able to compare, right, 23 locations?

A Yes, sir.

Q There's 23 locations is what you said at items number three the back door. And I think you said is is that if I'm interpreting this correctly is at each location normally if you were looking at a single individual -- at each location a single individual normally going to have two or either one -- and I know the technical term is alleles two or either one number at each location, is that correct, if you're looking at a single source?

A So, yes, an allele is the scientific term for a test result and a DNA profile that is exhibiting from one

person would have one to two allele calls at each location.

Q Okay. On sample number three, the back door how many alleles or numbers you have at each location are or marker?

A Well, it varies between each marker of how many test results I got in each location.

Q Okay. Do you have the results for all 23 markers?

A I do.

Q Okay. I'm sorry.

A I do have -- I do have it with my case file, yes, sir.

Q Why don't you just tell me the highest number that you had at a particular marker and then the lowest number?

A So at one of the locations I have six test results or alleles at one. And then the lowest would be nothing that partial -- I guess, I got 23 out of 24 results so one place had no test results.

Q Okay, okay. And then, of course, what you're doing is I think when you said that you're looking at the peaks. And, of course, is is that it's on a graft. And, of course, is is that at each marker, you're looking at the number of -- you'll looking at and correct me if I'm wrong, you're looking at the number of alleles at each marker. And, of course, is is those peaks represents

alleles, is that correct? And, of course, is that you're trying to look at those -- look at the number -- the peaks height at each marker to try to make a determination or an estimation with respect to whether or not it's two persons, three persons or four persons, is that correct?

A Yes, that's correct.

Q And, of course, is is that scientist -- two scientist looking at the same marker and trying to interpret whether or not there were multiple people at that marker. They could disagree, is that correct?

A They would -- they may disagree in the amount of numbers. No one would disagree if it's a mixture or not. It's pretty easy to see if there's one person versus multiple people. However, my case file when I generate my report it goes through two reviews. So there's two other analyst looking at the state or two and my interpretations and agreeing with that interpretation.

Q So this is human interpretation, is that correct, based upon your experience and training?

A Yes, sir.

Q Okay. This is not done by a machine or anything like that that's making this determination with respect to whether or not there's two or three more?

A That is correct.

Q Okay. Now, when you're look at the alleles, let me

ask you this question indulge me for just a second. When you're looking at multiple -- when you're looking at a mixture that contains the samples of multiple individuals, can you determine -- let's say for instance, I think on item number three, you said that you interpret that as three individuals. When you're looking at those alleles excuse me -- when you're looking at the markers and you're looking at the alleles that are in each marker, can you separate those alleles or assign those alleles to a particular person for instance if you're saying that okay I think is three persons A, B, and C and I can distinguish which alleles belong to A, which alleles belong to B, and which alleles belong to C, are you capable to differentiate that?

A The only time where we do would be for those DNA profiles where I assume a contributor. So those fingernail scrapings I assume that the DNA profile of the person whose fingernail scrapings it was. We do assign that profile to a known person because it's off of their body, but for typical evidence, no, we don't say, you know, these alleles come from a certain person.

Q Are you capable -- would the science you have are you capable of doing that is what I'm asking?

A Other than assuming it on intimate samples that come off of an individual, no, sir.

Q So the science is not able to do that separation? And the reason why I'm asking that question is is that when you're looking at sample number one and you're looking at that mixture of three people -- three people. I know that you said that you had Issac's sample, is that correct?
A Yes, I have his known standard.
Q His complete profile. And the reason why I'm asking you that is is that -- let me ask it this way. At each marker can people share -- can people share individuals? I know that this is an unique DNA -- the unique DNA area that we're looking at, but even though this is unique DNA can people share the same alleles within those 24 markers?
A So, yes, what is unique is the amount of repeats they have to the test results, so at every single location. So two people may have the same results at one location, but we test multiple locations to make sure it's unique to a specific person versus just looking at one test result at one location because people do share test results at a particular location.
Q And so what that means is is that probability -- if you're looking at 24 locations, the probability of someone sharing alleles at a couple of those locations maybe normal, but the probability that that person is going to share the same alleles at all of the locations is going to

be rare unless there is some sort of family relationship, is that correct?
A Yes, so identical twins would have the same DNA profile, so they have the same exact -- they have the same DNA profile. So they have the same exact DNA profile.
Q Okay. When you're looking at the alleles, let's talk about biological children. And, of course, is is the parents. I think it's your testimony that biological children and parents share the same DNA, is that correct? You get from half from mom and half from dad, is that correct?
A So you don't share the same DNA, but they do get half of their DNA profile is from their mom and half of it is from their father.
Q Okay. So the alleles is going to be the same half of the alleles dad -- and I want to make sure I understand this. So if you're looking at all 24 markers of a child, of those 24 markers and I think -- you testified that every marker that normally there is two alleles at every marker, is that correct?
A For a single source.
Q For a single source?
A That is correct.
Q That's why I say a child. For a single source child. If you're looking at the 24 -- if you're looking at the

complete profile for a child, which has 24 markers. And, of course, is is my understanding is that normally at every marker there's going to be two alleles, is that correct?

A Yes, that is correct.

Q Okay. And one of those alleles should match father and one should match mother, is that correct?

A That is correct.

Q And normally those alleles that child is going to share at least one allele typically say science is not -- don't know everything solve all the mysteries of the universe, but typically at all 24 still using that same example. All 24 of the markers or locations for that child is is that one of the two alleles within that marker is going to belong to the father and one to the mother?

A Yes, as far as any mutations, one DNA result from the child's profile is from the father and one result is from the mother.

Q Okay. Now, if -- and reason why I'm asking that question is is I think you testified to the -- I'll get to later. Let me ask this question. On item number three -- on item three I think subset one, I think it was your testimony that you said that the results underneath subset one and we're still talking about the exterior door handle of the residence, you said the DNA profile is 5,000 times

more likely if Andrew Legette and two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture, is that correct?

A No, I said the DNA profile is approximately 50,000 times more likely if Andrew Legette and two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture.

Q I said 5,000. It's 50 times more likely if Andrew Legette and two unrelated individuals contributed to the mixture as oppose to three unidentified unrelated individuals. Now, could you explain to the jury what likelihood ratio means? What does that mean when you say there's a likelihood ratio of this?

A Sure. So likelihood ratio is a comparison to two different scenarios. For example, if I finish a marathon, the two scenarios leading up to finishing of the marathon was either I trained really hard and did a training program or the complete opposite. I didn't do anything, so it's more likely that since I completed the marathon that I trained really hard for it. So it would be more likely that scenario explains the outcome. So we're doing that with DNA too. So the DNA profile I developed from the unknown is it more likely that the person of interest

if it's a mixture contributed versus somebody else completely unrelated unidentified individual better explains why I got that DNA profile from the evidence. So the likelihood ratio generated will show support to one of those two scenarios. So if it is support to the first scenario that it's a person of interest or it could be support to that it's the two or three unidentified individuals.

Q Explain it another way that this is no more than a mathematical probability -- mathematical probability based upon I think a ton of different factors that are taken into consideration. So you're not speaking in terms -- so you're not speaking in terms of absoluteness, is that correct?

A That is correct. So it is probabilities of the DNA results how frequent they are in the population. So it's a probability of that person over the probability of somebody else having that DNA profile that could have contributed to that unknown profile.

Q So it's a mathematical education. I think it's a mathematical educational -- I don't want to say guess because you can't tell the jury -- can you tell the jury -- I'm going to ask this straight and simple. If you can answer this with a yes or no if you can, and then explain. Can you tell the jury whether or not the DNA that three

person mixture DNA that is found on the exterior back door? Can you tell the jury yes or no whether or not Issac Hemingway contributed to the mixture?

A We cannot definitively say that comparison that someone contributed. We only explain that the scenario is more likely if that the DNA profile developed from the evidence is more likely because so and so contributed versus somebody else.

Q And I want to make that clear is is that you're not telling the jury that, yes, that's Issac's DNA on the back door, is that correct?

A That is correct.

Q Okay. Now, because I think -- and the reason why I ask you that question, I'll go to the DNA on the back door that relates to Issac Hemingway. I think you testified to the fact that under -- I think this is starting on page number three and going to page number four. I think this is subset two for item number three. And, of course, is is that in the hypothesis is Issac Hemingway and two unrelated individuals excuse me -- Issac Hemingway and two unidentified unrelated individuals contributed to the DNA mixture, that's a hypothesis, is that correct?

A That is one of the scenarios I'm comparing, yes, sir.

Q Okay. Under subset two?

A Proposition set two, yes, sir.

Q Item three, okay. And the results was the DNA profile is approximately one billion times more likely if Issac Hemingway and two unrelated individuals excuse me -- I'll read that again. I want to make sure sometimes my eyesight is bad. The DNA profile is approximately one billion times more likely if Issac Hemingway and two unrelated -- two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture, is that correct? Did I read that correctly?

A Yes, sir, you did.

Q And, of course, is is that you already testified is is that is a probability that's not evidence nor could you ever say to the jury that's Issac's DNA on the back door?

A No, it's very strong support for that scenario versus unidentified unrelated individuals contributed to the mixture.

Q Okay. And the reason why you say it's strong support is is that some of Issac's alleles was found in that 24 -- was found in the 24 marker -- 24 marker profile that you were able to develop from the back door, is that correct?

A Right. He was not excluded from that item.

Q Okay. And how many of -- and I don't know if you have this with you or not. You know how many of the alleles that were found from the sample on the back door?

How many of the alleles in that sample match with alleles from Issac Hemingway's complete profile?
A I don't know that off the top of my head. However, the way we do comparisons and for this profile specifically is that it is a low level sample. So our program that we use for interpretation calculates dropouts so that would be missing DNA results. So for a location where I only have two tests results is going to account for any test results that could have -- we call it drop out. That could not have been called. That a lower threshold. So even though the alleles may not be there, it calculates it that the possibility that it did drop out.
Q Okay. Because normally when you looking Issac Hemingway's complete profile -- I think you said you developed a complete profile for him from the swab that you got. And I think the testimony was that normally, you know, a complete profile there's 24 locations or markers that you're looking at. And normally there's two alleles at each marker. So roughly, you know, if there's two alleles at each marker, then, of course, in that 24 profile -- in that 24 location profile, there would be roughly 48 alleles, is that correct?
A No, there's two of the -- if he had two different alleles at every location, there are two gender

determining locations that result in only one allele. So there's a D Y location, which is specific to males. It's only one location and there's also a Y, which is also male specific location, which is one result. So it's not two results at every location.

Q So instead of being 48, it would be what 46 or somewhere around that?

A That is correct.

Q Somewhere around 46 instead of 48. And that's what I'm trying to figure out is is that I think it's your testimony to the jury that when you look at the roughly 48 alleles from his known profile, and you look all of the alleles from the profile that you got at the back door, you can't tell the jury how many of the alleles that got at the back door match his profile of alleles, is that correct?

A If I understand your question correctly, we never match it to a specific person. So we compare the known standard to the evidence. And if the alleles are present, it's going to give a likelihood ratio that is in support of the first scenario that contributing to the mixture. And then if it's the opposite where the alleles are not present or present enough, it would support an exclusion which is the second scenario.

Q Now, I want to make sure I understand. So the answer

would be, no, that you don't know how many of his alleles from his profile match known alleles or alleles that you got from the sample profile from the back door?
A No, because we do not do that kind of testing.
Q Okay. Can you do that type of testing?
A No, sir.
Q Your science, so that's a limit of DNA science?
A That is what we do -- that's not what we do at SLED.
Q Okay. Is the technology available I guess is what I'm asking to do that?
A Not for in forensics, no, sir.
Q Thank you. So we don't know whether or not any of the alleles on the back door match his alleles?
A There similar enough alleles present in the profile from the back door where he could not be excluded.
Q Okay. He could not be excluded. Now, I'm going to ask you one more question about the child again because I think your testimony was in this particular scene -- in this particular murder scene with Maisha Burch -- did you know that Maisha Burch and Andrew Legette -- not Andrew Legette, but Issac Hemingway they had five children together did you know that?
A At the time of the analysis I did not know that.
Q And did you know that those five children were living in the home?

A I did not know of the children nor that they were living in the home.
Q I think you previously testified is is that those children they get their DNA from mom and dad, is that correct?
A That is correct.
Q And that on 24 marker -- if you're looking at 24 markers from the kid, you know, then at least one of the DNA of each marker is going to be contributed by him roughly?
A If he is the biological father then, yes.
Q Okay. So is it possible that when you pulled DNA profile from the back door because Issac's DNA is the same as his kids, is it possible that you're looking at the kid's DNA?
A In my opinion, I don't think so because Maisha Burch was not included -- there was not a likelihood supporting that Maisha Burch contributed to that profile. So Maisha's the mother of the child and Issac's the father, then I would think no.
Q You would think no. So is that an educated guess?
A That is my opinion.
Q Your opinion. Okay. The reason why I'm asking you that is is that -- did you take -- you didn't take DNA samples from the kids, so that you can take the DNA sample

from the kids to compare the back door to see whether or not they would match -- they would also present a likelihood ratio match, did you?

A So I was not submitted any other known standards from any children. If I were, I would also make those comparisons and develop a likelihood ratio. Without that comparison, I wouldn't know if it would support the scenario that they could have contributed or versus that they couldn't.

Q In an idea world, will it be better -- would it have been better for you to have the DNA profile from the kids?

A It wouldn't change any of the comparisons I made. I am not the investigator, so I don't know if having the offspring would matter in their investigation or not.

Q It wouldn't change the analysis that you made, but, of course, is is that would it assist us in the interpretation of what it means?

A I'm not a hundred percent sure I understand your question.

Q I could rephrase it if I ask it badly.

A Okay, okay.

Q And I probably asked it badly and that's the reason why I didn't understand. What I mean by interpretation is is that if you had gotten the DNA profile -- if you had gotten the DNA profile from the children and you had also

compared the DNA profile of each child based upon the likelihood ratio, if one of the -- one of the proposition subsets for one of the children had came back and said, you know, well, it's one billion times more likely this child was a contributor -- was a contributor -- let me rephrase. It's one billion times more likely that that child and two unidentified unrelated individuals was a contributor to the mixture on the back door as oppose to three unrelated unidentified individuals contributing to the mixture, then wouldn't that tell you something about whether or not the potential is whether or not it could be the kids DNA or Issac's DNA?

A It would not change my comparison with Issac's DNA to that standard. It has no comparison -- the comparison that I had with Issac has -- will not change no matter what other standards I get in a case.

Q And I'm asking that badly because I'm not asking you whether or not it would change your comparison to Issac's DNA, that's not what I'm asking.

A What are you asking?

Q I'm asking is is that -- would it be helpful to the jury and helpful to us to know whether or not the children's likelihood ratio given the same subset factors would have been identical to that of Issac Hemingway? Wouldn't that be something that would educate the jury

with respect to whether or not the DNA could have came from -- whether or not the DNA from the back door could be that of Issac's or could be that of one of his five kids? Would that be helpful to the jury you think?

A I don't know. I'm not the jury, so I don't know. I just do the comparisons that I am given, comparison I am given. However, like I said, it's not going to change any comparisons I made in this case whether I get an additional standard or not. Whether it's helpful to have another comparison, that's not -- it's out of my realm of expertise. I'm not the investigator in the case.

Q And I'll say this and I'm going to move on. I'm assuming is is that what you're saying even if you had gotten the children's -- even if you had gotten the children's DNA profile, then the test results would still be that you can't say that that DNA belongs to Issac, is that correct? It wouldn't change anything that you testified to before, is that correct?

A That is correct.

Q And what you testified to before, you can't tell this jury that's Issac Hemingway's DNA on the back door, is that correct?

A That is correct.

Q Okay. Let's go to the next. I'm going to go to seven. I'm not going to go through the ones in which he

has been excluded. I'm going to go to number seven. Number seven that was the swab from the hallway. It says front of house side, is that correct?

A That's correct.

Q So from the hallway from the front of the house side. I'm not quit sure. And, of course, under that profile, I'm just going to go straight to Issac Hemingway. I'm not going to go through the other ones because I think you testified under item number seven, I think there was what you did eight proposition subsets, is that correct?

A That is correct I did eight proposition sets.

Q And on all the eight proposition subsets, I think of all the eight people that you took profiles from none of them could be excluded?

A That is incorrect. I had seven known standards and for many of them the likelihood ratio supported that it was unknown individuals, so supporting exclusion but not an outright exclusion.

Q Not an outright exclusion?

A That's correct.

Q So, again, the probability ratio is is that I think for a lot of them the probability ratio is is that it was more likely that it was two unrelated individuals as oppose to that person and an unrelated individual, is that correct?

A So the likelihood ratio does support that it was two unidentified unrelated individuals.
Q Okay. And, of course, I'm going to go straight to Issac Hemingway I think on number seven I think the number seven or item seven. And I'm on page five of State's Exhibit 61 and it says the -- and we're dealing with I think we said that item seven is a swab from the hallway of the front of house side. And I think your interpretation was that that was a mixture of two people, is that correct?
A That is correct.
Q And, of course, is is that's your interpretation could have been more?
A Based on my expertise and also my reviewers, we all agree that it was a mixture of two individuals.
Q Okay. But experts can differ, is that correct?
A That is correct. Typically, we -- it is more conservative to have a lower number than higher number. You could falsely include someone if you overreach and say it's three people versus falsely exclude people if it is a lower number. So typically at SLED we decide to the lower number if we're debating between the two.
Q And the more numbers that you have in the mixture then more complicated the interpretation is, is that correct?

A Most likely, yes.
Q Okay. So at least it's beneficial to SLED to have two mixtures -- two mixture person as oppose to three or four mixture person because it really becomes more complicated when you have that many people involved, is that correct?
A Typically, yes, sir.
Q Okay. So could that in any way sway your interpretation to two as oppose to three?
A No, sir.
Q Okay. Now, subset two underneath seven, and, of course, the hypothesis is is that Issac Hemingway and unidentified unrelated individual contributed to mixture. And the results were that DNA profile is approximately 1,000 times more likely excuse me -- 100 times more likely if Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture, is that correct?
A That is correct. The likelihood ratio is 100 just make sure it's clear.
Q Okay. And I'll ask you the same question is is that so the jury will know what that means because this is important to him. Can you tell the jury that the DNA in the hallway that estimate two person mixture, can you tell

the jury whether or not Issac Hemingway is one of the two people who contributed to that mixture?
A I cannot. I can just show support of which scenario best fits.
Q Okay. Again, the probability ratio ---
A Likelihood ratio.
Q Likelihood ratio. I'm sorry. What's the difference between probability and likelihood ratio?
A Probability is the chance of something occurring in a population. Likelihood ratios is the comparison of two separate probabilities essentially.
Q Okay. That sounds very similar?
A Excuse me.
Q Does that sound very similar? I'm confused. From what you just explained, it sounds very similar to me?
A So the likelihood ratios comparing two different probabilities. So the probability that it's the person of interest and two people over the probability that it is three individuals or two individuals whatever the mixture is, so the division would equal the likelihood.
Q Okay. And I go to I believe sample number seven and go to sample number eight and that's the swab from the wall of hallway back of house side, is that correct?
A That is correct.
Q Okay. And from that -- and from subset two Issac

Hemingway was excluded as a contributor?
A Yes, in my proposition set two, Issac Hemingway is a -- can be excluded as a contributor based on the listed propositions or scenarios.
Q The next one is item number ten and that's the hair that was found on the door -- the hair that was found on the floor near the front door?
A Yes, hair from floor near front door.
Q Okay. I think you tested this I think two different ways, is that correct?
A Yes, I did.
Q I think on 10.1 did you do that from simply swabbing the hair to try to determine whether or not you can pick up DNA off the hair? You explain it to me I want to make sure on 10.1?
A Yes, sir, so I swabbed the hair to see if I could develop a DNA profile for someone touching or grabbing that hair not the actual owner of the hair.
Q Okay. So and, of course, it came back I think the probability ratio the hypothesis was Maisha Burch contributed to the DNA profile. And I think you said that the DNA profile was approximately 350 octillion times more likely if Maisha Burch contributed to the profile than if an unidentified unrelated individual contributed to the profile, is that correct?

A Yes, that is the likelihood ratio.
Q Okay. Then, of course, under 10.2 you analyze it by cutting the hair, is that correct? That same piece of hair that you found at the front door you cut it, is that correct?
A So, yeah, item 10.2 is cutting from suspected hair that would be cutting the root material of the hair to determine whose hair it was.
Q Okay. And, of course, Issac Hemingway along with all the other -- along with all of the other comparison standards that you have were excluded?
A Except for Maisha Burch.
Q Except for Maisha Burch. I apologize except for Maisha Burch, but Issac Hemingway was excluded, is that correct?
A That is correct.
Q Okay. And I think 14 that's the fingernail clippings from Andrew Legette?
A Fingernail scrapings.
Q Yes, fingernail scrapings from Andrew Legette. And I think left fingernail scrapings I think it says DNA profile developed is attributable to Andrew Legette, is that correct?
A That is correct.
Q Right 14.2 right fingernail scrapings and it says the

DNA profile attributable -- develop as a attributable to Andrew Legette, is that correct?
A That is correct.
Q Okay. Did you compare that against any of the other comparison standards that you have?
A I did. So I compared it to all of the known standards. However, it was consistent with the DNA profile from Andrew Legette. It's a single source profile. It came off of him, so we just say attributable to Andrew Legette. We don't have to make any likelihood ratios because it's not probative since it's coming from his body.
Q So is that an exclusion of all the other standard profiles?
MR. BROOKER: Yes, sir, that be correct.
Q Okay. 18.1 and that's the fingernail scrapings from Maisha Burch did I read that correctly?
A That is correct.
Q Okay. Then subset proposition at least -- I think looking at proposition set one and I think your interpretation was that was a mixture of two individuals, is that correct?
A Yes, for item 18.1 which was the left fingernail scrapings from Maisha Burch I interpret it as a mixture of two individuals.

Q Okay. And I think your results was that the DNA profile is approximately 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and unrelated individual contributed to the mixture, is that correct?
A Yes -- well, the DNA profile is approximately 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and an unidentified unrelated individual contributed to the mixture.
Q And you characterize that as moderate support, is that correct, for that proposition?
A Yes, according to the table at the end of my report that would be moderate support that the first scenario explains the DNA profile of the unknown better than two unidentified or Maisha Burch and an unidentified unrelated individual.
Q And for the benefit of the jury, you can't tell the jury that Issac -- Issac DNA is one of the two -- Issac's DNA is one of the two people, I guess, two individuals that you develop that profile from, is that correct?
A No, but I could not exclude him.
Q Okay. I'm sorry.
A Said, no, but I could not exclude him.
Q I got you. I want to make sure they hear that. I

think your testimony was is that you can't say that it's his DNA but neither can you exclude him, is that correct?
A That is correct.
Q Okay. So it's a I don't know, is that correct?
A There is moderate support that Maisha Burch and Issac Hemingway contributed to the mixture.
Q Okay. Item 12 I think it's 18.2 I'm sorry right fingernail scrapings from Maisha Burch and that was determine as a mixture of two individuals, is that correct?
A That is not correct.
Q I'm sorry, I'm sorry. I jumped ahead. I apologize I'm looking at 24. So 18.2 it says DNA profile developed is attributable to Maisha Burch?
A That is correct.
Q I'm sorry. And so is that meaning that everybody else all of the other standard profiles or known profiles are excluded?
A That would be correct.
Q Okay. Now, 24 so I jumped ahead. Item 24 and that's the right fingernail clipping from Andrew Legette?
A Yes.
Q And, again, that was -- you interpret that as a mixture of two individuals?
A That is correct.

Q And, of course, Maisha Burch, Stephanie Reed, Isaiah Hemingway and all of the other standard profiles were excluded, is that correct?
A I was able to include all the known comparisons besides Andrew Legette to that profile I developed.
Q And specifically Issac Hemingway was excluded?
A That is correct.
Q Okay. Now, I want to ask you a couple more questions and I promise I'm going to stop. I'm going to wrap up soon. I promise, but the reason why I think it is important is is that for the jury to know at least a little bit more information about the limits of touch DNA because there are limitations to touch DNA if you can indulge me for just a second. Let me make sure I got my notes correct. Now, DNA contamination can DNA be contaminated?
A It's possible, but we try to prevent contamination within the laboratories as best as we can.
Q Okay. And, of course, is is that you have control of contamination at the laboratory, but, of course, you have no control of what happens at the crime scene, is that correct?
A That would be correct.
Q Okay. And so I'm assuming is is that in order for you to get, you know, I guess the best results, then, of

course, is is that you're relying on technicians or either the law enforcement that control the crime scene is to try as best as possible not to contaminate the crime scene, is that correct?

A That is correct. We work with our crime scene agents in the proper collection of DNA or DNA samples for analysis.

Q And the reason why that that's very important is is that DNA is shed very easily, is that correct?

A It can be.

Q Okay. For example, right now as I'm talking is that there small particles that are emanating from my mouth, is that correct?

A Most likely.

Q Most likely. If I sneeze, of course, is is that I emit small particles when I sneeze, is that correct?

A That is correct.

Q When I touch things, I can leave small DNA on the surfaces that I touch, is that correct?

A That is correct.

Q Okay. So theoretically while we're all in this courtroom, we been shedding DNA in this courtroom this entire week, is that correct?

A That is correct.

Q All right. And the sneezing and talking and the

small particles that we emit when we talk, those particles can travel some distance?
A I don't know how far they can travel, but I would assume so.
Q Okay. The reason why I'm asking you is you may not know this at all if you do is is that when we were going through this pandemic, I know that the Centers of Disease Control recommend that we stay six feet apart. Did that have anything to do with the traveling of the particles as we talk or sneeze or anything like that?
A Probably, that's based on the virus. So the virus is going to be different than cells that we would get DNA from, so I don't know exactly what the distance is for DNA.
Q You don't know how far it would travel when people are talking or sneezing and that sort of stuff?
A That is correct.
Q Okay, fair enough. So -- and I know that you said it's important what they do at the crime scene and normally you have technicians, trained technicians to come in and do the collection, is that correct, of the crime scene?
A Yes, and in this case our crime scene agents did go to the scene and collect the samples that I tested.
Q Okay. And normally when they go in is it preferable

or would it be better that they wear gloves?
A Yes, they should wear gloves.
Q They should wear gloves?
A When at least when handling items of evidence, yes.
Q Okay, when handling items of evidence. And, of course, is is that when they're collecting different items of evidence should they change their gloves as they're collecting different items of evidence?
A I would think so, yes.
Q And the reason why I ask you that is is that the reason why that's preferable is is that evidence can be transferred from one location to another, is that correct?
A Yes, but they would -- they're trained on not to transfer DNA from spot -- place to place.
Q Okay. Is it advisable that they wear face coverings so that anything from the mouth or the nose -- any DNA from mouth or nose whenever they're collecting evidence doesn't contaminate the sample that they're attempting to collect?
A Only if they're talking over the evidence, then we would advise that. They don't have to wear that at all times only if they're in a training capacity or talking while they're swabbing the evidence then they should.
Q Now, I think you said your technicians collected the evidence from the scene SLED technicians?

A Our crime scene agents did.
Q Okay. Now, I think do you have the DNA sample for your crime scene technicians since you can compare it to try to make sure they didn't contaminate the collected DNA whenever they collected from the crime scene?
A Yes, we do. So as part of the staff of SLED, we have every individual that has worked at SLED forensics known DNA profile on file as well as a lot of external submitters or collectors. We compare every unknown profile to this data base of profiles of known individuals and to make sure that it is truly unknown and not a source from a collector or something like that or a lab staff.
Q Okay. But in a situation like this when you're dealing with someone who has been -- who is someone who is been injured, isn't it sometimes that EMS will be the first people to arrive on scene to check the person?
A I would believe so.
Q Okay. In this particular situation, if there were four EMS personnel that arrived on the scene --
MR. WHITE: Judge, I would object. She doesn't know what happened on the scene as far as EMS is concern. I think we're veering out of her scope of her expertise.
MR. BROOKER: I'm asking her a hypothetical, and, of course, if she can't -- if she can't answer it ---
THE COURT: Go ahead.

BY MR. BROOKER:

Q What I'm saying is is that if there were four EMS personnel that came and checked the bodies and touched the bodies and work over the bodies, would you -- is part of your normal practice to also collect a known sample from them so that you can compare that to the evidence to make sure that they didn't contaminate the evidence that was collected?

A No, sir, we don't normally do that only if it's part of we know someone touched an item of evidence like a doorknob, our crime scene agents will ask for those persons standards if it's probative or relative to the case. This also does not affect any comparisons I did to the known standards that were submitted per the case.

Q So it would only be relevant if they came into contact with DNA that was collected to be tested?

A Yes, sir.

Q Okay. What if they came into contact with the deceased bodies? With the hands or with decease bodies would make a difference?

A A difference in what?

Q Difference in your wanting to have their profile, wanting to have their DNA profile to make sure they didn't contaminate?

MR. WHITE: Judge, I think it was her testimony

that it would not affect or impact her analysis of Issac Hemingway's DNA. I think it's been asked and answered. I think we're veering off a path here. I mean, I think that she's testified to it. I'm not sure where we going with this.

MR. BROOKER: If I could have an answer to my question, I'll move on, your Honor.

THE COURT: Okay, go ahead.

A Can you restate that question please?

Q I knew you were going to say that, going to make me repeat it. So in the scenario if the EMS personnel came in contact with the DNA that was ultimately collected, would it be useful to have the profile of the EMS personnel in order to determine whether or not they may have contaminated the unknown or the crimes sample just as you do with your crime scene experts?

