STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

JOHN DAVID ROUSE and
ELIZABETH G. YOSKIN
Petitioners,

vs. CASE NO. 16-2579RX

DEPARTMENT OF LAW ENFORCEMENT
Respondent.
_____/

IN RE: HEARING
(VOLUME II, PAGES 177-340)

BEFORE: HONORABLE LAWRENCE STEVENSON

DATE: June 17, 2016

TIME: Commenced: 9:00 a.m.
Concluded: 1:23 p.m.

LOCATION: The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399

REPORTED BY: CLAVETTE A. DONNELL, RPR
Notary Public in and for
State of Florida at Large

APPEARANCES:

Representing the Petitioners:

CHRISTIAN A. STRAILE, ESQUIRE
1031 N.W. Sixth Street, A2
Gainesville, Florida 32627

Representing the Respondents:

ANN MARIE JOHNSON, ESQUIRE
2331 Phillips Road
Jacksonville, Florida 32308

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(Transcript continued from Volume I.)

PROCEEDINGS

THE COURT: You can be seated. I'm sorry.

Are we ready to pick up where we left off.

MR. STRAILE: Yes, Your Honor.

THE COURT: Take the stand, please.

MR. STRAILE: Your Honor, before we pick up where we left off yesterday, yesterday I was trying to rush through the testimony because you gave us a hard deadline of 4:30 and I was attempting to pass the witness with enough time to Cross. But now that you've -- we've brought ourselves back today, I would like to ask Mr. Malhiot a few more questions.

THE COURT: That's fine. I was, in fact, going to ask you if you wanted to -- before she commenced her Cross, if you had thought of anything overnight. So, yeah, please proceed.

MR. STRAILE: Okay. Thank you.

Whereupon,

MATTHEW MALHIOT

was recalled as a witness, having been previously duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. STRAILE:

Q Mr. Malhiot, have you have you been to the CMI

facilities?

A I have.

Q Okay. Can you describe the environment up there?

A The factory?

Q Yes, sir. Well, where they did the testing and things?

A Well, it's broken up into many different sections: Repair, manufacture, calibration, administration, shipping. I'm sure you're asking about the calibration laboratory.

Q Yes, sir.

A When I was there the few times, the calibration laboratory is a room about the half the size of this room with benches, normal -- to me it's a normal factory type of setting. It's not a sterile laboratory as we have that preconceived notion. Have instruments lined up on the table, simulators, ventilation system. In fact, when I was at the Florida Department of Law Enforcement and the 5000 was still being used, we were having instruments coming back from the factory with calibrations and they were failing inspections. And we coordinated closely with CMI and their calibration laboratory and found out part of the problem the calibrations weren't coming back, it was consistent, there was a lot of issues coming back. The calibration wasn't meeting our standard of the five at the time. And we're finding out that air-conditioning vents were blowing right down on simulators

and cooling them. Simulators are very temperature dependent. So, they did some modifications of their laboratory based on our feedback. It's nothing special. It's not like a clinical laboratory. It's more of a factory setting.

Q In your hole as a Department inspector, when you first came to the FDLE, the Department inspectors were regionalized; is that correct?

A Correct. There were six different regions. I was in the Jacksonville office.

Q So, then you were going to the local law enforcement agency to conduct the Department inspections?

A That is correct.

Q So, can you describe, in general, the environment that the Intoxilyzer would be in? And I know it's obviously probably different for every agency, but in general?

A Normally, depending on the Agency, for instance Jacksonville Sheriff's Office had a room about the size of this and had five instruments on different tables throughout the room and do a lot of breath testing. Smaller counties had smaller rooms. Generally they were in a jail setting near the intake of the -- prisoner intake area. Most agencies had a separate room for breath testing depending on -- they varied widely from tiny little phone booth size rooms to rooms this big.

Q All right. Are you familiar with the 5000 EN?

A I am.
Q Now, we've never -- isn't it true that we've never used that machine here in Florida?
A That's correct. Florida never used the EN model.
Q Okay. There was some talk about one of the issues with the Intoxilyzer 5000 was the disbursement of the light within the machine. Did the EN use the same light system?
A Yes. Yes. The same -- the 5000, all of the models used a projector lamp, sample chamber, a filter wheel, and a single detector.
Q Okay. Have you, in the course of your work, ever analyzed a machine or audited a machine to determine the .3, the three standard to see if a machine would have failed the three standard instead of the five standard?
A Not specifically with that target in mind. We did inspections all the time. Generally, a instrument would pass the three standard, but I didn't specifically conduct the inspection with the goal of the three versus the five.
Q You're talking about now during your time as a Department inspector?
A That is correct.
Q And after you left the FDLE, in your consulting firm, have you done instrument audits for, I'm assuming, attorneys through out the state looking with this issue in mind to see if any machine would have failed this?

A Yes. I have seen through the audits that there's instruments that would not meet the three standard but meet the five standard and remain in service. I couldn't give you a percentage or how many instruments, but it's not uncommon to have an instrument with 084 or 076 that mets the five standard but doesn't meet the three standard.

Q Now, if that had -- to use your example there, 84, 76 --

MR. STRAILE: Let me use the board, Your Honor.

THE COURT: Sure.

MR. STRAILE: I don't know how familiar you are Your Honor, so.

THE COURT: Assume I'm not very.

BY MR. STRAILE:

Q Okay. So, the rule says that if you're testing a .08, right?

A Correct.

Q Then this is -- we're talking plus or minus?

A Correct.

Q The standard. So, the standard it can be changed. As we talked yesterday, you pick the standard and the machine is accurate to that standard?

A Correct.

Q So, in the procedures manual, the Department has chosen to go with the three standard?

A Correct.

Q And in the field when we're using it to incarcerate Floridians, they are using the five standard?

A Correct.

Q So, when we talk about plus or minus, if we were using the five standard, then if a machine came in and we're talking about testing known values, correct?

A Correct. Simulators, wet bath simulators or dry gas standards. Those are the two options.

Q For simplicity sake, we have a alcohol reference solution that is supposed to be analyzed by the machine and it's supposed -- the machine is supposed to analyze that known value within the acceptable range?

A Correct. The vapors from that alcohol reference solution.

Q Okay.

A Yes.

Q If the machine analyzes a known value of an 08 and it gets a .75 on the first test?

A It's going to be a .075.

Q Oh, yeah. Excuse me. Thank you. .075 on the first test and it gets a .085 on the second test, is that within the acceptable range?

A It's within the acceptable range. However, I would personally suspect that instrument because the vast variance

between the two samples. I would have a concern with that, but it does meet acceptable range.

THE COURT: Would it be better if the were both on the low side or both on the high side.

THE WITNESS: Well, closer to each other. The closer to each other is repeatability or precision.

BY MR. STRAILE:

Q Okay. So -- but you would have a concern because this is actually off by a wide range here?

A There's a huge variance between the samplization, yes.

Q However, legally, technically, this would be within the current definition of acceptable range?

A It would.

Q So, what the Department, then, is doing in the -- according to the procedure manual would be a .077, .083. Is that the acceptable range in the procedures manual?

A It is.

Q So, this is the rule and this is the procedures manual?

A Correct.

Q And if -- during your time at the FDLE, the department inspectors were following the procedures manual?

A Yes, but that .03 standard was not in the procedures manual until 2011.

Q Okay. So, that was after you left?
A Correct.
Q So -- but in your studying of their procedures since you've left, that's what it's supposed to --
A That's the procedures manual, yes. Prior to doing the Department inspection they do the intake and do what's known as stability testing. And the 03 standard applies to that stability testing prior to the Department inspection.
Q Okay. And if it -- ignoring all the other things that could go wrong, let's just talk about machine error, okay? According to the procedures manual, if this -- if the -- if the -- if this was an 084, for example, that would be outside the range error rate within the procedures manual?
A Correct. That would be outside the three standard as we've been referring to.
Q And that then would have to be -- if it is the machine, what is supposed to happen?
A Well, first thing is to determine cause. And I understand your assumption is it's the machine. Can it be fixed with calibration? Can it be fixed with an O ring, or does it need to go back to the factory for repair. Those are the options.
Q So, at the end of the day, if it cannot be recal -- in the field they are also supposed to attempt a recalibration prior to repair?

A Not in the field. The field does not do recalibration. The agencies don't calibration. What they will do is they'll check for the O ring, they'll check their simulator, they'll check their solution, they'll check their procedure, repeat it one time. If they cannot get it in standard with that single repeat, then they are to call the Department and get guidance, maybe troubleshooting, maybe shipping. But they don't calibrate or adjust calibration whatsoever in the field at the Agency level.

Q But if all of that doesn't work, they are supposed to ship it to a repair facility?

A Repair facility or at FDLE. Generally a repair facility, if they can't troubleshoot it over the phone, it's probably something that needs to go to the repair facility.

Q And at the end of the day if it fails at the procedure manual stage, if it fails the three standard, it also ends up getting sent to a repair facility ignoring, you know, O ring, and stuff like that?

A After their processes and determined, yes.

Q And, so, is it your contention that the FDLE is already enforcing the three standard then?

A During the Department -- prior to the Department inspection or the annual inspection, yes, they are enforcing the three standard during that -- in processing procedures.

Q So, basically, if it comes out of -- if it's outside

the -- if it's outside the three standard at the procedures manual stage, it can be sent to the repair facility. And do they enforce that on the agencies?

A Well, they are enforcing it at their level on the Agency's machine who ultimately is the Agency's responsibility for the repair cost.

Q So, they are -- basically, they're doing it any way?

A At the Department inspection, annual inspection, yes, they are.

Q Okay. But it's not in the rule?

A It is not.

Q By they are enforcing it?

A They are.

Q So, should it be a rule?

A I absolutely believe it should be a rule, yes.

Q And why is that?

A Well, two reasons. One, you have a standard that you're enforcing upon an agency that, as of right now, has no rule to cite; meaning, your instrument has failed the procedure. So -- but it has not failed the rule. And the rule is intended to, one, insure scientific reliability, but, two, let everybody, the agencies, the public know what the standards are.

Q Sure. And accuracy is also a big component of --

A Scientific reliability, accuracy falls within that,

yes.

Q Okay. Having a procedures manual in the lab, that makes good sense, it's good science you would say?

A Absolutely.

Q Every lab or testing facility should have a procedures manual?

A Correct.

MR. STRAILE: I don't have any further questions now.

THE COURT: Okay. Cross?

CROSS-EXAMINATION

BY MS. JOHNSON:

Q Good morning, Mr. Malhiot?

A Good morning, Counsel.

Q Do you hold a degree in any science?

A I have a Bachelor of Science, but it is not in a natural science.

Q What is your Bachelor of Science in?

A It's criminal justice administration.

Q Prior to your employment with FDLE, did you ever work in a lab environment?

A I was not employed by a laboratory. I worked mostly the law enforcement, but worked with the Division of Forensic Science in Montana, was certified by the Division of Forensic Science in technical instrument operation, calibration,

maintenance, and repair.

Q And was that -- was your primary role as a police officer?

A Yes.

Q So, you've never worked in the field of metrology, correct?

A Field metrology is the science of measurement. I would say working with FDLE is the science of measurement. But, no, other than that, I have not been employed by a calibration laboratory or metrologist.

Q And during your time at FDLE, you weren't responsible for rule promulgation, correct?

A No. It was not my ultimate responsibility. I was part of the team that developed, edited, gave input, but ultimately it was the program manager's responsibility.

Q Now, you said you had -- strike that. When you say you were involved in the team, how often did the team meet to go over?

A Well, it depends if we were in the rule process or not. Because we are all in regional offices during the rule process, we probably have monthly meetings in Tallahassee or Jacksonville or wherever we would meet, and we would have a lot of electronic e-mail back and forth. Here's the draft. Give us your input within ten days. And the six of us in the field would give input. But at the most, it would be a

monthly meeting during the six-month process prior to promulgation.

Q So, during the time you were with -- you started at FDLE in 2002 to 2010. So, that's approximately eight years, correct?

A Yes.

Q How many times during those eight years was the rule promulgated?

A Well, we had it up here 2001, 2002, 2004, 2006. There was a lot of different rule -- 2008.

Q And you would meet for the six months prior. Was that the sole purpose of the meeting that you have?

A Some of them were sole purpose rules some of them were quarterly staff meetings that rules were part of the agenda.

Q And during that eight-year period, were there ever changes to the rule regarding 8.002(1)?

A It was never changed during that time.

Q You talked on direct yesterday about failing a QC -- an instrument failing a quality control check, right?

A When he speak quality control, the 03 process standard?

Q Correct.

A Okay. I just wanted to make sure. Yes.

Q Those quality control checks were never in place

when you were with FDLE, correct?

A The 03 standard?

Q Correct.

A Was not.

Q Okay. So, in your eight-year period at FDLE, you never used the 03 standard; is that correct?

A We used it during research studies, but never on an evidentiary instrument that was being sent back to the field.

Q That wasn't part of your department inspection procedures any --

A Intake procedures.

Q -- checks you did?

A No, ma'am.

Q Okay. Did you do calibrations?

A We did.

Q And when you did your calibrations, those weren't to an 03 standard; is that correct?

A I don't believe so. But I don't remember for sure because that was a total different procedure. I don't recall if it was or not, but the calibration standard was different than department inspection or the in processing and I don't remember right off the top of my head to what standard that was.

Q Now, if an instrument -- you also talked about if an instrument fails a quality control check for the three

standard, it's not possible that it could then pass in a Department inspection, correct?

A Let me understand the question. If it fails the 03, is it physically possible to pass the 05?

Q Correct.

A Correct. It can't. In fact, if you apply the 03 standard, it will never make it to the Department inspection. So, they won't even do that processes until they determine the cause of the 03 for quality assurance range failure.

Q You also talked about the federal register and how all the instruments on the federal register meet the five standard, correct?

A Correct.

Q There are instruments on the federal register that do not use infrared spectroscopy, correct?

A Correct. We went over that yesterday, yes.

Q How many instruments meet the three standard that are on the conforming products list?

A I would have no idea.

Q Now, you said you work in other states for your forensic consulting?

A I do.

Q Have you reviewed the standards in other states?

A I have.

Q Are there any states that use the three standard?

A Not to my knowledge.
Q And you work -- your home base is in Georgia, correct?
A Correct.
Q And Georgia using the 9000, correct?
A They just finally transitioned the first of this year to the 9000.
Q And the 9000 has an instrument accuracy specification of plus or minus .003 or 3 percent, correct?
A It does from the manufacturer specification, yes.
Q And Georgia's acceptable range is plus or minus .005 or 5 percent; isn't that correct?
A I think it's .004 because they use an 08 standard. But during the dry gas control test, that is correct. And they use a 30 and a 05, but yes.
Q And in your review of other states, all states use the five standard or greater; isn't that correct?
A Well, not necessarily. Georgia when they use the 5000 used a .004 standard. The quarterly inspection must be between 08 -- or 076 and 084. So, on the 5000, they used a quarterly inspection of .004 standard.
Q What about during the breath test?
A During the control test on the 5000, Georgia never did control testing. On the 9000, they use a five.
Q So, you're not aware of any state that actually uses

this three standard as their acceptable range?

A I am not.

Q And you're not aware of any instrument on the conforming products list that uses the standard --

A There's hundreds of instruments. Some of the instruments I'm not even familiar with. But no.

Q You said that the manufacturer's instrument specs for accuracy are 3 percent. Are the process specifications the same?

A I don't understand the question. I'm sorry.

Q Is there -- the instrument specifications use the three standard or the accuracy uses the plus or minus of .003 or 3 percent. Does the process used for testing -- how do you know that that 3 percent is for the instrument accuracy and not for the process in its entirety?

A Well, it's the same thing. Because how can you test the instrument's accuracy if you don't do the process? I mean, you can't have an instrument stand alone. Like, we have the 8000 sitting there. We can't say it's plus or minus three, five, ten, whatever number you want to use unless you test it with a standard. So, it is the processes. It can't be a stand alone without the entire process.

Q Okay. When determining the accuracy specifications, CMI's accuracy specifications, you don't know how they conduct their testing, correct? Have you observed when they do their

testing?

A Yes. I have observed their testing of instruments many times.

Q For their accuracy specifications?