A It may be helpful that, again, is up to the investigator. So I issue my report and if there's an unknown and they're like, well, maybe it's from first responder, then they could go ahead and submit that. And I would make that comparison if they deem it necessary.

Q But didn't get any DNA samples from anyone else other than the known samples that we talked about earlier, is that correct?

A That is correct.

Q And so I'll ask you this one last question. Can you -- and yes or no if you don't know the answer is is that can you testify to this jury that you can guarantee that there was no contamination to the DNA evidence, is that something that you can testify to?

A We have strong controls, so at the lab I can testify that there was no unintentional transfer or contamination that was made at the lab. However, from the swabs and samples collected at the scene we have no control on the DNA from there, but based on the lab the strict protocols that we use and tools we use for contamination, there was no signs of contamination.

Q So you are better able to testify to what happened at the lab, but you can't guarantee that there was no contamination at the scene?

A The only thing I tell you that as far as the crime scene are two crime scene agents that did respond their DNA profile was not part of any of the samples that I generated I can tell you that.

Q Yes, ma'am. Age DNA, can DNA be aged?

A I cannot tell you the time that DNA got on a object. I can just tell you that it's there.

Q And that is one of the limits of DNA technology. You can't tell the jury how old DNA is, is that correct?

A That is correct.

Q Okay. So if I were to touch the surface of this counter and later on if my DNA was collected from the surface of this counter, you couldn't determine whether or not I touch this counter assume if you didn't know, you can determine whether or not I touch this counter two days ago, five days ago, ten days ago or either a week ago?
A That is correct.
Q Okay. And then also I think -- and almost finish another limit of DNA is is that DNA is transferable, touch DNA transferable, is that correct?
A Any type of DNA is transferable. We call that secondary transfer when one person can touch DNA, then touch another object and leave the DNA from the first spot to the second. It could be touch DNA. It could be blood. It could be saliva could be any kind of DNA.
Q And, I guess, an example of that would be is is that, again, using the same example I use before. If I touch this countertop and if I left DNA on this countertop, my DNA was left on this countertop is possible that Ryan White if he were to come and touch the same surface area, that he could pick my DNA up and transfer my DNA up and transfer my DNA to some other area?
A That is correct.
Q Okay. And the reason why that that is limit is that DNA the can create, I guess, the deception that someone is

at a place that they may never have been, is that correct?
A Yes, the limitations of DNA is I can't tell you how it got there or when it got there just that it's there.
Q Okay. And, of course, it doesn't necessarily mean even if you were to get a full profile on the person, that doesn't necessarily mean that that person was at that location because of the transfer ability of that DNA evidence, is that correct?
A It would depend on the type of DNA as far as touch most likely, but it really just depends on the case scenario.
Q Yeah, it would depend on whether or not it was blood, is that correct? If it was blood in sufficient enough amounts, you would assume that that probably would have been contributed if you saw blood -- if you saw blood spots, you know large clumps of blood on the floor, you would assume that that's from the original source, is that correct?
A Again, that's activity level. We don't really testify to activity of how items got -- DNA got to a location, but I would assume in my opinion that if it was drops of blood that most likely came from the person. But it could also come from someone carrying something bloody that was dripping. So there's no way to tell how it got there just that it's there.

Q And comparing at least that analysis to this particular case, you can't tell the jury that Isaiah Legette ever touched back door of Maisha Burch's house, is that correct?
A I cannot tell you that.
Q You cannot tell the jury that Issac Legette ever touched the interior walls. I think one of the samples were -- two of the samples were for interior walls of the house. You can't tell the jury that Issac Legette ever touched the interior walls of Ms. Burch's house, is that correct?
A Again, yes, I can't tell you how it got there.
MR. BROOKER: If you could indulge me for just a second. Let me make sure I don't have any further questions, your Honor. just a second.
(WHEREUPON, a pause in the proceedings.)
BY MR. BROOKER:
Q And just one more thing just for the record. I think it's an error on my part. There may have been -- Issac told me there may have times in which I've said Issac Legette as oppose to Issac Hemingway?
A Yeah, you also would say like Isaiah sometimes. So when I try to talk back, I would make sure to say the correct standard that I was comparing.
Q So let's make it clear for the record. When I was

talking about Issac, I was referring to Issac Hemingway. Did you understood or understood that I was talking about Issac Hemingway?

A I did, but, again, like I would state, if I had to say a name I would state it correctly.

MR. BROOKER: No further questions, your Honor.

THE COURT: Redirect.

MR. WHITE: Yes, sir.

REDIRECT EXAMINATION

BY MR. WHITE:

Q Ms. Boehm, let's just walk over a few things if you don't mind. First, he kept asking you whether or not this is your opinion. I just want to make it clear for the jury. This is your expert opinion on this matter, is that right?

A That is correct.

Q Now, he brought up the fact -- and you addressed it properly. All the crime scene techs are in the system as far as their DNA profiles, is that right?

A Yes, our crime scene agents that are employees of SLED are in our data base that we search.

Q And when you were doing your analysis, none of their DNA profiles cropped up in your interpretations, is that right?

A Yes, they were not part of those mixtures.

Q And would that lead one to believe that they followed proper procedure and protocol?
A Yes, sir.
Q And their DNA was not cross contaminated, is that right?
A I did not. Yes, I did not get their DNA on any of those items.
Q Now, if every person that was on that crime scene log -- I think you testified to it, but I want to make sure it's clear to the jury. Every single person on the crime scene log was submitted a comparison standard, it was your testimony that that would not have change your analysis of Issac Hemingway, is that correct?
A That is correct.
Q And also if all of his biological children, all the five that he had common with Maisha Burch or any of his children that he has, I think he's got eight or more. If they would have submitted comparison standards, would that have changed your analysis as to Issac Hemingway?
A It would not.
Q I want to go through and start by asking this. Mr. Brooker asked you several times that you couldn't say definitively that that's his DNA. You never do that, is that right?
A That is correct.

Q You're just offering the most likely scenario, is that correct?
A That is correct.
Q And I want to go over those scenarios with you. Well, before I do that, although you can't say definitively that it's him or anybody for that matter, you were able to exclude him in certain instances, is that right?
A That is correct.
Q And in certain instances you were unable to exclude him despite being able to exclude all the other comparison standards?
A That is correct.
Q So let's go back and we'll just go over the ones that he's involved with if you don't mind, Ms. Boehm. So it's fresh in the jury's mind and we'll start with 18.1, that's the left fingernail scrapings from Maisha Burch. Now, under proposition set two, you were able to -- correct me if I'm wrong exclude all other comparison standards in this case except for Issac Hemingway, is that right?
A That is correct.
Q And he was found to be 270 times more likely if Maisha Burch and Mr. Hemingway contributed to the mixture than the other scenario, is that right?
A Yes, the DNA profile that I developed is 270 times

more likely if Maisha Burch and Issac Hemingway contributed to mixture than if Maisha Burch and unidentified unrelated individual contributed to the mixture.

Q And you testified that in your expert opinion and you put it all out there, you were definitely an expert in this field, you testified that in your opinion it would be unlikely to see secondary transfer in this case and could you tell us why?

A Well, I believe the question you asked was would a third person if someone had -- someone else's DNA on their hand and then the other person scratched would it more likely -- it would be more likely to have the DNA profile of the secondary transfer and the person that's hand it came off of than just the secondary transfer.

Q And under her fingernails, there were only two DNA profiles, is that correct?

A Yes, I interpreted as two.

Q And, again, when you did the proposition set one, it was of Maisha Burch and Issac Hemingway, is that right?

A That is correct.

Q Now, moving on -- swabs from wall of hallway back of house side, you were able exclude, again, you could exclude Issac Hemingway from back of house side wall, is that correct?

A Yes, that is correct.
Q But the front side which we've seen in the photographs it's just right next to it. You were not able to exclude him off that wall, is that right?
A That is correct.
Q And I believe proposition set there was 100 times more likely if Issac Hemingway contributed, is that correct?
A The DNA profile is approximately 100 times more likely if Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if two unidentified unrelated individuals contributed to the mixture.
Q Okay. The last one that dealt with him is that doorknob on the back door. You were able to exclude individuals off that back door, is that correct?
A That is correct.
Q But you were not able to exclude Issac Hemingway, is that right?
A Yes, sir.
Q And in fact this is the largest -- I guess, the strongest support in all of your proposition sets starting with proposition set two under item three says DNA profile is approximately one billion times more likely Issac Hemingway and two unidentified unrelated individuals

contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture, is that your results?

A Yes, that is my results.

Q And then you said something that peaked my interest when you were under cross. You said that this is the likelihood compared to all the other people kind of walking around on earth, is that right?

A Well, so likelihood ratio is the probability of the two different scenarios. So the probability is based on the frequency of the DNA test results within the world. So everyone walking around on earth.

Q Very good. So in proposition set three, the DNA profile is approximately 2.3 quintillion times more likely if Andrew Legette and Issac Hemingway contributed than the other proposition set, is that right?

A That is correct.

Q And, again, not only is that more than people currently on earth, that's more than people had ever existed on earth, is that right?

A Yes, that would be the probability versus the likelihood ratio. So it's definitely strong support that Andrew Legette and Issac Hemingway and an unidentified unrelated individual contributed to the mixture versus the three unidentified unrelated individuals contributing to

the mixture.
Q And not only is this your expert opinion based on your many years of training in the field, but this was also peer reviewed, is that right?
A That is correct.
Q It was peer reviewed -- what peer reviewed means they looked at your report and checked it for accuracy, is that right?
A Yes, they look at all my work sheets and my entire case file. So we have lots of worksheets leading up to generation of the profile every single step of the DNA analysis has a work sheet. And they look at that. They look at the DNA results. And then they look at my report and the interpretation of the statistics. And they have to agree on my report and it happens twice. So we have a technical review and administrative review. And those are both two DNA qualified analyst that do those reviews before it's issued to our submitters.
Q So check by two experts in the field and they didn't have any problems with your conclusions that you issued in your report?
A That is correct.
MR. WHITE: Beg the Court's indulgence. Ms. Boehm, I think that's all I have for you.
MR. BROOKER: Just very briefly, your Honor.

RECROSS-EXAMINATION

BY MR. BROOKER:

Q I want to ask at least a couple questions in reference to I think more talk about the likelihood ratio. How is the likelihood ratio calculated?

A So it is the probability of two different scenarios. So typically it's the person of interest. And if there's a mixture, be in other people. And then the opposite scenario would be it's not the person of interest. It's the unidentified unrelated individuals. And so the probability of those two compared generate the likelihood ratio.

Q Is this done by software, computer software?

A Yes, we use the software called STRmix.

Q Okay. And I'm assuming is the reason why I'm asking you is is I've done some research, of course, on the likelihood calculation ratio. Do you know what the mathematical equation that STRmix uses in order to come up with these probability ratios?

A I am familiar with it. I don't know. There's two different ones. They're very complex. I don't know them off the top of my head, but we were trained by one of the developers in STRmix when we were bringing it online to use at SLED. And I'm very familiar with it had it hand calculated in training to understand what it's doing and

why we use it.

Q So did you hand calculate the likelihood ratios in these particular situations to ensure that this software that you kicking this information to is actually given an accurate result?

A So not in this case particularly, so part of our validation -- any time we bring in a new method or instrument it has to go through a validation, which is a study to make sure that it is using -- is being used as expected gives us the correct results during that part of the study, validation study. There was hand calculations done to make sure that it is working as expected and is reliable. We don't do that every single case. We just do that for our validation study before we bring it online to use in case work.

Q Okay. And that's what I'm concerned about. I'm not concerned about the validation work for the software in general. I'm concerned about the validation for the particular results in this particular case. So my understanding is is that you didn't do a mathematical calculation by hand to determine whether or not the likelihood ratios that are being spit out by the computer is accurate, is that correct?

A No, we look at the data to make sure it's as we expect it. Again, we do a visual comparison before we

put it into SRTmix. And we can kind of determine what kind of estimate likelihood ratio we're going to have whether it's going to be more sided towards one scenario or the other. And, again, it has been reviewed by two people, but we do not do any hand calculations.

Q And I think you testified that this is an extremely complicated mathematical equation of the software uses. And the reason why I'm asking that question is is that I think like everyone of us who has been in this -- who is in this courtroom who has used technology, technology sometimes fail and we have reboot it. I know I do that all the time with my cell phone and sometimes my computer. Is is that -- and that's why I'm asking you that question is is that because software is not infallible. If you had hand calculated to determine whether or not there was an error, how can you be absolutely certain that there was not in these likelihood ratios generated?

A So based on our validation studies. And then also -- I'm not sure what kind of error you're talking about, but if it didn't run correctly, we would do the same thing. We would restart the software, shut down the computer to restart it to make sure that it is calculating. Those are the only kind of errors I've encountered before just not open up or something like that. And then, again, I look at the results that it is spiting out to make sure that I

agree with the results and that is why I estimate.

Q And I'm almost finish along that line of questioning. So do you have a protocol where once you input this information in because you're using this machine, once you put this information in the machine and it spits out a likelihood ratio, do you have a procedure where you will run it a second time to see whether or not it produces the same result to make sure that for this particular ---

MR. WHITE: Judge.

JUROR: I'm very sorry. I absolutely have to take a very brief break.

THE COURT: Take a break. You all step in there. Do not discuss the case.

(WHEREUPON, the jury retire to the jury room.)

THE COURT: Let me let you all know Wanda Shelley, the juror on the front row in the very first seat with different glasses, she's got to take her sister to the doctor at 9:30 in the morning something pretty serious. Do you all have any objections replacing her with an alternate and just letting her go?

MR. BROOKER: Which one of the jurors?

THE COURT: The one that sits right there on the front row has the glasses on really small girl.

MR. BROOKER: On the end of the front row?

THE COURT: Yes, that's right.

MR. WHITE: Judge, I'll be more amenable to leaving her on there and starting later. Throughout the trial her specifically, she's leaned in and she's listening to every word. I think she's locked in, so that would be my preference.

THE COURT: I think her sister is having like a colonoscopy or something and there's nobody to drive her and all that kind of stuff. What's your thoughts?

MR. BROOKER: I don't have any mind -- I don't have any -- if you want to substitute her, I'm perfectly fine with that. I don't have any problem with that. It's whatever you decide.

THE COURT: It would probably take her all morning. Can you bring her back out let's find out?

(WHEREUPON, juror number 244 Wanda Shelley came into the courtroom.)

THE COURT: Ms. Shelley, is it in Florence or Columbia?

JUROR: Florence.

THE COURT: It's in Florence. Do you know what time you would be back?

JUROR: She has to be there at eight.

THE COURT: Okay, thank you step into the jury room.

(WHEREUPON, juror number 244 Wanda Shelley

returned back into the jury room.)

THE COURT: She has to be there at eight. I assume they take her by nine, 9:30. She might could be back by the afternoon. I just don't know.

MR. WHITE: I have no objection to seating an alternate, Judge.

THE COURT: And neither does defense attorney. If you'll take the two alternates names, put them in a little cup, pull the name out the hat. We'll make Melissa Calhoun the lady down a member of the jury.

MR. WHITE: Yes, sir. Thank you, Judge.

THE COURT: Let me speak to that lady one more time.

(WHEREUPON, juror number 244 Wanda Shelley came into the courtroom.)

THE COURT: Ms. Shelley, we're going to let you go ahead and go. We're going to replace you with an alternate, okay. So if you want to get your phone and purse whatever you need, you good to go. Thank you for being here.

(WHEREUPON, juror number 244 Wanda Shelley was dismissed by the Court.)

THE COURT: I'm ready if they are.

(WHEREUPON, the jury came into open court.)

THE COURT: All right. And, Ms. Calhoun, we're

making you apart of the jury if you'll go over there and take that empty seat. All right, you can continue.

RECROSS-EXAMINATION CONTINUED

BY MR. BROOKER:

Q Again, I think the last question I was going to ask you -- the last question I asked I think before we stopped was in reference to -- I ask you as a quality control procedure, do y'all have any procedure in your office where once you put this information in -- into the computer and the computer spits out probability excuse me -- spits out a likelihood ratio because y'all don't hand verify the accuracy of the likelihood ratio, but you've already testified to. Do y'all have a procedure where you run it through the computer software twice to see whether or not you reached the same results -- same likelihood ratio result to confirm that the software is not malfunctioning or miscalculating this complicated mathematical equation that the software is doing in order to come up with this number?

A No, we do not run it twice.

Q You don't run it twice. And you don't do hand calculations check of the results and software?

A That is correct. The only thing we do is that we look at the results to make sure that we agree with them and that it makes sense.

Q Okay. One more question I think -- not necessarily one more question, but almost at the conclusion that -- Ryan White asked you something about the DNA underneath the fingernails. I think he gave you a hypothetical scenario where -- because the DNA underneath the fingernails -- I think underneath Maisha Burch's fingernails. I think you determined or interpret that as a two person mixture, is that correct?

A One of the samples I did.

Q One of the samples you interpret as a two person mixture. And I think if my memory serves me correctly -- and for the record let me get to the -- that was item number 18, is that correct?

A No, sir, 18.1 the left fingernail scrapings from Maisha Burch.

Q 18.1. And I think your interpretation was there's a 270 times DNA profile that's 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than an unidentified unrelated individual contributed to the mixture?

A You didn't state the results correctly.

Q Read it correct?

A The DNA profile is approximately 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and an unidentified

unrelated individual contributed mixture.

Q And this hypothetical that he asked -- and I think it was is is that if someone had scratched or if she had scratched someone, then would it be more probable that that person's DNA would also be found within that mixture I think is what he asked?

A I believe what he ask he was talking about secondary transfer. And he was saying if someone touch somebody else had their DNA on their arm or hand or whatever, then Maisha scratched that person, would it be likely if there be a DNA profile of three individuals Maisha Burch then two unknowns or two other individuals.

Q Okay. And that is a hypothetical. Do you know whether or not the assailant in this case was scratched?

A That was a hypothetical. I do not know.

Q You have no idea?

A No idea.

MR. BROOKER: Your Honor, indulge me for just a second let me make sure I don't have any further follow-up questions. No further questions, your Honor.

MR. WHITE: Judge, just very briefly.

FURTHER EXAMINATION

BY MR. WHITE:

Q Did you review or did you have any reason to think there was any issues with the software that you used in

this particular case?
A I did not.
Q And, again, it was checked for accuracy your results by two experts, is that right?
A That is correct.
MR. WHITE: Nothing further, Judge.
THE COURT: All right, you have a good day. Any objections to her being excused?
MR. BROOKER: None at all, your Honor.
THE COURT: Drive carefully.
(WHEREUPON, the witness leaves the witness stand.)
THE COURT: Call your next witness.
MR. WHITE: Judge, may we approach for just one moment.
(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury.)
THE COURT: Members of the jury, if you'll take a lunch break until 2:30, we're going to stay here and work and try to keep it going, see you back at 2:30. Just so you'll know, we'll finish this case in the morning.
(WHEREUPON, the jury was excused for a lunch break.)
THE COURT: What do we need to take up?

MR. WHITE: Judge, we can take up now or go to lunch and come back at 1:30 whatever you prefer, but we need to go through the photographs probably one by one make a decision on those. The way we left it in chambers I believe that he was saying he wasn't intending to move in the text messages. It's my understanding that Kareema when she testified that she testified she did in fact spend some Christmas with the defendant. And I think that's the only reason he's trying to get these text messages in, but, again, I don't think he can lay a proper foundation to get text messages in at all, but, you know, I'll defer to him on that. And so we need to take up the photographs. And then the DSS paperwork which I'm vehemently oppose to.

THE COURT: All right. The DSS paperwork if the family court lady comes and testifies, lays a foundation for ---

MR. WHITE: It's the content, Judge. I don't think she'll be able to testify to the accuracy or inaccuracy of any of the content in here. And if you read it, Judge, I can pass it up to you. I mean, it's just wrought with hearsay. The first photograph I say four of the sentences here are just reportedly. It is reported, reportedly and it's objectionable material that I don't think is relevant your Honor. I think that the only the

reason he wants to get this entire document in is one sentence in this case. It says on August 29th 2019 case founded for physical neglect against Maisha Burch and Ms. Burch tested positive for cocaine on a random drug screen. Well, Judge, that's hearsay. If he can't call the analyst to produce that result and I can't challenge the veracity of that, I can't ask anybody what the level was or anything like that, that's simply hearsay. And, again, I don't know where that is relevant to this determination.

THE COURT: What if he asked her based on the records you have at the clerk of court's office, was she investigated for various things such as abuse and neglect and drugs and didn't ask for any hearsay, didn't ask for any opinions she can just say yes or no.

MR. WHITE: I think -- I have no problem with it being phrase exactly like that. Based on your review of the records, was she being investigated by DSS for that, but no results. I think that would be improper.

THE COURT: I'm good with that. Are you good with that?

MR. BROOKER: Your Honor, yeah, we're not trying to get results in. We're trying to show what she's being investigated for because the reason why it's important is ---

THE COURT: You can ask her were you

investigated for abuse and drugs and then that's it.

MR. WHITE: But not results.

THE COURT: That's right.

MR. WHITE: I'm fine with that, Judge.

THE COURT: You good with that? That accomplishes what you want I think.

MR. BROOKER: Yeah, that's perfectly fine.

THE COURT: So we're good there.

MR. WHITE: Yes, sir.

THE COURT: And then the photos taken from social media.

MR. BROOKER: I'll get those so you can take a look at them.

THE COURT: Let me take a look a them. Let me see what you got and take a look at those.

(WHEREUPON, a pause in the proceedings.)

THE COURT: All right. If she can say what it is, where she got it from, how she took the screen shot, I think it does come in. We've looked at a lot of cases, a lot of law and the bar is fairly low on these type things. However, I did look at 901(b) and compared it to this. We couldn't find anything specific with pictures, but 901(b) says the easiest and most direct way to authenticate a writing slash photograph having someone with personal knowledge about the writing slash photograph testify the

matter is what it is claim to be. This method may be accompanied by testimony from a person who sent or received the writing slash photograph. But I don't think that one comes in simply because there's hearsay. But I think they are what they are if she said she took them. I took it from TikTok, Instagram whatever. This is on my phone. I took it. I received it. I think they're fine to come in.

MR. WHITE: Judge, the only ones that I would -- out of that stack that you -- and I respect the Court's ruling. I think there are some that are taken or purportedly taken that have time stamps, is after this all occurred. And I don't know how that would be relevant. At this point the State's allegation is that he has murdered this woman and that's how he obtained custody. And I don't know that him taking pictures of the kids after this has happened is relevant to what occurred.

THE COURT: Part of me think it gives us a whole picture of what's going on. It's like the child support bench warrant, that was 11 months after. To me, it still gives a good picture of everything that's going on before, at, during and after up to the trial. I really don't think it's a big deal any way period.

MR. WHITE: Yes, sir.

THE COURT: So these are good.

MR. WHITE: Just to double check ---

THE COURT: Check them.

MR. WHITE: Were there any more that had captions?

THE COURT: That's the one that had writing on it. That's the one I prefer not to come in.

MR. BROOKER: Let's see what it says congratulations to my son ---

MR. WHITE: So that one is out, so don't have to worry about that one.

MR. BROOKER: The picture is not out. You just have to redact the writing. We can redact the writing.

THE COURT: You can redact if you want to, but the writings got to go. You can cut it off. And the text messages -- and the easiest thing to just ask the court reporter -- I can't remember. If she knows and if that's the case, that solves that problem.

MR. WHITE: I'll leave that up to Mr. Brooker.

THE COURT: All right. You want me to go over his Fifth Amendment Rights at this time?

MR. BROOKER: If you want to your Honor. I'll leave it to your discretion.

THE COURT: That way we don't forget it. All right. Mr. Hemingway, if you would stand up. I want you to understand that this is your trial and that you can

testify. You can be sworn in. You can come over here and you can testify in your case. You have that right. However, if you do testify, I want you to understand that you may be cross examined on any and all relevant issues in connection with your case. Also, if you have a criminal record that involves crimes of dishonesty or false statements or crimes that carry a punishment of more than one year and the Court determines that the probative value substantially outweighs its prejudicial effect, then your criminal record will be introduced to attack your credibility. Do you understand that?

THE DEFENDANT: Yes.

THE COURT: Furthermore, do you understand that you have the constitutional right to remain silent? You do not have to testify. And nobody can make you testify. And if you choose to exercise your constitutional right, I will tell you that the jury they cannot use that against you in any way whatsoever. And I will tell them they cannot even discuss that fact in the jury room. Do you understand that as well?

THE DEFENDANT: Yes.

THE COURT: Have you talk with your lawyer about whether you wish to testify or not?

THE DEFENDANT: No, I haven't.

THE COURT: All right. Do you want to talk with

your lawyer first?

MR. BROOKER: Your Honor, can we make that determination right after lunch, so he would have a chance to consider that?

MR. WHITE: That be good. Don't let me forget.

MR. BROOKER: Thank you.

MR. WHITE: Judge, from a procedural standpoint, I will be resting as soon as the jury comes back from lunch. So I would invite Mr. Brooker to go ahead and make his motions now so we can just roll right into ---

THE COURT: Sounds good to me. You prepared?

MR. BROOKER: The motion for -- your Honor, at this point in time, your Honor, we will make a motion for directed verdict. And let me grab the indictment, your Honor. If you can indulge me for just a second, your Honor. Your Honor, we make a motion for a direct verdict on the indictments -- on both indictments for murder and then also on the indictment for possession of a weapon during the commission of a violent crime. Let me start off with the indictments for murder. Your Honor, in order for the State to prove that Mr. Hemingway is guilty of murder, they have to present evidence to the jury in which the jury could make a determination that Issac Hemingway did in Marion County on January 12th of 2022, willfully,

feloniously and intentionally did kill the victim, Maisha Burch and Andrew Legette, with malice aforethought either expressed or implied by shooting the victims. That's the burden that they have to carry.

And, of course, in examining whether or not a case goes to the jury or whether or not a directed verdict should be granted, I think there is cases out there in which South Carolina Supreme Court and Court of Appeals said the appropriate standing is is that whether or not there is evidence on every issue and whether or not the evidence is sufficient enough where it would not require the jury to speculate. If the jury has to speculate with respect to guilt or speculate with respect to evidence excuse me -- speculate with respect to an element that has to be proven then, of course, the Court's have said traditionally that is grounds for a directed verdict.

And in this particular case your Honor, the jury would have to speculate. I'm not going to go through all of these witnesses your Honor, but very quickly let's talk about what we don't have in this case and what we do have. This is a case in which there was no witnesses. So there is no witness whoever got on the strand and testified that they saw Issac Hemingway kill either of these two people, so that is completely out. They don't have a murder weapon in this case, so there is no murder weapon that

they have in which can trace it back to Issac Hemingway.

The only evidence in this case is circumstantial evidence. And there's two pieces of circumstantial evidence that was brought up in this case. One is cell site data location information. And then also DNA evidence. That's what this whole case balls down to.

Let's talk about the cell site data location information. I think it was Chris Johnson who was the cell phone expert that testified yesterday. And if you can remember your Honor, and of course, Chris Johnson's cell site tracking maps are in evidence. And I think one of the things that I ask Chris Johnson, we went through that map completely. And what he testified to according to cell site data location information that Issac Hemingway I think went to Marion County. I think or Centenary, the Centenary area on I think it was February excuse me -- January that Saturday -- January the 11th of 2020.

And, of course, the cell site data location map he tracked them back to Conway, South Carolina where he lived. And I think the map specifically said that he arrived back in Conway, South Carolina at his home around Coastal Carolina University at 7:11 p.m. Saturday afternoon. And what's striking is is that that cell tracking information did not show him go back to Centenary

or anywhere close Centenary until somewhere around six o'clock on Sunday afternoon.

It's their theory that the murder happened somewhere around Friday excuse me -- Saturday night Sunday morning early Sunday morning. And I think even in the -- the arrest warrant, I think Detective Hotaling listed the time of death at least at around two a.m. on Sunday morning. All of Chris Johnson's maps that track the location of his cell phone show that he was in Conway from 7:11 p.m. Saturday afternoon, and, of course, never left Conway until Sunday afternoon when he went back and return the kids absolutely unrefutable evidence that he never went back to Centenary or Marion County or anywhere even close to that area. So the cell site information actually instead of supporting them, it supports us, so nothing there.

The only piece of evidence that they have in this case that they hang their hands on -- they can hang their hat on, at least try to hang their hat on is going to be the DNA evidence and what that DNA evidence means. And whether or not that DNA is going to require the jury to speculate. And, of course, this was a question your Honor in State vs. Phillips in which the judge -- in which the South Carolina Supreme Court says in State vs. Phillips, I think one particular issue that they said in

that opinion one thing that sticks out to me they said that when the attorney asks the DNA expert -- and, again, that was probability ratio -- probability ratio touch DNA case just like it is here likelihood ratio touch DNA case, that judge says one thing that was important in that case is that the DNA expert testified that she could not say that the DNA evidence -- the mixture of DNA evidence that they pull from the scene that the defendant in that case was a contributor, couldn't say that at all only could speak in likelihood terms.

And I think in that case the probability ratio I think was one and two, and the other one is one and 200. In this particular case, we have a likelihood ratio for the back door. And I think her testimony was it was one billion times more likely that Issac Hemingway contributed -- Issac Hemingway and an unrelated unidentified unrelated individual contributed to that DNA as oppose to three -- I think three unlikely individuals or three unidentified unrelated individuals. And, of course, when I ask her about that probability, well, can you tell the jury that's his DNA and she said I can't say that. She said I just can't -- I can't exclude it. What that means is is this could be in his DNA. It could not be his DNA. She said can't say it's his DNA nor can I exclude it. What does that mean. Means that I'm not sure, I don't know, but

there's a possibility. This is a classic definition of asking the jury to guess because that's what they're going to have to do.

Now, another problem with the DNA on the back door that one billion times more likely was the DNA on the back door. I think that was sample number three. Another problem with that DNA evidence is I asked her at least because that was touch DNA on the back door. I ask her about the transferability of DNA. And she says that, yes, DNA is transferable. And I asked her, well, because DNA is transferable can you say whether or not that is Issac Hemingway's DNA on the back door and she says no. Can you say whether or not he put that DNA on the back door. She says no. Even if you assume it was his, she can't say he put the DNA on the back door because it's transferable. Someone could have picked the DNA up and transferred it to that location. I ask her can you age DNA and she says no.

All the DNA that she tested she can't say whether or not that DNA was there the night of the murder, two days before the murder, two weeks before the murder, two months before the murder. She cannot say that at all. So this DNA is useless and worthless with respect to -- and I ask her this question, you know, because DNA is transferable, can DNA specifically put someone at a specific location at a specific time. The answer is

absolutely not, no. DNA can't put him there. And she can't say he ever was in the house. And I ask her that can you say he ever was in the house. Can you say he ever touched the back door. No, she can't do that because the limits of DNA can't age DNA and, of course, it's transferable. So you can't say who was the original source or whether or not it was a secondary source who put it there. She said that's just the limits of DNA.

Now, even if you are your Honor would have conclude that, hey, sample three or item three the DNA back door that because she testified that that's one hundred -- one billion times more likely that he was a contributor even if your Honor says that that's -- that, hey, we're going to accept that. What about the other forms of DNA are use. The ones they found underneath her fingernails, that was 270 times more likely. What about the other one that was on the wall. That was 100 times more likely. Far more inferior and likelihood ratio than the one on the back door. It's similar to the one in State vs. Phillips, in State vs. Phillip where we're dealing with a one and 200 times likelihood ratio or probability ratio.

Here we're dealing with a 101 time probability ratio less than the one in Phillips, less than one and 200 in Phillips. And also 270 times likelihood ratio, which

is slightly more than the one in Phillips, but when you consider the fact that she testifies that probability ratios can be in the octillions because she said that Maisha Burch's on one of the samples, Maisha Burch's likelihood ratio was in the octillions.

The most crucial evidence inside of the house underneath her fingernails as a one and 270 times likelihood ratio and the one on the wall or 100 times more likelihood ratio where she said I think that was modest support I think is how she classified it. I ask her the same question can you say in that mixture, can you say that Issac Hemingway's DNA is in that mixture. And she said I can't say that. I can only speak in terms of probability ratio. I can't exclude it nor can I say it's his DNA. I think this classic -- the classic definition -- oh, this is classic State vs. Phillip's scenario where the jury's going to be asking to guess. This whole case is going to come down to the strength of this DNA evidence and what does this DNA evidence means because there is no other evidence whatsoever in connection with this case.

Even if you look at the -- and I'll say this your Honor and I'll conclude. Even if you look at the time line, there is no objections -- I think been no objections, no contradicting evidence to the fact that at

around seven o'clock in the afternoon, on Saturday afternoon that's January 11th that he got back from Centenary, South Carolina with his daughter Kareema. The time line says that -- he says that he stayed there until him, his girlfriend and his girlfriend's son left to go to visit a friend in Conway. And, of course, the cell site data location tracking the information shows that and he say that he was there between -- he stayed at a friend's house somewhere around 12 or one o'clock. And then they left and came back home and that is undisputed. And I ask I think investigator -- I think SLED investigator -- I think I asked the SLED investigator that, and, of course, is is that he agreed that that information was consistent during both interviews other than on one I think he said around 12. And the other one he said between 12 and one at midnight. No contradiction of that.

I think for the first time the young man I think Savion Frazier testified that sometime after midnight that a car pulled up, rode around their house, stopped at the old school near where Maisha Burch's house was. And, of course, it stayed there for 15 minutes before and then it drove off. Even if you assume that that was the assailant, all the testimony is uncontroverted that he was in Conway at the time. The cell site location information, the tracking maps show that he was in Conway

at the time. He testified in both of these interviews that he was in Conway at the time. And I think the officers said that they talk with Antwan Kelly. And said that Antwan Kelly confirm that he was at his house that night. I think the only discrepancy is I think the officer says that Antwan Kelly says that Maisha Burch wasn't with him excuse me -- Latosha Baines was not with them. That his girlfriend was not with him and that was the only discrepancy. Even if you consider that time line, that time line exonerates him. So it all falls back on the DNA evidence and the interpretation of that DNA evidence and more critically the one inside of the house. The one inside the house. They don't have anything. This is a flimsy circumstantial evidence case at best with relatively no evidence at worst in which the jury is going to have to guess as to whether or not that his DNA. And even if it is his DNA, they can't even determine -- they can't even put him in the house at the time because you can't age DNA. DNA can't be aged. And, of course, it's transferable. So she can't even put him in the house on January the 12th the date in which they believe these people were murdered. They can't even put him in the house. It's a speculation case your Honor. Thank you very much.

THE COURT: Brief reply.

MR. WHITE: Judge, briefly. This was during this time a hotly contested child support issue going on. It was set to conclude on January 16th. On January 12th, it's uncontroverted that he comes and gets the kids. They go to a friend's house Antwan Kelly's. I think the issue here is what happens between midnight and 4:59 a.m. that's when we believe that this issue or this incident occurred. Savion Frazier said that sometime after midnight he saw a vehicle around the school parked, stay for about 15 minutes and leave. We know at midnight he makes a call -- he being Issac Hemingway makes telephone calls that ping off a tower that's consistent with his home and that's consistent with his first statement. I think even the second statement he says when that call is made whether or not -- I think there's inconsistency. He says that one time they spoke, another time he said they never spoke, but be that as it may, he said both times he was at home and that's consistent with that tower it's right there at his home. But what is -- does happen between then and 4:59. Is at 4:59 those star 67 calls is pinging of a completely different tower. And he tells law enforcement that he's at home from midnight to seven a.m., but yet at 4:59 it is pinging off a different tower from the one that pings at 12 o'clock. And if he's at home with his girlfriend at the time, it sure is odd that she is calling

him at 4:59 and then I think 5:05 and another hour passes she's still calling him. And then I think sometime around 6:30 a.m. he's calling her back. So all of that is discrepancies in his time line.

But, Judge, Mr. Brooker glosses over the fact that Mr. Hemingway says he is never -- they even offer up -- you know, have you ever touched anything on the outside of the house, have you ever touched the doorknob. He says, no, never. And although one proposition set is one billion. The second proposition set is 2.6 septillion more people than had ever walked on this earth, which I think gives more probative value to those moderate support level DNA proposition sets on the inside of the house. So respectfully to Mr. Brooker, I think there's overwhelming circumstantial evidence in this case and we'd ask it be argued to the jury.

MR. BROOKER: Give me 60 seconds for the record, Judge.

THE COURT: Sure.

MR. BROOKER: Just 60 seconds. Is that I think Mr. White says that at 4:59 that morning his cell phone is pinging off of a different cell tower, your Honor, if you take a look at the cell site data location, it's a different cell tower, but it's a different cell tower in Conway. It's a different cell tower in Conway. And then

also another factor that I forgot to mention. I think the first time we arrived your Honor, that is probably the most significant piece of evidence about the DNA. And I ask the expert in reference to this is that his DNA and the DNA of all five of his children who stays in the house are identical.

MR. WHITE: I don't believe that was the testimony at all not even close.

MR. BROOKER: No, your Honor, her testimony was is is that -- and if you want to look it up, you can do it. Her testimony was is is that the child gets his DNA half from the mother half from the father. And, of course, is is that I ask her about a complete DNA profile which have 24 alleles. There's two -- there are two -- have 24 markers. There two alleles on each marker. Of course, and is is that half of those -- half of those alleles and every 24 markers and all 24 of those markers one of those alleles is going to be from the father and the other allele is going to be from the mother is what she said. So that means that every last one of those markers, those 24 markers that they used for interpretation, one of those alleles is going to belong to him. And they can't make a distinction between his DNA and the DNA of the kids. And, of course, is that she says in a perfect scenario is that they should have gotten the

DNA from the kids, but they did not. But she was politely and diplomatic about it. But they can't even say that that's his DNA because they can't even exclude his kids. Thank you, your Honor.

THE COURT: You both have concentrated on cell phone calls and DNA. There's a lot more in this case than just that. In my opinion, there's evidence toward motive, which is child support. There is the DNA, which is at the scene of the murder. The defendant, the child said that when he picked him up and took them home, that he went out to play cards and maybe he had opportunity. There were no shell casings found at the scene, which indicates either he picked them up or used a revolver. His child said that she saw a pistol that he had that look like a revolver. He said at one point in time he went to I think said the Family Dollar to do some grocery shopping.

SLED officials said he went and reviewed the video tape and said he did not see there when he said he was there. Furthermore, the cell phone records do not stack up exactly right. The first statement that he gave is different from the second statement. The children stated that he didn't get them a lot, just happens he got them all, even though it took two trips at the time the murders took place. There are cell phone calls that are made when allegedly he is in bed and everything else in

the record. I think there's plenty of circumstantial -- substantial circumstantial evidence to send it to a jury and that's their call to make it. So I respectfully deny your motion, good motion.

MR. WHITE: Thank you, Judge.

THE COURT: All right. We'll see you back at 2:30.

(WHEREUPON, a lunch break was taken.)

THE COURT: And, Mr. Brooker, have you talked with your client about whether he wishes to testify or not?

MR. BROOKER: I did, your Honor, and he will not be.

THE COURT: All right, is that correct?

THE DEFENDANT: Yes.

THE COURT: All right. I find that he's making that decision freely, voluntarily and with advice of competent counsel. All right. So we'll call the State to call out your next witness. You rest. And then the record is protected on your motions, Mr. Brooker. You can just -- we'll move right on into your case.

MR. BROOKER: Okay, your Honor.

THE COURT: Go ahead and bring out the jury.

(WHEREUPON, the jury came into open court.)

THE COURT: All right, the State will call your

next witness.

MR. WHITE: Thank you, Judge. At this time the State rest.

THE COURT: All right. Thank you. The defense you're recognize to call your first witness.

MR. BROOKER: Thank you, your Honor. Your Honor, we would call Nicole Woodle is here. We wish to call her briefly, so we can go ahead and get her out the way.

THE COURT: Okay.

MR. BROOKER: Just got a couple questions for her.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: I do.

WHEREUPON,

Nicole Woodle,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BROOKER:

Q How you doing, Nicole?

A Good, how are you?

Q This is going to be very brief. I know that you've already testified I think before, is that correct earlier last week?

A Yes.
Q And I think you testified in reference to I think child support, is that correct?
A Yes.
Q And have I been over to your office to look through the child support records?
A Yes.
Q Okay. And, of course, it's my understanding is is that there was no active bench warrant for child support at the time in which he was arrested in December 1, 2020?
A There is an order to dismiss on December the 2nd of 2020.
Q Okay. Did he owe any child support at that time?
A Honestly, I don't know.

MR. BROOKER: Okay, okay. You can indulge me for just a second, your Honor. No further questions for Nicole, your Honor.

THE COURT: All right, any cross?

MR. WHITE: No, sir, Judge.

THE COURT: You have a good day.

(WHEREUPON, the witness leaves the witness stand.)

THE COURT: Call your next witness.

MR. BROOKER: Your Honor, the next witness that we're going to call is Latosha Baines.

THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?

THE WITNESS: Yes, ma'am.

WHEREUPON,

Latosha Baines,

after first having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BROOKER:

Q First of all, Ms. Baines, what is your relationship to Issac Hemingway?

A Girlfriend.

Q And how long have y'all been in a relationship?

A Almost four and a half years.

Q Okay. I want to take you back so would y'all have been in a relation ---

A Sorry.

Q Make sure you speak loud into the microphone so that the court reporter can hear you and also so the jury can hear you. So back in February excuse me -- January of 2020 would y'all have been in a relationship at that time?

A Yes, sir.

Q And were you and Issac Hemingway living together at that time back in January of 2020?

A Yes, sir.

Q Okay. Where were y'all living at?

A I believe 1025 Carolina Road in Conway.
Q And how long -- and were y'all living there together?
A Yes, sir.
Q And who was living in the house with you and Issac Hemingway?
A Myself, my daughter Manyla, my son Michael Boone, yeah, that's it.
Q That's it, okay.
A I got the question confused.
Q So make sure that I understand and make sure the jury understand it was you, it was Issac Hemingway and your son and daughter?
A Yes.
Q How old is your daughter?
A Currently or at the time?
Q Well, at the time?
A Probably 16, 17 I don't remember how old she was.
Q This would have been back in January of 2020 she been ---
A So she was probably 16, 15.
Q Okay. And your son how old would he have been back in January of 2020?
A Twenty-four.
Q Okay. Now, I want to bring your attention to one specific weekend. Well, tell you what before we get into

that how long -- I think you said that y'all had been dating correct me if I'm wrong, my memory is short as well. Back in December excuse me -- January of 2020 how long was it that y'all were together at that time?

A In 2020?

Q In 2020 -- January 2020?

A Oh, back then in 2020, we probably only been together maybe a year and a half.

Q About a year and a half?

A Yes.

Q Okay. And I know you testified that y'all were living together?

A Uh-huh.

Q Now, did you know at that time that Issac Hemingway had eight children?

A Yes, sir.

Q Okay. And did you knew that he had children with Maisha Burch?

A Yes, sir.

Q Okay. Did back in 2019 or at least during the time in which you were with the kids during the time in which y'all were together, did he visit with the kids?

A Yes, sir.

Q Okay. And roughly -- I'm not expecting you to have mathematical precision with respect to your memory, but

roughly how often would he see his kids?

A A lot. We spent a lot of weekends with his kids.

MR. BROOKER: You can indulge me for a second.

(WHEREUPON, a pause in the proceedings..)

MR. WHITE: No objection.

BY MR. BROOKER:

Q Okay. I want you to take a look at -- got some photographs here. I want you to take a look at them first. I'm going to give them to you as a group and just let me know whether or not you recognize those photographs? You can flip through them for a second. Do you recognize it?

A Yes, sir.

Q Okay. Who took these photographs?

A I did. Am I suppose to be looking at them talking or looking at you? I don't know what I'm suppose to be doing.

Q There is no rule.

A I'm sorry.

Q It's -- whatever makes you comfortable. Well, I'll tell you what I'll move over here, so you don't have to bend your head or switch back and forth, okay, so it more natural.

A Okay.

Q The first photograph I want to ask you about and I'm

going to hand it to you -- first of all ---

THE COURT: You Honor, can we go ahead and mark these as defense exhibit. I don't know whether you want to mark these individually or you rather a group.

MR. BROOKER: We'll do them individually your Honor, so we don't get them confused.

(WHEREUPON, a pause in the proceedings.)

A Can I say something?

Q No, you can't.

(WHEREUPON, a pause in the proceedings.)

COURT REPORTER: Five through 32.

MR. BROOKER: Five through 32.

THE COURT: Five through 32?

COURT REPORTER: Yes, sir.

THE COURT: Are they in evidence?

MR. BROOKER: I would move at this time to enter Defendant's Exhibits five through 32 into evidence.

THE COURT: Any objection?

MR. WHITE: No objection.

THE COURT: Thank you. Five through 32 defendant's are in evidence without objection.

(WHEREUPON, Defendant's Exhibits Nos. 5-32 were admitted into evidence.)

BY MR. BROOKER:

Q Ms. Baines, I'm sorry the reason why when you said

can I say something and I told you not to because the court reporter was labeling these exhibits. And, of course, she also has to take down everything that's being recorded, and she can't do both of them at the same time. Okay, so I wasn't trying to be rude to you or not, but she can't do both at the same time. But I want to go into these exhibits with you that's been marked. The first Defense Exhibit Number 1 if you can take a look at that. I think you said that you already recognize that picture. Tell me about that picture excuse me number five Defense 5?

A This was Saturday, February 2nd 2019. I took a picture of Ivy. At the time then me and Issac had a small place. We didn't have enough room for all the kids, so we use to rent out ocean front hotels to bring them and that's what this picture is of when we are at -- we're actually in this picture where we're at Best Western Ocean Sands B Resort in Myrtle Beach.

Q And on that weekend -- well, that would have been a weekend that -- would that have been a weekend when the children was visiting Issac and y'all in Myrtle Beach?

A Yes, sir.

Q Okay. And I'm assuming and you tell me if I'm wrong Defense Exhibit 6 I think which is the next day, is that the same weekend?

A Yes, sir.
Q Okay. Is that the same place?
A Yes, sir.
Q This is Defense Exhibit 10. Tell me about Defense Exhibit 10 and also 11 take a look at them and tell me what that is? First what date is that?
A One of them is April 6, 2019 and one of them is April 10th 2019. And from the dates April 6th is just regular weekend we had them. And I believe April 10th is also just a regular weekend we had with them.
Q Okay. When you say with them who was visiting?
A More than likely it was Ivy, Mariah and Kareema. Mariah didn't make every trip because sometimes we go pick up the kids and Mariah would be with other people. I don't know exactly who, but Mariah wouldn't always be home. She was two at the time. And Izyana she didn't make any of the trips to the resorts because Izyana was just Izyana.
Q Okay. Now, April 20th is that a different weekend April 20th 2009? Of course, I think that's Defense Exhibit 12?
A Yes, this is actually spring break. In the beginning of spring break, we did initially have all the kids. And I remember we took -- actually Issac Hemingway took the younger ones back. Ivy, Mariah and Tristen he took them

back because Kareema wanted to be with us by herself because she felt like she use to always have to babysit and she wanted a break.

Q Okay.

A So spent spring break with us by herself.

Q Okay, and that's April 20th of 2019?

A Yes, sir.

Q Okay. And that's Defense Exhibit 13 I believe. What is that and what's the date?

A This is April 27th also spring break. This is a picture Kareema and my daughter Manyla.

Q And that was one of Issac's visitation. I think you said that's -- did y'all have at least those two the entire spring break because I think the first picture ---

A Kareema -- we had Kareema the entire spring break, but the three smaller ones, no. We took her back home -- took the rest of them back home.

Q Defendant's Number 14 I think this is the date of May 20th of 2019. Do you know what that is?

A That is actually a Snapchat video that I recorded of the kids. They were all there. Izyana wasn't there. Kareema, Mariah, Tristen, yeah, they were all there. This is when they're outside in front of the door flipping. And Kareema and Tristen were challenging each other to doing push ups. And Kareema couldn't go past two. I

remember we were all laughing at her.
Q Okay, and that was May 20th?
A Yes, sir.
Q This photograph is -- which is Defense 16 it's dated July 25. Is that another visitation day?
A Yes.
Q Tell me about visitation if you remember?
A Kareema -- all the kids were at the house. Kareema came with us -- came with me and my son and my daughter. My daughter, Manyla got her nose pierced and so that's what we're taking a picture of Manyla and her new hole in her nose.
Q Okay. What I'm going to hand you now is Defense 17, 18, 19 ---
A Actually at this time Kareema was living with us.
Q --- and 20. I'm going to hand you those if you can take a look at -- well, let me ask you about that what do you mean she was living with you?
A Kareema was living with us at this time. Their mom's lights had got cut off. So their mom took them to stay with a lady name Tub or something like that. And while they were living at this lady's house, one of their mom's friends an older gentleman ---
MR. WHITE: Judge ---
Q Don't say what anybody says. You can say what you

say. And you can say what people did, but you can't say what they said. You can describe what people physically what they're are doing. You can't talk about what they say.

MR. WHITE: May we approach, Judge?

THE COURT: Sure.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury and on the record.)

MR. WHITE: She's trying to go into testimony about the kids being possibly molested. She doesn't have any direct knowledge of that.

MR. BROOKER: She didn't say anything about molestation.

MR. WHITE: That's where she's going.

MR. BROOKER: She said that -- she said their lights were out what that has to do with molestation ---

MR. WHITE: She said the older gentleman -- she said that's when an older gentleman was -- that's where she's going, Thurmond.

THE COURT: Just make sure you stop her with the hearsay.

MR. BROOKER: Okay.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the

jury has ended on the record.)

BY MR. BROOKER:

Q I'm sorry go ahead and finish what you were saying if you remember what you were telling us. Like I said, you can't say what someone else says. So you can testify your own knowledge of things, but you can't testify to what someone else told you. It's called hearsay.

A Well, to my own knowledge Kareema came to stay at our house because -- I'm sorry I don't want to -- I can't say anything out of the way about these kids' mom.

Q That's is perfectly fine. And you don't have to. You don't have to. You don't have to say anything bad about their mom. Just tell me about the weekend that you spent with them and that's why we're going through these photographs for?

A Kareema was living with us at the time and she -- we just tried to put her in a better environment.

Q Okay.

A And while she was living with us, she went to school. She did well. She was happy. I helped her with her speech. I helped her with her anger. Me and Issac helped her with a slew of things. She was doing so well.

Q About how long did she stay with y'all?

A Well, she stayed with us from the beginning of the summer until I believe November when her mom came and got

her.

Q Okay.

A Without our knowledge.

Q Did she enroll in school -- did y'all enroll her in school in Conway?

A Actually, Issac Hemingway enrolled her in school. He took off work and he enrolled her in school.

Q Okay. Now, couple more photographs and these are Defense Exhibit 17, 18, 19, 20 and 21. I'm giving them to you together because they all have the same date July 28th of 2019. And you just tell me about what's going on in those photographs?

MR. BROOKER: So this is another trip to the beach. I don't know where you guys are from, but Myrtle Beach is a beautiful place you want to take your kids at and have a good time, don't cost a lot of money to sit on the beach with some sandwiches and cost sufficient. So we did that all the time with the kids if we didn't do the ocean front. So that's what these are pictures of another weekend the kids were with us. And if I appear to be shaken, I take Albuterol consistently throughout the day because I can't breath and it makes me do this. I don't know if y'all know about Albuterol it makes me very shaky. And this is a picture of Kareema when we are out to eat. That's a picture of Ivy. This is a picture of me, Issac

and Kareema. This is a picture of Issac and Kareema. This is a picture of Kareema, my daughter and my son and we're just all at the beach in Myrtle Beach, South Carolina.

Q The next photographs I have, and, of course, it's like a same day August 18th of 2019 and it's Defense Exhibit 22 and 23. Is that a separate -- a different visit in August?

A Yes. This is when my family came up from New York. This is a picture of Kareema on the Slingshot. And I remember laughing at her because when her and my daughter got off, the video -- we paid extra for these videos to record when they're on the slingshot. So when we got the videos back, Kareema and my daughter were like cursing on the videos. So we all thought it was so funny because they got shot in the air and like every curse word imaginable came out these little girls mouths. So that's what this is a picture of. This is a picture of us on the boardwalk Issac Hemingway had rented golf carts, so we were riding up and down the boardwalk on golf carts.

Q Okay. And I think this is Defense 24. This is August of 27, 2019, is that correct?

A Yeah, and this is also another trip. These are my cousins from New York actually and Kareema.

Q I think the next one I have here is November 27 of

2019. You recognize that photograph?
A Yes, this is -- we were so proud of Tristan. Tristan was playing football and he was so short at the time. Tristan was like really really short. When I tell you that little boy was so fast on the football field, so this is what this is a picture of it was his last football game and he kick butt.
Q Who was there at the football game?
A Myself, Issac Hemingway, we came to see him play, so the kids weren't with us. It was just myself and Issac Hemingway to come see him play. And when we got there, we saw Kareema. Kareema was there and, of course, Tristan.
Q Okay. Did she ride with y'all to the ballgame in your vehicle?
A No, sir. No, she did not.
Q Did she leave with y'all for the ballgame in your vehicle?
A No, sir. No, she did not.
Q Okay. Was there a gun in that vehicle at that last ballgame?
A No, sir. No, it was not. I have a very credible job and I'm not going to throw my job away riding around with guns -- unlicensed guns in my car.
Q Where do you work at?
A The surgery center. Do I have to state the name of

it?
Q No, you don't have to?
A I work at a surgery center.
Q Okay. And what is your position?
A I'm a certified surgical technologist. I do surgeries for a living. I been doing it for 13 years. I started out on a trauma team. I mean, I'm no analyst or nothing, but anybody fall out in here nine times out of ten I can save your life.
Q Okay. The next one is November 23rd. I'm assuming this is a different weekend. Did you all spend time with kids in November 23, 2021. If you please state what's the exhibit number on that?
A Twenty-five.
Q That's Defense Exhibit Number 25. Tell me about that time?
A Okay, this is another weekend the kids were at our house. It was Thanksgiving. And we had all the kids at our house. This is a picture of Mariah holding my daughter's dog who is now deceased, Mesa. And the younger kids didn't stay the entire time because we went to New York for Thanksgiving and we took the little ones back. And, of course, Kareema was staying with us, so we brought Kareema with us.
Q So y'all went to Thanksgiving -- went to New York.

What did you go to New York for specifically?
A Well, my kids are from New York, so they seen the Macy's Day parade a million times. Kareema had never been to New York before. So we booked out a sky-rise hotel where you can see the Macy's Day parade from the window. It's usually cold that time of the year, but this particular time it wasn't cold, so we brought the kids out to watch it at the road. The kids, me and my two and Kareema because the little ones weren't there.
Q Okay. Okay. And, of course, this is Defense Exhibit 26. And I think the date on this at the top is January 1 of 2020?
A This is actually New Year's another hotel that we booked out for the kids. I believe this one was the Sheraton Plantation and it is a picture of Tristan. It was actually a recording, but I see they turn it into a picture. Tristan was doing a back flip in the recording and that was New year's day.
Q And that picture that y'all had the kids that weekend was actually roughly two weekends before their mother's death?
A Probably so if this is New Year's, yes.
Q Okay. And I probably glossed over Christmas, but did the kids spend -- I know that's New Year's January 2020?
A 2019.

Q Excuse me that's 2020 January 1, 2020.
A Yes, because it turned into 2020, yes, I'm sorry.
Q Absolutely. But y'all had them for that New Year's ask about Christmas -- just let me know when you're okay?
A Go ahead.
Q Okay. Did the kids also spend Christmas with you and Issac?
A Yes, sir.
Q And do you know how long they spend? Did they spend just that day Christmas day or Christmas Eve or if you have any recollection of it and this would have been January ---
A Mariah wasn't with us on Christmas and I remember Mariah wasn't with us on Christmas. And I remember Mariah wasn't with us because I hung stockings up on around the island in the kitchen. And Issac was filling them and Mariah had a stocking. And I remember the rest of the kids ate her stocking because she wasn't there.
Q I got you.
A So I think she probably -- I don't remember if she came after or she was with somebody else I don't remember.
Q Okay. And the final photographs I'm going to give you and these are Defense Exhibit 27, 28, 29, 30, and 31. These don't have a date on them. Would you take a look at them?

A Not the whole Christmas.
Q Sure, go ahead.
A It was the day.
Q So she just spent -- they just spend Christmas day, but not the entire, I guess, Christmas holiday?
A I'm trying to remember. I think they just spent the day, but -- yeah, I think they just spent the day.
Q Okay, okay. Defense Exhibit 27 through 31 these don't have dates on them. If you just take a look at it and tell me or at least describe to me what those are what those pictures are depicting?
A Okay, so 27 this is actually a recent picture of Tristan and Issac on Tristan's birthday. He took Tristan to what place -- they jump and they can slam dunk on the hoops. I forgot the name of it. I don't remember, but that's where he took them in that picture. This is a picture of him teaching Mariah how to ride her bike and that's in 2019.
Q Okay.
A This is a picture of him at school with Tristan. He went to a father brunch -- no, breakfast with dads I believe it's called with Tristan. Yes, it's also 2019 he's helping him climb on a monkey bar or something at a playground. And this right here is actually after the fact. He's teaching Ivy, Mariah to skate and that's

something that we do all the time as a family all of us like really good at skating Ivy, Mariah are amazing skating, okay. I know they have those pictures.

Q Are there other times when y'all had the kids that was not memorialize in photographs?

A I'm pretty sure it was. I mean, I didn't take pictures of every single thing we did. But I'm pretty sure it was. I don't think he took pictures of every single thing.

Q All right. Now, what I want to do is is that I know that in one of those pictures it was two weeks before their mom's death. I think that was New Year's. And, of course, I think their mom passed away I think somewhere around January the 11th or 12th somewhere in there, okay, that weekend. I want to ask you about that weekend. Do you recall that weekend?

A Yes, for the most part.

Q Did y'all come to pick up the kids -- I think this would have been a Saturday, January 11th, Saturday January 11th. Did y'all come to pick up the kids again for that weekend for another visit?

A Yes, sir.

Q Okay. Do you know about what time that y'all left Conway to come down to Centenary to pick the kids up?

A I don't recall probably -- I don't remember exactly

what time, no.
Q Okay. Did you come with Issac to pick the kids up?
A Yes, sir, on one of the trips. I didn't go both times.
Q Okay, okay. Let's talk about the first trip. Do you know whether or not you came the first trip or the second trip?
A I went on the first trip.
Q Okay. And who went with y'all -- who went with you and Issac to pick up the kids?
A On the first trip.
Q Yes.
A Myself and Issac Hemingway.
Q Okay. And did y'all pick up his kids?
A Yes, sir.
Q Which kids did y'all pick up on that first trip?
A Ivy, Mariah and Tristan. We didn't get Kareema because Kareema was saying she had to do some kind of community service or whatever. I don't remember exactly what she had to do.
Q Okay. When y'all got there, did Issac go in the house on that first trip?
A Yes, sir.
Q And why did he go in the house if you know?
A His kids' mom, Maisha Burch, she called him in the

house. She open the door, and she said she needed to talk to him about Tristan. She said come here I need to talk to you about Tristan.