A Not specifically for the research and development of the machine's accuracy standards, no. But I have observed and watched and assisted in accuracy testing of 8000s and 5000s at the factory many times.

Q Do you know what external components that they use?

A They use wet bath simulators during those accuracy standards and also dry gas.

Q Do they use specific brands?

A Of?

Q Of, say, simulators.

A Normally they use Guth simulators. That's the manufacturer.

Q But you don't know if they always use the same manufacturer, the same --

A When I was involved up there, they were solely a Guth customer, they only used Guth. Now, they did do other simulator testing to see if other simulators worked with their instruments. But their calibration laboratory was solely Guth at the time.

Q When you where are with FDLE, did CMI dictate what external component --

MR. STRAILE: Objection, Your Honor.

Q -- that FDLE used?

MR. STRAILE: Objection, Your Honor. The external components is -- external components could be keyboard, a plug, a leg that your screw, adjust the machine. First of all, we don't know what external components she's talking about. So, I don't know if it's even relevant to these proceedings, so.

MS. JOHNSON: I'll rephrase, Judge.

THE COURT: Narrow it.

BY MS. JOHNSON:

Q Did CMI dictate what simulators, what tubing, what alcohol reference solutions during evaluation of the accuracy specifications?

A CMI cannot dictate to the customer anything. They did have a list of things that they would recommend. For instance, they had approved printers that were, but they never dictated you must use a Guth 2100 simulator or Tygon tubing. No, there was no mandatory adjunct equipment in the accuracy testing.

Q So, CMI didn't dictate that in order to -- to evaluate the instrument specifications, you have to use X simulator, X tubing, X alcohol reference solution, correct?

A No, they didn't dictate to the state any of those.

Q Did CMI actually make recommendations on acceptable

range?

A Other than their published three standard. A recommendation, I'm no familiar with a recommendation of their accuracy standards to the states, no. In fact, they defer to the states and the state standards, administrative codes, state law, state statute.

Q Now, you talked about using the three standard for quality control and how that's putting some kind of extra burden on the agency to pay for the calibration?

A Well, not calibration. Because you guys don't charge for calibration. You guys are going the calibration. So, the calibration is actually a money saver to the Agency. That was part of the change in 2010. The repairs of the instrument that's not under warranty, is the Agency -- the owner's responsibility.

Q During the quality control checks, if it doesn't meet the three standard, the standard operating procedure recommends that the instrument be calibrated, correct?

A Well, it recommends calibration. It also recommends troubleshooting; meaning, determine the cause. Is it the calibration or is it simply an O ring that's not sealing properly. So, the Department inspector will go through a processes to determine the cause. If the calibration is off and that is determined to be the cause of the failure of the 03 standard, then they will complete a new calibration on the

machine.

Q Have you looked at the data regarding instruments that fail to pass the quality control checks and then how many of those that had to be determined that it needed -- the instrument needed to be sent for repair?

A I have not audited all 400 and something instruments, department inspections. I have seen specifically Jacksonville, a couple of instruments that have come up, failed the three standard and were shipped back for repair to CMI. But I have --

Q You don't know the overall 63,000 control tests how many of those would have failed the three standard?

A No. And when we're talking the control test, that data is available to FDLE and that's the dry gas test during every breath test.

Q You said that during your time at FDLE, that when you did quality control checks, you used a different standard. Why would you use a different standard?

A Because that was what was published procedures from FDLE's alcohol testing. We didn't have a -- there was not a three standard stability test prior to Department inspection at the time.

Q I think you stated that you used some kind of pre-Department inspection check that was different from the 5000 to the 8000. What was that?

A Well, the intake procedure form was developed when everything was moved physically to Tallahassee for the department inspection. In the past, there was no intake form because the machines weren't in-taking. We physically went out. The intake processing sheet involved from 2010 when Mr. Murphy and I first developed the form to what you have today. And there was a lot of procedures that have been added over the last six years.

Q During your time at FDLE, were you actually ever physically located in Tallahassee?

A I was.

Q For how long?

A Probably 11 months, ten months.

Q And was that prior to your departure from FDLE?

A Yes.

Q Were all the Department inspectors at that time located in Tallahassee?

A No. I was the first to move up there, but they were all being moved.

Q How many -- before you left FDLE, how many Department inspectors were actually located in Tallahassee?

A I believe myself and Mr. Murphy were the only two physically here.

Q And that was only for 11 months prior to your departure?

A Yes.
Q You said you used a different standard to determine whether or not an instrument required calibration. What was that standard?
A I don't recall saying that, but the standard for calibration was the Department inspection standard. There wasn't an 03 standard.
Q So, that was the five standard, correct?
A It was.
Q So, there wasn't another standard that you ever used during your time at FDLE other than the five standard?
A Not during the evidential instrument inspections, no.
Q Now, you said on direct yesterday that the reason the 5000 was left in 2006 in the rule promulgation was -- actually, strike that. You said after the 2006 rule promulgation that FDLE was looking into changing it to the three standard, correct?
A It wasn't after. It was all the way through the process, all the way back to 2002 when I started and we were looking at the Intoxilyzer 8000 as an evidential instrument.
Q And part of that process was to collect data points?
A Right. Once it went evidential in 2006, then we'd be collecting evidential data points on the control testing, the monthly or Agency inspection and the Department

inspections of actual evidential instruments in the field. And that was intended to be done for a couple of years and look at the data to support the 03 or the 05 standard.

Q So between 2006 and 2010 when you left, did you ever review that data?

A Many times, not necessarily specific for that rule promulgation, but part of our responsibility was to audit that data on a monthly basis.

Q But you didn't never review it to look for data to support the change from a 05?

A No, statistical data, control testing, inspection testing, Laura -- Ms. Barfield was collecting that data.

Q But you never actually reviewed it to see if the data supported the actual process of change?

A No. I wasn't involved with evaluation or statistical analysis.

Q Was it ever discussed with you that anyone found data to support changing the rule?

A Yes, monthly -- monthly FDLE published a control test graph of all the instruments in the state. But I was never tasked with reviewing it for rule promulgation purposes.

Q Did the data actually support the change from -- support changing it to an 003.

A In my belief it did, yes.

Q How so?

A Well, if you look at the graphs that's published every month the instruments were very, very reliable at that 03 standard on control testing and the 05 standard. They performed better than expected actually.

Q But of all the -- say in 2015 there's 500 control outside tolerance in approximately 65,000 control tests. Of those 500 --

MR. STRAILE: Objection: Facts not in evidence.

MS. JOHNSON: Judge, he said he's reviewed the data regarding control outside tolerance.

THE COURT: I'll overrule. Go ahead and ask the question.

BY MS. JOHNSON:

Q Out of the 500 control outside tolerance test out of 65,000 control tests, you don't know how many of those, even if you reduced it to the three standard, whether or not those would still be controlled outside tolerances?

A I haven't look at the data, again, for that specific goal. Obviously, you've looked at the numbers and know better than I.

Q And you agree that the 500 outside control tolerance of 65,000 tests is less than 1 percent of all control tests?

A You're probably right, yes.

MS. JOHNSON: If I can have one second, Your Honor?

THE COURT: Sure.

BY MS. JOHNSON:

Q When you were talking about the data that's on the dry erase board, you said there's a huge variances between the .075 and the .085. There are other rules that address precision --

A Correct. If you were --

Q -- determination, correct?

A Correct. But, obviously, we only have two numbers. We can't calculate a standard deviation. During the monthly inspection, they'd run three tests. So, you'd have three numbers. And during the Department inspection, they'd run ten. So, you'd have ten numbers. And you would be able to calculate a standard deviation. And there is a standard deviation requirement.

But if my recollection, I've seen instruments that have had that variation that will pass the standard deviation. But to me looking at an 075 and the next evaluation is an 085, that's an automatic red flag. Why? Because of such a huge variance.

Q But that's something that as a Department inspector if you saw that in an Agency inspection, as a Department inspector, you review all Agency inspections for your region?

A Correct.

Q Correct? So, if you saw that, even if though it's within standards, you would review that and --

A Correct.

Q -- question why there's such a huge variance, right?

A The first question I would ask is what's the third number. Because if the first is an 075, the second is an 085, and third is an 085, right away I would say, okay, they didn't let the simulator warm up enough or there was a air leak on the simulator. That would be my immediate. Then I would look at what is the 20, what is the 05? Look at it in the totality of the inspection. But just that raw 075 and 085 to me is a red flag in the quality assurance review.

Q So, you would take some proactive steps. You wouldn't just look at that and say, okay, whatever?

A I would not throw it in the done pile. I would look a little further than those two raw numbers.

MS. JOHNSON: I don't have anything further at this time, Judge?

THE COURT: Redirect?

REDIRECT EXAMINATION

BY MR. STRAILE:

Q What is the difference between precision and accuracy?

A Precision and accuracy are two terms we use in breath testing in forensic analysis a lot. Accuracy is -- and I use the analogy -- and if I can use the white board, I could graphically show it very easily and I think it will help the

Court. I use the dart board analogy. If we throw darts at the dart board and we hit, that's accurate absolutely. And I use the analogy if we sent a scout out to scout a new pitcher for the Dodgers and he throws a strike on the first pitch, that's an accurate pitch, but we're not going to give him a contract for $10 million.

So, precision is how many times can we lit the bulls eye. Repeatability now that's accurate and precise. If we have an instrument that has lack of accuracy, but it could still be precision. All of those are in a small grouping. If we were to take this and say 085, .085, .085, that instrument is precise, repeatability. It's the same value every time, but it's not very accurate because the target value was 080. So, that's the difference, accuracy, precision. So, in the analysis, we're trying to achieve accuracy and precision.

Q Is there a separate rule that addresses the precision?

A Yes, it is in the rule.

Q And that just basically the -- what is the precision rule?

A Well, it you calculate the numbers and actually the instrument does it for you. It calculated the standard deviation and the standard deviation cannot exceed whatever the numbers. It might be a .05. I'd have to review the rule.

Q Is that also kind of the 02 agreement or 002.

A No, that's -- the 02 agreement is apples and oranges.

Q Okay. Now, earlier you said that, on cross when Ms. Johnson was asking you about whether there was a different standard used during your time as a Department inspector at the FDLE and your answer was not during evidential inspections?

A Correct.

Q So, in other words, not during following the form and doing the annual according to the rule?

A Correct.

Q Because that was the rule?

A Correct.

Q Now, let's go away from that. Was there a precheck kind of thing?

A There was a precheck, but stability checking and the 03 standard or 05 standard, there was no quality assurance accuracy or precision during the precheck test at the time. That was implemented after I left.

Q Okay. Now, there's been a little bit made about the control test, okay?

A Correct.

Q Now, what we're talking here with the rule that as far as more calibrating the machine, that's done during an Agency inspection and a Department inspection, correct?

A The wording of your question makes it kind of --
Q Let me rephrase. Let me rephrase. During the annual and the monthly, the Department and Agency inspections, they don't use a different standard?
A No. They use the 05 standard for both inspections.
Q Okay. But there wasn't a -- so back to the -- so, the Agency and the Department inspections, they are using the five standard?
A Correct.
Q And that's during the monthly when the local technician -- the word escapes me.
A Agency inspector.
Q The agency inspector, that's a controlled test where they are plugging in known values?
A Correct simulators and dry gas.
Q Okay. And the Department the same. You plug in known values?
A Correct.
Q The control test is when a subject is actually blowing into that machine?
A No.
Q When the -- when their -- okay. Tell me.
A The control test is during the breath test sequence, before and after every breathe test there's a diagnostic on the machine and then there's a control test. And that's the

dry gas control test during the breath test sequence.

Q I see where my question was poorly worded. When a subject is arrested and comes in and they sit them down and then they do a 20-minute observation, during the collection of the breath sample from someone who has been arrested, that is when the control test in between the breathe sample is proceeded?

A Before and after of the breath sample.

Q Before and after. Excuse me. So, the procedure then I'm arrested, hopefully not me, but they sit me down in front of the machine. They do their 20 minute observation. Presumably they read me Implied Consent. And the Implied Consent -- are you familiar with the Implied Consent warning?

A I'm very familiar with it.

Q What is it?

A Well, it's part of the Florida Statutes. All states have some sort of implied consent. Basically it's saying that when you're issued a driver's license, at that time you consented to a breath test if lawfully arrested by law enforcement for blood or urine, depending on what they want. If arrested, lawfully arrested for law enforcement who has reasonable suspicion to believe you were operating a motor vehicle on the roads of the state under the influence of alcohol. Now, there could be drugs for blood testing, but we are talking breath.

Q Right. And then is there a refusal warning also written.

MS. JOHNSON: Judge, objection to relevance.

THE COURT: Overruled.

A The way Florida's implied consent is, the Courts have said that the individual must be warned of the consequences of their refusal. So, in Florida, in fact, if an officer says, hey, will you take a breath test and they say yes, the if implied consent warning is not even read in most jurisdiction. The implied consent is read when this no says, no, I'm not taking a breath test. Then they dread the implied consent where they are warned that your refusal will result in the revocation of your driving privileges. Then they are given another chance. Having the knowledge of this revocation, do you still refuse the breath test. Then if they refuse, a refusal affidavit is done and DHSMV will suspend or revocate their driver's license or driving privileges in the state.

Q Okay. So, after that, now I have chosen to submit a sample or blow into the machine. The first thing they do is they run a control test on that machine?

A They start a test. And if you look at the procedures form, it's all automated in the software.

Q What is the form number? Do you remember off the top of you head?

A I don't.

MR. STRAILE: So, Your Honor, if I may approach the witness?

THE COURT: Sure.

A I was going to say Form 37, but didn't want to be wrong.

Q Okay. So, that is Petitioner's --

THE COURT: Twenty-four?

MS. JOHNSON: Correct.

BY MR. STRAILE:

Q Twenty-four.

A Tab 30, Form 37.

Q Yes. That's the operational procedures. So, this is their checklist, so to speak?

A Correct. It's not in the checklist from because it's -- 90 percent of these tasks are automated by the software. And if you notice step 1 is to push the start test button and everything else, other than data entry, a lot of it is automated by the software.

Q Okay. So, this control test as they call it, this is during the submission of a breath sample?

A It's during this process, yes.

Q Wholly separate from bringing in the machine into an acceptable range? I mean, in other words, we're not plugging in known values here?

A Yes. The controlled test is plugging in the known value of a .08. But it is totally different than the monthly or annual inspections. Department or Agency inspections are a specific processes for inspection and known control. The control test is a known standard of .08 dry gas during the breath test sequence. So, you have three separate times that a machine will look at the known standard. During the monthly inspection, during the annual inspection and during a breath test. The control test is during the breath test sequence.

Q And you would agree there are more variables during the submission of a breath test than an inspection?

A Yes. The breath test control test will have the most variables because you have a human variable of an intoxicated person sitting right net to the machine.

Q And everybody's body is different, right?

A Everybody's body is different. The environment may be alcohol saturated because it's being done in a room depending on the size, if they're breathing in and out alcohol, you have zero references. There's a lot more environmental variables during the control test than there is during the Agency or Department inspection.

Q Okay. When a -- is there any data available to the public? Does the FDLE store the data when they go through the stability check according to their procedures manual at the three standard before they go to the Department? In other

words, are those tests stored anywhere to your knowledge?

A Hard copies are. The stability test is not a Cobra data point. Control testing, inspection testing, all of those are and available on the website. The stability testing, printed hard copy, stapled and it's maintained in the instrument file. The data is available in paper form. It is not published electronically or part of Cobra reporting system.

Q This procedures manual is an internal document, right?

A Internal to FDLE, yes.

Q Is it -- other then through a public records request, if you knew it existed and if you knew to ask for it, is it available anywhere else out there through, for example, their web site?

A It is not on their website.

Q Okay. Now, when we talk about their website, I think you and I probably understand what we mean. But for the Court's -- for the benefit of the Court, can you describe what we're talking about when we say the website? It's not actually the whole site. It's a --

A Page on the -- the FDLE has a website for all of their functions. A sub page to that is the FDLE, slash, ATP or Alcohol Testing Program pages. And there they have all the electronic breath testing an inspection data, control test

data, statistical data, all subject tests in the state, everything except stability testing that's generated by the 8000. There is some fields that -- obviously, date of birth and driver's license numbers, those aren't published on the website. But the name of -- I jokingly say, when I teach how open the records are, is remember a few years ago Justin Beiber was arrested down in the Miami area for a DUI. His breath test is on the FDLE website, and you can look up Justin Beiber and find out what his breath test result was. That's how open those records are.