Q Okay. How long was he in the house?

A I don't really remember probably about ten minutes.

Q That's fine, okay. So after Issac Hemingway has the conversation with Maisha Burch about Tristan, I think you said that you took the three smallest kids, you didn't take Kareema, is that correct?

A Yes, we just the smaller ones, but we came back to get Kareema because Kareema really wanted to go. And she was telling her dad that she really wanted to go.

Q Okay, okay. You don't have to tell me anything about what Kareema says, okay, or what anybody else says?

A Okay.

Q Okay. So you left with the three kids. Where did you go once you left Maisha Burch's house from picking up the kids, where did y'all go then?

A We went back home.

Q Okay. All right. When you say back home, are you talking about back in Conway?

A Yes, sir.

Q Okay. Did Issac leave the house later on after y'all got back to Conway with the first three kids?

A Yes, he left again.

Q And if you remember and I know it's been a long time ago, do you know about what time he left?
A No.
Q Do you know where he was going when he left?
A Yes, he was going back to pick up Kareema.
Q Okay. Was he by himself when he went to pick up Kareema?
A No, my son was with him.
Q Okay. And what's your son's name?
A Michael Boone.
Q Okay. So they left to go back to pick up Kareema, okay. Now, do you know roughly what time they returned back to Conway to the house after picking up Kareema?
A No, I don't remember the time.
Q Okay.
A I'm sorry, I don't. Nobody came and question me, so I don't remember stuff.
Q That's perfectly fine. Was it still light or dark when they come?
A I think it was still daytime.
Q Okay, okay. Now, when they returned back to the house when Issac, your son Michael and Kareema return back to the house, what did y'all do once they got back to the house?
A Just hung out around the house for a little while

eat. We got the kids situated. Gwen was having people over to her house, so we got the kids situated so we can go to her house.

Q Whose house?

A Gwen's that's Antwan Kelly mom.

Q Okay, okay. And so who went to Antwan Kelly's house?

A Me, Issac and my son.

Q Okay. And do you know about what time did y'all leave y'alls apartment in order to go to Antwan's house?

A It was dark outside when we left. We went to go play Spade's. They were having a Spade's game at their house, so that's why we went there and it was dark outside. And it was definitely nighttime.

Q Sure. When you got there, do you recall who was at Antwan Kelly's house?

A Antwan was there, his mom Gwen was there. Shauna was there. Brittany his sister was there. It was a decent amount of people.

Q Okay. Was that something that y'all did on a regular basis back then?

A Yes.

Q Okay.

A We went to play Spades with them a lot.

Q Okay, okay. Now, you went and played Spades was there drinking at the get together?

A Yeah.
Q Did y'all have any drinks?
A I mean, Chardonnay wine, that's what I did. I don't recall what Issac had.
Q Okay, okay. Do you know about how long y'all stayed over at Antwan's house?
A We was there for a little while. I don't remember exactly what time we left, but I know it was after midnight.
Q Okay. And did y'all all travel in the same vehicle?
A Yes, sir.
Q Okay. And who was driving?
A Issac.
Q Okay. Do you know what vehicle y'all was driving?
A Probably, my Lexus. I'm pretty sure it was my Lexus.
Q Now, from where y'all were living and where y'all went to play cards at Antwan's house, about how far apart was y'all house's from Antwan's house?
A They live really close probably about five minutes not far than ten minutes.
Q Five to ten minutes by car drive?
A Yes.
Q Okay.
A Wasn't far at all.
Q So I know you said that sometime after midnight y'all

left Antwan Kelly's house from playing cards. Where did y'all go after you left?

A After we left Twan's house?

Q Yes.

A We went home.

Q Okay. All three of y'all?

A Yes, sir.

Q Okay. So when you got home, what did y'all do when you get home?

A Pretty sure just hung around. Issac likes to play the game with my son, so him and my son's probably playing a game. I don't know. I don't remember exactly what was going on.

Q Did he leave the house? Did Issac leave the house after y'all got in from Antwan Kelly's?

A No. No, he didn't.

Q Now, assuming if you stayed in all night, do you know what time you got up the next morning that Sunday?

A I don't remember what time.

Q When you got up on Sunday morning, was Issac Hemingway there at the house?

A Yes.

Q Was everybody else there at the house? Was Michael there at the house?

A Yes.

Q Did Issac leave any of that Sunday?
A Yes.
Q Roughly, what did he leave on Sunday if you can remember?
A Probably like 11:30, 12ish. I know when he did leave it was like late morning probably going into the afternoon.
Q Okay. Do you know why he left?
A Yes.
Q Okay. Do you know where he was going?
A Yes.
Q Where was he going?
A To Blake's house.
Q Okay. And do you know how long was it that he returned once he said he was going to Blake's house? How long did it take him to return back the apartment?
A Well, I asked him to stop before he came home. I needed him to get some stuff from Family Dollar, so I don't remember what time. I just remember asking him to go to the store, but I don't remember what time he came back.
Q Okay. All right. But he did come back that Sunday?
A Yes, sir.
Q Okay.
A And he had the stuff I asked him to get.

Q Okay. Now, I won't try to ask you to remember what you asked him to get. But when he gets back to the house with whatever you requested him to get, what did y'all do then?
A I think we just hang out around the house for the most part. I don't think anybody left after that.
Q Okay. That would have been Sunday afternoon. Eventually, did y'all leave the house that Sunday afternoon?
A No, just to take the kids back if that's what you're asking me.
Q About what time did you leave to take the kids back if you know?
A I'm sorry I don't remember like all the times. I don't remember -- I remember it was getting dark, so I don't remember exactly what time it was.
Q That's fine. Just asking you what you remember, that's all you have to say what you can remember. So it was getting dark?
A Yes.
Q And who was in the car when y'all went to take the kids back?
A It was Issac, me, Kareema, Ivy, Mariah and Tristan.
Q Okay. And what car was y'all driving?
A More than likely when we took them back probably my

Lexus. I don't really remember. More than likely, I don't know.

Q Did y'all ---

A We always drove the Lexus.

Q I'm sorry. Go ahead. I didn't mean to interrupt you. Go ahead.

A I don't know. I don't remember.

Q Okay. When y'all went to take the kids back from y'alls home in Conway to Centenary, did y'all stop any place in between the restaurant or anything to eat dinner or anything like that?

A No, sir.

Q Okay. Did y'all drive straight there to Centenary?

A Yes.

Q Was it light or dark when y'all arrived at Maisha Burch's house?

A It was dark.

Q Okay. Do you know what time it was?

A No.

Q Okay. Tell me when you pull up at the house what did you see when you pulled up at the house?

A When we pulled up, it was bitch black. It was dark like no lights, only lights probably was from our car lights. It was really really dark. And usually when we take them back home, she either meets us at the door or

you can see lights on in the house, but it was pitch black.

Q Okay. Excuse me -- did anybody go into the house or try to go into the house?

A No, I remember Issac Hemingway was blowing the horn. I remember Kareema got out of the car and she said -- Issac Hemingway was calling her, calling Maisha Burch. And he was calling her on the way there as well. And when she didn't answer the phone -- Kareema told Issac to call her cell phone.

Q Well, you don't have to tell me what Kareema said.

A I keep forgetting that. I'm sorry.

Q I know this is difficult. This is not something you do every day. Y'all did attempt to call Maisha Burch?

A I didn't attempt to her call, no. Issac did.

Q Okay. All right. Now, when y'all -- were y'all able to reach her on the phone or was he able to reach her on the phone?

A No, sir.

Q Okay. When y'all were at her house and you were not able to reach her on the phone and everything was pitch dark, did y'all go some place else?

A Yes.

Q Where did you go?

A To the lady house down the street.

Q Is that a neighbor?
A No, she not their neighbor. She lives like down the street. I don't know this lady's name. I don't remember.
Q I guess, when I'm talking about neighbor, I'm not talking about next door neighbor. Was she in that neighborhood where Maisha Burch lived at?
A Yes, uh-huh.
Q How long did it take y'all to travel from Maisha Burch's house to get to her house?
A Probably about two minutes not even it's just down the road.
Q Okay. So very close. Was Maisha Burch there?
A No.
Q Okay. When y'all couldn't find her at this neighbor's house, what did y'all do next?
A I remember Issac -- I think he called Kyria first.
Q He called who?
A He called Kyria. I mean, Shkyria.
Q Shkyria?
A Uh-huh.
Q Okay. Were y'all able to reach Shkyria?
A Yes.
Q Okay. And what did Shkyria live at?
A I don't know where she lived. She just didn't live there.

Q She didn't live with her mother Maisha Burch?
A I mean, I know she didn't live with her mom, but I mean she didn't live in that area. She lived somewhere else.
Q Okay.
A I'm not like from around that area, so I don't know what to call it, but she was living somewhere else.
Q I got you. I got you. Were y'all able to reach her? Don't tell me what she said on the phone or anything like that don't want to get into hearsay. Were y'all able to reach Shkyria?
A Issac was able to reach her. She was talking to Issac on the phone.
Q Okay. And did y'all take the kids over to where she lived at?
A Yes.
Q Did she live in an apartment complex?
A Yes.
Q Okay. Did y'all left the kids there at the apartment complex where she stayed?
A Yes, but I don't recall leaving them with her. I think we left them with somebody else.
Q Okay, I got you. I got you.
A Of course, they familiar with.
Q Okay. And so once y'all took the kids, of course,

drop them off at the apartment complex where she stayed at. You said you think it was with one of the neighbors. What did y'all do once you dropped the kids off there?

A We are return back home. And I feel bad now because I remember talking junk in the car saying she know we got to go to work in the morning. And I just remember talking junk about it to Issac about her not being there when we drop the kids off.

Q Okay. When you and Issac returned back to your home in Conway, were y'all home for the rest of the evening or did you go any place?

A Yes, we went home. We went home.

Q That next morning would have been a Monday?

A Yes.

Q Okay. And that would have been the 13th I think January the 13th. Did Issac work that next day?

A It was a Monday, yes. He works throughout the week.

Q Okay. And what time does he typically go to work?

A Back then I think he had to clock in at seven in the morning.

Q Okay, okay. Only got a few more questions. I think you were in the courtroom when the two interviews with Issac was played?

A Yes, sir.

Q I think in one of those interviews, he said he went

to Maisha Burch's wake. Did you go with him?
A No, sir. I wasn't familiar with her then. I didn't know her. I wasn't familiar with her older daughters. So I didn't know them then well enough to go to a funeral.
Q I got you.
MR. BROOKER: Your Honor, if you would indulge me for just second. Let me make sure I don't have any further questions.
(WHEREUPON, a pause in the proceedings.)
MR. BROOKER: No further questions, your Honor.
THE COURT: All right. Cross.
MR. WHITE: Thank you, Judge.

CROSS-EXAMINATION

BY MR. WHITE:
Q Good afternoon, Ms. Baines. Is it Baines?
A Yes, sir.
Q I just want to ask you some questions.
A Okay.
Q Ms. Baines, back in 2019, you were kind of the primary bread winner in y'all house, is that right, you were making the most money?
A At the time.
Q And you were kind of responsible for most the bills, isn't that right?
A That is incorrect.

Q Okay. You were aware at that time that obviously Maisha Burch, Issac Hemingway had five kids in common, is that right?
A Yes.
Q And you were aware that they had a history spanning at least 13 years?
A Yes, sir.
Q And you were also aware that in recent months, I mean, I think all these photographs are from 2019 majority of them. And about that time they started to have difficulties she and Issac in the form of child support, isn't that right?
A Isn't it right they had difficulty with child support?
Q Wasn't she taking him to court for child support, is that right?
A I believe -- and this is my honest opinion. The department of social services was taking Issac for child support. It wasn't her.
Q Okay. He was going to court for child support on those children, right?
A Yes, sir.
Q Okay. And up to that point, he hadn't been put on child support for any of those children, is that right?
A That's incorrect.

Q You're saying that he's already been paying -- he's on child support -- child support papers before February of 2019?
A That's not what you just asked me.
Q Okay.
A You ask me was he paying -- was he not paying child support for -- I forgot what you ask me. But can you ask me again.
Q Okay. Well, I'll ask it again. February 12th of 2019, isn't it true that Issac Hemingway was called to court for child support on all of his kids with Maisha Burch?
A Yes.
Q Okay. Now, that's about the time that y'all start posting photographs on Facebook, isn't that right, and most of these photographs from 2019 are really just screen shots of you posting things on Facebook, is that right?
A Can you repeat what you just said?
Q Okay. Back in 2019, right, she's taking him or DSS however you want to phrase it, they're taking him back to court or to court for child support on the five kids that he has never been on child support before and that's about the time ---
A That's what you said before. He was already paying child support for Ivy.

Q Okay. But he wasn't ordered to pay it, right?
A Yes, he was.
Q He was ordered by family court to pay it?
A For Ivy, yes, they were taking it out of his paycheck.
Q Okay. Well, that's contrary to what the family court documents say. February 13, 2019, he was court ordered to pay Ivy child support February 13, 2019. So that's contrary to what you're saying here today. But that's okay we'll keep going. But that's about the time that you start saving and posting these photographs, isn't that right, I mean, that's about the same time?
A I didn't know -- I don't know anything about what time they started going to child support court. I don't know anything about that the times. I just know that he was previously paying child support for Ivy before he started paying child support for the rest of the kids.
Q Okay. And, again, that's contrary to what the family court says?
A I wouldn't know if that was contrary because that's your handwriting. It's not an official document.
Q Okay. Well, it's in evidence, so the jury can view it?
A I didn't know. I don't know, that's all I'm saying.
Q Okay, that's no problem. And in some of these

photographs, these here these after Maisha Burch's murdered, isn't that right?

A Yes, the dental pictures are related to the dentist.

Q Okay. This is well after she's been murdered?

A We didn't just speak about those pictures, sir.

Q Say again?

A We didn't just speak about those pictures.

Q Well, okay, I'm showing them to you. I'm showing you State's Exhibit 9, 8 and seven. All these photographs are taken after?

A Those three pictures, yes, sir, but me and Thurmond did not just speak about those pictures. We only spoke about pictures in 2019.

Q Okay.

A And the pictures of Tristan on New Year's day going into 2020.

Q All right. Well, now I'm asking you about them. I'm not trying to be difficult, but he moved them into evidence now I'm going to ask you about them?

A Okay.

Q Okay. So seven and eight and nine these photographs were all taken when she was murdered?

A Yes, those three, yes, sir.

Q Okay. And is this about the time they started calling you mom instead of Maisha Burch?

A No. That wasn't the time. And they don't call me mom just Ivy and Mariah. And what we really need to not do today is continue bring these kids into this. These are children and her calling me -- Mariah and Ivy calling me mom, that happen naturally. That's nothing that I wanted them to do. And it made the hair on my arm stand up the first time they call me that.

Q Well, it didn't happen naturally, it's because their mom was murdered, right?

A I wouldn't know what happened to their mother I wasn't there, sir.

Q Okay. And then these photographs. We got something from April. And then, you know, there's some from spring break you say, but none of these photographs are the -- are you or Issac Hemingway or you and Issac ever photograph with all of the children, are you?

A I had just met the kids.

Q I just need a yes or no, and then you can explain it. But are any of these photographs are they photographs of all of the children together?

A At once.

Q That's correct?

A No, not everybody together, no.

Q Okay. And they're sporadic, right?

A You said you were going to let me explain.

Q Okay, go ahead.
A I mean, treatment me like I'm one of your analyst and just let me explain and stop cutting me off.
Q Okay, yes, ma'am. Yes, ma'am.
A Because we're here to find the truth, right? We're not just looking for a conviction. We're looking for the truth. Right?
Q Can I move on to my next question?
A I don't know, you keep cutting me off.
MR. WHITE: Judge, may we approach?
A I thought we was here to seek the truth. You keep cutting me off.
(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record.)
MR. WHITE: Judge, I don't know do I need to treat her as a hostile witness or what we're doing?
MR. BROOKER: She already is a hostile witness, but I just say, Judge, that it's a good idea that if you instruct her in these situations normally it's a good idea if you instruct her that she can't ask Ryan questions and she just have to answer the questions that Ryan ask. And I was going to say that, but I don't know whether or not if it's appropriate for me to say that. It might be better coming from you.

THE COURT: Why don't you just ask your questions and I'll keep an eye on her.

MR. WHITE: Okay, thank you, Judge.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury has ended on the record.)

BY MR. WHITE:

Q Ms. Baines, during this time, these dates on these photographs you would agree with me that these photographs and these dates they're not every weekend?

A I don't think anybody said they were every weekend, sir.

Q Okay, and I'm just asking a question.

A And I'm just answering.

Q And I appreciate it, I really do. And during this time, I think there are -- you all mentioned pictures April 6th, April 10th, April 20th and April 27th. And from my recollection that's kind of the most pictures from one kind of time period that you have here in these photographs, is that right?

A Sir, do you take pictures of your actions every single day?

THE COURT: You don't need to ask him questions why don't you just answer the question.

A Can you repeat the question?

Q April 6th, April 10th, April 20th and April 27th, y'all have four photographs from that time period. And that's the most photographs you have from any like conceivable consecutive time period, is that right? Everything else is just kind of sporadic?
A Probably right here, but not in my phone. I just couldn't bring them all because I was only suppose to bring certain pictures that had dates on them.
Q Okay. So you were just instructed to bring certain pictures, is that right?
A They said that you wouldn't allow them if they didn't have dates on them.
Q Okay. Well, here are some that don't have dates, is that right? I'm going to show you State's Exhibit 31 that doesn't have a date on it, does it? This is a yes or no. I mean, I'm not trying to trick you?
A You didn't allow it he did.
Q Does this State's Exhibit 31 have a date on it?
A No, sir, it don't.
Q Now, those photographs and I'm just trying to get to the point here if you'll let me. April 6, April 10th, April 20th, April 27th are when those photographs were taken down at the beach and you said you got them eating sandwiches and you're having a good time, is that right?
A Yes.

Q And isn't it true that on April 17th, so that's April 6th, April 10th, April 20th, April 27th. April 17th in a court in Marion County Issac Hemingway was requesting genetic testing on these very children, isn't that right?
A I don't know what happened with them in child support court. I wasn't there, so I can't speak about what happened in child support court just like I don't want to speak about their mom. I was not there. I can't speak about that.
Q So you aren't aware that he was contesting paternity? You aren't aware of that? Were you present in the courtroom when the child support clerk testified to that?
A Okay. So what I do know is Issac wasn't contesting all his children. He was contesting Mariah.
Q Okay. But you were present in the courtroom when the child support clerk said that he was contesting Izyana, Kareema, Tristan and Mariah on April 17th of 2019, the same time that you said y'all were having a grand time down at the beach?
A I don't know if that's the time, sir, no.
Q Okay. Now, January 12th 2019, you came to Marion you said and you picked up the kids with Issac Hemingway, is that right?
A Yes, sir.
Q Okay. And then y'all went home and then he came all

the way back to pick up Kareema, is that right?
A Yes, sir.
Q And then y'all came home and you ate some dinner. And then you went back out again you went to play spades and you went to drink a little bit, isn't that right?
A Yes, but to be quite honest, he didn't want to go all the way back. He only went all the way back because Kareema wanted him to.
Q Okay.
A I remember him telling her he didn't want to come all the way back, but she wanted him to that's why he came back.
Q And that's kind of like when you said Kareema on spring break didn't want to go back to Marion because she didn't feel like babysitting the kids, isn't that right?
A No, it's not kind of like that, that's just what happened.
Q Okay. Kind of like when y'all left her to babysit the kids to go out and play Spades and drink?
A We didn't leave her she was too young. We left my daughter. She was of age. Kareema at the time was probably 12. We didn't leave Kareema, sir. We never left Kareema with those children. They were babies. So if you're going to quote what I'm saying quote me correctly.
Q Yeah, sure. Okay, you and Issac Hemingway and

Michael Boone you left the house, right?
A Yes, sir.
Q Okay. When you left the house, Kareema was still in the house, right?
A Yes, sir.
Q With the little kids, right?
A Not to babysit. She was being babysat. My oldest daughter was there.
Q Okay. And you go out and you drinking with Issac Hemingway, is that right?
A Yes.
Q Okay. And y'all drink until about midnight, is that right?
A No, we didn't drink until about midnight. I pretty much had probably like a half a glass of wine.
Q Okay. And then you came home and you went to sleep at some point, right?
A Yes, sir.
Q Okay. And you got that Life 360 tracker on Issac, right?
A I don't believe it was at that time that I had that. I do not believe I had it at that time, no, sir.
Q You were present in the courtroom when we played the video and that's what he said, isn't that right?
A Yes, that was also after he was arrested the second

time which was December the 1st, so he probably didn't recall that we didn't have that tracker then. And it wasn't for him. It was for my daughter who just started another school in the area we weren't familiar with because we're not from here. So I wanted to make sure I knew my daughter's whereabouts. So the tracker was for my daughter. It wasn't for Issac Hemingway, sir.

Q Right. But you heard when he said that it was for him because you wanted to keep tabs on him, isn't that right?

A No, that's not what he said.

Q Okay.

A He said that I had a tracker on him. And if he would have been there longer then he would have suppose to, I would have known, that's what he said. He didn't never say it was for him.

Q Okay. And then you went to sleep at some point, right?

A The whole house did.

Q Everybody went to sleep?

A Uh-huh.

Q And you heard Issac Hemingway say that he woke up sometime around 7:30, is that right?

A Probably, I don't remember.

Q Okay. But yet he has calls where he is Star 67

calling Maisha Burch at 4:59, isn't that right?
A That's what you said.
Q Okay. That's not what I say, that's what the cellular expert said, isn't that right?
A Okay.
Q And then you start calling him at 4:59 a.m. in the morning, isn't that right?
A Yes.
Q Okay. And then you start calling him ten minutes later, isn't that right?
A Yes.
Q Okay. And then you call him an hour later, isn't that right?
A Yes.
Q And then he calls you back 30 minutes after that, isn't that right?
A Yes.
Q While y'all were in bed together?
A Probably not, but probably in the same house together. We do that all the time. We literally did that yesterday because ---
Q All right. So let me get this straight after a night of drinking, right?
A No, not after a night of drinking. When you say that, it comes off like we were just out getting drunk and

that's not the case.
Q All right. After a night of playing Spades?
A Say that because we had a house full of kids, we weren't drunk.
Q Got you. You come home. You go to sleep. Issac Hemingway says he doesn't wake up until 7:30 in the morning. So what are you saying y'all wake up in the middle of the night and sleep walk start calling each other, is that right?
A No, I'm saying that if a police officer would have came and question me when this first happened, I can tell you exactly what happened. But because y'all ignored his alibi and nobody came to speak to me, we didn't know what happened, but I can honestly tell you that if her number wasn't stored in his phone and she's calling his phone because that woman she use to change phone numbers like I change underclothes, I probably Star 69 it to see who it was -- I mean, push Star 67 to see who it was. I probably did that, probably wasn't even him. I can also tell you that we seriously sit in the same house and talk on the phone. When we lived in that house, it had an upstairs and downstairs. And if he's upstairs playing the video game with Tristan or playing the game with my son and I want him to do something for me, I'll call his phone. That is the norm for us. We literally just did that last

night and that's what reminded me of what we were probably doing then.
Q But that's not what Issac Hemingway said, right, he said he was sleeping until 7:30 a.m.?
A I'm sure he probably don't remember.
Q And that's not what you said. You said you were sleeping until that time too, right?
A Again, had you guys came and questioned me we would know exactly what happened, but you ignored his alibi and just -- I don't know what you did, but nobody came and question me.
Q Law enforcement did speak to you, didn't they?
A On December the 1st after a year, when it was 11 years old. And I didn't remember anything, but nobody ever came and question me. On the first video, he said he was with myself, my son, a whole slew of people playing cards and you just ignored it. Nobody came and spoke to us.
Q All right, just yes or no answer and then you say whatever you want. Did law enforcement come speak to you about this incident?
A On December the 1st?
Q Any time?
A On December the 1st, yes.
Q Okay. Law enforcement spoke to you just want to be

clear.
A On December 1st, yes.
MR. WHITE: Beg the Court's indulgence for one moment.
(WHEREUPON, a pause in the proceedings.)
BY MR. WHITE:
Q Did you ever pick up the phone and call law enforcement prior to that?
A Did I ever call the police prior?
Q Yes.
A For what?
MR. BROOKER: Your Honor, may we approach?
(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record.)
MR. BROOKER: We have to be real careful because the burden of production is always on the government and we don't ever want to get into a situation where you're seen as if you're shifting the burden because it becomes automatic a situation. I just want to make sure so we don't get into a mistrial situation just be careful with that make sure you don't shift the burden.
(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record has ended.)

BY MR. WHITE:

Q Again, Ms. Baines, you never called law enforcement, is that right?

A I didn't say I never called law enforcement. I'm asking you why would I have called him. I don't remember calling them. What would I call them for?

Q To tell them what you just told us?

A I didn't know Issac was a potential suspect. Had I known that, maybe, of course, I would have who wouldn't.

Q Okay. And, again, law enforcement did speak to you, right?

A So you want me to do their job and call them. I didn't know. Had I known he was a suspect, I would have called.

Q But they did talk to you?

A On December the 1st, 11 months later when they arrested him.

MR. WHITE: Nothing further, Judge.

THE COURT: Redirect.

MR. BROOKER: Very briefly.

REDIRECT EXAMINATION

BY MR. BROOKER:

Q Maisha ---

A Latosha.

Q Latosha. I guess, I call these names so many times I

apologize. I get them mixed up. Latosha, December 1 of 2020 when law enforcement talk with you, did they talk with you after they had arrested -- after they had arrested Issac Hemingway?

A Yes, sir.

Q Before they arrest Issac and during the 11 months of this investigation, did anyone call you to talk with you?

A No, sir.

Q Okay. Now, I know that Ryan White asked you did you call law enforcement to talk with them. Are you an investigator?

A No, sir.

Q Is it your job to get in contact with them?

A No, sir.

Q Had they contacted you, would you have spoken with them?

A Yes, sir.

Q Okay. When they finally talk with you after they arrested Issac, did you speak with them?

A Yes, sir.

Q Okay. Do you know whether or not they talk with your son?

A Yes, sir, I know. They didn't.

Q Okay. Now, I want to ask you a couple of questions in reference to -- I think Mr. White said that around

4:59. I think he ask you whether or not you were in the courtroom when the cell phone expert spoke. Were you in the courtroom when that cell phone expert spoke?

A Yes, sir.

Q Okay. And I think you said that that cell phone if you can recall -- if you don't recall saying that cell phone expert said that there were two calls from your phone number around 4:59, around I think two or three seconds. You remember him testifying to that?

A Yes, sir.

Q Okay. Did you also remember that cell phone expert testifying that the entire time that his cell phone was pinging off of Conway, do you remember that cell phone after testifying to that?

A Yes, sir.

Q Did he ever leave Conway?

A No, sir.

Q That night?

A No, sir.

Q Okay. I just want to correct the record. I don't want just there was some innuendo at least some sort of impression that was created that y'all left the kids alone for Kareema to babysit. Who was babysitting those kids?

A My daughter Manyla.

Q How old was your daughter at that time?

A At that time Manyla was 17 years old.
Q Okay. So Kareema wasn't babysitting?
A No, she would have been 16 sorry.
Q So Kareema wasn't babysitting, is that correct?
A No, sir.
Q Okay. I think there was a lot of questions also asked about in April. I think you said that y'all were all of a sudden taking pictures of the kids. Were y'all taking pictures of these kid somehow to impress somebody at child support?
A No. Like I can't -- I don't even understand -- that's exactly how it sounded when he said that, but no, no. I didn't know. He keeps calling this hot and heavy and contested. It wasn't hot, heavy and contested. It was two parents disagreeing on child support, that is it. That is all. Actually, at the time when Maisha Burch passed away her and Issac wasn't even fighting. They weren't arguing. They were just on the phone a couple of days prior to that. He use to always have her on speaker having a normal conversation, didn't sound hot and heavy and contested to me.
Q Okay. And how often would they speak?
A They spoke on the phone a lot and speaker. Issac Hemingway always put her on speaker and I think he got that from me. I always put people on speaker. I hate

putting phones to my ear. So I heard a whole lot of conversations between the both of them when she use to call late at night and her favorite sentence was F out of here. I don't know how many times she told me that.

Q Well, don't tell me what she told you?

A But at the end of the day, she was decent.

Q Okay. Now, the photographs, all those photographs that you took you said that those photographs was taken by you on your phone just for reference? Did you know whether or not you send those photographs into DSS or child support. Did you send all of them over there?

A Did I send pictures to DSS?

Q Did all those photographs that it was suggested that you might be taking them for the benefit of DSS?

A I never sent DSS anything.

Q Okay. So all those photographs that are in your phone, you never sent them over to child support enforcement or anything like that?

A No, and a lot them pictures aren't even post anywhere, that's why they don't have dates on them. They're personal pictures between me and Issac and the kids. A lot of the pictures don't even have dates on them. The ones with dates on them is the ones that made to Instagram or well not Instagram to Snapchat. And on Snapchat, they don't even stay up that long. They

disappear. They go into my private log, but I think on Snapchat you see something for like 24 hours or something before it renews for you to put up something else.

Q Okay. Now, if you can indulge me for just a second. I'm almost finished. Now, the fact that y'all went to Antwan Kelly's the night y'all went to Antwan Kelly's house to play cards, was you drunk?

A No.

Q Was Issac drunk?

A No.

Q Was your son drunk?

A No.

Q Okay. Sure you wasn't boozing it up?

A Positive.

Q I want to ask you one more question. Were you in the in the courtroom when Issac Hemingway -- when Issac Hemingway's two interviews were played, is that correct?

A Yes, sir.

Q Okay. Pretty sure that you knew she had been murdered?

A Yes, sir.

Q Okay. Did at any point in time -- and I want to make this clear. Did at any point in time did you refuse to cooperate or talk -- did you refuse to cooperate with law enforcement?

A No. No. And when he came to my house on December 1st after they arrested Issac -- I'm sorry. When they came to my house on December the 1st after they arrested Issac, he explain to me that I didn't have to speak to him, that I could have refused.

Q But you spoke to him any way?

A Yes, sir.

Q Okay. And why did you speak with him?

A Because I wanted to give him as much information as they needed. Just like Issac, I'm pretty sure that Issac thought that he was helping them.

MR. BROOKER: No further questions.

MR. WHITE: Just very briefly.

RECROSS-EXAMINATION

BY MR. WHITE:

Q Ms. Baines, y'all live at Coastal Carolina, is that right or at that time?

A Coastal Carolina College?

Q Yeah, university yes, ma'am?

A Yes, sir.

Q And you have to go through Conway to go back to Maisha's house, isn't that right?

A You have to go through Conway?

Q Or right by Conway?

A I don't know if that's the only route. I can't

attest to that, sir.
Q So that's the route that y'all go, right?
A Yes.
Q All right. And are you aware of what has happened to that child support case?
A Yes.
Q And what has happen to it?
A It is dismiss now.
Q All right. Thank you very much.
A But it would have been dismissed any way.
THE COURT: All right, you may step down. Thank you.
(WHEREUPON, the witness leaves the witness stand.)
THE COURT: If you'll call your next witness.
MR. BROOKER: Your Honor, the next witness we would like to call is Antwan Kelly.
THE CLERK: Do you swear to tell the truth, the whole truth, and nothing but the truth so help you God?
THE WITNESS: I do.
WHEREUPON,
Antwan Kelly,
after first having been duly sworn, testified as follows:
DIRECT EXAMINATION

BY MR. BROOKER:
Q How you doing, Mr. Kelly?
A I'm doing all right.
Q Mr. Kelly, I'm going to take you back to January of 2020. Did you know Isaiah Hemingway at that time?
A You mean Issac Hemingway.
Q Issac Hemingway?
A Yes, sir.
Q And what was your relationship with Issac?
A This my friend.
Q Okay. Had you known each other for a long time?
A At that point I say maybe a little better than a year and a half. We use to work together actually.
Q Okay. Did he use to come over to your house a lot to play cards?
A Yeah, that was pretty much our thing cards or video games. We use to like to play 2K a lot. So if it wasn't cards, it was video games.
Q Okay. I want to ask you about that Saturday night. This would have been I think January the 11th of 2020 that Saturday night. Do you remember that Saturday night?
A Yeah.
Q Did Issac Hemingway come over to your house?
A Yes, sir.
Q Who did he -- was he alone or company with him?

A It was Latosha and Michael.
Q Okay. And I don't know if you remember, but you know approximately about what time would they get over to your house?
A I'm not exactly sure of the exact time. I know it was getting dark outside, so I say it was around evening time.
Q Okay. And do you know how long did they stay over to your house?
A If I had to guess, I say somewhere between one and two o'clock in the morning.
Q Okay. And who else was at the your house when I think you said Issac Hemingway, Latosha and Latosha's son came -- who else was there at your house?
A My mom, my sister, her kids and my aunt.
Q Okay. Now, just a couple more questions should be finished. Did law enforcement ever come to interview you?
A Yes, they came and interviewed me the day Issac Hemingway got arrested.
Q But they didn't interview you the day before or any time the 11 months before they arrested him?
A No, sir.
Q And when they interview you, did you tell them the same thing that you just told the jury here today?
A Yes, sir.

MR. BROOKER: If you can indulge me for just a second, your Honor. I don't think I have any more questions for Mr. Kelly.

THE COURT: Cross.

CROSS-EXAMINATION

BY MR. WHITE:

Q Thank you, Mr. Kelly. I'm going to get you down in just a second just a few questions and I'll have you out of here. When they arrived over at your house, you're not exactly sure what time it is. You weren't watching your clock, were you?

A No.

Q And when they left, you weren't really your watching, were you?

A No, but I do know it was pretty late because I remember telling them to make sure they call me to let me know they made it home.

Q And were people drinking over at your house?

A Well, I'm not gone say they was drinking drinking, but I know Tosha had something to drink. And I don't remember if Issac drink or not because I don't drink.

Q Okay.

A My mom drank and my sister dranks and my aunt drinks a little bit.

Q But you weren't watching him, you weren't keeping

tabs on him or anything?
A No, no.
Q And you don't know what he did when he left your house?
A No.
MR. WHITE: Thank you. That's all I got for you.
THE COURT: Any redirect?
MR. BROOKER: No further questions, your Honor.
THE COURT: You may step down.
(WHEREUPON, the witness leaves the witness stand.)
THE COURT: Call your next witness.
MR. BROOKER: Your Honor, the defense rest.
THE COURT: All right. Members of the jury, I'm going to have you come back at 9:30, and we're going to finish the trial tomorrow. We're going to stay here and do a little bit of work and get it ready for you. You are dismissed at this time.
(WHEREUPON, the jury was excused for the day.)
THE COURT: Any motions?
MR. BROOKER: Your Honor, we just need to renew our motions for a directed verdict, your Honor. And then, of course, I won't go through all of the previous motions, but just to make sure that we protected for the record we

deny those motions. I'm getting the charge right now let you take a look at it and see if it looks good.

MR. WHITE: Sound goods. Thank you, Judge.

THE COURT: Check the verdict form. And, I guess, we'll have the State close, defense and then State.

MR. WHITE: Yes, sir, Judge.

THE COURT: You all want to take a look at the charge real quick and just see if it suits you. I can add or take out whatever you want.

(WHEREUPON, a pause in the proceedings.)

MR. BROOKER: Can I ask a quick question, your Honor?

THE COURT: Yes.

MR. BROOKER: I think this is the reasonable doubt charge, and it says however if based on your consideration of the evidence, you were firmly convinced that the defendant is guilty of the crimes charged, you must find him guilty. If on the other hand you think there is real possibility that he is not guilty, you must give him the benefit of the doubt and find him not guilty.

THE COURT: That's Victor v. Nebraska the case is. Do you want to charge them that?

MR. TUCKER: That's my understanding of the charge, your Honor.

THE COURT: And Tommy Cooper charge.

MR. WHITE: Manning Tommy Cooper?

THE COURT: Yes.

MR. WHITE: That's a good one to get it from.

MR. BROOKER: And the reason why I ask that your Honor is is that it gives the impression and maybe I'm being too picky, but it gives me the impression that it might be asking the jury to consider -- to consider I think a burden that is improper. When it says if on the other hand if you think there is a real possibility that he is not guilty, the problem I have with that your Honor is is that -- and I been saying this to the jury. And I'll say it to the jury tomorrow. It is is that is is that the standard is not whether or not he is innocent. The standard is whether or not his guilt has been proven beyond a reasonable doubt. And if there's any suggestion that the jury should evaluate his innocence, I think it may create an improper burden. Their burden is not with respect to his innocence. Their burden is solely with whether or not the State has proven his guilt beyond a reasonable doubt.

THE COURT: I think that's what it said. You read the whole thing in context?

MR. BROOKER: Yeah, but, I guess, it's that part that said if you think there is a real possibility that he is not guilty. And I guess without an explanation

of what not guilty is, I don't have a real problem with it because normally what I do is is that for the jury define to them what not guilty is. Not guilty is the State's failure to prove guilt beyond a reasonable doubt. So I guess I would make it clear if there was a definition of what not guilty was. And that is just a failure of the State to satisfy its burden. I'll leave it to your discretion your Honor. I raise slight objection, you know. And I think it would better be worded is is that if you think there's a real possibility that the State has failed to satisfy his burden of proving his guilt beyond a reasonable doubt, you must give him the benefit of the doubt and find him -- and if you do, you must give him the benefit of the doubt and find him not guilty.

THE COURT: I'm fine with that.

MR. BROOKER: I don't know whether or not I'm mensing words or not.

MR. TUCKER: Your Honor, that's the language I'm comfortable with. I can't speak for Mr. White, but that's the charge I think I been -- I don't know how many murder cases I tried in front of you, but that's the exact language that is always been submitted to the jury and I'm familiar with that language. And, again, other judges have charged the exact same language. So I think as you quite directly pointed out when you take it in its

entirety, I certainly think it does a sufficient job.

THE COURT: Take the whole charge in its entirety.

MR. TUCKER: Yes, sir.

MR. WHITE: We're happy with it as you worded it, Judge.

MR. BROOKER: And that's fine. That's fine. You can keep it that way your Honor. It's just that ---

THE COURT: That way you have a record.

MR. BROOKER: Yeah, I want to have a record of my objection of that language, and, of course, that's cool almost finish your Honor.

THE COURT: Take your time.

MR. BROOKER: Ryan is a fast reader compared to me. I'm like a Tortoise almost finished.

(WHEREUPON, a pause in the proceedings.)

MR. BROOKER: I'll just say this for the record your Honor. I think the malice charge I think implied malice and I think I'm right. I think we had this conversation I think during sometime during this trial.

MR. WHITE: I'm sorry.

MR. BROOKER: Implied malice. I think implied malice is okay. And I think I even argued I think earlier during the course of this trial is is that implied malice is -- the only time that implied malice can't be charged

is in a situation where self defense has been invoked. There's been no self defense in this case. I don't know whether or not I think prosecution told me that I might have been wrong. I'm going to do research tonight to confirm that I am right. And if I am right, then, of course, I will have no objection to implied malice under the circumstances because self defense is certainly not an issue in this case.

THE COURT: Thank you.

MR. WHITE: Thank you, Judge.

THE COURT: So you all in the morning. Thank you.

(WHEREUPON, the proceedings were concluded for the day to be reconvened on March 1, 2023.)

(WHEREUPON, Court's Exhibit No. 1 was marked for the record.)

THE COURT: All right. I want to let everybody know in the audience that we're getting ready to do closing statements. The lawyers are going to get up and give their closing statements both sides and I'm going to charge the jury. I know a lot of you are emotional and you have a lot invested in this trial, but I want to let you know I don't want to see you do anything. I don't want to see you act out. I don't want to hear anything. If I do, I'm going to point to you and I'm going to have

that deputy right there, haul you off to jail. So if you can't abide by that, you leave now. All right. If you can sit there like a knot on a log, you're welcome to stay, but I'll be watching you. All right. You ready?

MR. WHITE: Yes, sir, Judge.

THE COURT: You ready?

MR. BROOKER: Yes, sir.

THE COURT: All right, go ahead and bring the jury.

(WHEREUPON, the jury came into open court.)

THE COURT: All right. The State's recognize for your closing statement.

MR. WHITE: And therefore it is ordered that this case be dismissed. And therefore, it is ordered that this case be dismissed. That is exactly what happened. And that's exactly what Issac Hemingway wanted to happen. February 25th 2020 about a month after the brutal murder of Maisha Burch and Andrew Legette, a child support case pending between Issac Hemingway and Maisha Burch is officially dismissed. And it reads custodial parent Maisha Burch passed away no arrears owed. Any arrears owed shall be stricken. He's debt free. Doesn't have to assume those $671 a month payments. It's over with. And make no mistake, ladies and gentlemen, it's the motive here.

It's the financial motive, but it's not just that. This is about him being unable to manipulate the system, being unable to manipulate Maisha Burch. He could no longer control giving her money. He can no longer control what she was going to do with it. If you have any doubt in your mind that that is a hundred percent the motive behind why she was brutally murdered on January 12th 2020, ask yourself this who on earth benefits from her death. Only one person, only one person and don't take my word for it.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: Now, in the first interview, he says it's fine. He didn't have any problem paying. You heard in that second interview you'll hear it in just a second, he did have a problem with it. He had a major problem with it. And he was fighting it every step of the way.

(WHEREUPON, video statement played for the jury.)

MR. WHITE: Tomorrow, that interview conducted January 15th two days after Maisha Burch and Andrew Legette bodies are discovered. Two days, the very next day on the 16th is the final hearing where the judge is going to say you got to pay on all your kids.

(WHEREUPON, video statement played for the

jury.)

MR. WHITE: He got to live too. He doesn't mean Maisha Burch and Andrew Legette's death. He got to live.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: In that first interview, Maisha's a great mother. We get along great. I got no problem paying child support and that amount is a little crazy, but I got no problem. Here at the negotiation conference, she's pissing me off. I'm not about to give her that money. I want to go in front of the judge. I want to talk about her character, that's a sharp departure from that first interview.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: My kids' mom can call any time. No matter what my girlfriend says. My kid -- their mom can call any time.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: You can see a trend. In that first interview, everything is fine. Pay no attention to that child support case. I had it under control. We were getting along just fine.

In that second interview, he's intent on

assassinating her character. And I want to stop right there and let you know, ladies and gentlemen, you never heard not one time from that witness stand. Now, you heard the defense attorney ask it, ask the question. As far as what actually came into evidence, you never heard that she -- Maisha Burch use drugs. You never heard he kept saying about cocaine, isn't it true about cocaine. Nobody ever said that. It came from them. That comes from him in his statement. He's putting that out there. That is not in the evidence.

The only thing that was present in her system at the time of her death was alcohol and she was in her own home. The only evidence you heard about Maisha Burch that came from that witness stand and into that microphone and is recorded right there by the court reporter was that she was a good mom. She was strict. She cared about her kids. And she was taking Issac Hemingway back to court for child support. Anything negative comes from that table right there.

February 12th 2019, this is where the child support starts. Notice of financial responsibility Issac Hemingway is court ordered duty support on four of the children -- four of the five, if you want to know Izyana, Kareema, Tristan and Mariah. Negotiation conference is scheduled for April 17th 2019. The next day February 13th

he's also ordered duty of support now on Ivy. So now all five kids he's ordered duty to support those children. And, again, that negotiation conference on all five is going to be held April 17th. April 17th comes negotiation conference he's found to be the natural parent of Ivy. He's ordered to start paying $322.35 a month. Payments are to begin May 1st of 2019. But he does something interesting at that hearing negotiation conference. He requested genetic testing on all the rest of the kids. He's saying hold up now those aren't my kids. I'm not paying on those kids.

So his girlfriend gets up here and says everything was great. We were one big happy family. We were down there eating sandwiches on the beach. I just want you to know at that same time he was saying those kids aren't mine. And you can see it right here in black and white request genetic testing on the children Izyana, Kareema, Tristan and Mariah.

And his next sentence always struck me. He puts that in. He requests that. And then it's on Maisha to take the children and go get genetic testing on May 15th 2019, it's scheduled. She's got to round up her kids. And imagine that conversation where we going, mom. Well, I'm trying to get some money to support us and support you guys and your dad says y'all aren't his, so I got to go up

there and get genetic testing to prove he is your father. That's what she's dealing with.

September 10, 2019, notice of financial responsibility court ordered duty of support for all the children. So now genetic testing is over. Court says you gone pay. You gone pay. He, again, disputes the amount. The negotiation conference and this is the last one is scheduled for December 11th 2019, keep an eye on that date. We getting closer and closer to the murder of Maisha Burch and Andrew Legette.

December 11, 2019 payments increase to $671.96 a month, final hearing scheduled for January 16th 2020, January 16th 2020. Her body is found January 13th 2020. There is not enough coincidence in the world. And what happens on January 16th 2020 -- even though on January 16th, he says I know I got a hearing tomorrow. I know it. He tells law enforcement we got that final child support hearing tomorrow. He doesn't show up. He doesn't show up. He doesn't go into court say, hey, you know, Judge, I just want to let you know the mother of my five kids has been brutally murdered. You know, I just want the Court to be aware, but no they dismissed it because nobody shows up action is dismissed. And then later on when they find out the actual reason for Maisha Burch's failure to appear, they dismiss it based on her death. It is motive,

ladies and gentlemen. And on that date, any financial obligation he had to her, any control she had over him, vanishes, is gone.

Let's talk about the time line. Those hearings were coming up, coming up. He comes and picks up the kids. Now, you can flip through these photographs from the defense and you'll see they're sporadic. They don't refute what Kareema said. They don't refute what Stephanie Reed said from that witness stand. She said we saw him few weekends here and there. And what did Kareema say. When he would come and he would get three of the kids or two of the kids, he would very rarely get us all. That very rarely ever happened. In fact, Stephanie Reed said in four years Maisha Burch had been living there, she only saw him come and get the kids four times.

Take a look at the time line 12:00 p.m. on January 11th, this is a Saturday. Issac Hemingway picks up Ivy, Mariah and Tristan from Ms. Burch at her home takes them to Conway. Kareema at that time was performing community service at church. Think about this, he gets the three kids. He takes them all the way to Conway. He goes out of his way to come all the way back to get Kareema.

I submit to you, ladies and gentlemen, the reason he did that is because when he came to get the

kids, he didn't realize Kareema wasn't going to be there. So he comes and he gets those three kids and he sees Kareema's not there. He realizes I got to get them all because he knows what's coming. So he takes them all the way back to Conway, hangs out for a while. And he comes back to get Kareema between five and six, returns back to Conway. Between 9:30 and ten, he goes to Antwan Kelly's residence.

Now, ladies and gentlemen, you know, I know what it's like to have a child. I know what it's like. Every now and then you got to get away, okay. This is a man who's claiming he's father of the year, okay. He goes and gets them. He hangs out with them for a couple hours before he's out the door again. And then the next morning, he wakes up and guess what, he's gone again. But he tells law enforcement the time with them is so valuable. It's important. 12:01 a.m. he says he's back home and in bed, that's important what he tells law enforcement.

Now, you heard Savion. He lives right here, ladies and gentlemen. This is the incident location right here. This is the old Terrells Bay High School. It's abandon now. This is Savion and Stephanie Reed's house. Savion said that sometime after midnight he couldn't say exactly when it was. He sees a car -- hears

a car first, come down Taft Watson Boulevard and drives around the school. He comes and parks right here said he couldn't make out the description of the vehicle, didn't see anybody, but the vehicle stayed for about 15 minutes. And then it was gone again, that's sometime after midnight.

7:00 a.m. Issac Hemingway says he wakes up and he says the sun was just peaking. On January 2020, I mean that's probably a little closer to 7:20, 7:30 the sun's peaking, but we'll give him seven a.m. He says that's when he's waking up. Ten or 11, he goes to a friend's house. Around 12:00 p.m., he says he goes to the Family Dollar. And you heard from Agent Barkdoll. He went and retrieved video surveillance. He did not identify Issac Hemingway on that video. About 7:30, 8:00 p.m., he takes the kids back to Marion.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: Now, I'm going to do something I don't usually do. I'm going to share some personal information with you. I have a child. And her mother and I we split custody 50/50 right down the middle. Let me tell you something, when she comes home to me or she goes home to her, when we pull up in that driveway, she's out the door. And it doesn't matter whether it's light inside

that house or not, she's headed to that front door. Why didn't those kids do that here. Kareema says it's because when they pulled up Issac told them don't move, don't get out the car. Why didn't he get out the car, suppose to be dropping your kids off at their mother's house. Why wouldn't you get out the car. It's dark okay that's fine. It's dark outside go to the door, knock on the door, check on things, that's peculiar behavior, ladies and gentlemen. Before we get there...

(WHEREUPON, video statement played for the jury.)

MR. WHITE: Now, backing up, this is January 13th. And the call he's referring to is when Shkyria finds Maisha Burch's body and Andrew Legette's body, they call him he's at work. But backing up just a second on January 12th, they pull up at Maisha's house nobody gets out. They go to a neighbor's house. And what does everybody say happens. As soon as they got to that neighbor's house, Kareema went straight inside. She got out the car and went straight inside, comes back out. They go to Shkyria's apartment complex. Shkyria's on the way back. She's not there yet. And what does he do, he leaves them with a neighbor.

Their mother is missing. And he drops them off and he hits the road. And the next day Maisha Burch and

Andrew Legette are found and that call comes in. And let me tell you something, ladies and gentlemen, I care about this case. And I care about everybody in this courtroom. If I got a call right now that something had happened to my daughter's mother, I be out that door. I be gone. I don't care if I didn't have a car, I find one. He doesn't even bring it up to his supervisor says he brings it up to Chris. He working with Donovan. He gets a call that the mother of his five children has been brutally murdered and he barely flinches. He stays at work.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: Okay. You don't get off work, that's strange. You don't tell anybody you're working with, that's strange. You knock off. Now, you have no -- nothing holding you back. And he just says -- I think Agent Barkdoll says you just went home. He said I go home every day. It's just another day.

I mean, his kids are suffering in Marion with the death of their mother, he doesn't go check on them. He says they're spread out. Well, Shkyria testified they were all together under one roof. He never called. He never checked on them. Kareema said the same thing. I think Kareema said the only way they could get him to come around was they called him and said, you know, it's

Tristan's birthday we're trying to keep some normalcy here why don't you come over to the house and let's celebrate his birthday on the 15th. And he comes and what does Kareema say he barely talks to her, that's peculiar. I don't care who you are that's strange behavior.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: There is always an excuse. Let me tell you something, he could have rescheduled that, if it even existed. Call DSS, hey, the mother of my children been brutally murdered. I want to be there for my kids. They would have rescheduled it, strange behavior. I mean, time and time and time again after the incident occurs. And it's not the only strange thing.

Call log is important, ladies and gentlemen, Sunday, January 12th. Now, I want to get into -- a guy in my office likes to say the defense wants you to focus on the string beans hanging off of the plate, so you don't look at the meat and potatoes. And that's what this is and that's what's happening. It's not in dispute what he did up until midnight or what he did after say 9:00 a.m. the next morning.

It's what happened between midnight and 4:49 a.m. And the calls that reflect seven a.m. that's what is important. That's what's important here.

12:01 a.m. phone call from Maisha to Issac Hemingway four seconds. Expert says that's probably not a call. It doesn't go through or nobody answers. 12:01 a.m. same thing. 12:02 this is a call. This is a call. They speak. Maisha Burch calls and speaks to Issac Hemingway at 12:02 a.m. on Sunday morning. And when that pings off that tower, it pings right here at Coastal Carolina University. It's important, ladies and gentlemen. This is his home. It doesn't mean he's at home, but it means it's consistent with his home, but he says when he gets that calls he's in bed. So we can go to that, that's fine.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: As she did that time of night, she checking on the kids, sounds like a pretty good mom to me. But what he just said is different than what he's gone say in that second interview.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: So what was it. Did you talk to her or you didn't.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: So at 12:01 and 12:02 he says now

he's saying it was just a missed call. I didn't speak to her, but I was at home in the bed and that is consistent with the cell tower information. It doesn't mean he was at home in bed, but he could have been. It makes no difference 4:49 a.m. this is where things get really peculiar, okay. And I want to make it clear that Star 67 and I imagine that we all are familiar with Star 67. If you put in Star 67, it blocks your number on the other end of the line, okay. Say it again, if you put in Star 67 when you call somebody else, it blocks your number. And on the other person's phone, it says no caller ID. At 4:49 a.m. Issac Hemingway does that twice to Maisha Burch, twice. We know that because it's two different times on the calls neither go through. These calls don't connect. There's no voice call, but twice Star 67. Before I go into that, just keep in mind, ladies and gentlemen, that's when investigators going over these times they're in that standard time what have you. When Verizon sends it, it's not in eastern standard time, so their operating on those. These are the correct time stamps, but they confront with the time nonetheless.

(WHEREUPON, a video statement is played for the jury.)

MR. WHITE: Lots of stuff is important about that that last statement. He knows about pings, okay.

He's familiar with that. And he knows enough to say, hey, you want to check my pings because he knows during that time they're not going to find any pings. I'm going to tell you why in just a second, but that 4:49 call this is important, ladies and gentlemen. Those early calls at midnight they ping down here around Costal Carolina and this is his home, so that would be consistent, okay.

At 4:49 a.m. when he tells law enforcement consistently that he's asleep in bed beside Latosha. He says that over and over again. At 4:49 a.m. he's pinging up here closer to Conway. He's moving. He is not at home. And I ask Latosha I said how you guys go to and from Maisha Burch's house, she wanted to avoid the question at first. You know there's lots of ways that you can go to and from that way. I said which way do you go, which way do y'all go. And she had to admit they go through Conway. To Maisha Burch's house and back, they pass through Conway.

Ladies and gentlemen, I submit to you at 4:9 a.m. he is coming back from Maisha Burch's house after he murdered Maisha Burch and Andrew Legette. And he gets here, he turns his phone back on and he makes a mistake. He turns it back on a little too early. A little later and he got to ping near his home and turn it on too early because he wanted to call to Maisha Burch's number and

block it to see if anybody would answer. He wants to know if anybody heard those shots. He wants to know if law enforcement is on scene. He wants to know if neighbors are on scene because he eventually is going to have to go home. And he needs to know what he's coming home to because is it going to be a house of hysterical children having to learn that their mother has just been murdered, that's what these calls are here. He's coming back, but he doesn't go home quite yet and this is why we know that. 4:49 several calls from Latosha to Issac Hemingway, several calls 4:59 up to 5:05 calling him over and over and over.

Now, she said that that's something they do a lot. Now, if you believe that for a second stick around after this trial's over, I got some ocean front property I want to sell to you, okay. She sat in that witness stand and she testified that the house is so small when they have more people over, they have to rent out another place. In that small house, they call each other and talk. Not only is that unbelievable, those 4:49 calls put the phone away from the house. And the other thing if she's saying that she's responsible for star 67 that number, first of all, why. And second of all if she is doing that from Issac Hemingway's phone, then she has the phone in her possession. And she also has her phone in

her possession, so what does she want you to believe. She's got both phones and just calling it back and forth, no.

Ladies and gentlemen, sometime before 4:49 she rolls over in bed because she's got that Life 360 on his phone. She rolls over in bed sees he's not there. She goes to the tracker, his phone's turned off. Where is he. Where is he. She starts calling. She's probably called him several times before this. But it doesn't register on the cell site because the phone's not on. And as soon as he comes back into town, her calls start coming through. She is wanting to know where he is, but he doesn't answer. Again, 5:05 and then 6:11 still an hour later, she's still calling him. 6:39 he calls back twice. 6:41 he calls back no answer. Now, those are all the calls before 7:00 a.m.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: Sun was peaking. Ladies and gentlemen, the way I presented it, I submit to you that's exactly how it happened because the way Latosha -- think about it. I mean, the way Latosha described it cannot be the case. None of that makes sense. And that's why she got so defensive when I ask her about it. I'm trying to be polite, but that's why because she knows it doesn't

make sense. She knows.

Let's talk about the crime scene home of Maisha Burch and her five children. On the night of January 12th -- is January 11th to 12th, she's at home with her friend Andrew Legette whose body is found on the couch. And you'll see in just a second, ladies and gentlemen, the only sign of a struggle inside of this living room is one piece of hair that ultimately is rule to belong to Maisha Burch. There's no sign of a struggle whatsoever in this living room other than that piece of hair. He was killed in his sleep. Issac Hemingway walked up on him after entering that house. He shot him first to eliminate the threat.

And then when Maisha Burch heard it, she came out of her bedroom where there was a struggle in the hallway. The struggle leaves his DNA on the front side wall, leaves his DNA under her fingernails. He fires one shot to her left cheek.

Pathologist said that wouldn't have killed her, but he would have thought she was dead but think about that. You hit a gun it's a close contact. You get a gun that close to somebody's left cheek and you pull the trigger and they slump down on the wall, you think they're dead and that's what happened. He walk back here to make sure he had killed Andrew Legette. And at some point that

hair falls there to the floor. At that point he probably hears Maisha moaning, groaning. She's not dead. He comes back. He steps over her body. And this would match the trajectory that the pathologist testified to. He walks around her. He fires three times into the top of her head and the fourth is meant for her head and misses and lands in her right shoulder.

This is the view Savion would have had of the car coming around here. This is the back door, ladies and gentlemen. And let me point out, Issac Hemingway testified before this school was abandoned he went to this high school. He's familiar with this area. This vehicle right here is a police car. It's in the exact spot Savion says that car pulled up. And look at that line of path right here to the back door where his DNA is deposited, that's the door and it's on that interior door handle. And this is the front door. Ladies and gentlemen, there was a mark here, and, again, they want you to focus on string beans not the meat and potatoes.

Todd Schenk got on that stand he says he's been to over 500 crime scenes. This guy has seen a lot of blood. He knows when it's blood and when it's paint. He knows when it's blood and when it's kids writing Crayons on the wall. He can tell it. That guy's a professional, ladies and gentlemen and don't let the defense try to

confuse you otherwise.

And there's that hair as you come in the door. There's the body of Andrew Legette. You know, the only thing you can say about that is maybe he was fortunate that he didn't suffer the way Maisha Burch suffered. Two shots to the left eye and Andrew Legette would never speak to his family again.

Down that hallway Maisha Burch heard those shots. She comes out and there's a confrontation. You could see it, ladies and gentlemen, this is the front when that DNA report and I'll point it out in just a second. It says the front side wall or front house side wall, this is what it's referring to. And keep in mind, I'll bring it up in a second. They were not able to exclude Issac Hemingway's DNA off that front. And this is what they're swabbing these marks. These are signs of a struggle. They're swabbing. And there is Maisha Burch slumped over after being shot to death. And there's some more of those marks that they swabbed.