Q So, these records then are published on the FDLE website?

A They are.

Q Except for the procedures manual testing?

A The procedures manual, I mean, their core schedule, their employees, their contact information, blood analysis stuff, dry gas, wet bath, solution certifications.

Q But the procedures manual is not there?

A It is not.

Q And the tests that are done according to the procedures manual is also not there; is that correct? You just said they are hard copy.

A They are hard copy. Well, if you go look up a department inspection on instrument ABCD, you could find a PDF version of the hard copy stability test for that instrument.

When I say electronically not available; meaning, I cannot export that into an Excel spreadsheet and review statistically. The hard copy paper is scanned and is there, but not the data, if that makes sense.

Q Well, let me clarify that. When a department inspector is checking out the machine according to the procedures manual and presumably they are writing a report or something as they go along?

A They use the intake form. It's a check sheet, a check checklist, but yes.

Q It's called an intake form?

A In processing sheet or intake form, yes.

Q That's available online?

A It is. And it's a handwritten form. It's not something generated by the instrument.

Q Is that form in the rule, in-taking process solution?

A No.

Q So -- when -- does CMI use the same procedure as a Department inspection in checking out their machines?

A No. They have a separate procedures form, a checklist internal to CMI.

Q Okay. Now, earlier when you said that this rule 8.002(1), you said on cross that it never changed. Were you talking about the language around the numbers?

A No. I'm talking the raw numbers. The language is, whether you call it a quality assurance or during the department -- the wording has changed as the rule evolved. The numbers or the acceptable range has not changed.

Q Okay. So, when you were answering that question, you were meaning the numbers never change?

A It was my understanding that was the intent of the question, yes.

Q Okay. Ms. Barfield testified yesterday at great length what words were changed prior to the numbers, but the numbers did not change. Okay. And the numbers were in place for the 5000, correct?

A Correct.

Q Do you know how long those numbers have been in use in Florida?

A Prior to my employment. So, prior to 2002.

Q Okay. Is there any requirement in federal law or state law that the State's must use the five standard?

A No.

Q Okay. But to be on the CPL, the conforming products list, the machine must be able to meet the five standard?

A Correct.

Q So, that's the federal minimum floor?

A Yes. That's the minimum standards for acceptability on the federal registry.

Q So, if a machine can't come within the five standard, you're not a conforming produce. But if you can some within the five standard, you have meet the floor of the federal standard for the United States?

A Correct. Along with all their others, but yes.

Q And earlier you testified there are hundreds of products only the CPL?

A There's pages. I don't know if there's actually hundreds, but there's pages and pages of different breath test machines that are -- part of the problem with the conforming products list is once the machine is on there, it's on there -- the Breathalyzer is on the conforming products lists, but nobody in the United States uses the Breathalyzer. It's still there. That's from 1950s technology.

Q Okay. 1950s technology. So, this standard, this minimum Florida, the federal government has given us is applicable to a machine with 1950s technology?

A Yes.

Q Do you have any idea how long the federal government has had that minimum standard?

A I don't.

Q Okay. But to your knowledge, it does apply to the 1950s technology?

A 1950s instruments are on the conforming products list, yes.

Q Are you aware of any machines other than the 8000 which CMI says is capable of meeting the three standard, but are you aware of any other machines that are capable of meeting the three standard?

A Well, the 5000 EN was published that way, the 9000. I don't know about other manufacturers. But since the 5000EN, all of CMI evidential instruments have used the three standard.

Q But we never incorporated the EN in Florida because we instead chose the 8000?

A Correct.

Q Okay. Other than CMI products, CMI is kind of like the big dog in the house, or whatever?

A They are the predominant manufacturer in the United States.

Q They have about half the market share; is that correct, 40 percent?

A Probably 40 percent, and there's five manufacture -- well, four because tow of them combined. It's not a huge market --

Q Okay.

A -- as far as number of competitors. It's probably like four or five breath test -- evidential breath test instrument.

Q Okay. Now, you are hired by lawyers to audit

machines, right?

A I am.

Q And during that audit, have you ever kept in mind the three standard versus the five standard and kind of looked and see?

A Not specifically. Because when I'm auditing a machine, I'm auditing it for compliance with state standard, state statute, and state regulations. I don't specifically look at that.

Q Okay. Not on a regular basis?

A Not on a regular basis.

Q Have you looked for it?

A I have seen it, yes. I have seen inspections where they are outside the three and within the five.

Q Okay. Generally is this machine capable of meeting the three standard in the field, though?

A During the inspection process, yes. During the control test generally, yes.

Q Okay.

MR. STRAILE: I have no further questions.

THE COURT: Further cross?

RECROSS-EXAMINATION

BY MS. JOHNSON:

Q You talked about the -- regarding the control test that there are more variables during a control test, during a

breath test because of the environmental factors, correct?

A They are more environmental variables during the breath test than there is during the inspection, yes.

Q Isn't the agency -- strike that. The Agency inspection is conducted in the same environment that the breath test is conducted, correct?

A Yes. The same physical room, but the environmental conditions are changed. There's a difference in the DUI breath test room at 2:00 in the morning on Sunday morning with five presumably impaired persons saturating the environment with alcohol as they breathe in and out versus Monday at 10 a.m. when nobody is in there and somebody is running a simulator test.

Q But you don't know when the Agency inspection -- strike that. The Agency inspections time and date that they are performed is up to the Agency inspector, correct.

A Correct.

Q So, the agency inspector could be conducting them at 3 -- the agency inspections at 3:00 in the morning?

A Some of them doing. You can't be doing breath test and the inspection because the machine is going to be tied up for a half-hour to 45 minutes during that time. It would not be past the common sense test to do inspections simultaneously with breath testing subjects.

Q But it's done in the not same location?

A Physical location, yes, generally. Some agencies, I know like Miami-Dade move all of their instruments in a conference room, sets them up on a table sometimes and does them, not necessarily in the breath test room. Because Miami-Dade County is like 40 different agencies with breath test machines, sometimes down there they'll take and combine their resources and one guy will do four or five different agencies and they will all meet somewhere. Some agencies specifically do the agent inspection in their breath test room. So it varies.

Q The Department inspections are conducted in Tallahassee, correct?

A Most of them, yes.

Q So you -- strike that. So, the Department inspections are done in a more controlled environment than an agency inspection, correct?

A Well, it all depends on how you define controlled environment. If they are not done in a breath test room, but the Department inspection last year or the year before had done them at the Agency in their breath test room. But the FDLE calibration laboratory or Department inspection bench is a controlled environment in the sense that you're not going to have an intoxicated person in that room saturating that room with alcohol, you would hope.

Q So, the Department inspections are done in a more

controlled environment than an Agency inspection, correct?

A They are all done in the same environment. When you say controlled environment, we're controlling what? We're controlling access, we're controlling people. It's a more laboratory environment than at the jail.

Q When you were talking about the quality control checks and the data available, you said that the quality control check results were not a Cobra data point, correct?

A Well, correct. If you look at the reporting processes, you have control tests that are reported, you have log in cylinder changes, monthly inspections. If I were to go to the website right now and look at the Cobra Intoxilyzer 8000 reports, stability checks are not reported.

Q When you were with FDLE, you used a different version of Cobra that is currently used, correct?

A Correct. I think it was April 2014 they switched over.

Q And you didn't do quality control checks as part of your duties when you were in --

A Not the 03 standard, no.

Q You didn't use the instrument processing sheet when you were with FDLE?

A We used a version. The stability checks were not part of that process, but we developed -- Patrick and I developed the first version of that form. The first versions

did not have the stability or as you're referring to it, the quality control check.

Q And the quality control check information is listed on the instrument process and sheet currently, correct?

A Yes.

Q And those instrument processing sheets are also available on the website?

A Yes. They are scanned as a form on the website and you manually go through them.

Q You also talked about how the numbers listed in the acceptable range definition haven't changed since before the 5000, correct?

A To my knowledge, yes. I think the only change was when they added dry gas, but the numbers were the same. In other words, dry gas and wet bath, the 08 standard is the same acceptable range.

Q Prior to 1993, the alcohol testing program was with a different agency, wasn't it?

A HRS, I believe.

Q Do you know what instruments HRS used?

A I don't.

Q Since the alcohol testing program has been with FDLE, what instruments have been approved for use?

A The Intoxilyzer 5000 Model 64, 66 and the Intoxilyzer 8000.

Q And both of those instruments use infrared spectroscopy as a method of analysis, correct?

A They do.

Q An d infrared technology hasn't changed in 40-plus years, has it?

A Yes. The technology has changed. The science and the theory has not changed, but the technology has advanced dramatically in the last 40 years.

Q Now, there are other states that use newer instruments than the Intoxilyzer 8000, correct?

A Correct.

Q And you're not aware of any other state that is uses the three standard, correct?

A I am not.

MS. JOHNSON: Can I have one second, Your Honor?

THE COURT: Sure.

MS. JOHNSON: I have no further questions, Judge.

FURTHER REDIRECT EXAMINATION

BY MR. STRAILE:

Q I just want to kind of refocus the hearing here, because I think we got a little off track. If you would please turn to Tab 8 of the binder, which is Petitioner's 2, Florida Administrative Code 11D-8. And I just want to clarify yesterday, just for the Court and for opposing counsel, yesterday when I was referring to this --

MS. JOHNSON: Judge, I'm going to object. This is beyond the scope of Cross. I didn't ask him any questions having to do with 11D-8 interpretation.

THE COURT: Well, let's see what the question is.

MR. STRAILE: I just want to clarify for the record also, Your Honor, what I was doing is trying to say that yesterday when I was talking about this, I inadvertently said I was talking about Petitioner's No. 5 instead of Petitioner's No. 2. This that was admitted was Petitioner's No. 2, which is that Florida Administrative Code as it stands after the rule change in 2015. So, I just want to let the Court know this was not actually a public record request. It was indeed 11D-8 that was --

THE COURT: Okay.

MR. STRAILE: The Petitioner's 5 that was filed entitled 11D-8, which I couldn't find this was never actually that document. This was the actual rule.

THE COURT: The rule.

MR. STRAILE: So, anyway, I just wanted to clarify that for the Court and opposing counsel. Petitioner's 5 is not here. This is Petitioner's 2, which is the code.

BY MR. STRAILE:

Q So, sir, we talked -- we were going around and around about the control testing, a control test during the subject submitting a breath sample, okay. This rule 11D-8.002

that we are talking about here today, this has to do, not necessarily with the control test, but the results of analysis of a known standard; is that --

MS. JOHNSON: Again, beyond the scope of recross.

THE COURT: Overruled.

A Could you repeat the question?

Q Yes, sir. The rule refers to acceptable range being the results of analysis of a known value?

A Correct.

Q Okay. So, the control test is a little different than that?

A No. The control test is this also, because it's a known value.

Q Okay. I got you. Okay. So when the -- all right. Just want to make sure. The question on how the technology changed in the infrared spectrometry over the past 40 years you said drastically. Can you elaborate for the court in reference to these machines and the history of the --

A Again, can I use the dry erase board? I'm going to do the alcohol infrared fingerprint for demonstrative. I fully understand that this is not exactly the way it looks. But if we look at an infrared fingerprint of alcohol, and this is the three micron level and we go all the way up to the ten micron level. The Intoxilyzer 5000 that Florida used had three filters. All three filters were looking at absorptivity

right here in three micron range. Notice that it is a very thin area of the infrared fingerprint. So, it's a very, very limited evaluation of the fingerprint of infrared absorptivity, very, very narrow band. When, in fact, the Intoxilyzer 8000 came out -- when the Intoxilyzer 8000 came out, CMI advanced the technology in infrared spectroscopy. If you were to buy a $100,000 machine, you could do a lot more. But we have to keep cost down, the manufacturer, for the law enforcement and government and make it under $10,000 machine.

So, in the 70s, the technology wasn't available. So, when the 8000 came out, they look and said, hey, okay. Let's look at the three micron and also the nine micron in the fingerprint. This is advances in the technology. Because now what the presumption is is that we can have more specificity for the ethanol molecule; meaning Acetone, Isopropanol, methanol. Other chemicals could be excluded, a better ability to exclude other chemicals that could interfere with breath testing. So, this was the Intoxilyzer 8000.

When the Intoxilyzer 9000 came out, the advances in infrared spectroscopy and filterization is that all of the filter are now up in the eight and nine micron range where if you notice it is a much wider absorptivity ability and the filters can now have even more specificity for the ethanol molecule. That's how the technology has changed. The science and the theory of Henry's law and Lambert-Beer, the physics of

infrared spectroscopy has not changed. The technology of how it's applied in breath testing has changed.

Q That's like a light wave that you're --

A There is the infrared fingerprint and these are different light filters that are used on the breath test machines to absorb electromagnetic energy at different wavelengths in the ethanol molecules.

Q So, you were also questioned about other states, all this and all that, whether other states use a different standard. You said Georgia actually uses a four standard?

A They did on the Intoxilyzer 5000. Their quarterly inspection was at a 080, and they went from 076 to 084, which is allowed acceptable range.

Q Is Florida using the three standard now?

A Yes. During the in processing they are enforcing the three standard at the Department inspection, prior to Department inspection.

Q And they are enforcing what their manual -- presumably they are enforcing what their manual says?

A Correct.

Q So, they are already pretty much enforcing the three standard?

A At the annual Department inspection time, yes.

Q But they didn't put it in the rule?

A It's not in the rule.

Q Okay.

MR. STRAILE: I have no other questions.

MS. JOHNSON: I just have one or two, Judge, to follow up with what he just said.

FURTHER RECROSS-EXAMINATION

BY MS. JOHNSON:

Q You just said that the Florida Department of Law Enforcement is using the three standard.

A They are during their quality assurance check or in processing prior to the Department inspection.

Q But we're not -- the Department of Law Enforcement is not using the three standard in -- with the Agency inspection or Department inspections, correct?

A For control testing; that's correct.

Q Now, you talked about states using newer instruments and newer technology. None of those states that are using the newer technology are using a three standard?

A I can't say none of them because most of the states, I only know a few states what their standards are. I can't say most. But the states I know of, none are using the three?

MS. JOHNSON: I have nothing further, Judge.

THE WITNESS: Thank you, Your Honor.

THE COURT: Let's take five and then we'll start back.

(Court in recess.)

THE COURT: Be seated. Mr. Straile, I'm assuming the Petitioner rests?

MR. STRAILE: Yes, sir.

THE COURT: Okay.

MS. JOHNSON: Judge, at this time the Respondent moves for a motion to dismiss. The Petitioner has failed to demonstrate by a preponderance of the evidence that 8.002(1) Florida Administrative Code is arbitrary and capricious and thus an invalid exercise of delegated legislative authority.

THE COURT: I'll deny the motion. Is the Department ready to call its first witness?

MS. JOHNSON: The Department will call Dr. Brett Kirkland.

THE COURT: If you'll step up here. Raise your right hand.

Whereupon,

BRETT KIRKLAND

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

DIRECT EXAMINATION

BY MS. JOHNSON:

Q Dr. Kirkland, would you please introduce yourself to the Court and spell your last name for the record?

A I'm Dr. Brett Kirkland, K-I-R-K-L-A-N-D.

Q How are you employed?
A I am employed by the Florida Department of Law Enforcement in the Alcohol Testing Program.
Q How long have you been employed with FDLE?
A Three years.
Q What is your current position?
A I am currently, somewhat recently, the program manager for the Alcohol Testing Program.
Q What are the duties as the program manager?
A First off, I'm a supervisor for all of the Department inspectors, all of the administrative staff. I am the person who issues all of the breath test permits, the blood analyst permits, the Agency inspector permits, I also issue the Department inspector certifications. I'm currently also the one still analyzing the alcohol reference solutions to determine whether or not they fit within the acceptable criteria. I am administering the blood proficiency testing program, which is what is used to test the blood analyst to insure that their procedures are conformed to and make sure that they are following all the requirements in the rule. I also do all of the review for all of our internal standard operating procedures and decide whether or not -- or make the final decision on whether or not those procedures need to be updated and addressed depending upon the needs of the laboratory itself or the program itself. I'm also tasked with

the ability to initiate the rule promulgation process as well as making recommendations to change the rule. I am -- I'm also, I guess, the point of contact for all of the different individual labs through the state as it relates to rule, you know, and their addressing rules specifically for all the different toxicology labs throughout the state who have analysts who permitted to conduct blood testing.