And, again, Issac Hemingway was not excluded from that wall. The opposite wall. They were able to exclude him. And the defense got no objection to testimony coming in. When it's that time that excludes him, it's okay that sounds right. When it's the testimony that says that's his DNA, then he's got a problem with it.

Pay attention to that.

There those marks and there is the hair. And the hair is consistent with the hair that's found on the floor in the living room. You can see again DNA is recovered from underneath her fingernails. They appear to be broken. And there she is just a tragic situation, a tragic that I cannot imagine the family has to deal with. I can't.

I want to point out something that struck me in this case and was pointed out to me by investigators who did a great job in this case. On January 13th, January 14th, January 15th when Issac Hemingway is brought in to give a statement, law enforcement has no idea -- Judge, beg the Court's indulgence one moment.

THE COURT: Take your time.

(WHEREUPON, a pause in the proceedings.)

MR. WHITE: Law enforcement has no idea whether or not Maisha Burch is the intended target, if Andrew Legette is the intended target or they are both the intended target. The only person who would know that would be the person who killed them.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: How on earth. DNA analysis, ladies and gentlemen, you heard from Maryann Boehm that lady is

an expert in the field. What did she say. She said even if comparison standards were all of Issac Hemingway's biological children -- this is important. I want to make sure y'all heard this when she testified to it. Even if all the biological children submitted comparison standards, that would not have changed her analysis and her interpretation of the comparison standard of Issac Hemingway to the DNA in the house.

It wouldn't have changed at all. The results as to Issac Hemingway would be exactly the same. And she said the same thing about the crime scene log. If you got all their standards, would it have changed the analysis as to Issac Hemingway, not one bit.

Her results were peer reviewed by two other experts. This lady been doing it and testified I think 83 times as an expert been doing it for 16 years. She checks her results. She makes sure they're accurate. She sends it off to two other people who are also experts in the field. And they said I agree with it.

Now, this is important. She is a scientist. She only deals in likelihood ratios and exclusion. She will never -- I don't want you to misunderstand DNA. She would never no matter what say that is definitively his DNA. That never happens. That is not what she can testify to. She only deals in it is this times more

likely that it's his. So that gives the defense the ability to stand up and say like he did, you can't say it's his DNA, can you. Well, no, but she can say the likelihood is astronomical. She can say that.

Here's the point, ladies and gentlemen, all though she can't say it because she's bound by, you know, policy and procedure and her scientific expertise and her ethics. Although, she can't say it, let me tell you who can, you can. You can look at that report and you can see those numbers. And you can say, hey, that's his DNA. I'm sure of it. You can say back there as many times as you want. And it will be hard to argue with it.

(WHEREUPON, video statement is being played for the jury.)

MR. WHITE: No way, no how. I want to play a bunch of clips when he says it over and over again. I don't mean to bore you, but I want to emphasize it. Before I jump there, I missed one point that I want to bring up about the crime scene. The crime scene there were no shell casings recovered from the scene. And it's two reasons that could have happened. It's a revolver that doesn't expel shell casings or shell casings were picked up, got the firearm expert who came in he tested projectiles. He said most likely .22 caliber revolver.

Now, Kareema got on that stand -- and, ladies

and gentlemen, that young lady is 16 years old. She was 13 when this happened. She's put in an impossible situation. And they want to imply that she's lying because she hates her dad.

Well, let me tell you something if that were the case, if she made up her mind to lie to convict her dad, wouldn't the lie be big, wouldn't it be, hey, not only did I see him with a gun at that time, I saw him with a gun the night he killed my mom. He was waiving it around saying I'm gone kill her, that's not what she said. She just testified very broadly to the description she saw of that gun in the back of that car that her brother uncovered from that towel. And remember her dad came out, Issac Hemingway, and put it in the backseat.

And how did she describe it. She said it's one of those guns that fold out from the side, it spins, put bullets in it and close it back. And I gave that exact description to the firearm expert and what did he say, a revolver. Andrew Legette and Maisha Burch are shot a total of seven times said the revolvers make -- carry more than six shots. Do they make one's that carry more than six shots. He said, yeah, of course. Even the gun she sees him with is consistent with the crime scene and the projectiles recovered from the body.

(WHEREUPON, video statement is played for the

jury.)

MR. WHITE: That's convenient. He doesn't say that in the first interview. He brings it up in the second interview. Let me tell you something, ladies and gentlemen, you not going to grab somebody's jeans and get DNA under your fingernails.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: Father of the year. First time a drunk rage nobody's saying -- he said drunk rage. No such thing as I got into a drunk rage and he catches himself and he moves on. Law enforcement doesn't put that in his mind. They ask him if he was drinking, but he says ain't no such thing as me being in a drunk rage and then he quickly moves on.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: The last, ladies and gentlemen, DNA. This is the likelihood ratio table anything above a million is very strong support, okay. Start first with the swabs from wall of hallway front of house side. The DNA profile is approximately a hundred times more likely if Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if two unidentified unrelated individuals contributed to the

mixture, that's moderate support. But, again, he could not be excluded from that front wall. His DNA cannot be excluded and she was happy to exclude. I mean, she excluded. She excluded him on the other wall. So why wouldn't she have excluded him on this wall unless the DNA is present.

Now, fingernail clippings or fingernail scrapings, left fingernail scrapping from Maisha Burch. The DNA profile is approximately 270 times more likely if Maisha Burch and Issac Hemingway contributed to the mixture than if Maisha Burch and an unidentified unrelated individual contributed to the mixture. You heard the expert. She completely shot out the defense's theory of transference. She shot it right out from underneath them. She said transference in a fingernail scrapping case, you would see three DNA profiles. And that makes sense because as you transfer the DNA and you get scraped, you would get the DNA that you're transferring along with the DNA from the person who's doing the transferring. And that's not what's happening here. It's only two individuals under those nails. One is Maisha Burch obviously. The other is Issac Hemingway. Ladies and gentlemen, these are both moderate support, okay. Fingernails and wall are moderate support. I submit to you that they are significantly strengthen by the fact

that not 20 feet away is that back doorknob that has astronomical support for Issac Hemingway.

Swabs from the back door exterior door handle of the residence, she did two different proposition sets supporting Issac Hemingway. And I want you hear it too. The first DNA profile is approximately one billion times more likely that Issac Hemingway and two unidentified unrelated individuals contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture. Very strong support is anything over million. This is one billion.

But she goes even further in proposition set three. The DNA profile is approximately 2.3 quintillion times more likely if Andrew Legette, Issac Hemingway and an unidentified unrelated individual contributed to the mixture than if three unidentified unrelated individuals contributed to the mixture. Ladies and gentlemen, 2.3 quintillion. I mean, that's what they're dealing with. That's why she can't say for sure. She know it says likelihood. It's one in how many ever people there are. This is 1.23 quintillion times. That is more people -- and you heard her that is more people than have ever walked the face of this earth. If that don't convince you, I don't know what will. And, again, she can say because she's bound by her scientific interpretation. She

has to stick to the likelihood ratio. You don't. You can get back there and say, that's high 2.3 quintillion, that's his DNA. You can say that. And you can say since that's so close to the other ones that have moderate support, that lends support that that's also his DNA because he couldn't be excluded from those two items. And it's moderate support that they're his DNA.

Ladies and gentlemen, in just a second, Mr. Brooker he may address you, he may not, but throughout the course of this trial, he's tried to distract you from what I just showed you. What I just showed you was overwhelming evidence of the guilt of Issac Hemingway.

Maisha Burch died in a brutal way trying to get support for her children. Andrew Legette died because he was in the way. This is a case about Issac Hemingway loosing control. This is a case about him taking control back, but now you're in control. When you go back there, I want you to him find him guilty.

THE COURT: All right, ladies and gentlemen, we're going to move on -- you need a restroom break? You do. Do not discuss the case.

(WHEREUPON, the jury retire to the jury room.)

(WHEREUPON, a break was taken.)

THE COURT: Go ahead and bring in the jury.

(WHEREUPON, the jury came into open court.)

THE COURT: The defense is recognize for closing statement.

MR. BROOKER: Thank you, your Honor. Good morning everyone. I guess where I'm going to start in the process is talking about the jury selection process itself. It's how most trial begins. And, of course, you can remember last week we had a courtroom full of potential jurors. I came here. And, of course, you heard the judge go through the qualification process. He asked the jurors a bunch of questions to try to determine and make sure that they were qualified to sit as jurors. And then after he was assured that everyone was qualified to sit as a juror, he then ask -- he went through what's called voir dire process where he had asked the jurors a bunch of questions related to whether or not they can be fair and impartial, whether or not they can be fair and impartial.

After voir dire was completed and that we were assure that the juror pool could be fair and impartial, then came the process of actually selecting the jurors. The process of selecting all of you that are sitting on the jury pool right now. And you heard where the government had strikes. The defense had strikes. Witnesses came up or excuse me -- potential jurors came

up. Of course, we had to decide whether or not we will accept or reject this juror. Some jurors were accepted, some jurors were not accepted. What remains are you. You are the people who are selected to hear this case.

And there was a reason why you were selected to hear this case of all of those people who was in that pool. There was a reason why you were selected. You were selected because -- let me pull up this and, of course, you can follow along with me. The ability to understand legal principles that make up the criminal justice system and the evidence presented at trial. Whenever the jurors are being selected, this is extremely important. Those jurors ability to be able to understand the legal principles that make up our criminal justice system, some of them can be very complicated.

In order for the criminal justice system to work, you have to be able to understand those principles. And you have to know what they mean. And you have to know how to apply them. That's why you were selected. And then also not only to understand the legal principles that make up the criminal justice system, but also understand the evidence is going to be presented at trial. It's crucial for a jury to be able to do that. Because, again, in some trials, I been doing this for 23 years now. I've done more trials than I care to remember.

Some trials are very simple. And what I mean by simple. Now, don't confuse simple with being important. Every trial is important. But some of them are less -- are simpler than others because some of them you don't have complicated evidence like in this case. DNA evidence, cell tower mapping and tracking information that was presented to you. Most of the time, a lot of trials they're just witnesses who get up on the stand and they testify. And the question is who do you believe. Do you believe this person or that person, but no complicated evidence that you have to decipher. This case does. And it's critical. It's critical that you be able understand to that.

The next reason is or duty is that you have to be able to without passion or prejudice apply the evidence or lack of evidence given to you by the government against the law that is given to you by the judge without passion or prejudice, that is critical responsibility of the juror. And the reason why it's critical is specifically in a case like this where we talk about the death of people. It's emotional. It is emotional. And as you've already seen in evidence there are photographs that are in evidence up here that will go back to the jury room with you and their photographs of the decease bodies.

Now, most of us don't see that every day. Don't

see that at all. And it's bound to have some sort of affect on you. It would be unnatural if it didn't, but the duty of a juror another reason why you were selected is your ability to be able to push aside that passion and make these decisions based upon an application of the evidence or lack thereof against the law that's given to you by the judge. It is absolutely critical to be able to do that.

And, of course, the third responsibility of the jury is to be able to reach a conclusion that the law requires. And you probably think, well, that's kind of funny. What does that decision or what conclusion does the law requires. The law requires a conclusion or a decision that is based upon the law. It requires a decision or a conclusion that is based upon the law not based upon emotion, not based upon passion, not based upon feelings. It's got to be based upon the law. That's the reason, ladies and gentlemen, why you were selected out of the pool.

Now, if you know anybody that was in that pool, I don't want you to go back and say, well, Attorney Brooker said y'all can't understand the legal principles of the law, that y'all are incapable of being fair and impartial. That's not what I'm saying. I'm sure there's a lot of people out there that was capable of the same,

but this is your responsibility. This is your duty. Now, we understand that. Excuse me for just a second, I don't have the best eyesight.

Now, let's talk about what must be proven. We've talked about what your responsibility is. Let's talk about what must be proven. And it's just simply what has been charged. The government has charged Isaiah -- Issac Hemingway with murder of two people. And this is just a definition of murder as it comes directly out of the code. It's the killing of any person with malice and aforethought expressed or implied. I'm not going to go into great detail about what malice is and aforethought is. Malice is just simply is killing someone with anger. Aforethought is just killing someone after having contemplated. It relates to intent wasn't an accident. You thought about it and you did it, that's what aforethought is. It's an intentional act after contemplating it. And then, of course, possession of a weapon during the commission of a violent crime is very simply is is that the government has to prove to you that he had possession of a weapon at the time in which he committed the violent crime of murder.

This is what has to be proven in each and every element of that has to be proven, each and every element of that has to be proven. Now, who must prove this. And

I put this in big red letters government, government, government. And the reason why I put it that way is because the burden of proof is always on the government. It is absolutely entirely at all times on the government. It never shifts to the defendant. In our system of justice, when the government accuses a citizen of committing a crime and seeks to deprive that citizen of life and liberty and property, and I define property as freedom. It's the greatest property that any of us owns is our freedom, our life and our freedom. And when the government seeks to take that away from you, they are the ones who have the burden of proof. It is on the government completely and one hundred percent when they're trying to take our property away from us, our freedom our life.

And if you can remember at the beginning of opening arguments, I said to you that if myself and Issac wanted to we could have sat there and slept at our table and not say a word, just went to sleep. Because the burden is never on the citizen, it's always on the government as it should be.

And I also said something to you during opening remarks. And I told you that because the burden is entirely on the government, then when you go back in the jury room to evaluate this case if there is missing

evidence, if there are things that are not there, you must hold the government responsible, that is their responsibility. If there is -- if the evidence is not logical, if it doesn't match up, if what you need in order for you to carry through with your duty is not present whether it be the existence or lack of evidence, whether it be the logical reasoning of the evidence. If it's missing, you have to turn to the government. You never turn to the citizen and says why this, why that, what about this, what about that. Why didn't you explain this. Why don't we know that. It is the government. That is their awesome burden. It's a tremendous one.

And that takes me next into my next page and that is how you must -- the government prove murder and possession of a weapon during the commission of a crime. How they go about proving that. What's the standard of proof. That's beyond a reasonable doubt. It's beyond a reasonable doubt. And, of course, South Carolina our judicial system has attempted to define what beyond a reasonable doubt is. And I think what the judge is going to instruct you, of course, if I'm wrong, you always listen to the judge on the law. He's responsible for providing you with the law.

But I think he's going to tell you that South Carolina says it's proof beyond a reasonable doubt is

proof that leaves you firmly convinced of a defendant's guilt. It's proof that leaves you firmly convinced of the defendant's guilty or what the heck is that. What that means is is that -- what that means is I guess try to put this in a way that might be a little more understandable. What it means is is that the government must eliminate all actual and substantial uncertainty raised by the evidence, the facts and circumstances shown by the evidence or the absence of the evidence. They have to eliminate the government, eliminate actual and substantial uncertainty.

Now, do they have to eliminate all uncertainty, no. That's why it's called beyond a reasonable doubt. It's not beyond doubt because some doubt is unreasonable. Some doubt you may be, you know, may not be frivolous. It's beyond a reasonable doubt and that's why they must eliminate all actual and substantial uncertainty, not all uncertainty, but actual and substantial uncertainty raise by the evidence, raise by the facts and circumstances shown by the evidence or the absence of the evidence. It's the highest burden that we have in our judicial system. I can't begin to express to you how high that burden is and the reason why that burden is so high and it should be, it should be because like I said before we're not dealing with money. We're dealing with lives and freedom. It's the most precious things we have as

citizens.

Now, to kind give you an idea of high how this burden is, I quote two scholars William Blackstone. And William Blackston says it is better that ten guilty persons escape than that one innocent suffer. And William Blackstone is an English judge and jurist from the 17th Century. A quite brilliant man, that's what the literature says. And then, of course, not to be undone, I would say Benjamin Franklin. And, of course, everyone here may know who Benjamin Franklin is is Benjamin Franklin is one of the persons who authored the United States Constitution and he's the signature to that. He was one of the persons who help construct the system that we live in today.

He was very important in our history. He was an inventor. He was a scholar, but not to be undone. He says it is better that a hundred guilty persons should escape than that one innocent person should suffer. And the reason why I give you these quotes is is to give you the height of that burden, to give you the height and the enormity of that burden. Like I said, I don't have the words to express that, but this is just an illustration of straight what they thought that burden was. It is extremely high. And this burden always rest with the government.

So now that we understand that, let's talk a little bit about what this case is about or the case. This is a case of murder. I said this to you at the opening remarks. This is not so much of a case about what than it is about who or as I put it here, it's more about who, than it is about what. And what I mean by that is is that we have a basic understanding of what happened. We don't know everything. We have a basic understanding of what happened. One or more persons we don't know how many.

And the reason why we don't know how many is if you can remember when the arm's expert testified, and, of course, they collected all of these bullets that are in evidence. That the arm's expert says that the bullets were damaged to the extent in which he could not determine whether or not they were fired from the single gun. So it's a possibility that they could be fired from multiple guns. So we don't know exactly whether or not it was one or two people or three people. We don't know that at all, but what we do know is that one or more persons entered Maisha Burch's home sometime during that weekend and shot and killed her and killed Andrew Legette. That's what we know. We know that they were murdered.

What this case is about is who, who did it or whom did it, that's what this case is about. That's what

the government has to prove. And I want to emphasize that is is that because as I sat back and I listen to the government gives you their presentation and I think about the first 30 or 40 minutes of their presentation consisted of interpretation or spinning of the facts.

The government says -- and I think they spent the first 30 to 40 minutes on the most important part of their case and that was the child support. If you notice, that's what they start with, that's where they spend most of the time with. And I think if I can get that quote right, I think I wrote it down what was said. I think Mr. White says that sometimes defendants or defense attorneys want you to focus on the string beans, so you don't look at the meat and potatoes. What did he focus on, the string beans because ladies and gentlemen, I submit to you that there are millions of people, millions of people men and women right now in this country that pay child support. And that doesn't mean they go out and kill somebody for child support. That is the weakest motive that they can come up with. If child support is such an inducement to call such passion to rise to kill, we would have dead people all over this country, but it is convenient. The reason why they picked that motive is because it's a convenient one. It's one in which they don't have to prove. It's one in which they can inject

into your minds and ask you to allow your minds to run wild.

If you can remember during Mr. White's presentation, he said this word I submit to you, I submit to you and when he was saying I submit to you, what he was saying is this is what I believe without offering any evidence whatsoever. That's what he was saying. Ladies and gentlemen, I submit to you that I'm ten feet tall. Ladies and gentlemen, I submit to you that I'm the most beautiful person that ever lived. Ladies and gentlemen, I submit to you that I'm the richest person in the world.

Yes, there was a child support dispute, that child support dispute wasn't contentious. If that child support dispute was so contentious, why would they be calling each other. Why would he come to pick up the children that weekend. Ms. Burch says come in the house and can you talk with Tristan because he's getting into trouble. If they hated each other so much, why was she inviting him in the house to talk with their son.

Latosha testified that days before this they had a long conversation on the phone. They had a long conversation on the phone about the kids. Just because people have child support disputes or a dispute over the amount of child support, doesn't mean they go out and kill somebody. It is a lazy and lame excuse. But the reason

why it was the government leaned on it so much is because the actual evidence doesn't support them. The actual evidence is weak, that's why they leaned on that so much. They were seeking to evoke passion from you, sympathy.

I'm going to move on to the meat and potatoes in a minute, but I felt I needed to address that because as I sat there in my seat and I heard, well, what about this or what about that. She was a loving mother. She was a caring mother. And I thought, well, I can say that. The department of social services she was so loving and caring, the department of social services would not have been involved in these children lives. I didn't make that up. Her own daughter testified to that. There was a dispute about whether or not it involve just the condition of the home and the condition of the kids. There was a dispute about whether or not it also involve her use of drugs, but I don't care about that.

All of that stuff is just a distraction. I don't care if she was good mom or not. I don't care if Issac was a good dad or not, that is not what this case is about. This case is about who did it. And what evidence is there of that person or person's identity. That's what this case is about.

It's about reasonable doubt. Let's talk about reasonable doubt. And as we talk about reasonable doubt,

that's going to lead us to talking about the evidence. Is it a reasonable doubt in this, ladies and gentlemen, because that's what you have to decide. That's going to be the most important question that you have to decide when you get into the room. Has the government eliminated all reasonable doubt. Have they eliminated all reasonable doubt. And remember what I told you what reasonable doubt is. Government must eliminate all actual and substantial uncertainty, that is raise by the evidence, that's raise by facts and circumstances coming from the evidence and the absence of evidence. That's their job.

Now, why is there reasonable doubt. The first reason why there is reasonable doubt is because of Issac's testimony. And let's talk about Issac's testimony. Issac Hemingway testified that on Saturday, January the 11th of 2020, he testified that he went, and, of course, he lived in Conway, South Carolina with his girlfriend and her two children. And he testified that he talked with -- if you remember the video, that he had talk with Maisha Burch, the mother of his five kids. And it was arrange for him to come and pick the kids up that weekend. And he said that Saturday he came to pick them up somewhere around about 12. Somewhere about 12, one o'clock that afternoon said he came to pick up the kids. No one disputes that. He says that consistently in both of his interviews. And,

of course, he said that in his first interview. I think he said that his girl was with him Latosha and Latosha son.

In his second interview, he said he couldn't remember. He believe it was only Latosha's son that was with him. But let me ask you something is that important to resolving the identity of the killing. It's not. There are going to be small -- there going to be small variations in his testimony because like the human brain, the mind we don't always remember everything. We're not tape recorders. And, of course, his first interview was taken in January and his second interview was taken in December, which was 11 months away. But let's look at the important parts of his testimony, that part is undisputed.

There's nobody disputing that he came down and that he pick up his kids somewhere around 12 or one o'clock, that's undisputed. It is undisputed that he picked up three of those kids. And it's uncontested that he picked up three of his kids, he return back to Conway with those kids said that in both of the interviews January and February interview.

It is undisputed -- it's undisputed that I think his testimony was is is he didn't pick up Kareema because at the time in which he came down there Kareema had I think community service. That she had to be at at two

o'clock. So they left and went back home and he would come back later. It's undisputed. It's not disputed that later on he traveled back from his home in Conway back to Centenary, South Carolina to pick up Kareema, that's not disputed. Law enforcement doesn't dispute that. And that was sometime that afternoon after she finishes her community service. He says that in both statements. And Kareema even verified that when she testified, it's undisputed. It's uncontested.

And it's also uncontested that after he picked up Kareema, that on his way back to his home in Conway that he stopped at his father's house, so that his father could speak with Kareema and chastise her for the trouble that she had been getting into. Law enforcement doesn't dispute that. And he says that in both interviews consistent in both interviews. And then, of course, he says that after his father chews out Kareema that they drove back to his home in Conway and that all of them was there. The three youngest kids, Kareema, him, his girlfriend and his girlfriend's two children, that they ate dinner, undisputed. Law enforcement doesn't dispute that.

And then he says somewhere around about nine or ten o'clock, he says hisself, his girlfriend and his girlfriend's son leave to go over to Antwan Kelly's house,

so that they can play cards. Law enforcement doesn't dispute that or have they offered you anything to dispute that. You can't dispute facts with interpretation. You have to meet facts with counter facts. Law enforcement -- the government hasn't offered any counter facts to that because it's true. It's what he testified to in both of his interviews.

Kareema, who was a State witness, testified to it. She doesn't seem to have any love loss for her father. His girlfriend testified to it. Antwan Kelly testified to it. They have offered no counter evidence to that. They can't because it's factual. It was his testimony that they were there between 12 and one o'clock. Says as far as he can remember, he think it was after midnight between 12 and one o'clock. They don't offer any disputing evidence of that, none whatsoever. They have no disputing evidence of that. They have no contradicting evidence. He testified to that. Kareema testified to that. His girlfriend, Latosha, testified to that and Antwan Kelly. The only difference was says that he thought it was between one and two o'clock, said it was pretty late and he don't know exactly what time it was said he thought it was between one and two o'clock because he said that it was so late that he was concerned that he told them, hey, maybe y'all call me to make sure you get

home even though they lived only five minutes away. The government doesn't -- they haven't offered any disputing evidence of that. No disputing evidence of that whatsoever.

If you all will give me just a second. Just so you can see, this is the time line of that. This is the time line of everything that I just explain to you that's not disputed. Somewhere around 12 o'clock said between 12 or one Issac travels from Conway to Centenary to pick up three of the kids and return to Conway. And, of course, I think in one of his statements he said between three and four he went back to pick up Kareema. And whenever they give you a range, what I did for purpose of this is to give the earliest time that they said to be fair to the government. And, of course, sometime after three o'clock said he -- Issac traveled from Conway to Centenary to pick up Kareema and that he stopped at his father's house on his way back before returning back home in Conway undisputed.

Issac Hemingway arrived back in Conway somewhere around I think 7:30 says it was -- because he said that in one of his interviews around about 7:30, he said it was still light. It wasn't dark when they got back. And then, of course, he says somewhere around about nine o'clock, and, of course, his testimony was nine or ten

himself, his girlfriend, and his girlfriend's son traveled to Antwan Kelly's house where they played cards and drink. And he said between one and two they returned from Antwan Kelly's house back to his home in Conway.

And then he says, of course, somewhere around about nine o'clock the next day, that Sunday that would have been January 12th that Sunday, that he said between nine and ten he believes he got up and he went to Blake Johnson's house and that he also said that he stayed there maybe one o'clock or so. And, then, of course, he came back home, but I think his testimony was that he stop by the Family Dollar because his girlfriend asked him to pick up some things. And then he was there at his home until somewhere between six or seven o'clock he took the kids back. And then, of course, after six or seven -- I think they returned back to Conway from dropping the kids off somewhere around about nine o'clock or so don't know exactly, so that's what they testified.

Government offers no evidence to dispute this other than innuendo, other than speculation, but this is not a court of speculation. This is a court of evidence. They have a burden of proof beyond a reasonable doubt. Tell me you have something more. Two people are dead, tell me you have something more than I think he killed them because he didn't want to pay child support.

Now, they don't offer no facts to contradict this. They offer absolutely no facts to contradict this whatsoever. But not only is there no facts offered by the government to contradict this time line, there is actually evidence supporting the time line. There is actually evidence supporting the time line. You remember the cell phone expert. This wasn't our expert. This was SLED's expert. This was the guy that they sent these records to to say look at them and see whether or not you can verify whether or not the time line that he gave you was true. And Chris Johnson SLED expert, I know Chris Johnson. I had him on a number of cases very experienced been with SLED doing this for a long time, had him in many cases in the past. He prepared this. But I submit to you, ladies and gentlemen, look at what time he prepared this, look at when this was prepared, when he was asked to do this. This report says October 20th of 2022. This is two years and nine months, almost two years and ten months after the death of these people.

Issac had already been arrested. These charges are already pending for nearly -- for over a year and a half before they analyze this. And they had these cell phone records and the cell site data location information. They had this from day one, is one of the first things that they did during this investigation is to get the cell

records and the cell tower location information.

Let's look what Chris Johnson if you can remember, I'm not going to spend a whole lot of time on this. Let's look at what Chris Johnson -- let me get a little bit closer because like I said my eyes are not as good as I like for them to be. I think I got a copy for myself where I can kind of follow through. I'm going to highlight this if you can see it. And I just want to remind you because this is -- his analysis or his tracking from those records started in the afternoon.

Then start from the first time that he went to Centenary to pick up the kids actually started on Saturday afternoon at 4:58 p.m., that's when they start doing this tracking data. This mapping tracking data from the cell phones. And, of course, his cell phone showed that on Saturday afternoon at 5:58 that he was in the vicinity of Coastal Carolina University, that's the area where he lives at. I'm pretty sure y'all know where Coastal Carolina University is. It's on the other side of Conway between -- as you driving between Conway and Myrtle Beach, that's where his cell phone is.

Now, in about 35 minutes later at 5:38 p.m. his cell phone shows him traveling. His cell phone is bouncing off of a tower, that's located off 378 and 41, Interstate 378 and 41. That is the area between Conway,

Centenary and you can see Brittons Neck. This is the second trip. The only thing that's different is his timing, is that he thought he went to pick her up a little bit earlier, but this is a second trip where he is going back to Centenary on Saturday afternoon to pick up Kareema.

At 5:40, it's just four minutes away his cell phone still bouncing off that same tower. He is somewhere in this area. And, of course, is is if you remember the expert basically says that the cell tower facing this area is the one that's communicating with his cell phone. So that's why he has this kind of open triangle or open pie because this is the side of the tower that is communicating with his cell phone. So he is somewhere driving to Centenary so he can pick up Kareema and that is Saturday afternoon 5:40. 5:40, 5:48, he is still bouncing off of a cell tower near 41. And this is -- I think that Orange Highway is 501 and 41. Centenary is back this way, so he's bouncing off of this antenna because you remember what the cell phone expert says normally what happens is as you're driving, your cell phone is changing from tower to tower because what your cell phone is trying to do is trying to communicate with a tower, that is providing the strongest signal, so you can get a better service. So as you're driving your cell phone is roaming. It's looking

for the strongest tower to communicate with to give you a better service. So now he's bouncing off of this tower because this tower is close to Marion and close to Centenary. This is 547 -- 548.

And, of course, this is another cell phone tower at 614. And, of course, this cell phone tower -- I don't know if y'all know this area as well. I really don't either look at the map, but, of course, this is 51. And of course, this cell phone tower is still bouncing. I think you can see here Friendship Church somewhere near Friendship, somewhere in that area. This is the area where his father lives Friendship Gresham. His cell phone is bouncing off that tower, which is consistent with what he's saying on the trip back that they stop by to visit his father, so that his father can chew Kareema out about her conduct.