Q Do you act --

A I --

Q I'm sorry.

A I also testify in court and I act as, you know, the -- kind of the voice for FDLE's interpretation of rule as it relates to 11D-8.

Q What was your position before you were employed as the alcohol testing program manager?

A Immediately prior to being promoted to program manager I was the quality assurance manager also for the alcohol testing program.

Q How long have you been the program manager?

A A few months. I don't remember the exact date of my starting. I think three or four months now.

Q And what were your duties as the quality assurance manager?

A As quality assurance manager, I was independent of the program manager and I had oversight over the entire

quality program of the -- or over quality system of the entire program ensuring that our standard operating procedures are followed, making sure that we have met all the different requirements in rule and how all that then trickles down at the local agency. I was also tasked with improving and making recommendations for our internal document control system in order -- and writing what's call a brand new quality manual so that we can then become accredited with the American Society of Crime Lab Directors. That was the big focus of what we've been trying to do in order to improve our system in order so that when we are providing a product we can say that this is the best possibly product that we can provide.

I was also -- and because there's still not a quality assurance manager, a lot the of tasks I'm still kind of doing both.

MR. STRAILE: I'm sorry. I didn't understand what you said. You kind of mumbled your words.

A Because the quality assurance manager position right now is vacant, I'm still performing some of the same duties. As I'm about to say, I'm still analyzing the alcohol reference solutions. That's not my primary responsibility as a quality assurance manager. And once we hire a new one, that will fall. I also administer the blood analyst proficiency test program. That would also fall under the quality assurance manager once we have them. But right now I'm kind of doing

double duty. We're in the process of hiring somebody new. So, for temporary, I'm qualified to do it. So, I continue doing it. I also, again, provide testimony throughout the state. I act, again, acted as the liaison for every permitted state -- every permitted lab that holds stuff throughout the state.

Q As the quality assurance manager, were you also trained as a Department inspector?

A Yes. I have gone through the same training as any Department inspector did.

Q What does that entail?

A It is about a yearlong program of fairly intense course training college level, I guess bachelor's degree level in kind of a basic science as it relates specifically to ethanol and some associated alcohol and associated other type of small molecular things that you might find in the whole breath testing and blood testing community. There is also training in specific quality assurance, quality control, statistical analysis. There's also a portion on anatomy and physiology as it relates to breath testing, some pharmacology in there. It also includes training into the Florida statutes and Florida Administrative Code as it relates to the Alcohol Testing Program and the DUI and Implied Consent law. There's also then a whole section on court testimony, providing court testimony, all the different medical, legal aspects of that.

And all of those are -- you take exams as you go through. You have to provide oral presentations, and it culminates in a final, you know, comprehensive exam that you have to pass. And then you sit in front of other Department inspectors as your peers and they do kind of an oral board process and they'll say, hey, we agree that they have got the knowledge necessary.

And then they do kind of moot court where we bring in some other attorneys and they ask you questions and give you kind of a realistic impression of what testifying in court is going to be like. And then once all of that is completed, you get your little piece of paper and it was signed off by the program manager. It says yes, you have completed all the requirements and all the training necessary to be a Department inspector. You can now then perform Department inspections on evidential instrument.

Q After becoming a Department inspector, did you perform any of the duties associated with Department inspector?

A Yes. Like I said, my primary role, prior to program manager, was quality assurance manager. But you lose personnel. People go out on maternity leave. And, so, all of a sudden you're left with a lose. So, because I was trained and a fully certified person to go in there and work on these instruments, I go in there, perform those duties over multiple

regions.

Q What is your educational background?

A I have a Bachelor's in science degree and microbiology and cell science from the University of Florida i also hold a Ph.D in microbiology and cell science from the University of Florida. However, most of graduate work was more biochemistry, molecular biology related. I just happen to graduate from the microbiology of cell science program.

Q Have you published in the field?

A Yes, I have. I have had a dozen or so publications in fairly well known scientific journal articles in the area of biomimetic surface modification chemical sensing, antipathogenic toxicology metabolite analysis, genetic modification and analysis. And I think I've done some what's called lab on a ship technologies where we're trying to make all the methodologies for doing different biosensing and detection of individual cells, genetic abnormalities that are very, very small nano level trying to develop that type technology.

And then I'm in the process of publishing two more in the area of blood and breath alcohol testing where I entered into a collaboration with Dr. Bruce Goldberger from the University of Florida toxicology lab. And I have presented that data at multiple scientific conferences. That's kind of a process you go through when you start -- want

to send it out for a publication.

Q Can you please discuss your training and experience prior to FDLE?

A Immediately prior to FDLE I was a postdoctoral fellow at Florida State University in their department of chemical and biomedical engineering where again I was working on new methodologies for testing for biological and chemical testing using biomimetic surface modification nano array, lots of big words that would take a lot longer to explain than to just say I was doing a lot of advanced scientific research.

Q What did you do prior to your postdoctoral fellow program?

A Prior to that I was what's called a graduate research assistant, which pretty much means I was a Ph.D student, and that was where I did all of my Ph.D work, gained all of my advanced knowledge in spectroscopy, gas chromatography, liquid chromatography, all the different scientific principles involved in metabolism, kinetics of enzymes, how the body works, how individual cells work, how overall science and all the instrumentation that's use in that works.

During that period of time I also moonlighted with University of Florida engineering department in their major analytical instrumentation center. They have a stand alone kind of contract services where graduate students have gained

expert level knowledge. They kind of employ, because they want to be able to use you -- you are the foremost experts in those fields -- to use some of that instrumentation for different contract services, different companies, other research groups. Specifically, I was working on what's call atomic force microscopy. But that same instrumentation center also allowed me to cross-train in called x-ray photo spectroscopy or infrared spectroscopy, which is infrared spectroscopy is the underlying technology of the intoxilyzer. So, I have been able to gain extensive training and hands on experience in spectroscopy and the overall science, how it works in very, very advanced instrumentation long before I started working here.

Also, during that graduate period of time, I was also the project coordinator for the -- the internship program for all of the undergraduates who joined our department. They would come in for the summer and they would do a research internship program. And I was in charge of teaching them other basic skills, how to use some of the basic instrumentation. How do you do a basic calibration of the scientific instruments they would be working with, whether it gas chromatograph, whether it is some sort of spectrometer, whether it be just a basic pipette, or how to use the sterilization instrumentation.

Q Is that at the department of microbiology?

A Yeah, that was still well, that part was with the department of microbiology. The part where I worked as a major analyst of instrumentation center, I was still in the department of microbiology, but I had been subcontracted out because I had expertise in something they needed.

Q How many years of lab experience do you have?

A I have had over 15 years of working in clinical labs. Because before I was a graduate student, I worked at a local hospital there in Gainesville at North Florida Regional Medical Center where I was an entry level lab technician primarily in their microbiology section. But through the needs of the hospital, if you work in a lab, you get cross-trained in the chemistry section, the serology, histology, urinalysis. So, I've had almost since I graduated high school, I have been in some sort of advanced laboratory or research clinical laboratories and now with FDLE.

Q So, you have significantly more experience and training with instrumentation than --

MR. STRAILE: I object --

Q -- just what you learned at --

MR. STRAILE: -- to the form of the question.

Q -- FDLE, correct?

MR. STRAILE: I withdraw my objection.

A Absolutely.

Q Please state for the Court your permits and

certifications related to breath alcohol analysis, alcohol testing, and the intoxilyzer.

A Sure. As I said before I have been certified, gone through the entire training program. I have a little piece of paper that certifies me as a Department inspector. I have also gone through the entire training and gone through the permitting process for the Agency inspector. Those are at the local level. And gone through the training program and the permitting process for even the breath test operator. So, I'm authorized to perform breath test even though that's not my job. I'll probably never have to do it. But it's part of the whole process of learning the intoxilyzer and the alcohol testing program.

I'm also a certified breath test instructor. So, as the different other instructors out there, out there teaching all the different classes, I teach the instructors. So, I'm the teacher of the teachers. So, I'm certified through both what's call the CJSTC as a general instructor and as a specific breath test instructor. Let me see what other certifications and permits.

Q Have you been certified by Guth Laboratories?

A Well, I have attended their training programs and they give you a certificate of certification that you have gone through their training program, that you -- someone from their manufacturer has trained you on how to use -- to operate

it, how to do some basic maintenance of it and I think they show us --

Q I'm sorry. When you say it, what does Guth Laboratories do?

A Oh, they are the ones who make or one of the manufacturers who make the wet bath simulators. That's what is the external piece of equipment that's connected to the intoxilyzer during an inspection process.

Q Have you received training from CMI?

A Yes. I have very recently been to CMI. I have seen their lab and gone through their training on the maintenance usage and calibration of the Intoxilyzer 8000.

Q Have you also been trained at the University of -- Indiana University?

A Indiana University holds a very prestigious course for everyone who is involved in blood and alcohol testing. They call it the Borkenstein Institute where they bring in experts from the scientific community throughout the world and they go through a training, they train you in all the actual science involved in breath testing, blood testing, some of the medical, legal aspects of all of that, and I have gone through that training as well.

Q Have you had any -- please state any additional training and professional experience related to this area?

A Sure. As I spoke a moment ago, I'm in a

collaboration with Dr. Bruce Goldberger who is probably one of the foremost experts in the world in forensic toxicology I did an internship with him in his lab using his procedures, specifically getting hands-on ability to do blood alcohol testing and using gas chromatography procedures, being able to see how they do all of their different drug analysis. And he's become my mentor since I started and is even agreed to be my sponsor for membership with the Society of Forensic Toxicology. So, because I knew of him back when I was an undergraduate there, when I started working for FDLE, I had contact with him and he says, you know what? You've got expert level training. Why don't you --

MR. STRAILE: Objection, Your Honor, to what somebody else has said.

THE COURT: Overruled.

A A Ph.D kind of means you have expert level training.

MR. STRAILE: It was hearsay objection.

THE COURT: It's the hearsay objection. I understand. I'll overrule it.

BY MS. JOHNSON:

Q Do you also attend conferences in the area of forensic toxicology?

A Yes. I routinely attend multiple conferences in the areas of it. I guess I routinely would attend a symposium held by the manufacturer CMI. They hold a big conference for

all of the users of their intoxilyzer. And that's all the different peers whether they be at just the police officer level all the way up to doctoral level who are involved in the breath testing community who specifically use an intoxilyzer. I have gone to that several times and have been an invited speaker in the past and I've actually been invited to speak at their conference in this year.

I also routinely am a full member with the International Association of Chemical Testing where I have attended their conferences as well as all the different training courses that they provide in specific areas and have been and going to -- no, I was an invited speaker because it was held in Orlando this year. I was an invited speaker this year.

Q What teaching have you done in this field?

MR. STRAILE: Your Honor I would stipulate that Mr. Kirkland -- Dr. Kirkland can testify if that's what we're getting at here. We've been going over his background for about ten minutes now.

MS. JOHNSON: That's fine, Judge. I still want to demonstrate for the Court.

THE COURT: Go ahead.

BY MS. JOHNSON:

Q What teaching have you done in the field?

A I guess we can start -- I guess as it relates to

breath and blood alcohol testing, I'll go back to some of the teaching I did while I was a Ph.D student because it's relevant. I taught some of the molecular genetics and biochemistry classes to undergraduate students. And part of that process is teaching some of the basics of spectroscopy, some of the basics of metabolism, which are all things that you have to know how to do and have to no how to -- know how everything works. And because we've dealt really in the microbiology and the cell science that department also doubles as the Florida center for Renewable Fuel, which a lot of the main, big researchers they are world renowned in their ability to produce alcohol. So, the testing of alcohol was kind of an invariable part of my advanced training.

Now, it wasn't specifically part of my Ph.D work, but all of my advanced training and instrumentation and they were teaching us how to do it and how it all works. We were doing it for testing alcohol and other related stuff.

Since that time, I have now -- I said I'm a breath test instructor and I routinely teach the instructors class once, two times a year. I also teach the renewal classes where I primarily teach science of how the instrument works, the pharmacology, the toxicology, the physiology because that's what I have had vast amount of training. So, I'm the best person to be teaching it.

Q Can you please describe your experience in rule

revision and rule promulgation?

A When I was employed, first employed by FDLE as the quality assurance manager, part of my duties was I was allowed to make recommendations to the rule as it related to the quality system, if anything -- what needed to be updated, what was in line with current recommendations from the scientific community. And I was involved in that process starting in 2013 when the whole process for updating the rule started. I was allowed to make recommendations. I was there for all the different -- the hearings that were held, all the different workshops and have testified regarding my opinion on 11D-8.

Q How many times have you promulgated administrative rules?

A Every time -- I was part of the process I guess every time it's been done since I started in 2000 -- so, that's what two times? '15, twice in '15 is what -- I can tell you about all the individual things. I don't remember when they actually went into effect. And right now we're in the process of trying to make another rule change. So, now that I am program manager, I'm kind of the lead person for that.

Q Have you ever testified as an expert in court before?

A Yes.

MS. JOHNSON: At this time, Your Honor, I ask that

the witness be able to give the opinion in the areas of forensic alcohol toxicology and pharmacology of alcohol, operation and maintenance of the Intoxilyzer 8000, pharmacodynamics, pharmacokinetics, Florida Administrative Code Rule 11D-8, instrument analysis and data analysis.

THE COURT: Any voir dire or objection?

MR. STRAILE: No.

THE COURT: I would will qualify him to give 11D-8 as the program manager, not necessarily offering a legal opinion, but --

MS. JOHNSON: Right, not for legal analysis.

THE COURT: We'll accept him as expert as tendered then.

BY MS. JOHNSON:

Q What is the approved instrument for breath alcohol analysis?

A The Intoxilyzer 8000.

Q Could you describe or show what the instrument looks like?

A Yes.

THE WITNESS: With Your Honor's permission, I actually brought one that can kind of help --

THE COURT: Sure.

THE WITNESS: -- demonstrate all of this process a

little bit here while we talk.

A So, as you can see, the intoxilyzer is about the size of one of those old-fashioned igloo coolers.

MR. STRAILE: Your Honor, may I move to see the front of the machine?

THE COURT: Sure.

MR. STRAILE: That way I can see what he is pointing at.

THE WITNESS: I'm not going to be -- we're just going over the basics of it.

MR. STRAILE: Okay.

A Can you re-ask your question so I can be specific?

Q Yeah. Can you describe, you know, what the instrument -- let me strike that. How does the Intoxilyzer 8000 analyze a breath sample for alcohol concentration?

A As you can see the instrument, it's got a little -- I'm just going to give you the basic overview. It's got a little keyboard. That's where you add all the data that's added into it. There's a little breath tube. What happens is we put a little mouthpiece on there. The defendant blows into it. You've heard about this breath test. They blow into it. And inside this instrument is a little bitty chamber, and that chamber house it is actual methodology, the infrared spectroscopy. And how that works is, think of a long tunnel. On a nice clear dark night, someone at the entrance of the

tunnel shines a light at the entrance of that tunnel and the exit of that, there's another person standing there and he says that amount of light that I can see shining through, that's a ten.

Now, what happens when a cloudy night comes in, cloud get in there. That same person with that same light same amount that was shined into shine into, I guess, the darkness of the clouds. The other person at the other end of exit when he writes how much light is being passed through it, he says, oh, that's decreased. That's no longer a ten. That's now a nine or it's a seven, six, five, four. Now, the difference is the amount of light that got absorbed by the fog. That's how -- that's kind of a general description of how the overall technology works. All right.

So, that is directly proportional to how the instrument then goes through and calculates actual concentration. So it takes a measurement of the amount of light absorbed and turns that into a concentration based upon some chemical laws. And I won't go into the specifics. But based upon some chemical laws that are then based upon the actual calibration of the instrument. Does that answer your question?

Q Yes. How do you verify that the instrument processes accurate and reliable results?