6:60 it's bouncing off of this tower that's somewhere near Marion. It's on the other side of Marion. His cell phone is bouncing off of that tower. It's like -- you remember what the expert says. You're constantly looking for the strongest signal, so they're not back at home yet. 6:18, 6:19 this is still Saturday afternoon. This is 501. This is just past Rains. There is a tower there. His cell phone signal is bouncing off of that tower. I suspect here that they're on there way

back, but they're on their way back to Conway supports his story. At 7:11 p.m., where are they. His cell phone is bouncing off of that Coastal Carolina University tower. He's back at home with Kareema, with his girlfriend and the rest of their family.

Like I said, if you don't believe anybody who testified on that stand, if you don't believe his statements, if you don't believe the statements of his girlfriend, you don't believe even Kareema's statement that they came back that afternoon back to Conway after picking her up, this even further supports that. But guess who introduced this, it wasn't the government that introduced the cell site mapping. It wasn't the government who did that, we did that. We did that on cross-examination because if we had not, they would not have admitted because it did not support their theory.

Even though, we don't have to prove anything, but we do have to do something because if we had not introduced this, you would not have saw it. I think they asked Chris Johnson about the cell phone calls, but they did not introduce this, this mapping, these mappings even though they had it, they're the ones who gave it to us because they're required to. We're the ones who gave it to you even though we have no obligation to. The burden is always on them, but why wouldn't the government give

this to you. The government is looking for the truth, isn't it. They do want you to have all the information necessary for you to make an intelligent decision, don't they. This is not about winning or loosing.

And next time his cell phone would have been bouncing -- is bouncing off of a cell tower, that's right here near 501 and 507, that's in the City of Conway. I don't know whether or not you know this. I think if you go back, and, of course, and I pray and ask you please don't accept my word for what's on his interviews. Don't accept the government's cut and nip and sound bites here and cell bites there taken out of context.

All of this stuff is in the record. If you want to hear the entire testimony again that he gave at those interviews, you have that right take advantage of that if your memory is not clear because I submit to you a lot of what was said was taken out of context. It doesn't support nothing. It's not evidence. This is evidence.

And, of course, you were here when he gave a description of where Antwan Kelly lives. He said in order to get to Antwan Kelly's house that you have to go down -- and, of course, he is over here near Coastal University. You have to go down 501 bypass, get on 701 and I think his instructions was is is that when you get on 701 -- after you get on 701, you pass a Family Dollar store and then

there's a church. And when you pass that church, you turn by that road and that's how you get to Antwan Kelly's house. This cell tower will be very close to where Antwan Kelly lives. And even though these cell towers are so close -- like I said, these cell towers are very close. That might be a reason why his phone is bouncing off that signal, but look what time it is. This is still Sunday morning at 4:49 a.m. on Sunday morning where is his cell phone. And this is -- their theory is that she was killed early Sunday morning.

I think if you can remember when you saw the second interview when they came in, the December interview when they came in and arrested him and they read him the arrest warrants, the arrest warrants says and I question -- I question Barkdoll about that. SLED Investigator Barkdoll about that, but the arrest warrant says that he is being charged for killing Andrew Legette and Maisha Burch at 2:00 a.m. on Sunday morning, the 12th two a.m. on Sunday morning. This is past two a.m. This is 4:49 where is his cell phone when he came back to Conway at 7:11 p.m. when he arrived back in Conway after picking up Kareema for that second trip his cell site -- his cell phone and never leaves Conway after that, never leaves Conway after that until the next morning -- until next the morning. And even the next morning he doesn't leave Conway. The

next morning it will show him going out towards Loris consistent with what he says to see Blake Johnson on Sunday morning, but Blake Johnson lives in Conway. His cell phone never leaves Conway.

What does the government say. The government says I submit to you, I submit to you and the reason why I use the word I submit to you, that is another phrase for this is my opinion not supported by evidence whatsoever. He says I submit to you that he shut off his phone, that he drove down to Centenary. That he killed those two people. That he came back to Conway and he turn his phone back on when he got to Conway and maybe turned on a little to early because Maisha was called.

Now, ladies and gentlemen, where is the evidence of that. Proof beyond a reasonable doubt where is the evidence. This is not a court of speculation. It is a court of law that is based upon evidence and facts and not speculation. Where is the evidence of that. Ask the government where is your evidence. Every time you give me a cockamamy theory where is your evidence. Where is the evidence of that theory. There is none.

And I apologize if I get passionate, but the reason why I am because this stuff is serious. I take the law serious. I'm not going to tell you anything that I can't support. I'm going to point to witnesses

statements. I'm going to point to some sort of evidence that substantiate what I said.

I'm not going to say I want you to allow your imagination to drift. You can have theories. You can have opinions. We all do. You can have them on the street. You can have them in the courtroom. The only difference between opinions in the courtroom and opinions on the street is is that when you have an opinion outside on the street, you don't have to support your opinion for fact. You don't have to -- this is what I believe. Thurmond, I need to go find some evidence to support what I believe. You believe what you want to believe out there. But in here every opinion has to be supported by fact, has to be supported by some sort of evidence. So don't get tripped and fool by the State.

The reason why they're asking you to make these leaps of logic is is because they don't have the evidence to support what they telling you. This is all reasonable doubt. It takes the tinsy bit of reasonable doubt, that's the definition of not guilty. If there is just a tinsy bit of reasonable doubt, not any doubt, but reasonable doubt, that's the definition of not guilty. Because like Benjamin Franklin said, like William Blackstone said when you take someone's freedom, that's what they were saying in these quotes. We got to be darn sure. We can't make

mistakes about that sort of stuff. This ain't a game. But at no time did his cell phone ever leave Conway. And his cell phone cell site data location information tracks with his story, so his story is supported by witness testimony and his story is also supported by the cell site data tracking information. This is mapping that their expert performed. That they accumulated.

I think this is a duplicate map. This map here it's 1:13 p.m. on Sunday morning. It's 1:13 p.m. on Sunday morning. And remember what he told you and this is -- this is 701 and Highway 22 bypass. This is going out towards Loris. If you ever been on the 22 bypass and you trying to skip going through Conway, you going to the beach and you get on 22 bypass and 701. This is where it is. It's a cell tower there. His cell phone is pinging off that tower, which is consistent with him going to see Blake Johnson still in Conway, still haven't left Conway.

And then at 4:49 p.m. excuse me -- this is a duplicate of the other one I've already showed you. In the report, I didn't take out anything. I wanted to present the report to you as it was given to us by the cell phone expert. It's the same one. It's a duplicate of him bouncing off that cell phone on 701 22 bypass. This is Sunday afternoon at 4:31 p.m. he's visited Blake Johnson. His cell phone is bouncing off of the Coastal

Carolina tower where he lives at.

Now, probably some of you would you say, well, Issac gaps and bouncing off the tower. The reason why there gaps the cell phone expert testified to this. And then also of the lady from Verizon testified to this, that the communication happens -- the communication occurs whenever there is a -- there is a incoming or outgoing call. So they're mapping based upon incoming and out-coming calls. And I think if you remember Mr. White ask the expert could he have turned his phone off and there's no communication. You don't have to turn your phone off if you're not using it. If nobody's not calling you with Verizon, you not calling somebody, there is no communication. The tower's not registered. But we can't deal with speculation we have to deal in what we have. We have to deal in facts, so this is Sunday afternoon at 5:14 still at home with the kids Sunday afternoon before he takes them back. This is six o'clock Sunday afternoon and they're still at home hadn't taken the kids back yet.

Now, 7:43 you start seeing some movement. He's now bouncing off of this cell phone tower, off of 501 bypass and 70. And you can tell he is probably somewhere in this direction because the face of the tower he's bouncing of off is in this direction. This is what's capturing the cell phone signal. They're on their way

back to take the kids home Sunday afternoon. Sunday afternoon 7:56 cell phone is bouncing off of -- cell phone on 501 just between Conway and Marion County. This is eight o'clock Sunday afternoon. This is Nichols Highway. Like I said, you may have greater reference is 501 over there cell phone is still bouncing. I don't know whether or not they're in Marion. That they're in Centenary at that time or on the way, but this is bouncing off of a cell tower in that area. 8:19, 8:20, 8:24, 8:28, 8:32 off of 501 it's bouncing off of a cell tower. 501 and I think that's 41 over there. So they're still down in the Marion County area. It's like heading back. Looks as if they're heading back because here's Galivants Ferry. So looks about as if they're heading back consistently with that's exactly what they testified to.

Again, the same thing 8:27 to 8:28 Sunday afternoon still 378 it's bouncing off of one those towers there on 378. This is a duplicate. This is one that we already seen before and this is 8:43. It's bouncing off of this cell phone tower. It's just outside of Marion off of 501 and 41. And see that answers another critical question and it answers something I think the State ask before. The State says why when he's in Conway and he's suppose to be in bed why is his phone bouncing off of this tower and not that tower. And I found that weird too. I

found that very weird where it looks as if his cell phone was bouncing off of these different towers. It looks like some of the towers are further away. And I'm thinking why would his cell phone be bouncing off of that tower when he -- when there maybe a tower that's closer. He maybe closer. And that's that roaming thing that goes on cell phones looking is roaming and constantly searching for the strongest signal they can find.

And then, of course, this is the next morning. This is Monday morning at 5:47 a.m. And, of course, his cell phone is bouncing off of this cell tower here in Conway on the other side of Conway. I imagine he testified the next day that he went work, gets up early. This is close to six o'clock gets up early and go to work. And then the last map is going to be -- I think the last two maps we'll be finish. This is 501 what time is on that then we'll be finish with these maps. This is 6:34 Monday morning, again, from where I looked at and that this is a stretch between Conway and Myrtle Beach. It appears as if he is headed on the Myrtle Beach to put in a pool. So let me explain to you that's what he did. And I think this is the last map. And you can tell this is the North Myrtle Beach area. This is around 10:04, 10:35, 10:39, 10:43 was his cell phone was bouncing off the tower in North Myrtle Beach. This is where -- somewhere around

this time is when he gets the call from Shkyria. This is where he was when he gets a call from Shkyria saying that she had found her mom dead and Andrew Legette dead in the house. And he had testified that he was on a job site. He tracked everything that he had said. Indulge me for just a second.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury and on the record.)

MR. BROOKER: Ladies and gentlemen, that's the mapping. Go back to the reasonable doubt sheet. And, of course, this is -- reasonable doubt number one -- all that was reasonable doubt is found in his testimony. And, of course, it's also found in the cell tower map tracking report. So there's two evidences of reasonable doubt there. Reasonable doubt number three comes from the witnesses testimony. And this is consistent with what I said before. We'll go through three very quickly because it's related to one and two. I said the testimony of Latosha Baines. The testimony of Kareema. And then we'll get into the testimony of Antwan Kelly. Their testimony verifies and validates his testimony, but where he was at the time in which they say that these two people were being murdered never left Conway from the testimony of the witnesses and from the cell tower tracking, never left

Conway. This is the definition of reasonable doubt.

The next one is DNA evidence. How does the DNA evidence present its reasonable doubt you say. I am not going to -- if you can remember when I cross examined Ms. Boehm on the stand, she was the DNA expert. It was pretty long and I don't need to go through all of that to explain why it presents reasonable doubt.

And if you can remember, I ask her these questions ask her can you say whether or not the DNA evidence on the back door that Issac -- that that DNA evidence belong to Issac. I think it was a mixture of two people. I think it was a mixture excuse me -- of three people all on the back door. Can you say whether or not the DNA evidence belongs to Issac. She said I can't say that. I cannot say that that's his DNA. She says the only thing she can say is is that he can't be excluded. You can't say it's him. You can't that his DNA -- that that was his DNA on the back door, and you can't say that that wasn't his DNA on the back door. You can't say it is. You can't say it isn't. What does that mean. It means I don't know. It means I don't know. And, of course, is is that the government says, well, what about the likelihood ratio. The one billion likelihood ratio and that's a strong likelihood that he contributed. And without getting into the weeds of it, just remember when I

talk with her about 99.9 percent of all our DNA is the same even though we may not have any relationship to each other. 99.9 percent of all our DNA is the same. And this is the DNA that most -- that tracking the human genome is what most DNA scientist have been concerned with. And they would have tracking human being genome, you know, for scientific purposes, from medicine and diseases and that sort of stuff. And they had been doing this long before, you know, the law enforcement decide, hey, we can use this. We can use this technology to try to catch criminals because traditional DNA, blood and semen where there's large quantities of -- there's large quantities of DNA most of the time is unchallengeable. And I guess an example of that would be might be your -- when you go get a paternity test and nobody really challenges paternity tests. And the reason why that's traditional DNA where you have large quantities of DNA, you have one person to one person that you're comparing.

And, of course, you have a complete DNA profile from the child. And you have a complete DNA profile from the father. Of course, you heard her testify that a complete DNA profile consist of 24 markers or 24 locations on a human genome, that they're looking at. And they can look at those 24 locations. And they can just kind of match them up. You know, marker one or location one yep

same jeans, two yep same jeans, three yep. They can catch them up and match them up and says all 24 matches, all 24 match. And all 24 match means is is that it is mathematical -- mathematically almost impossible for people to match all 24. So that's how they become almost certain that, yeah, these are two people are related. These two people are related. But in forensic -- forensic DNA unlike the other scientist who are looking at the human genome who are looking at all of the DNA, you know, the billions of DNA that's in our body, forensic scientists are looking at that small amount that less than one percent DNA that is unique amongst us. That distinguishes us, that makes us different. They're trying to isolate that small amount of DNA and that's what she testified to and that's what they're looking at. And trace DNA is what they have in here. Trace DNA is not reliable like traditional DNA. And the reason why trace DNA is not reliable like traditional DNA because a lot of times with trace DNA is that you don't -- you can't develop a complete profile.

And then mixture DNA makes it even more complicated is because you're dealing with a mixture of multiple people. And we share so many -- so much of our DNA. And remember when we talked about -- I asked her about the first DNA sample, that's the one that came off

the back door. And, of course, a complete sample is 24, 24 markers or location. And I ask her how many locations you have on that one. She said there's 23 great. Twenty-three is great. It's almost 24. And I then ask her and he said it was a mixture they believe. And she said they can't be for certain. Their interpretation is that it's at least three people. It could be more because of the complexity of mix DNA. You can't really determine how many people it is. It could be two, three, four, five, six, seven and nine. You can't determine it. It all depends on how many alleles there are at a particular marker or particular location. I asked her, well, those alleles can be determined how many of those alleles came from Issac Hemingway. And she said our technology is not that advance. So if you think it's at least three people, you can't say, well, okay, we can take this DNA and we can say, you know, if three of you touch the same surface and creates a mixture and they pull it and analyze it, they couldn't say, well, we have X amount of alleles. And these alleles belong to him. These would belong to him. These will belong to him. They don't have the technology to do that.

And the reason why that's critical is is that if you have 20 alleles, you need to know whether or not this person contributed one of the alleles. This person

contributed nine of the alleles. And this person contributed 12 of the alleles. Because if you only have one allele from a person, that one little DNA marker from a person -- that one little piece of DNA from a person and because DNA is shared amongst people, you can't make a distinction. You can't say for certain that this is his DNA. You can't separate a mixture is what she's saying. They're just looking at collectively. All three people's DNA collectively. That's where the likelihood ratio come in is that when that happens, that's when we talk about the computer software STRmix, which is a commercial company that makes money off of selling the software. And she didn't even know how these likelihood ratios are computed. I asked her do you know the mathematical equation and the algorithms the software uses to spit out these estimates. Now, we just chunk in the software and she said we went to a class and they told us about the algorithms and the mathematical equations being extremely complicated, but she couldn't explain it from the bench. I ask her, well, did you do hand calculations of these equations to confirm the accuracy of the software, it is too complicated. They just chunk it in the machine, it spits out a number. And they said this is it.

Ladies and gentlemen, this is the dirty secret behind trace DNA that the normal person don't know. The

dirty secret behind trace DNA is, it is so complex. It is a commercial industry that people are making money off of it, but it is so complex that it's not reliable, that's why she can't say with any degree of certainty. And that mixture she can't even tell how many alleles was attributable -- that she think is attributable to him because she can't separate them. It's the limit of the technology, but that's where you get likelihood ratios. That's where you get the educated guess. And when you're talking about somebody's life, proof beyond a reasonable doubt requires more than an educated guess. It requires more than an educated guess. I ask her the same questions for all of the DNA. Hey, what about the DNA that you got from the mixture on the wall, can you say that Issac contributed to that mixture. No. I can't exclude him. I can't say one way or the other whether it's his or it's not his.

I know it's a possibility because some of the alleles that was found in that DNA maybe similar to some of the alleles that was in his DNA profile. But she can't tell you how much because normally I think if you heard her, she said that normally, you know, at every DNA marker, those 24 markers we have normally have two alleles at every marker. I think she said except two markers. She corrected me and said except two markers because

there's an X and Y chromosome, which determines male and female.

So there's two at 46, so basically there's 46 alleles under the complete profile. And I ask her, well, how many with the sample you got, how many of those alleles and the sample that you got matches the 46 alleles that came from his DNA profile. I can't tell you that. You can't tell me whether or not the sample from the wall whether or not five of the alleles were consistent with a 46 alleles that he had. She can't tell me whether or not it's 10 or 15 or 20. How much must you have to in order to have a sense of certainty. She couldn't tell me whether or not it was one or two or three or four because the science haven't advance that far where they can separate the mixtures. That's why we have these probability ratios. And it sounds all technical, but it's less than technical. It's an educated guess. It's the difference between trace DNA and additional DNA. The same thing with the fingernail clippings. I can't say that's his DNA. I can say it might be his DNA, but I can't say that's his DNA because it's a mixture and I can't separate the mixture. I can't determine what alleles belong to who. I can't even identify who the second person or the second contributor is with some sense of certainty, so I give you a likelihood ratio.

And I already said she can't explain how the computer software generated the likelihood ratio is calculated. And boy that is tremendously important. And I ask her, well, if you can't determine how the likelihood ratio is calculated, if you don't know the math and the algorithms behind it, well, what do you do to ensure consistency. Because what is the definition of consistency that we all know, consistency means that you do something and you get the same results. Two plus two is four. Two plus two is four. Two plus two is four. It's never going to be six. It's never going to be six, so it's reliable. Because when you do duplicate something and get the same results all the time, that's one way to do a test to test the consistency of something or contest the veracity of it. And I ask her, well, if you didn't do the math yourself, if you don't how the math works, how can you determine whether or not the computer in this specific case is spitting out an accurate number. It's calculating the math wrong because as we know if anybody in here ever have a Tesla or if you ever had Microsoft how many times did you -- use to be the Microsoft you would get sent when they introduced a new software, you would get sent patches all the time where they are find areas in the software and they're sending you fixes. They're sending you fixes. If you got a Tesla every now and then,

you'll get an update where they're updating the software because they find a glitch in the software and they have to fix it.

Computers are not infallible, that's why it's important that we know how it works and that somebody be able to do the math. And even if you don't know how it works and you don't know the math, a very simple test is to repeat it, put the same stuff in and see if you get the same result. Now, I ask her did you do that. Do y'all have a protocol that requires you to run the numbers, run the test twice to see whether or not you get the same result. She says we don't do that. So what she's telling you is is that someone's life is going to be potentially taken away from them due to a computer software with some mathematical equations and algorithms that none of us know how it works. And they can't confirm the accuracy of it. All of this is under the category of reasonable doubt, can't rule out contamination of the DNA samples collected at the crime scene. And remember when I was asking all of those questions about -- and I think I ask these questions with all of the detectives were you wearing gloves, did you go in the crime scene, were you wearing facial coverings, were you wearing shoe coverings.

The reason why I was asking that is is that DNA evidence is also easily contaminated. Remember, I ask

the expert the reason why is we share -- we shed DNA all the time. We been in this room for the last week and this week and we constantly shed DNA just by sitting there you shed DNA, dead skin cells fall off of us. And I don't know how true, I remember -- I was told one time that dust is -- are just dead skin cell particles, that's why people dust their house all the time. But we shed skin cells all the time. And I ask the expert that and she agree with me. When we speak, we omit DNA when we speak. When we sneeze or we cough we're omitting DNA. So when we touch things, we potentially leave behind DNA.

How many people were in the crime scene. First, there was four EMS personnel. I'm talking about physically inside the house. I think there's a total of 25 at the crime scene outside, but people who went inside before the CSI techs went in, four EMS personnel. There was two people who discovered the body or three because remember Ms. Reed testified that she came over from next door and that she said that she was the one who called EMS. And that Craig Hopkins the guy -- Craig Hopkins, Jr., the guy came with Shkyria, that he told her he never went inside the house. And she went in and she saw Andrew on the couch and she went and stood over him and look at him. And then, of course, she pierce down the hallway, and, of course, she saw Maisha on the floor in the

hallway, so that's seven. The two detectives that went in and swept the scene, I think that was McCaskill and Cribbs, so that's nine. Then, of course, is is that Hotaling said that he and another officer went in just to look around a little bit and check out the area before EMS techs went in, that's 11.

Now, the DNA expert said basically is is that the SLED CSI techs -- that the SLED CSI techs that they keep their DNA profile on file so that when they collect stuff, they able to compare it with the SLED -- the SLED collectors. They can compare it to their DNA profile to make sure that they didn't contaminate the scene. That's how important it is because they know it's easy to contaminate the scene, but what about the 11 other people. None of it was collected. None of it was compared. And that's why I asked her can you ensure this DNA was not contaminated. And she said, no. She said the only thing that they can -- the only thing she can speak with with respect to certainty is that the lab because that's what she performed, but what happens in the field. She said can't control that, and she's right. But she said their lab technicians are trained and they're suppose to collect it in a way to try to prevent contamination.

So underneath that subset of the DNA evidence that is another grounds for -- for reasonable suspicion.

DNA evidence can't be aged, therefore, you can't say that it has any relevancy -- relevancy to the murder. Remember, when I asked her about can you age DNA. And what that simply means is is that one if one of you were to come to my house and if your DNA was found in my house and later on I was murdered in my house and they search for DNA in my house and they pick up your DNA, and they said got they John's DNA, it's in Thurmond's house. John must have been there on -- John must have been there on Monday when Thurmond was murdered can't say that at all because they can't determine whether or not that DNA has been there for two days, two weeks or two months. You can't age it. So you can't determine whether or not it has any relevancy to the murder. And that's how sometimes -- that's another limit of DNA technology. And it can be a deceptive limit because most of the times like in this case, the government says we got your DNA. You did the murder. Well, when did my DNA get there, I was not there Saturday night when these people were murdered. I was there five days ago. The DNA can give you a false impression. The DNA can give law enforcement if they don't understand what they're doing, they can give them a false impression as to whether or not DNA is relevant to a murder scene, that's another limit of DNA. When was it placed there. When did it get there.

She admitted that that's a limitation of DNA and that is critically important. Because what you're looking for in a murder, you're looking for -- you're trying to identify who was there Sunday morning not who was there at Maisha Burch's house two days ago or four days ago or six days ago. You're trying to identify who was there Sunday morning.

Now, DNA could be age -- someone died and they get there two days later and they can determine, okay, this DNA was left there 24 hours ago. Then they can limit -- they can narrow it down and says, you know, hey, all of this DNA that's five days ago, we can separate that from the DNA that was deposited 24 hours ago or 12 hours ago. So we can narrow it down, so we can determine what DNA is relevant to the murder and what DNA has no relevancy at all. They can't determine that, but the government has to prove that to you. They have to prove to you that whatever DNA they collected that that DNA is relevant to the murder. That DNA was left by the assailants. That that DNA is not something that preexisted prior to the murders. They have to prove that to you. Have they done that. Can they that do, no, because the expert says that's the limit of the technology. We can't do that here yet. I don't know whether or not they'll ever be able to do that.

Secondary transfer. She testified that that's another limit to DNA. And what secondary transfer is I actually bought some -- some flour from home to try to give you a demonstration of what secondary transfer is, you know, but I don't have to use that. You know, I can explain it to you. Some people are visual people. And I can use the flour if you want me to, but just imagine if there was -- if their DNA was on this table. And imagine if I take that flour and I put it on this table. And that flour represents someone else's DNA, imagine if it represented your DNA, that flour. And I put my hand in the flour that represents your DNA. Well, that flour if anybody's been baking, you know -- and I've cooked a little bit, flour gets on your hand and in everywhere you go you leave, flour, flour, flour, that's called secondary transfer. And the importance of that is is that if someone picks up someone else's DNA. If your DNA is here represented by that flour and I put my hand here and I pick up your DNA, I can transfer her DNA to over here. If an expert or law enforcement who don't understand how DNA works, if they were to swab that thing to pick up your DNA and it's your DNA, and they said you touched that. You touched that. You touch that column and you said, no, I didn't. And they said, yes, you did because we got your DNA off of it, so you touched it. And in reality, you

never touched it. I picked up your DNA and I transferred it over there. So it can give law enforcement the false sense of impression that someone was at a place that they never were.

I imagine right now your DNA is probably on the steering wheel of somebody's car because you probably shake somebody's hand and, you know, in the grocery store and you talk to a person, a person goes out and grabs the steering wheel of a their car and your DNA is on the car and you never been in their car. Our DNA always places that we never been before because DNA is transferable. And it's not only transferable once, it can be transferred multiple of times, which means that if I transfer your DNA from here to over here somebody else can touch here or pick up your DNA and transfer it over there. That's what secondary transfer is. And you never been to these places never touch this stuff, yet your DNA is there.

Remember, she testified to secondary DNA. And she says that is the weakness, that's another weakness of trace DNA. It's transferable. So where you find DNA, you can't say whether or not a particular person put it there because of the transferability.

Now, in order for them to convict him beyond a reasonable doubt, they have to prove to you that this is not secondary transfer even though they can't even say

it's his DNA. Even if they could say it was his DNA, which they can't. They have to explain to you and prove to you that this is -- this was not a secondary transfer situation. That he was the original source of the DNA.

Issac's biological children in the home share equal DNA between the mother and the father and this is big one. If you can remember when she testified and what does she say about children, children get half of their DNA from their mom and they get the other half from dad. Remember, when we talked about those 24 markers. And remember when she testified and I ask her that at every marker -- usually at every marker there's two alleles. And those alleles are represented by numbers, so there's two numbers at every DNA marker. And one of those numbers are going to match your father. And one of those numbers are going to match your mother at all 24 alleles. Two alleles are represented by numbers at every location or marker. And those two alleles represented by numbers. One of them is going to match dad's DNA. One of them is going to match mom's DNA all 24. One of them is going to match dad. One of them is going to match mom.

And when you're dealing with trace DNA and you're dealing with a partial sample, your children is going to share at least one of your alleles. One of your alleles at all 24 markers. Twenty-four of your

chromosomes they're going to share. And I ask her is is that if you get a partial sample and if dad's DNA -- half of dad's DNA is the same as the kids and if you picked up some DNA and it's a partial DNA where you can't match all 24 alleles two in each category, how can you determine whether or not it is the child's DNA or the parent's DNA, you can't unless you have a complete profile. Because if you have a complete DNA profile, the child won't have all of dad's DNA, it's going to have half of it. So if they look at every allele, they look at every marker, every location and if you got a complete profile for the dad and a complete profile for the mom, you're going to see only one of those alleles is going to match dad. The other allele is not going to match dad because dad didn't contribute that DNA, that DNA was contributed by mom. So if you have a complete DNA profile of dad and kids, you can determine -- and, of course, if the profile at the crime scene is complete and you match all three, you can make a distinction, but you don't have a complete DNA profile at crime scene.

You have dad's complete DNA profile because he voluntarily gave them his DNA. And you don't have the children's profile at all. Now, she said that would not change my result, which was kind of an deceptive answer. What that means it wouldn't change her result. It

wouldn't change her report, but it would clarify it and that's the point I was trying to make. It would help us make a distinction as to whether or not or either try to make a distinction as to whether or not what you picked up came from the children or what you picked up is dad's or whether or not you can differentiate the two. You can't. They can't because they never even collected it. And I asked her ideally would you want to have the children's DNA and she said yes for purposes of that. But she said she only test what is given to her. Who's fault is that.

And she's right whatever you send to SLED, they test whatever you give them. They're not the investigators. They're not the ones who make investigative decisions, that's made by the people at the scene. You know, these trained people. That's made by Hotaling who was the lead investigator in charge, but they don't know this stuff. Investigators at the scene has to be educated on all of this stuff so that they don't make mistakes because they work as a team. If you screw it at the scene, then the result is going to be tested at the lab is going to be screwed up. So people at the scene needs to know what they're doing too. They don't even know to collect the children's DNA. All reasonable doubt it's a ton of this here. I mean, I don't ever think I've had a case with this much reasonable doubt. This is the

first time I ever took this long.

MR. WHITE: Judge, may we approach.

MR. BROOKER: Sure.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury but on the record.)

MR. WHITE: I was wondering when we're going to wrap it up any time soon.

THE COURT: Yeah, by statute there's a two hour limit.

MR. BROOKER: By statute?

THE COURT: By statute. I'm pretty sure.

MR. BROOKER: Oh, no, no, you don't have to show it to me. I trust you. I'll go ahead and speed up and wrap it up soon.

MR. WHITE: Real soon let's get going.

THE COURT: All right.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the recorded as ended.)