A In order for any instrument, whether it be an

intoxilyzer, a gas chromatograph, you have to introduce it to standards, something of a known concentration and say can that instrument read it within some sort of acceptable criteria. That's not just unique for the breath test instrument, it's common throughout all analytical testing of any measurement whether it be for biological or chemical substances.

Q What's an Agency inspection?

A An Agency inspection is one of those verifications I was just talking about at the local level. It's a series of known standards that's introduced to the instrument to ensure that the instrument has the ability to detect within an acceptable range whatever is introduced to it. So, it has to be able to say, hey, if I give it an 05, an 08, or a 20 it has to be able to say within reasonability that it's got to be able to do that. Think of a bathroom scale. When you go get on your bathroom scale in the morning and just jump on it, how do you know whether or not it's accurate.

THE COURT: It lies.

A Exactly. So, what you do is if you want to know truly how it's accurate, you can grab a five pound weight that you know is five pounds and put a five pound weight on there. And if that scale read between four and a half and five and a half you know it's pretty good. Same thing if you go ahead and you put a 50 pound weight on it. Then you put a 200 pound weight on there. If it reads within a certain acceptable

criteria, you'll have confidence in whatever -- when you jump on it, you know that it's going to give you a reliable result, right? So.

Q How often is an Agency inspection conducted?

A It is conducted on a monthly basis. So every month a Agency inspector comes into that breath test room, hooks up those simulators and run a series of tests to ensure that it meets those acceptability criteria.

Q What is the Department inspection?

A A Department inspection is done annually. It's similar to the Agency inspection in the fact that it's also introducing known standards to the instrument to ensure that it's functioning properly. However, the Department inspection is done in a much more controlled facility. We are able to do much more control of the temperature. Plus our personnel who are actually using the instrument are much more highly trained. That's what we just went through. The Department inspector training is fairly intensive, which is much more training than a local agency inspector would receive. And that is their primary -- the Department inspector, that's their primary function is to insure the accuracy and reliability of that instrument. So, that Department inspection is not only measuring those simulators to determine, you know, that known standard at short intervals, it's also doing a much longer number of measurements. So, in

order for us to be able to say it's got that long-term stability, we have to test it multiple, multiple times to get that overall repeatability. Then when he combine that with local level of their repeatability and you demonstrate that you're falling within some acceptable criteria, you know that instrument is working just fine.

Q Where is an Agency inspection conducted?

A Same place it's done for the breath test operator. As previous witnesses have said, it's done at the local level. Sometimes they're in small rooms; sometimes bigger rooms. Sometimes they have got ventilation; sometimes they don't have ventilation. Sometime's it's just right there next to where all the in processing sheets are. Plus they have mobile instruments. They can be -- well, excuse me. Mobile instruments are only -- I don't think they -- excuse me. They're all immobile instrument. I just confused the breath testing from the actual Agency inspection process, which is what she asked me about. I apologize for that. When they are doing Agency inspection process, they are doing it at the Agency.

Q And where is the Department inspection conducted?

A It is conducted here in Tallahassee. Well, in one of the ATP labs. We now have two labs. One here in Tallahassee and one in Fort Myers.

Q What's the difference between an agency inspection

and a department inspection?

A Specifically, it's the number of tests that are performed. The Agency inspection performs the triplicate analysis of each individual standard where as the Department inspection performs ten analysis of each individual standard. The Department inspection also kind of looks at the barometric pressure. It also does a minimum volume sample check.

Both of the Agency inspection and the Department inspection also do checks for interference to insure that it is able to discriminate between ethanol and let's say some other chemical that might be found on the breath so that you aren't arbitrarily accusing someone of being impaired on ethanol when it is not ethanol.

Q Is it the procedure for a Agency inspection -- is there a set procedure for an Agency inspection?

A Yes.

Q And where is that procedure documented?

A I believe it is found -- it's referenced in rule -- Form 39, I believe. And that outlined the step-by-step instructions that an Agency inspector has to do in order to perform those Agency inspection checks.

Q And is there set procedure for Department inspections?

A Yes. That would be Form 36, which outlines the step-by-step procedures that the Department inspection or the

department inspectors used to perform that Department inspection to check verifications.

Q Now, you talked about known standards. What are known standards?

A Known standards are something that is -- that five-pound weight, something that you introduce to the instrument that you know is going to read within a certain range. They are not an absolute value, which I'm sure we're going to go into later. When we say it's a known standard, it's a known standard with give and take well within a specified tolerance that the manufacturer tells us. But there's no such thing as a perfect 080000. It doesn't exist.

Q What is a dry gas standard?

A A dry gas standard is one of those standards that's, specifically, a mixture of ethanol vapor. And I believe it's nitrogen, a balance with nitrogen that can be attached to the instrument for not only a control test, but it is the same standard used during the Department inspection test and the agency inspection test. That way we have a consistency all throughout the entire testing process.

Q Just for demonstrative purposes, how does the dry gas -- how is the dry gas standard used in relation to the Intoxilyzer 8000?

A So, whether it be for a breath test, whether it's

being used in the Agency inspector, it's all the same thing.

I'll keep this tilted to you so you can see. If you'll notice there's a little cradle in the back. These are specifically done, and they are not made by CMI. This is a complete and separate company. They have -- CMI has no -- now, they are an official distributor of the some of the dry gases, but they are not the creator of these. So, when they give it to us, CMI has no control over this. I want to make that's -- that's --

Q So, the dry gas comes from a separate company?

A Separate company. So, this just screws into this little part and attaches, pops through here, is attached to a little tube. That introduces it, whenever you are using a testing process, introduces it into a sample chamber. So remember when we were talking about that long tunnel. It introduces a known fog in there and that instrument needs to then prove that it can measure that.

Q Now, is that dry gas standard -- normally when the instrument is stored at the Agency, is the dry gas standard always attached?

A Most of the time, yes.

Q And it's -- obviously, when you do an Agency inspection or Department inspection, is that dry gas standard always attached to do the instrument?

A Typically they will disconnect it, because they have

got some other equipment that they have to plug into it. So, they have to remove -- pop this hose out that connects the dry gas in order to connect that other simulator to it. So, A lot of times they'll just kind of have it out of the way just because it makes it cluttered. So, they'll take it off and they can put it back on.

Q That leads me to the next question. What is an alcohol reference solution?

A An alcohol reference solution is a liquid that is a mixture of water and ethanol at a known concentration, but it's also something that -- it's -- it performed another specification function because it's a liquid. And the dry gas standard is a dry. When we blow out of our breath, it's not just a dry gas. There's humidity associated with it. There's a temperature associated with it. That wet bath is able to more accurately reflect that same type of thing. So, what we're doing is we're giving it a very specific test. And then we're also doing it under more real world conditions to insure that it's able to function the way it's supposed to.

Q How does the alcohol reference solution, what is -- in what form is it actually delivered when it comes to FDLE? What does it actually look like?

A We purchase it from a manufacture, and they send it in little bottles kind of like this. It's about 500 milliliters, which is a little big bigger. They send it to

us. Now, ahead of time we have to approve those lots from the manufacturer and we run it through a gas chromatograph and we test it 20 times to make sure it's within acceptable -- again, within an acceptable range before we even introduce it through to an instrument. So, the manufacturer makes it and says, oh, we tested it, but we then do a further verification and say, yes, it's within their acceptable range and it's within our acceptable range, this is a good solution.

Q Now, you just said you use the alcohol reference solutions in a more real world environment. Would you be talking about the simulators?

A I don't quite understand the question.

Q I'll strike that. What is a simulator?

A A simulator is about the size of a big peanut butter jar and it's got a little -- about the size of a peanut butter jar. I'll unwrap it a little bit just so you can see the outside of it. And I'll stand up so y'all can see it.

Remember I told you that solution, this whole top head unscrews and you pour that liquid solution in there. This is then plugged in. There's a little stir bar. There's a little heater in there. And then there's a little bubble thing.

So, what happens is you unplug the dry gas tube. And I won't do all -- I'll take out the actual connecter. It gets plugged into it. Then when he do the stability check and

the Agency inspection, there's a little pump that's able to flow through the instrument, come through. So it's able to stimulate that breath type environment. And then it reintroduces it into the sample chamber. So, we're able to actually test it multiple ways through a wet bath simulator and the dry gas. And, again, this simulator is made by a different manufacturer and, so, therefore it has different accuracies than this stand alone instrument.

Q Now, you talked about the simulators basically heat up the solution?

A Yes. This also -- so, part of the rule requires that these -- whenever we use the dry gas simulators, because breath temperature when we blow out comes out 34 degrees, we require that these provide a vaporous ethanol concentration when we bubble through it at exactly 34 degrees plus or minus .2 degrees. So, again, there's always that little bit of variation.

Q How does the simulator basically simulate an actual breath test, a human breath test?

A So, we start out with a liquid. That liquid is a known mixture of alcohol and water. Whenever we blow through it, we're actually making a vapor. And there is a chemical law, chemical analysis law that says that the concentration in a liquid is directly proportional to the vapor directly above that solution. And, so, because we know what that law is,

we're able to then determine a concentration of it based upon that.

Q So, basically, the liquid is heated to produce a gas; is that correct?

A It's heated to a known temperature and then, as I said, there's a little bubble in it. So it blows through up here, which there is a little pump in here that it blows through it. It bubbles. When it bubbles up, that produces a little bit of vapor. And that vapor directly above the liquid is directly proportional to the concentration in the liquid.

Q What's the purpose of the dry gas standard during an Agency inspection or Department inspection?

A Of a dry gas standard?

Q Correct.

A The purpose of the dry gas standard, again, is to provide that standard at the 08 level because the dry gas is only used at an 08 level. So, this -- specifically, this has a very, very lower air rate and the actual analytical capability of this stand alone versus one of these. So, it allows for very tight control again of the -- but there's also so many other factors that are involved in the overall process. We can't just say look at this bottle which specifically says .080 plus or minus .002. We can't say, oh, that has to read .080 or .002. There's other factors that are involved, and we'll get into that.

Q Now, you refer to that as a stand alone item. So, the simulators and dry gas standards are not, say, part of the instrument itself?

A They are external standards that are attached to the instrument to test the instrument.

Q We'll get back to that in a bit. Right now does the Florida Administrative Code Rule 11D-8(1) -- 8.002(1), I'm sorry, in this case define what the acceptable range is for alcohol reference solution and dry gas standards?

A Yes.

Q What does the rule define as acceptable?

A For the 050 simulator solution it says that it has to be between .045 and .055. For the .080 liquid standard, it has to be between .075 and .085. And for the .20 liquid reference solution, it must be between .190 and .210 or in word form, it must be plus or minus 005 or 5 percent. The dry gas standard must also -- the 08 dry gas standard must be also be within .005 or .075 or 085.

Q How is the acceptable range determined?

A The acceptable range is determined by a lot of different factors. The scientific community still says that's an acceptable range. That's the reason it still exists in the Florida register. The overall scientific community as a whole agrees 005 or 5 percent is the acceptable criteria. And can you ask that question one more time?

Q How is the acceptable range determined?

A It's done through a lot of experimentation through different machines. Because it's not just unique to breath testing. We use acceptable ranges for any type of instrumentation. It's done through extensive testing under laboratory conditions. And they say, hey, this is the give and take that you can expect with the measurements. And, so, when you're actually doing your, let's say quality control checks, your verifications, you should be able to introduce a standard. And within the acceptable limit, it should be capable of performing this function. And if it does, it's good to go.

Q Does the manufacturer, in this case CMI, make recommendations regarding the acceptable range for alcohol reference solutions and dry gas standards?

A They do not.

Q Showing you what's been -- this is the only exhibit, it's Exhibit 14, that was not stipulated to.

MR. STRAILE: Your Honor, I would object to that because it is a -- first of all, it was created specifically for this hearing and for the purposes of litigation. So, it wouldn't come anywhere near the business records exception under hearsay because of that. It's literally dated just before our first hearing was to take place created by CMI for introduction here

specifically for litigation. So, the entry of that, I'm going to object to.

MS. JOHNSON: And, Judge, it's something that Mr. -- Dr. Kirkland reviewed as part of his job as program manager. It is a public record of FDLE.

MR. STRAILE: Judge, it is now because they created it for today. I mean, specifically they created it to try to get in -- there's no one from CMI here. They created a one-page letter for purposes of influencing and entering -- influencing the outcome and entering evidence. So, yeah, I mean, I would agree if that's in possession of FDLE now, sure it's public record now. But for purposes here today, Judge, that was created for today for the litigation. I mean, just circumvent the hearsay, the exception on that, I --

THE COURT: Yeah. I guess, Ms. Johnson, when I look at it I don't see how much difference it makes. I think we've had testimony establishing everything that's in this letter anyway.

MS. JOHNSON: Well, Judge, not really because this is directly in conflict with what Mr. Malhiot and Ms. Barfield had to say in their testimony.

THE COURT: I mean, I see all approved devices have an accuracy of plus or minus 5 percent. I thought that was what he testified to, I mean, as far as NHTSA's

standards.

MS. JOHNSON: Right. But they -- Mr. Malhiot and Ms. Barfield both said that CMI issued a .003 and that letter states that they don't issue recommendations.

MR. STRAILE: They also testified that they don't dictate and that they don't -- they cannot tell Florida what to do.

THE COURT: I understand it's kind of six of one, half dozen of the another. I don't see this as being -- helping or hurting anything. I mean, it seems consistent with me.

MR. STRAILE: You've already read it, Your Honor. So, let's go ahead and talk about it.

THE COURT: Yeah. Go ahead.

A Can I see it now?

Q Yes. I'm sorry. Is that something you reviewed, that letter that you reviewed as program manager?

A Yes.

Q And is that consistent with what you've learned from CMI that they do not make recommendations as to the acceptable range for the Intoxilyzer 8000.

A Yes.

Q Does CMI make recommendations as to the instrument accuracy?

A The stand alone instrument, yes. They have provided

instrument specifications, yes.

Q Does CMI's accuracy specifications, is that considered a stand alone measurement?

A In my dealings with them, yes. And in my practical experience with the instrument, yes.

Q Does CMI make statements as to the accuracy and precision of their instrument when in forensic use?

A You mean out in the real world conditions type thing?

Q Correct.

A No.

Q The manufacture provides the specification sheet with a stated 3 percent or .003 accuracy. Can you explain this?

MR. STRAILE: I'm sorry. Say that again.

MS. JOHNSON: Manufacturer provides a specification sheet with a stated .003 or 3 percent accuracy. Can you explain this?

Q Let me rephrase. The manufacturer specification sheet which states it's .003 or 3 percent accuracy, what does that 3 percent accuracy statement reflect?

A Okay. Based on my conversation with CMI, my understanding of how instrumentation works to begin with, it's a stand alone instrument. Now, it's tested against external equipment. But when they are providing their accuracy

statements, they can't control all of these other factors. So, they say what's the analytical capability of this instrument. So, we talked about this breath tube. That's what they blow. In order for this to function properly, this breath tube has to be heated to a specific temperature. So, there's a little bit of variation in that. Then it goes into that simulator -- or, excuse me, that chamber that is inside that also has to be heated. There's a little temperature variation in there.

There's also a light source that transmits that infrared light across it. The power of that light source is a little bit of fluctuation in the power. So, all of those things are added together to determine what the specific analytical accuracy of that instrumentation. Such that when it's been attached to the instrument, its individual internal variation is accurate within .003 or 3 percent.

Q What is the difference between the manufacture specifications for the instrument accuracy and the acceptable range as defined in 8.002(1)?

A The acceptable range includes all the other associated factors, not just the instrument's analytical capability. May I use the dry erase board --

Q Sure.

A -- to make a point? So, kind of another way of understanding this a little bit better, remember I showed you

the dry gas standard. And may I approach the Judge to show you something so you can see it for yourself, and I'll show it to the defense as well.

You see this? It says 080. Right here is the concentration. But then it also gives you a plus or minus .002. All right. Happy to show this to you. The 080 plus or minus .002.

So, when we introduce a known standard to this instrument, it says it's .080, plus or minus 002. So, according to the manufacturer of that dry gas, the actual concentration in there could be between .078 to .082. All right. Then we introduce that into the instrument. The instrument technical capabilities says it can make a reading within .003, correct? So, we then say the instrument can go within .003.

So, let's say in actuality within the manufacturer -- here we take it all the way down the extreme value just as a quick point of reference. We say that it's actually reading .078. So, then we apply the instrument's accuracy of .003. And say we'll go in the same direction just to prove a point. We're now at .075. That's well within the instrument's accuracy statement. That's well within the accuracy statement of the dry gas. And that's is well within our acceptable range. That's how we come about with those acceptable ranges. That's why it's relevant today.

Q Are the uncertainty numbers for the 5000 different than for the 8000 since FDLE took over the program in 1992?

A From their testimony, yes, but I've never used the 5000. It's not being used today. It's not ever going to be used.

Q Why would the uncertainty numbers not change with different instruments?

A Well, there's different factors that can influence them. From the former witness's testimony, he said they used to do calibrations on site. So, they never had to do quick control checks ahead of time to see. They could just do an on-site calibration right there. We have now brought them all back up to a controlled facility where we can do a kind of quick snapshot and decide whether or not we need to adjust the calibration to insure that it is then meeting that requirement.

Q Has the accuracy of infrared alcohol testing changed in the last, say, 20-plus years?

A No. When we speak about the accuracy, we're actually speaking about its ability to determine a concentration, not necessarily its specificity. May I also use the dry board?

Q Sure.

A So, when they determined accuracy, it's still having to measure light. The 5000, as the previous witness said,

used a completely different wavelength. But that's not a difference in technology. Spectroscopy has always been the absorbence of light. We had just changed the wavelengths they were looking at because it ended up being more specific for ethanol. And over time they realized if they would just move the filters to a different wavelength, it would be more specific for ethanol because there could be, let's say, other substances that might have interfered with its ability to determine that it was specifically ethanol. It had nothing to do with its actual ability to determine the concentration.

Q Is the scientific community uniformly agreed that a uncertainty statement of not less than .005 or 5 percent is appropriate?

A Yes. That is the national requirement. That is the international requirement. And that's what's found in the current literature on breath alcohol testing for instrumentation.

Q What are the factors in determining the acceptable range?

A I use a very simple example of just the dry gas. I used a direct comparison of the 002 with the 003. When in actuality it's a little bit more complicated. It's an actual formula. Because you don't just add the uncertainty -- or the error range of the dry gas plus the error range of the wet bath. I mean, that would essentially make everything hugely

long. I originally did that for simplicity purposes. But it does -- each individual component does add a certain extended error on top of the instrument analytical capability.

So, as we start adding in the uncertainty of the dry gas, the uncertainty of the simulator -- and the simulator itself, like I said, it has the solutions in it. The solutions themselves have a little bit of plus or minus. Well, then you've got that part of the simulator that produces a temperature. Well, that temperature has a plus or minus and that can affect the ability. So, remember I said that the concentration is directly proportional to the concentration of the vapor above it. That's true in a specific -- if it's holding at the same temperature.

So, this has to hold it a tight temperature. So, it has to hold it at 34-degrees plus or minus .2. Also, the length of the tubing can affect it. Because as it's going through, it gets a little bit of condensation. So, there's all sorts of tiny little bitty things that are introduced into the instrument that are not controlled by the manufacturer that influence the overall acceptable range of what that instrument is capable of.

Q Would the operator be one of the factors or user be one of the factors in -- one of the factors used in determining the acceptable range?

A Determining it? Well, the determination of it is

set. But when they do the actual check, absolutely. You've got Department inspectors who do the Department inspection, that much larger -- more tests who have gone through a year-long training versus you've got an Agency inspection who routinely deal with it, but their class is only three days. Their main job is being an officer. So, they have got very limited science training.

Then you've got the breath test operator who go through an even shorter training. And all they are trained to do is push a button and follow specific procedures. Same thing with the Agency inspection. When it comes to discretion, is this instrument working, yes or no, you have to rely on those Department inspectors. There are some many other different factors.

And as the previous witness pointed out, if you have values between a 075 and a 085, it immediately should bring up a red flag. Absolutely. That's the reason we then have all the Department inspectors go through and do reviews because we want to look at that.

Q Now, you mentioned, you know, simulator tubing and the simulator temperature and the percentage on the dry gas standard itself. So, all of those things combined -- and I think you -- I'm sorry. You also mentioned the environment. All of these things combined are what you use to determine what your acceptable range is?

A Yes.

MR. STRAILE: Objection, Your Honor. I think this witness has already testified that he didn't create this acceptable range.

THE WITNESS: But I can say to the scientific reliability of how it's used today.

THE COURT: I'll overrule.

THE WITNESS: Sorry.

A Can you please re --

Q If I can remember the question, I will repeat it. You stated that simulator temperature tubing, the dry gas standard, operator or user, all of those things together are used in determining what the acceptable range is, correct?

A Yes. Essentially what we have done and what we're -- how we currently use it is what's called kind of using a measurement uncertainty, which are all the factors together. And we've just kind of made that a static thing of 5 percent or 005, which is the national recommendation. Adding all of those different factors together because that is the national requirement, that is the international requirement, that is what is accepted, that is the requirement that we use because it's influenced by all the analytical capability of the instrument, the plus or minus of the temperature on this, the plus or minus of the actual wet bath solution, the plus or minus on the dry gas, the plus or minus

on the training of the user, whether or not they know how to do any troubleshooting, plus or minus the actual overall temperature of the room.

Let's say, the temperature of the room in a breath -- the Agency inspection, yes, it's in a controlled environment, but at the jail -- I've been to jailhouses, in a professional capacity. Sometimes they are a little warmer. Well, that makes it a little -- this has to then work harder to keep it at that 34-degrees. So, it's going to be doing a lot more fluctuation up and down, up and down. So, that can introduce more uncertainty into that. So, that's all involved into the overall determination of that acceptable range.

And then to ensure that we are consistent across the board, we have those same standards. And this is found in all science. You want to keep the same standards consistent when you are looking at it here or all the way down the final user, which is the breath test operator who uses a dry gas using the same standard that's found in the laboratory.

THE COURT: Getting back to Mr. Straile's objection. That's the science. That's sort of why you're sticking with the 5 percent now even though you've got this machine that says 3 percent.

THE WITNESS: Correct.

THE COURT: But in the old days, you had machines that said 5 percent. The rule still said 5 percent. So,

were they not building in -- were they not accounting for all these other --

THE WITNESS: I actually don't know how they were doing it. I wasn't there.

THE COURT: Yeah. Okay. That was my question. You don't know what their rationale was back then.

THE WITNESS: I do not know.

THE COURT: Okay.

THE WITNESS: I can -- like I said, I'm speaking to how it's relevant today and how that rule is used today in Florida and in the breath testing community at large.

BY MS. JOHNSON:

Q So the manufacturer specifications are more of a starting point, correct, in determining the acceptable range?

A Sure. Yes.

Q You just mentioned uncertainty. What is the difference between acceptable range and measurement uncertainty?

A For all practical purposes, how we're using it today, we're not using it any different. If I'm -- but in strict definition, the measurement certainty is all the factors around the influence, the measurement as a whole. That's the strict definition. So, that's all the different things that influence what a instrument is capable of. The acceptable range is what you use as your acceptable criteria

to insure that that instrument is working properly. In the context of how we are using it and how we are interpreting that rule, they are, for the most part, interchangeable.

Q But your measurement uncertainly can never be greater than your acceptable range, correct?

A No.

Q Switching gears. Can you explain what the standard operating procedures are?

A Standard operating procedures are the internal guidelines for the trained staff, the people who have -- in our department who have had Department inspector training, who have hands on work with the instrument, who've gone to the manufacturer. They've been trained specifically. And it provides all the guidelines and individual instructions for how to maintain the instrument and then insure that when we do all the actual Department inspection checks, that it's working properly. It also includes some administrative procedures, how we do some document control to make sure that ever step of the way we have a written documentation that's good science.

Q Is everything in the standard operating procedure also in the rule?

A No.

Q Why not.

A Standard operating procedure, again, is a set of specific guidelines. It has to be flexible in order for the

discretion -- in order to be kind of changed due to the discretion of the analyst, the changing of the laboratory equipment that you might need, the personnel that you might have, or changes in science in general. Or, like I said, mainly it's just for using a lot of extra equipment and increasing your quality control. So that when you do your actual Department inspection, you can guarantee it's going to pass that acceptable criteria. It's all of the day-to-day operational functions that someone should be doing in order to maintain the accuracy and reliability of that instrument.

Q Would it be safe to say that the rule is more of a framework and the standard operating procedures, more regulation of the day-to-day activities?

A Yes. And if you were to even try to put into rule your standard operating procedure, it would turn into an endless endeavor of regulations because you'd never be able to keep up, plus you would be locking in all of your current methodology because you would have to write in rule the specific type of dry gas used, the specific type of simulator used. And what happens if that manufacture quits making it? Well, then we got to do a whole rule change. In the meantime, that stops all the breath testing because you can't do it.

So, it has to be -- have the ability to evolve and change and improve to improve the whole system overall. And trying to put it into rule will turn into a hopeless endeavor

of epic proportions.

Q What are the quality control check procedures?

A The quality control check procedures are a quick snapshot of that instrument and how it's functioning. We use it as a determination on whether or not to perform a calibration, to bring its alignment close to the center.

For example, whenever you by a new car, the manufacturer said that car is aligned and it's straight and narrow. They test it at their manufacturer and they say it's accurate within a tiny little bit. They're using, you know, strict criteria. They're using a close track. Straight as a arrow. But then when we actually go down to the user, we start -- we drive. It's influenced by wind. It's influenced by other drivers. It's influenced by the roadway itself.

So, what we do is, we take the margins of our roadway and we make them wider. Even though the strict capability of that car can hold pretty steady, we narrow -- excuse me, we widen out the stuff. And as long as you're going down the road within those lines, you're operating it correctly and its performing accurate and reliable.

What those quality control checks do is, let's say it starts to drift a little bit. You don't want to let it drift so far that it touches the line and then correct it. You want to set some guidelines that are beforehand. So, let's say you're driving down the road. Do you bring yourself

back to center after you have crossed the lane or do you try to do it beforehand? You try to do it beforehand. So, what we do is we have those internal quality control checks as a quick snapshot to say, hey, this is an 003 or 3 percent. It's time to realign that instrument back towards closer to the target range.

Q Who performs the quality control checks?

A Performed by the Department inspectors and it can be done with -- I did when I was quality assurance manager, but primarily Department inspectors who are, again, the higher trained people who know how the instrument works. They use simulators that they keep under strict temperature. They calibrate them on a very regular basis. We control the solutions going in. They know exactly how these functions all the way from the manufacturer. Where as, the local Agency inspection, they know how to use it, but they have not been trained and know how to take the thing apart, how it's supposed to function on the inside.

So, the training of the Department inspectors when they are doing those quality checks is a big factor of why we can keep it at that -- that narrower version in order to realign the instrument, as our decision point to realign the instrument.

Q Are the quality control checks part of the Department inspection?

A No, they are not. They are done before the Department inspection.

Q What steps are performed during a quality control check?

A Well, quality control check, we've been primarily discussing just standards. But the quality control checks are a multilevel looking at -- looking at the flow -- checking the flow meter. So, as you look, we attach a flow meter to blow through it so the instrument can tell, hey, something is being blown through it and it's measuring within a certain reasonable flow rate. It also goes through and we do, like I said, the dry gas and the wet bath solutions. We're going through and doing checks on that. We can go ahead and check the internal barometric pressure of it. We check the temperature.

Q What are the acceptable limits for the known standards during a quality control check?

A They are -- we use, like I said, internal, because that's our decision point to know whether or not when need to realign the instrument. We use the same solutions, but we narrow the range of it. So, we say that within .003 or 3 percent.

Q What is the reason for using a narrower range versus the .005 that --

A That is our decision point of whether or not we need

to perform a calibration. In other words, driving down the road and we notice that -- we think that it might be -- stability checks are a quick snapshot. They are only three tests each as opposed to the Department inspection, which is a much longer repeatable sets of tests. It isn't just a quick snapshot. If we see real quick, hey, that's starting to drift one way, we say, hey, realign it closer to center. That way when we do the overall long check, we know we're going to be within that requirement.

Q So, the decision that the narrower range used for the quality control check is only to determine whether an instrument needs to be calibrated?

A It's the decision point to know whether or not we need to adjust that calibration. So, in other words, whether or not we need to bring it, bring the car back to center.

Q What do you rely on to determine whether or not the acceptable range in rule needs to be revised?

A Well, we look at, of course, the federal regulations, the National Highway Traffic and Safety Administration. We look at their requirements, what they say all instruments should be. We also look at the actual scientific literature where they go through -- individual labs go through and determine that specific instrument's measurement uncertainty through a long testing process. And we're in the process of doing it ourselves, so that we can

actually provide a more accurate determination of exactly what that is. But until we actually have all the data available to make that claim, we go ahead and say, hey, it's 005 or 5 percent, which is to the benefit of the defendant.

Q Are you familiar with the International Organization of Legal Metrology?

A Yes. They are the international organization that require -- that provide all the recommendations for all different things including breath test analyzers.

Q What does the federal register recommend as the acceptable range criteria?

A The 005 or 5 percent.

Q Now, you mention --

A Whichever is greater.

Q -- the Journal of Analytical Toxicology. Have you reviewed --

A I'm sorry. I didn't hear that first part of the question.

Q I said that you mentioned the Journal of Analytical Toxicology. Have you reviewed publications within the Journal of Analytical Toxicology -- not publications. I'm sorry -- articles in the Journal of Analytical Toxicology that address measurement uncertainty in ethanol alcohol concentration?

A Yes. Specifically for the Intoxilyzer and breath test instruments as a whole.

Q And what do they recommend as the acceptable range criteria?

A They all use the recommended by the manufacturer. Now, in their labs, they are able to get a much more precise. Because we just use the 005 or 5 percent. They might say it's 0048, but roughly the same. But it is calculated through known testing in a controlled laboratory condition. They still use the acceptable criteria of 005 or 5 percent once it goes out in the field.

Q And what does the International Organization of Legal Metrology recommend as the acceptable range criteria?

A Also 005 or 5 percent.

Q What does NHTSA, which is the National Highway Traffic Safety Administration, what do they recommend as the acceptable range criteria?

A 005 or 5 percent.

Q Do you review -- as one of your duties as program manager, do you review other state rules regarding breath and alcohol testing?

A Yes, plus I interact with them on a regular basis through conferences, just regular phone calls asking, you know, information they have on different legal type cases, how they address certain things. I'm in constant communication with several other agencies.

Q Are you aware of any other state that using an

acceptable range criteria of less than 005 or 5 percent?

A No.

Q Are you aware of other states that use a larger acceptable range criteria than 005 or 5 percent?

A Yes.

Q And what's the -- when I say larger, do you know what the -- some of the other states use as a acceptable range criteria?

A I can't remember off the top of my head exactly which state it is, but I know there's at least one other state that uses -- because they truncate all of their measurements. They use an 00 -- or excuse me. They use an 01. Because if you take 005 and round it up, it 01. So, they use an 01 acceptable criteria.

Q What would be the affect of narrowing the acceptable range to .003 or 3 percent?

A Essentially it would shut down breath testing in the state of Florida.

Q Why?

A Well, number one, as I have said, we -- there's a lot of different factors associated with that. So, yes, the instrument it's capable and we can even demonstrate on really good days, it will go within 003, but it's actually specs on all of the other things in there that it might have a variation plus or minus. Also, during the Department

inspections and the Agency inspections, that's a software driven set of steps. And we would have to immediately have software changes.

And let's say we use my analogy earlier if you bring the requirement to 003 and say that it has that same thing, the instrument is working fine with all the associated factors, but then at the Agency level you then have to say, oh, that's control outside tolerance. We'd have to change the software for the instrument to then, number one, tell it that it's a control outside tolerance because we don't rely on the agency inspectors to say it's a control outside tolerance. We let the instrument flag it, right?