MR. BROOKER: And, of course, number nine is also saying the children was never tested anything. Reasonable doubt the government's failure to medically identify time of death. And you heard me talk with -- I think SLED agent -- SLED agent -- I don't want to get his

name wrong. This is Barkdoll. He was the one that I think who testified that he assisted them in the investigation. The failure to medically identify time of death. What is the important -- what is the important of time of death, important time of death is is that, so that you can try to narrow down the window. And so you can try to figure out where people were at that particular period of time. I think Ryan White -- Mr. White, with the government, said that the last communication they believe that that Maisha made was -- I think it was somewhere around 12 something, 12:02. I think there was -- and you heard the cell phone expert testify to this too. There was something like a 54 second call. Remember, when we asked do you think that that was actually, you know, a conversation. And he said, yeah, that's probably a conversation because normally, you know, anything beyond 30 seconds that they assume -- because voice mail doesn't last that long. And, of course, anything beyond 30 seconds, you know, then, of course, is is that circumstantial evidence that, you know, that the call was received and there was at least a conversation. And that's believe that was the last time there was communication with Ms. Burch, okay. That's the last time there was communication with her. Sunday morning, Sunday morning at around just after midnight.

She wasn't discovered until Monday morning I think around ten something is when her daughter went and check up on them and found them dead, so you got a big window there. Did the assailants came and killed her Sunday morning like they said. They said we think you came and killed her Sunday morning between two and four. We think you went and killed her Sunday morning, that's our theory supported by what.

Normally, either the coroner or either the pathologist will determine a time of death if they're asked. The coroner wasn't even called as a witness. So, you know, the coroner didn't prescribe a time of death or if they did, we don't have a coroner's report. So when did she die, when did they die. They died just after midnight on Sunday morning. Did they die ten o'clock on Sunday morning. Did they die Sunday evening. Did they die Sunday night. Did someone came in and killed them Monday morning.

Now, they are making the assumption that she died sometime Sunday -- early Sunday morning because no one is able to get in touch with her. I think you heard Ms. Reed said that Sunday morning -- Sunday morning -- I forgot what time she said maybe around nine or ten o'clock or something like that, she went over get Kareema who was doing community service at their church. She went over to

get her to bring her to church. And she knocked and she couldn't get a response. And she couldn't get anybody to come to the door. She couldn't get anybody to come to the door.

And then, of course, her daughter said that she had called her didn't get any answers for her. I think she said on Sunday. I'll leave that up to you. But they're saying, well, okay, because nobody heard from them that Sunday, it had to be sometime early that Sunday morning, you know, between the time in which she received the last communication with Issac and around about nine o'clock or whatever time it was that Ms. Reed came over to get the kids, so they're saying that's our window. And we're assuming that because nobody is able to get in contact, but you can't do -- you can do that outside, but people are talking and they're discussing the case outside. They can draw these assumptions, but you can't do it in court.

You have medical experts in this case. Did anyone ask the medical expert to determine a time of death so that we can determine what the window is, nobody, just sloppiness. And I hate to say it like that, but that's what it is. When did they die.

In order for the State's theory to work, they would have to die within that window, but there's been no

medical testimony with respect to the time of death or reasonable doubt. There was no witnesses to the murder scene. There's no witnesses to the murder of these people, that's why all of this is based upon circumstantial evidence. Nobody witness the death of these people. There was no murder weapon found that could be traced back to any individual.

I want to go into the poor investigation by law enforcement. The failure to speak to the following witnesses before arresting. Kareema Hemingway they never spoke with before they arrested Issac. She could have validated a large portion of his story as to where he was that night. Latosha Baines they said, yeah, we speak to her. We just spoke to her after we arrested the guy. It's not how it goes. You suppose to speak to people before you arrest not after.

Michael Boone they never spoke with him at all. He traveled with Issac a large portion of that day and was with him that night when they went to play cards. Antwan Kelly they spoke with him after the arrested him, after they arrested Issac. And I ask Agent Barkdoll do you have a conversation, do you have a recording of that conversation, do you know what he said. No, no, I know that somebody spoke with him. You don't know whether or not -- they didn't put him on the stand. The government

didn't put him on the stand, we did. Because if we had left it to the government, you never would have heard what he had to say. Well, he said, yeah, we were over there playing cards that night. We're playing cards and drinking. And they were there he said between one and two o'clock in the morning.

Blake Johnson they never talk with. And, of course, if you can remember when I ask both of the agents Hotaling I asked him first. He's the first one to testify and he says, well, I try to look for them. I said what efforts you use. He said Facebook and DMV records. And I say, well, didn't he give you a detail description, he tells you a description of how to get to his house, road by road, color of his house everything. He tell you, hey, if you need me, get the address, never talk with him to try and verify what he is saying. And then, of course, failure to discuss with the DNA analyst about the meaning of the DNA report before arresting him. And we're almost at the end here.

If you can remember during the second interview and this is the interview that the government played to you a lot, when Detective Hotaling and Detective Barkdoll was saying it's your DNA. It's a hundred percent your DNA's on the back door. No doubt whatsoever, no doubt whatsoever. It is yours. Your DNA is in the hallway.

Your DNA is underneath the fingernail absolutely no doubt it's your DNA.

And if you remember I ask detective -- Agent Barkdoll is that your interpretation. He said, yeah, my interpretation. And did you ever have training on how to interpret these things. It's complicated, never had training on what this stuff means. No, this is my interpretation of it. Do you ever call the DNA analyst and say, hey, what does this stuff means. This likelihood ratio. No, it's just my interpretation. And his was a hundred percent wrong. It's your DNA, absolutely it's yours, can't be anybody else's. DNA expert says no. We can't say this is his DNA. Science doesn't give us the ability to be able to do that. We can only say it might be his DNA or it might not be in his DNA we don't know. But, ladies and gentlemen, I'm about to wrap up. But, ladies and gentlemen, that is -- all of this is reasonable doubt. You only need a small amount of reasonable doubt, but like I said, I've done this for 23 years. I've done a lot of murder cases. It takes so long because I've never had so much reasonable doubt in a murder case.

MR. WHITE: Judge, I'm going to object to him personalizing commenting on, you know, past cases.

THE COURT: Why don't we go ahead wrap it up, if you don't mind.

MR. BROOKER: Your Honor ---

THE COURT: Keep going just wrap it up.

MR. BROOKER: He told us about his kids, he personalize it.

MR. WHITE: I didn't tell anything about the other case, just wrap it up please.

MR. BROOKER: But never has so much case with reasonable doubt in it. You only need one. You only need a little bit of reasonable doubt, that's the definition of not guilty. That's the definition of not guilty. It's a ton of it in this case. There is a ton of it in this case. And I think I wrap it up by saying I remember when Barkdoll was saying that during that January 20 excuse me -- December 1 of 2020 interview, the second interview with Issac and he was saying the DNA evidence is the holy grail, that the DNA evidence locked it in. It was fire, that's it. DNA evidence is absolutely unrefuteable is what he was telling during that interview. It is your DNA. We got you. We got you. We got you. They receive this DNA report in August three months before they arrest him.

And, ladies and gentlemen, I will probably submit to you is that if that DNA -- they thought that that DNA evidence was the holy grail. Why did you wait over three months -- almost three and half months to

arrest him. And he testified he was at the same job the entire time. Why wait three and a half months to arrest him. And then why do we interview him a second time if you got the holy grail of evidence if it's locked in. I get the impression that they know that that DNA evidence was not. That's why they pushed him so hard in December 1, 2020 interview. They were trying to push him to confess to something that he didn't do.

The evidence said that you -- we know you did it, you lying. And he consistently and persistently says no way and no way that could be my DNA. The furtherest I been in there is in the front room, never touched the back door. You absolutely wrong. He was persistent. And he stood up to a barrage -- a barrage of allegations by those two officers and he's always maintain his innocence.

They even told him, hey, your cell phone was pinging in Centenary at the time of the murder. I ask Barkdoll about that and that's what he said as well. You know, law enforcement were able to use a little bit of deception during our interrogation. They were saying is is that it's legal for them to lie when they're interrogating people to try to get people -- to try to induce people to confess, to try to make it seem like it was hopeless.

His cell phone pinged off of Centenary -- pinged

in Centenary at the time of the death. And DNA evidence is absolute all lies. They were trying to get a confession because that's what they needed and he didn't confess because he didn't do it. And right now there is somebody or somebodies out there that have killed two people that's walking around because they didn't do their job. They may have done -- I don't know if I would say that they did it to the best of their ability. Maybe, they did.

They didn't have a crime scene -- remember when they were talking about this theory that Issac came in and shot them and shot Andrew Legette. And then Issac then had a struggle with Maisha. And Maisha fought for her life with Issac. And I said, hey, is there anybody -- was there anybody on the crime scene that was an expert in crime scene reconstruction. No. They just made it up that's what we think happen, so we're just going to say it. They have experts for that. No one on the scene was a crime scene -- was an expert in crime scene reconstruction. No one at all. And there's a photograph there -- and I'm about to sit down.

Remember the photograph where the hair in the -- where Maisha -- and you'll see the photograph of Maisha is laying on the ground and she has a ball of hair in her hand. And I ask him did the ball of hair in your hand --

if you believe she was in a struggle, that she's got a ball of hair in her hand, that ball of hair could have belong to the assailant, that's what they did. They never took the ball of hair out of her hand and send it to SLED for analysis. They analyze hair by the front door, but the one that's in her hand and you will see -- never sent it for analysis. And they gave some story about, well, we determine that you couldn't profile them, but what did the DNA expert did for the hair that they did send. They got a profile off it. They got a partial profile off of it. They got two partial profiles off of it. How can you not do that. I mean, that is detective work Barney Fife would have known to send in that ball of hair that was in this decease person hands, specifically if it was your theory that she fought.

Ladies and gentlemen of the jury, I will say this and I'll sit down. Ryan White is going to get a chance to come back up and speak with you because he has the ball. He gets a second bite at the apple. I won't get a chance to talk with you again, can't rebut anything that he says. But, ladies and gentlemen, the jury I submit to you that there is tons of reasonable doubt in this case. And that no one should be sent to jail for the rest of their life until these questions are answered until a thorough investigation is done.

We as citizens are entitle to that. We are entitle to that. He is entitle do that. Every citizen of this country is entitle to that. That's what our government promised us. Our government made certain promises to us. The Constitution is the government's promise to its citizens to make them live up to their promises. No man or woman should be deprived of their life based on this. I wouldn't feel comfortable sending anyone to prison for two days based on this.

MR. WHITE: Objection, Judge.

MR. BROOKER: And I hope you feel the same way because it's just not here. I know it. They know it. Everybody in this courtroom knows it. Don't let passion interfere with your duty. It's a tough one and I know that because someone's dead. You got grieving relatives in a courtroom and I know you want to relieve -- you want to relieve them in some way. That's not a consideration for professional jurors. The question that you have when you go back in that jury room is is there any reasonable doubt. And if the answer is, yes, law enforcement has to go back and do their job.

THE COURT: All right. Members of the jury, we have about 30 minutes left. You want to take a quick break, restroom break or you want to plow through? Mr. Foreman, once everybody has used the restroom and

ready to start back, knock on that door and let me know. If you'll let me know and then we'll come back out here and we going to finish it up. We going to feed you and let you do your job.

(WHEREUPON, the jury retire to the jury room.)

(WHEREUPON, a break was taken.)

(WHEREUPON, the jury came into open court.)

THE COURT: The State's recognized.

MR. WHITE: Thank you, Judge. Ladies and gentlemen, I know you want to have this case and decide it. I'm not going to keep you very long at all, okay. I want to tell you when I first started as a lawyer, I clerked for a judge. I'm just like the law clerk who is up there right now and that judge told me this is if you got the facts in a case, pound the facts. When you got the law, pound the law. If we don't have either, pound your fists. This is exactly what the defense attorney was just doing, wants to confuse you, confuse the issues. And one is motive and it's a big one. And, ladies and gentlemen, I didn't bring that kind of thing in.

(WHEREUPON, video statement is played for the jury.)

MR. WHITE: I didn't make that up, that didn't come from me. It came from his own statement. And, ladies and gentlemen, $671 a month and that's lot to me,

but if you extrapolate that out five kids per month until each kid turns 18, you talking about tens of thousands of dollars on up about $100,000 or more. There is financial motive all over it.

He also touched on, ladies and gentlemen, the cell phone evidence and the time line. He's right I don't know why he keeps bringing it up. I don't dispute everything -- we don't dispute everything that happened up to midnight. What they can't account for -- and he glossed right over it. It's what happened from midnight until 7:00 a.m.

MR. BROOKER: Your Honor, may we approach? May we approach?

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record.)

MR. BROOKER: I think he just made a critical error that you may have to instruct the jury. He can't say what they can't account for. Burden of proof is not on us. You can't ---

MR. WHITE: That's what you said in your closing.

THE COURT: He's just replying what you brought up.

MR. WHITE: Yeah, that's all it was.

MR. BROOKER: I'm bringing up the evidence, but he can't say that we can't account for it where he's basically saying ---

MR. WHITE: You glossed over it.

MR. BROOKER: --- we have something to prove. We don't have to account for anything.

THE COURT: I'm going to charge them.

(WHEREUPON, a bench conference was held in the presence of the jury, but out of the hearing of the jury on the record has ended.)

MR. WHITE: And, again, you didn't hear much about the time from 12 midnight to seven a.m. that's the time that I'm talking about. And he wants to say that I didn't want to move this in, but that was strategic because I knew he would. And the fumbled backwards and emphasize my point and that is exactly what he did. He had no idea when he ask that expert he said on this slid you don't see the 4:49 call why is that. And you can tell it caught him off guard because that's a different tower he's moving.

Ladies and gentlemen, despite what he says at 4:49 a.m he is not in his house. I can't emphasize that enough. Twelve o'clock he says he's in his house talks to Maisha. The last person to talk to her alive. Savion says after midnight sees a car come up 4:49. He star 67

the call both times and he is not in his house where he says that he is. That's the issue that I'm bringing up. And these calls even though he says he's asleep with his girlfriend in the bed, they're calling each other, that's the issue that I'm bringing up.

And, ladies and gentlemen, I don't know if you know this, but when he was -- he had that expert on the stand. He did it time and time again. I didn't think I had to bring it up, but he -- it was -- it's a defense strategy. It's a little technique. It's suttle if you don't catch it. The defense attorney gets up there and he's questioning an expert. And he'll say I don a lot of research on this. And I've research topic, topic, topic. And I research this, this and this because when he gets up closing, he wants you to think he's the expert. He wants you to think that he has all the solutions. And he talks about he's never seen such things in a case. I never heard such gross mischaracterization of evidence in a closing argument ever. He completely misstated everything that that DNA expert said.

I remind you Thurmond Brooker is not an expert in anything in this case. The expert you heard testify from that stand right there and it's not as complicated as he wants you think it is. It's not.

Maryann Boehm was the expert. And she said even

if all of his kids were to submit to a standard, all of them, it would not have change the analysis as to Issac Hemingway. Those interpretations that septillion would have been exactly the same, exactly the same. And how he characterize familiar DNA and is not how she testified. She said, yeah, you share your mother and your father, which means on that back doorknob if it would have been a kid, you would have seen Maisha Burch's DNA, but you didn't, not at all. So that theory is blown completely out of the water by not by me, that's important by the expert because I'm not the expert and neither is Mr. Brooker not even close.

And also she said the same thing about the people at the crime scene. If you got standards on all those people, would it have changed your analysis as to Issac Hemingway not at all. It would have been exactly the same septillion exactly the same. And he wants to go into it wasn't checked, right, you didn't run it through the system twice. Well, that's another defense technique. She didn't personally run it through it twice, two other experts did. They checked her work twice. And you know what they found, we agree with you. We think you're absolutely right. And she can't say certainly I said that again, she only deals in likelihood ratios and exclusions. And let me tell you something that flour analogy, she

didn't testify to that. She didn't give that example at all. He gave that example.

And what did she say about transference that it would not have occurred in that fingernail scenario, that is not transference. The DNA that's under there is the person's who was scratched. And she said it's more likely that it's Issac Hemingway under the fingernail and that's what she said. That's what the expert said not what Mr. Brooker said. Mr. White said, but the expert said. The report's going to be there for you review it if you need to.

Ladies and gentlemen, there is only one person who benefited from the death of Maisha Burch on January 12th 2020 and I can't emphasize enough it is not small. Five children at $671 a month for the rest of their minor lives. And in one fail swoop, they get custody of them, these children. And the next thing you know they're calling the girlfriend mom. I mean, it's completely turn everything on his end. He doesn't have to pay a cent, not one cent.

Now, I just kind of briefly went over the evidence, but you remember everything I walk through. There's a ton. It's more than the DNA. It's more than the cell phone. It's the description of the gun. It's his statement. It's the fact that he says Andrew Legette

was innocent. The only person who would have known that is the killer of Andrew Legette and Maisha Burch, but he like to quote me. He like to quote me, so I'll bring up one of his quotes. And I remember it from law school. It's better that hundred innocent persons escape, than one person suffer. Why I got news for you, ladies and gentlemen, we dealing with a guilty person. We dealing with a guilty person. I want you to go back there and find him guilty of taking these lives well before it was their time. Thank you.

THE COURT: Members of the jury, it is now my duty to instruct you on the law applicable to this case. And it is your duty as jurors to accept and apply the law as I now state it to you. Furthermore, it is your exclusive duty to decide all the issues of fact in this case and to determine the effect, value and weight of the evidence presented. Both the State and the defendant have the right to expect that you will carefully consider and evaluate the evidence and apply the law this to it, so that in the end both the State of South Carolina and this defendant will have received a fair and impartial trial. I want you to understand that when I use the word defendant I am referring to Issac Kareem Hemingway.

Furthermore, as I told you at the beginning of the trial, you and I have separate duties to perform. As

the trial judge, it is my responsibility to preside over this trial. Therefore, I have the duty to rule upon the admissibility of the evidence offered during this trial. In that regard, you are to consider only the testimony which has been presented from this witness stand, review any exhibits that are admitted into the record of this case. Furthermore, I have the additional duty to charge you on the law applicable to this case. And in that regard, it is your duty to accept and apply the law as I now state it to you.

In this trial, you are the sole and exclusive judge of the facts, and I am the judge of the law. Do not infer that I have any opinion about the facts in this case from anything I have said or done during the course of this trial. In this regard, the law simply does not permit me to have an opinion about the facts. As jurors, it is your duty alone to determine the effect, value and weight of the evidence presented during the course of this trial.

Furthermore, it is your job as jurors to determine the credibility and believability of the witnesses who have testified in this case. You must evaluate the evidence and determine which evidence convinces you. In determining the believability of witnesses who have testified in this trial, you may

believe one witness over many or many over one. You may believe a part of the testimony of a witness and reject the remaining part. You may believe the testimony of a witness in its entirety or reject it in full. You may consider whether the witness has an interest in the result of the trial, whether the witness is prejudice toward either party. The opportunity for the witness to have seen the matters and things about which the witness may testify. And the way the witness acts on the witness stand.

The rules of evidence ordinarily do not permit witnesses to testify to opinions or conclusions. And exception to this rule exist for witnesses we call expert witnesses. A witness who by education and experience may state an opinion as to the relevant and material matter in which the witness claims to be an expert and may also state the reasons for the opinions. You should consider an expert opinion received in evidence in this case and like any other evidence give it the weight you think it deserves. If you decide that the opinion of an expert is not based on sufficient education and experience or if you conclude that the reasons given in support of the opinion are not sound or that the opinion is outweighed by other evidence, you may disregard the opinion entirely. An expert witness' testimony is to be given no greater weight

than that of any other witness simply because the witness is an expert. Furthermore, you are not required to accept an expert's opinion even though it is not contradicted.

Furthermore, there are two types of evidence which are generally presented during trial direct examination and circumstantial evidence. Direct evidence directly proves the existence of a fact and does not require deduction.

Circumstantial evidence is proof of a chain of facts and circumstances indicating the existence of a fact. Crimes may be proven by circumstantial evidence. The law makes no distinction between the weight or value to be given to either direct or circumstantial evidence. However, to the extent the State relies on circumstantial evidence, all of the circumstances must be consistent with each other and when taken together point conclusively to the guilt of the accused beyond a reasonable doubt. If a circumstance is merely portrayed the defendant's behavior is suspicious, the proof has failed. The State has the burden of proving the defendant guilty beyond a reasonable doubt. This burden rest with the State regardless of what the State relies on direct evidence, circumstantial evidence or some combination of the two.

The State in this case alleges several offenses against the defendant. These charges against Issac Kareem

Hemingway are murder two counts and possession of a weapon during a violent crime. Each charge is a separate, distinct offense. You must decide each charge separately on the evidence and the law applicable to it uninfluenced by your decision as to any other charge. The defendant may be convicted or acquitted on any or all of the offenses charge. You will be asked to write a separate verdict of guilty or not guilty on each charge.

To these charges, the defendant has entered a plea of not guilty. This plea -- these pleas of not guilty places the burden of proof on the State to prove the defendant guilty to you beyond a reasonable doubt on each and every charge. It is vital to understand that the defendant is presumed under the law to be innocent of the charges. It is a fundamental rule of our law that the defendant regardless of the seriousness of the charges against him is always presumed innocent of the crimes for which he is charged unless and until his guilt has been proven by evidence that satisfies you beyond a reasonable doubt.

The presumption of innocence is not a mere legal theory or legal phrase. The presumption of innocence is very important. You need to understand that this presumption accompanies the defendant from the time of his arrest an appearance in this court and continues with the

defendant even after you retire to the jury room to deliberate. In other words, the defendant receives the benefit of presumption of innocence until the very end of this trial when you, the jury, will deliberate upon the evidence and decide whether the State has proven his guilt on each and every charge beyond a reasonable doubt.

Proof beyond a reasonable doubt is proof that leaves you firmly convinced of the defendant's guilt. There are few things in this world that we know with absolute certainty. So even in criminal cases, the law does not require proof that overcomes every possible doubt. However, if based on your consideration of the evidence, you are firmly convinced that the defendant is guilty of the crimes charged, you must find him guilty. If on the other hand you think there's a real possibility that he is not guilty, you must give him the benefit of the doubt and find him not guilty.

Please understand that reasonable doubt may arise from evidence which has been presented in this case or from the lack of evidence in this case. It is your responsibility to determine whether or not reasonable doubt exist as to the guilt of this defendant on each and every charge. I charge you that the defendant is entitled to every reasonable doubt arising in the whole case. If upon any issue of fact essential to conviction and a

verdict of guilty, you have a reasonable doubt as to how that issue would be resolved, it would be your duty to resolve that reasonable doubt in favor of the defendant.

Thus in summary, it is important to understand that the defendant is not required to prove his innocence. Instead, the State is required by law to prove every essential element of the charges against the defendant by evidence which satisfies you of his guilt beyond a reasonable doubt. Only then can you convict the defendant and find him guilty.

I further instruct you that the fact that the defendant in this trial did not testify on his own behalf is not a factor to be considered by you in any way during your deliberations or in your consideration on the question of guilt or innocence. In this regard, the defendant has the constitutional right to remain silent. And in exercise of this right, it must not be considered by you in your deliberations. The fact that the defendant did not testify should not be even be discussed in the jury room.

The burden of proof as I have already stated to you is on the State. The defendant has no obligation to prove his innocence. The burden of proof remains with the State to prove the defendant guilty beyond a reasonable doubt. And the fact that the defendant did not testify is

not a factor to be considered by you in the guilt or innocence of the defendant.

A statement allege to have been made by the defendant has been admitted into the evidence of this case. While the Court has determine that the statement is admissible, I instruct you that you make the ultimate decision of whether or not the defendant made the statement. If the defendant did make the statement, you must determine whether the statement was made by the defendant voluntarily and of his own free will. This means that the statement was not caused by pressure, force, fear, threat, coercion or intimidation or by hope or a promise of leniency or a reward of any kind. And in determining whether the statement was voluntary, you should consider both the characteristics of the defendant and the details of the questioning.

Some of the factors that you must consider are the age of the defendant, the defendant's education or lack of education. The defendant's mental ability or capacity, the defendant's IQ or intelligence, the defendant's background and environment, the place and length of detention and the nature of the questioning. The State has the burden of proving beyond a reasonable doubt that the allege statement was voluntary. If you determine that it was, you must give the statement any

further consideration that you deem proper. You must decide what weight, if any, should be given to the allege statement. If you determine the allege statement was not the free voluntary statement of the defendant, you should not consider the statement at all.

The defendant is charged with murder. The State must prove beyond a reasonable doubt that the defendant killed another person with malice aforethought. Malice is hatred, ill will or hostility towards another person. It is the intentional doing of a wrongful act without just cause or excuse and with the intent to inflict an injury or under circumstances that the law will infer an evil intent. Malice aforethought does not require that malice exist for any particular time before the act is committed, but malice must exist in the mind of the defendant just before and at the time the act is committed. Therefore, there must be a combination of the previous evil intent and the act.

Malice aforethought may be expressed or implied. These terms express and implied do not mean different kinds of malice, but merely the manner in which malice may be shown to exist. That is either by direct evidence or by inference from the facts and circumstances which are proved. Express malice is shown when a person speaks words which express hatred or ill will for another or when

the person prepared beforehand to do the act which was later accomplished. For example, lying in weight for a person or any other acts of preparation going to show that the deed was within the defendant's mind would be express malice.

Malice may be implied from conduct showing a total disregard for human life. The defendant is further charged with possession of a weapon during the commission of a violent crime. The State must prove beyond a reasonable doubt that the defendant was in possession of a firearm or visibly displayed what appeared to be a firearm during the commission of a violent crime. In order to prove that -- in order to find the defendant guilty of possession of a weapon during the commission of a violent crime, you must first find the defendant guilty of a violent crime, here murder is considered a violent crime.

Now, Ms. Clerk, if you would hand the foreman the verdict form please. All right. Now, ladies and gentlemen, I'm drawing near the end of my charge, and I want you to clearly understand that you are not partisans or advocates for the State of South Carolina or the defendant. You do not serve as jurors to reward your friends or punish your enemies. In this regard, you have been selected by both the State and the defendant to be fair and impartial jurors. It is your duty by your joint

deliberations to determine facts in this case giving the defendant the benefit of every reasonable doubt on each and every issue. Then to the facts that you determine to be correct, you should take and apply the law which have been given to you by this court and thus arrive at a verdict. When you have accomplish these responsibilities, you will have satisfied your oath as jurors and you will have discharged your duty to this court.

Now, I have handed the foreman the verdict form. When you arrive at a verdict in this case, you're to write your verdict on the form. For the charges, if the State has failed to prove the guilt of the defendant beyond a reasonable doubt, your verdict will be two words not guilty. However, should the State have prove their case against the defendant beyond a reasonable doubt, then your verdict will be one word guilty.

Mr. Foreman, once a decision has been made, you should check your choices on the verdict on each and every charge. Also, please understand that the verdict that you render in this case must be the verdict of each and every juror. It must be an unanimous verdict. All 12 jurors must agree on a verdict which you authorize the foreman to write for the jury.

Now, Mr. Foreman and members of the jury, I want you to further understand that the order in which the

choices a verdict appear on the verdict form, are not suggestive of any verdict on the part of this court. The verdict in this case is to be determined by you and not before. Furthermore, ladies and gentlemen, please understand that even though I have given the verdict to the foreman, it is not verdict his verdict alone. I emphasize again the verdict must be unanimous.

Now, you will retire to the jury room. However, I would ask that you do not begin your deliberations at this time. The law requires that I consult with the attorneys first. After I have done so, the bailiff will bring in the items of evidence and instruct you to begin your deliberations at that time. Also should you have any questions during your deliberations, you must put them in writing and send it to me by way of the bailiff. The court bailiff will be placed immediately outside the jury room door to provide security and assistance for you during your deliberations. Once you have reached your verdict, please knock on the juror room door and ask the bailiff to advise the Court that you have reached a verdict. And at that time we'll return you to the courtroom as promptly possible thereafter. Thank you. You may retire to the jury room, but do not begin your deliberations until advise to do so.

(WHEREUPON, the jury retire to the jury room.)

THE COURT: All right. Any objections to the charge from the State?

MR. WHITE: No, sir, Judge.

THE COURT: How about the defense?

MR. BROOKER: None, your Honor.

THE COURT: You all take a look at the items that are in evidence make sure they're in order to your satisfaction. Let me know and at the time we'll send them in and bring out the alternate.

(WHEREUPON, a pause in the proceedings.)

THE COURT: Everything look good from the State?

MR. WHITE: Yes, sir, Judge. Thank you, Judge.

THE COURT: Thank you. Everything look good from the defense?

MR. BROOKER: Thank you, your Honor.

THE COURT: All right. You can take it on in and tell them to begin and bring out the alternate. And tell them we're going to bring them lunch.

(WHEREUPON, the jury began deliberations at 2:42 p.m.)

THE COURT: Trials are a lot like a football field, you got to have 12 people. If Tom Brady got hurt, they have to send in somebody else. But it's an important part as you know of all the trials, complicated trials. So we had to have you sit through it all just in case.

Even right now if somebody fell out, you got to step in. We got everybody. You free to go. You've earned a three year exemption by being here. And you can stay if you want or you can go whatever you want to do.

(WHEREUPON, the alternate juror was dismissed.)

THE COURT: Bring out just the foreman.

(WHEREUPON, the jury foreman came into the courtroom.)

THE COURT: Checking with you to see if you would like to go home for the evening and come back fresh in the morning or do you think you're getting close or stay and finish?

JURY FOREMAN: Can we have a few more minutes and I'll let you know.

THE COURT: Yes.

JURY FOREMAN: Thank you so much.

(WHEREUPON, jury foreman returned to the jury room.)

(WHEREUPON, jury foreman returned to the courtroom.)

JURY FOREMAN: We need to come back tomorrow.

THE COURT: Okay, go ahead and bring out the jury let me talk to you real quick.

(WHEREUPON, the jury came into open court at 5:35 p.m.)