Then if it goes within the 003, it's coming in 0075, as we've already demonstrated here is well within what it should be reading, they then would have to address it as some kind of control outside tolerance issue. So, then they send it up to us and we have to then do it. And we look at it and then we recalibrate it. But we've already recalibrated it. So, it's really not going to make any effect. So, we send it back down to them. They do it again and they get roughly the same thing. All of a sudden that instrument has now been said, hey, there's something wrong with it twice. The whole credibility of that instrument has been -- because any good defense lawyer can say, hey, they keep having to send it back and forth. But for the most part, that instrument which is

working just fine is null and void. So, that would consecutively start happening, and we would just come to a standstill in the ability to have DUI prosecuted in the state of Florida with breath tests.

Q So, in essence, the instrument would have to work better than its specifications?

A Yes.

Q The 003 standard is something that is used only for quality control checks, correct?

A We only use that quality control check as a decision point whether or not that instrument, we should bring that calibration closer to that initial target.

Q So, there's nothing in rule that requires a three standard.

A No.

MS. JOHNSON: Can I have one second, Judge?

THE COURT: Sure.

MS. JOHNSON: I have nothing further at this time, Judge.

THE COURT: Cross?

CROSS-EXAMINATION

BY MR. STRAILE:

Q You got to the FDLE in 2013, correct?

A That is correct.

Q So, as far as the procedures manual, it was already

existing when you got there, the 2011 version, correct?

A The 2011 version, yes.

Q Was already there?

A Yes.

Q And in that 2011 version, they were using the three standards to do their quality checks?

A That is correct.

Q And the 2014 version, which is Petitioner's 4 and also Respondent's 13, you reviewed that?

A I reviewed the 2011 version and I was the one who made the updates to the 2014.

Q In fact, your initials appear on the 2014?

A That is correct.

Q Okay. And they use the three standard there, right?

A That is correct.

Q Okay. So, this whole thing that you went through as to why and this and that and the other, was that ever discussed in public when we got this spec sheet that says, hey, this machine can do the three instead of the five?

A I was not there when it was originally given.

Q How about since 2013 to 2015, have you discussed or put public notice, hey, we have a spec sheet that says three? We have procedure manual that says three, but we're going to use five to incarcerate you. Have you ever said to the public this is why. Or where have you said that before in the

public? Did you give public notice?

A It's available by public records request all of that information that you're asking. The specification sheet, that's how you have it, a public records request.

Q That's not my question. My question is, this theory that you just used to form the basis as to why the rule has not changed, did you discuss this in a public forum with notice to the public as to why we're keeping this rule?

A No.

Q Okay. So, right now --

A I also don't tell them all the -- because remember I said our standard operating procedure, we have to have the flexibility in our discretion to make changes. We don't address our standard operating procedure with public. But any time they want to see a standard operating procedure, we're happy to provide it.

Q Let's stop talking about public record request, because we're talking -- I'm talking about public notice and rule promulgation, okay, where your job is to notify the public of what you are going and why and give us an opportunity to come in and discuss and debate. That part has never been done by the FDLE. Has it been done in your time with FDLE?

A Every time there is a rule update, there is the opportunity for the public at large to come in and comment and

ask us any questions.

Q Have you ever told the public, hey, a procedure manual conflicts with the rule.

A It doesn't conflict with the rule.

Q The Department inspection says a five standard and the procedure manual says a three standard? Yes?

A That's an improper characterization. The standard is used for a decision point for calibration. We're still using the Department inspection in our -- referenced in our standard operating procedure as our acceptable range criteria.

Q You would agree that you follow your procedures manual, correct?

A Yes.

Q So part of the procedures manual says that you must send this off or send it off to a repair facility; is that correct?

A If it's determined that we -- let's say we're doing that alignment. We do that quick snapshot of the good quality assurance -- it's good quality assurance in any testing to have slightly narrow constraints than what you know is available for the actual testing process so that you know what are -- your decision point for whether or not you need to recalibrate that instrument.

Q Okay. But then it can be sent off to a repair facility if you can't calibrate it, right?

A If for some reasonable we attempt a calibration and there's something that is preventing us from being able to realign that instrument and we try repeating that calibration and it's still not working, of course, we send it off for repair.

Q Okay. Now, when you do the three standard check, according to your procedures manual, and then you do the five standard check, according to the rule in your forms, isn't that done in the same place?

A Same place, but the Department inspection is a much more intensive testing process than those quick quality control test. Those quality control tests are three rapid tests. I mean, over the same series of use for the Department inspection. But then when we do the Department inspection, that's going to done over ten different things. So, you're going to see more variability again. It's to ensure that when we do those extended tests that we can guarantee that it's within that 005 or 5 percent.

Q Now, were you -- this five standard, do you know how long it's been in the rule?

A From your testimony, it's been there a while. But that's the accepted standard in the scientific community. When we test our body temperature, we say it's 98.6. We haven't adjusted the temperature of our body over a very long period of time because it is what it is. That's an acceptable

criteria.

Q Has the internal workings of our body changed like technology has changed over the last 60 years?

A I would disagree in your definition of the changing of technology, as it relates to infrared spectroscopy. Besides infrared spectroscopy and how it determines the concentration hasn't really improved at all.

Q Okay. That's theory. Like, you're talking about the method of infrared spectrometry, this is how we're going to do it, we're going to put a light source through it, and theory is this is what is going to happen, right?

A Right.

Q Now, the science -- or the technology, different than the theory, on how we actually do that, that's changed?

A The electronic components have gotten a little smaller. They go about -- that wheel to look at the filters, they have changed how they do that. But it hasn't really improved. I would argue that it hasn't really improved. It went from a spinning wheel which chopped up the light source to a light source that pulses.

Two reasons for making that change. Whenever you take an infrared light source and it's on consistently, it will burn out the filter. So, you flicker it so it doesn't burn out the filter. That chopped up wheel performed the same function and inside of it, it has little filters that allow

the light to pass through at different wavelenghts so we could test it.

Now, we do -- we're essentially doing the same thing. It's just a different methodology.

Q Okay. So --

A But the overall infrared spectroscopy hasn't changed.

Q So, let's talk about driving a car. I mean, if we're driving a diesel or an electric, we're still driving a car, right?

A Two different types of combustible engines. We're talking about the same type of combustible engine. So, can a 1980 Ford Ranger operate the same as a much newer -- operate roughly the same as a new one? It's still a combustible engine inside. It's got a bunch of fancy new bells and whistles. But at the end of the day, it still functions the same.

Q Right. So, then if we change, like, the fuel injection and that kind of thing, instead of having a carburetor and timing belt, all of that kind of stuff is gone, right?

A But we're still dealing with an internal combustion engine. We've changed how we've introduced that combustion, but it still works by an explosion to blow out a pistol.

Q Okay. So the theory of what we're doing has not

changed, but the technology that we use to implement the theory has. Is that fair? Yes or no?

A I'm having difficult answering yes or no because there is some many components and things involved into it. When we're looking at the --

MR. STRAILE: Nonresponsive, Your Honor.

THE COURT: Well, I think he says he can't say yes or no, so.

MR. STRAILE: Okay.

BY MR. STRAILE:

Q The federal register, that's not a requirement on the state, is it?

A No.

Q Okay. And -- were you part of the process in developing this acceptable range by the scientific community back as far as the '50s?

A I wasn't born yet. So no.

Q Me neither. You would agree that the purpose of these rules and everything is to ensure the accuracy of the machines, correct?

A To provide a framework to ensure that when that instrument is being used by the person blowing into it, that we can assure the accuracy and reliability of that instrument, yes.

Q What is the purpose of collecting these breath

samples?

A To provide evidence for the trier of fact whether or not that person was above or below the legal limit.

Q So, the purpose of this machine is to collect evidence to use against the citizens of the state of Florida, or, excuse me, the people who operate motor vehicles in the state of Florida?

A Yes.

Q And then some of those people, the State is going to use this for their purpose to incarcerate them, right?

A I guess it -- I'm not part of the -- the part after guilty, the sentencing process. So, I don't know if they are incarcerated or not. My part is to say whether this instrument is working accurately and reliably.

Q Is it your testimony that you don't know if anyone has ever been incarcerated for a DUI?

A Oh, yes. When you word it that way, yes, I understand.

Q Okay. So, the purpose of collecting these samples is to use in court against the people who may be incarcerated as a result?

A Yes.

Q So, if the scientific community is using the five standard and all of this, why does your procedures manual say the three standard?

A Again, we use that three standard as a decision point to decide whether or not I think we need to recalibrate that instrument. Because we have all of the different control environmental conditions. We have the equipment available to us. We have trained personnel that are able to take a quick snapshot, look at it, make an informed decision that we need to bring that calibration closer to the target range.

Q Or send it to a repair facility?

A Or if we can't address that, send it to a repair facility.

Q And if you send it to a repair facility, the agencies, basically, as the owner of the machine, is going to end up paying for that?

A It depends on whether or not it's under warrantee. But then once it comes -- it has to come back to us, then we have to reinspect it and prove that it's functioning correctly.

Q So, let's pretend -- excluding the warrantee. Okay. Basically, as I understand it, if it's under warrantee, CMI takes the hit just like a car manufacturer would if the car is under warrantee?

MS. JOHNSON: Judge, I'm going to object. This line of questioning is irrelevant. Cost to the Agency has no bearing on this petition.

THE COURT: I'll overrule. We have discussed that a

bit. So, I'll overrule it. I agree with you, but let's flesh it out.

BY MR. STRAILE:

Q So, just for purposes of my questioning, let's pretend it's out of warrantee.

A Okay.

Q Your decision point end up sending it to a repair facility. Agency has to pay?

A Yes.

Q If it's out of wack at the Agency level, repair facility, Agency has to pay?

A It comes to us first. Just because they have -- it doesn't mean -- let's say it comes out of control outside tolerance. So, they're driving the car, they hit that line. They immediately send it to us. Now, the reason for that control outside tolerance could just be something as simple as they forgot to screw it on real tight. So, when they did it, they got a control outside tolerance. It's then up to us to then relook at it using much more control. We know that these have to be in correct functioning order, to do a quick snapshot say, hey, is it something to due to calibration or is it something due to something else. We make the decision and then we sent it back up to CMI or back to the Agency who would then be required to reinspect it one more time. If they were still having a problem, we'd probably say, hey, you probably

got some sort of equipment or you need to have some better training. But if they where are still having a problem, they would be in constant communication with the Department inspector to address that. And they say, hey, it either needs to come back to us again or you need to send it back off to repair. There's multiple safeguards and checks and balances before that instrument goes back into evidentiary use and some blows into it to ensure when that personal blow into it that we can ensure the accuracy and reliability of that instrument.

Q All right. So, at the Department level when the Agency sends the machine back to you, you first follow the procedures manual because that's your internal procedure?

A Yes.

Q And then you do another Department inspection?

A Yes.

Q And then you ship it back to the Agency?

A Yes. Who then does another Agency inspection.

Q Okay. But the first step is we're going to make it meet the three standard in the procedures manual?

A We're going to -- again, we're going to check it very quickly to see whether or not we need to do a calibration on it. It's a decision point on whether or not to do a calibration and that is held to an 003 or 3 percent, that decision point. But when we then do the -- when we get the

Department inspection, we do 005 or 5 percent because that's a much more in depth thing that shows -- allows for all the different variances than that short, narrow quick stability check.

Q So, first it meets the three standard. Then you go through more intensive looking at it, and you let it go out to the five standard?

A Yes. I think I have explained that.

Q So, if the machine does not pass the three standard pursuant to your procedures manual, that machine is not going to be put into evidentiary use, is it?

A It's then got to pass --

Q Hold on. It doesn't pass the three standard, it does not then get put into evidentiary use. For whatever reason --

A That three standard would immediately be calibrated. So, then when we do the Department inspection and do that verification, we can guarantee that it will pass at that 005 or 5 percent.

Q If the machine -- okay. So, basically, what you just said in response was -- I asked you if it doesn't pass the three standard -- if it doesn't pass the three standard, does it get into evidentiary use? If it does not --

A Eventually, yes. So, I'll go more in depth in the actual process. When we -- let's say we do that quick quality

control check and it falls outside of that 003 or 3 percent, we do calibration. We then redo that quality control check, do that quick snapshot 003. You say yes. Okay. It's good to go. Now, we then send it on for that longer test stuff for the verification. So, we have ensured that we've corrected the -- whether or not -- whether it actually was a calibration issue or not, we brought it closer to nominal, closer to center and then put it back out for the Department inspection, which they qualify it for use to go back to the Agency inspection. The Agency inspector then does another subset of inspections right there, which makes it -- gives it the ability to then be put into evidentiary use. So, we're going back and forth back and forth, having that narrow range that we're using as our decision point for calibration. But then when we actually do the in depth Department inspection, we still use the 005, which is consistent for the Department inspection, the Agency inspection, and then quality control test.

Q I think you misunderstood my question.

MR. STRAILE: Your Honor, if I can have the court reporter read back the first part of the answer to the last question.

THE COURT: If she can find it.

(Court reporter unable to read back last answer.)

BY MR. STRAILE:

Q All right. So, my question is not what happens when it fails the three standard and you recalibrate it and you check it and you make the machine good to go. My question is, what happens when the machine is not good to go and it does not pass that three standard at your standard operating procedure level, it doesn't pass the three, it's not good to go. It is then not used -- it doesn't get sent -- put into evidentiary use, does it?

A We do the quality control test -- I'm having a hard time understanding how you're -- what you're asking.

Q Sure. Let me ask it again then. I'm not asking you what happens after you fix it and it's good to go, as you just said. What I'm asking you is, what happens when the machine is not good to go, it does not pass the three standard? What do you do?

A That three standard?

Q Yes.

A Immediately after it doesn't pass the three standard, it immediately would be -- we would try to determine what is a function. Could it have been something with the simulator. You know, we might retest that same three standard. And then say, okay. Let's say it's reading 045, 045, 045, it's still well -- we know it's not going to be something due to something really that wrong. We know it's probably just due to the calibration. So, again, that's our

decision point for them performing the calibration adjustment. Once, we have done that calibration adjustment, we do that -- again, that quick three, plus or minus three and say, okay, now does it fit. If it then fits, then it goes along to that Department inspection.

Q Right there. If it doesn't fit, what do you do?

A We can attempt to do it again. And if it doesn't fit at that point, we're only able to calibrate the instrument. It could be something with, let's say, we've been using the simulators too long that day and we're getting too much --

Q Dr. Kirkland, my question is it does not pass your three, regardless of the reason, okay, does it get to a Department inspection or does it go somewhere else?

A If we're unable to recalibrate it.

Q Yes, sir. That's my question.

A We would send it off to repair.

Q Okay. But you wouldn't put it into evidentiary use if it didn't pass the three. You would send it to a repair facility, right?

A That's the decision -- because if we can't calibrate it, then it needs to be sent off for repair.

Q My question is simply if you can't make the -- you know, I'm not asking you to speculate as to a reason why. There is several reasons why a machine may not be calibrated.

My question is simply, if it doesn't pass the three, for whatever reason, it gets sent to a repair facility instead of a Department inspection?

A Again, that three is only done by trained personnel in our controlled lab using our equipment. Such that when we when we're doing it, because we are higher trained, we've got better facility than Agency inspectors, we don't ever send it out until we can make sure that that calibration is in line closer to nominal because that's what that -- for us that 003 or 3 percent is used is as a decision point for the calibration. If we are unable to calibrate it quickly and get within that narrow range, we'll never even bother doing the other ones. We'll send it off for repair. That's good science.

Q So, that's good science, but it's not in the rule?

A Again, science has to allow -- there's always improvements. Any time you try to put your standard operating procedures in a rule, it would devolve into a hopeless endeavor because you would have to start regulating absolutely everything and you couldn't keep up with it. You would then lock in all of your current methodology and it would be unchangeable except with another rule change. But rule change is not a quick process to do. You would end up locking yourself into a --

Q So, I'm not asking you about all of your procedures,

you know, where -- there's personnel things in here, too. We're not talking about that. We're talking about this three standard, okay? It's not in the rule. But in order to get into evidentiary use, it's first got to pass the three?

A We're providing a narrower area to decide whether or not that instrument needs to be calibrated. I don't know how else to answer the question.

Q Sure. No. No. That's great. So, basically, you --

A So, let's say -- let's use for example --

Q Hold on. I'm asking the questions.

THE COURT: Let him ask --

BY MR. STRAILE:

Q So, basically, you're enforcing the three standard first before you get to the five standard?

A We're using as a decision point for calibration. Because we don't want to do a calibration on an instrument that's already outside. We want to go ahead and narrow it before it goes outside of tolerance.

Q So, basically, your decision is that the three standard first?

A Yes.

Q And for whatever reason you can't meet the three, it never goes into evidentiary -- it doesn't go into evidentiary use until first it passes the three and then it passes the

five?

A I'm trying to -- so, it would -- if I understand your question, let's say if we can't realign it and we can't get it -- we send it off to the manufacturer. The manufacturer sends it back to us. But we double check that the manufacturer --

Q Of course.

A -- did it. And, so, if it was still -- but the manufacturer using a complete different calibration process. They don't use wet gas. They only use dry gas. So, they could have a calibration when -- they could fix it and then calibrate to their standard which is different than our calibration procedures. And I guess eventually we're going to have to go into calibration procedures because we seem to be --

Q Okay. Let's forget about the procedure. I'm not asking you about the procedure, how you get there, and who uses dry and who uses wet, and where it's done. It comes back from a repair facility. You just testified you basically checked the three standard again?

A Yes. It's our decision point because we might need to re -- their calibration that they do on the instrument might slightly differ from ours. And then when we test it, it might not do. So, we take that quick snapshot again. Because we can then calibrate it again. Because if we're then able to

calibrate it, it doesn't need to be sent back for repair. They repaired whatever issue it was and they were able to bring it within such that when we do the department inspection which is a much longer verification test. We can guarantee that it's within that 005 or 5 percent.

Q So, ignoring some people -- or some repair facilities may use slightly different procedures, whatever they did to say, hey, it's calibrated. Okay. They send it back to the Department. You then go through your standard operating procedure, yes?

A Uh-huh.

Q Which is the three standard we're talking about, right? And until it's good to go, pass that three standard, it doesn't get to be inspected by the Department, it doesn't get to do the department inspection?

MS. JOHNSON: Judge, I'm going to object. This has been asked and answered multiple times already.

THE COURT: I'll overrule.

BY MR. STRAILE:

Q So, until it passes that three, it never gets to the Department inspection?

A Because that three is our internal decision point for calibration, it needs to pass that three.

Q First?

A First. Because we need to decide whether or not

that calibration needs to be adjusted based upon our procedures.

Q And if for whatever reason under the sun it doesn't pass the three, it does not then get placed into evidentiary use, correct?

MS. JOHNSON: Judge, again, he just asked the same question and just answered the same question.

THE COURT: That one has been asked and answered. One more time. I'll overrule it.

A It has to pass that 003 as a decision point. If it's within that 003, we will then do the much more larger Department inspection.

Q Now, for the most part Department inspections, they are performed here in Tallahassee in your control facility, correct?

A That is correct.

Q On rare occasions, you have to go out to the Agency?

A In the past. I don't think we're going to have to do those. There's been some rule changes that prevent us. We don't have to do that any more.

Q So, now, all the Department inspections are going to be here in your controlled environment?

A That is correct.

Q Which is the same place you're implementing the three standard?

A That three standard is used as a decision point.
Q Well, I'm not asking you where it's being used or what for. I'm asking you where. Okay?
A Same location.
Q Okay. Thank you. That's the same controlled environment, right?
A Yes, but complete different testing.
Q Hold on. The same environment? The same people?
A Yes.
Q I'm not asking you for all the variances. Just the same people, the same place, and the same control environment?
MS. JOHNSON: Objection: argumentative.
Q Right?
THE COURT: Overruled.
A Yes.
Q Now, I'll come over here to this white board here. So, if this is how you got to 075, why is the scientific community using 05 instead, if this is how you got there?
A Because the scientific community is talking about it's acceptable range criteria of all the -- the instrument capability plus all the associated factors.
Q Okay. So, this on how you got here and why you are using this, this five standard, it's been in place -- you were here for earlier testimony, right?
A Uh-huh.

Q Do you have any reason to disagree that it's been in place since the '60s and maybe even the '50s?

A Uh-huh.

Q Okay. So, then are you familiar with the 5000 series?

A Not really.

Q Not really. So, you wouldn't know how the -- how CMI got the machine to go from an 05 standard to a more narrow standard in the EN?

A How they got increased accuracy? No. You can talk about -- they only talked about the change in tech -- we call it technology for the simple fact that that's your wording you use. But their increased accuracy, how it determined the concentration, I don't know.

Q Okay. All right. And, so, basically, this five standard has been in place since the '50s. And at point in 2002, apparently, we get down to a capability to do a three standard, the three standard that we have been talking about today, right? Right?

A Sure. That's all history.

Q So, now, you were talking about the uncertainty, the dry gas has its .02. When you --

MR. STRAILE: One moment, please. I don't have any further questions, Judge.

THE COURT: Redirect? I guess I should ask how much

longer do we think we'll be. I was hoping we could finish with Dr. Kirkland before we break for lunch. But if it's going to take a while, then we should take a break and --

MR. STRAILE: I don't know what she's going to redirect, Your Honor. But I think that we've kind of gone around and around, but --

MS. JOHNSON: I would say maybe 15 minutes.

THE COURT: That's okay. If nobody else is starving, I mean, I'm fine. I can --

MS. JOHNSON: I'm fine as well.

MR. STRAILE: I'm fine, Your Honor.

THE COURT: Okay.

REDIRECT EXAMINATION

BY MS. JOHNSON:

Q As part of your rule promulgation, have you familiarized yourself with Chapter 120 regarding promulgating rules?

A I'm becoming more and more familiar as the day goes by.

Q Is there any requirement in Chapter 120 that you have to notify the public why you're keeping a rule?

A Not that I'm aware of, no.

Q Chapter 120 only requires that you give notice to the public that you're changing the rule and what your changes

are going to be, correct?

A That is my understanding, yes.

Q And the public is given an opportunity to request a hearing, if they so choose, correct?

A Correct.

Q When the 2015 rules were revised to purge all references to the 5000, did any member of the public request a hearing?

A In 2015 it was -- I believe, it was published in the Florida Administrative Register and no one requested anything.

Q So, notice was given to the public that they were change -- that the rule was being changed, all of 11D-8, correct?

A Yes.

Q And that the public was given notice of what those changes to the rule would be, correct?

A Yes.

Q And no one requested a hearing on addressing those changes, correct?

A No.

Q And you talked about regarding how long the five standard has been accepted in the community, and you used a analogy about the body, that the body hasn't changed, the way the body works hasn't changed. The body temperature is still the same. Even though the technology exists for heart

transplants and pace makers and, you know electronic deep brain stipulation, when you introduce those -- those components into the body, that doesn't change how the body works, correct?

A No.

Q So, if you change the different internal components that's not going to change the overall method of how something works, correct?

A Speaking of the instrumentation?

Q Correct?

A If you will rephrase that question. I got a little bit confused.

Q If you're changing the internal components, changing the -- updating the internal components to an instrument, that doesn't change the way infrared spectroscopy works; is that correct?

A No.

THE COURT: No, it doesn't change?

THE WITNESS: No, it does not change to way infrared spectroscopy works.

MS. JOHNSON: Sorry, Judge.

A Or spectroscopy in general. Infrared specifically speaks to one range of the overall light spectrum.

Q When you did the 2015 rule revision, you stated before that you -- that was started in, say, sometime in 2013,

correct?

MR. STRAILE: I object, Your Honor. I don't think he said he did the rule change because he wasn't the program manager at the time.

MS. JOHNSON: He did state on direct that he was involved in the promulgation.

MR. STRAILE: Okay.

THE COURT: I think he was.

MR. STRAILE: Then I'll withdraw it.

A Yes. Sometime in the -- in that area. I don't remember the exact time when it was started.

Q Okay. When the decision was made to revise the rules, were all the rules reviewed to determine their applicability?

A Yes. We were asked are there any rules that needs to be addressed or updated to conform to whatever new requirement or scientific community can fix.

Q So, it wasn't like you only chose to address the rules that involved the Intoxilyzer 5000, correct?

A That was, I think, what started the process. But because we were going through and revamping the rules, we were going through each individual one of them saying is this still scientifically acceptable, is this still useful in what we're doing today?

Q So, it wasn't that you forgot to change to the

acceptable range. That was reviewed and still determined to be scientifically reliable, correct?

A Yeah. It was still what's used in the scientific community.

Q And you determined that that the 005 or 5 percent is still valid and supported by the data, correct?

A Correct.

Q Opposing counsel asked you about a whole series of questions about whether -- about a breath test used against a defendant. You're not involved in -- strike that. You're not concerned with criminal prosecutions?

A My job is just to be an unbiased witness on whatever the court asks me.

Q So, you don't make recommendations as to what the State charges?

A No.

Q Have you ever been asked for advice on prosecuting defendants?

A Yes, many time.

Q How so.

A Let's say in terms of they need -- they want to do a retrograde extrapolation whether or not it -- they should try to have an expert come in and do a retrograde to get them above the 08 limit.

Q Can you explain what a retrograde is?

A Back calculating someone breath alcohol concentration to a known level given certain information has been provided. Because alcohol is metabolized by the body at a very consistent manner, if we know certain pieces of information, someone who is trained and has a lot of education and experience can say, you know, there's been all the different correct factors involved, you can backtrack what their concentration would have been at a prior time point.

The other one I get, I guess, fairly -- I wouldn't say it's not uncommon, was something right around that range of 080. Someone will come in and say I've got a 083. You know, is this something that you would -- then you can come in and I'll look at it and say, well, you know, if it were me and I was looking it -- because we do our acceptable range at 005 and 5 percent, I think you can make a logical argument to any given one specific sample. Because we don't give a specific error rate for the actual breath sample itself. You could make a reasonable argument that that person on one specific sample could be 079. I wouldn't go that -- on a strict number criteria. I would say, hey, do you have a lot of extra impairment from the officer. Then I can actually then go in and talk about the probability of that specific thing being above 08 or technically below 08 because it's actually a whole statistical analysis you get into. But it gets a little complicated. But in actuality you could make a reasonable

argument because we're saying that that 005 or 5 percent that is specifically stated just for our calibration process, but we're also doing that 005 right there for the dry gas standard right before a breath test. So all of those same factors still apply to that one specific sample.

Now, there's a lot of other biological factors that can affect it to some extent. But the one specific number, 080 it could, I think you can make a reasonable claim that it could be 079. It could be 083. There's going to be a tiny little range there.

Q So, using the hypothetical of, like, an 083, using the five standard, you would -- you could say that that defendant could be as low as a .078, correct?

A Sure.

Q If you narrow that to a three standard, that's detrimental to the defendant, correct?

A Because then I would have -- if we did that, you couldn't make that reasonable claim. You would have to say within 080 to 083 or 080 to -- the total range of it. So, yeah, that strips -- it does strip the numbers, but it's to the detriment of the defendant. So, again, by having a acceptable range of 005 or 5 percent to the benefit of the overall defendant. Like I said, that's just how I look at the data that's addressed to us. How we look at the acceptable range. How that's interpreted by FDLE.

Q Opposing counsel also talked about to cost an agency for repair. The rule requires that the Agency send the instrument to FDLE at least once per calendar year, correct?

A Yes.

Q And they are responsible for the cost of shipping it to us and ensuring it, correct?

A I think we -- part of it that I know for sure, we do. Under shipping back, we do it. But we don't -- but they are overly responsible for the overall, if they don't have a warrantee. Unless it breaks and stops --

Q Right. But if they are shipping it to FDLE, say from Miami to FDLE, they are responsible for paying UPS or Fed Ex and insuring it with them, Correct?

A Correct?

Q So, there are other costs that an agency incurs regarding an instrument that aren't in the rule, correct?

A Correct.

Q When you were talking about the quick check, the quality check being a quick snapshot and using your car analogy. Would the quality control check be equivalent to driving the car for a mile to see how it works versus the Department inspection driving it for 30 miles to see how it works?

A Sure. Yeah.

Q So, that original quality control check is not

intended to negate any part of the Department inspection, correct?

A No. It's a quick check to ensure that when you do that Department inspection, you know you're going to be able to meet that acceptable range criteria.

Q And the Department inspection is a much longer ad a more time involved process, correct?

A Correct.

Q So, your -- that quality control check is essentially just a quick check to make sure that you're going to be able to complete a full Department inspection?

A Correct.

Q How long has the method for determining measurement uncertainly been in existence?

A Like I said, it's a relatively new concept, but it's becoming more and more widely distributed within the scientific community. But it's always been part of any analytical instrumentation. It just had different names throughout the years. But it's overall been around for a very, very long time. But more recently there's more, you know, correct definitions more, say, recently over the past decade.

Q You used other instrumentations other than the gas chromatograph or an intoxilyzer, correct?

A Oh, yes, tons.

Q Has the methodology for determining acceptable range in those -- in other instrumentations is -- strike that. Is the methodology used for determining acceptable range in other instrumentations, is the formula for determining it generally the same?

A Roughly, yes. I mean, you have to, of course, adjust the type instrumentation you're using based upon the actual, what's called the matrix. The actual technology. Whether or not it's based on infrared spectroscopy or if it's based on chromatography, which is just the science of separation. Whether or not it's based upon bionic charge, which is what mass spectrometry is based up. So, there's a lot of different factors associated with it. But in general, it's all based upon overall testing process with all the other associated factors into it that say, hey, this is what -- if it's meeting this criteria, the instrument is functioning fine.

Q What is liquid chromatography?

A Liquid chromatography is separating liquid components based upon some sort of physical property.

Q So, what, I guess, instruments do you need in determining that?

A Oh, I guess, for doing liquid chromatography you use what's called a liquid chromatograph. It's an instrument quite, very dissimilar from the intoxilyzer, but it has a

series of injection parts where you inject a liquid and it has another liquid that flows through --

MR. STRAILE: Your Honor, I object to --

BY MS. JOHNSON:

Q Just basics. You have a chromatograph of some sort. You're going to have other external components that are going to be used with that, correct?

A Yes. It has to also introduce standards and also introduce other uncertainty factors for that overall system, and you have to determine what the overall acceptable criteria for that overall system.

Q Okay. So, you're taking the actual instrument plus all the extra pieces and coming up with a measurement uncertainty number, correct?

A Yes.

Q And that's the same thing you're doing for the intoxilyzer, correct?

A Essentially, yes. That's the way we determine the acceptable criteria as -- for the most part a measurement uncertainty.

Q So, no matter what instrument it is, in order to determine measurement uncertainty, you need to determine the precision of the instrument plus all the external components, correct?

A Absolutely, yes. They call it an uncertainty

budget. It looks, in terms of -- I can kind of do a quick description on the dry erase board to kind of let you know what it looks like throughout the scientific community. It's all the same when you do one.

Q Do what? I'm sorry.

A When you do a uncertainty budget.

Q Okay. How do you do an uncertainty budget?

A Or how it's graphed type thing. When you are looking at the overall uncertainty or interpreting acceptable criteria, you start working out what are all the factors that influence the overall measurement process, the overall calibration of the instrument. I'm trying to think. It has a real technical name to it, and I'd have to look it up. I don't remember it.

But what you do is you say, okay, at the end of the day that is our plus or minus value. That plus or minus value is influenced by the analytical component. It's also influenced by the standards that are used. Now, those individual standards themselves are influenced by the person who originally made those standard. So, the testing requirement of whoever made the manufacturer of the testing requirements. So, we call that the manufacturer.

Now, we use multiple standards for multiple different companies to ensure that when we introduce it into the instrument, if there's anything wrong with one individual

standard, we're able to see it. We use different standards from multiple different companies.

All right. You would also have something having to do with, let's say, the programming. Then you actually would have the actual calibration process. All of that gets added up to your final uncertainty of measurement, which, like I said, for all practical purposes how are you interpreting the acceptable range. That's what that is. There are multiple components. And, like I said very simply all of these calibration, you know, that would include -- when we do the actual calibration adjustment, we're actually using a whole new set of reference solutions as well as also the known standards provided by another separate company also using wet bath simulators and dry gas standards. Such that we're using another external check to ensure that we can provide accurate and reliable results.

Now, that calibration of itself also has a slight uncertainty of it. So, there's uncertainty built into everything, not just the specific analytical capability of the exact instrument, which is what the manufacturer is talking about. I think they call it a fish diagram, actually. Fish bone diagram.

MR. STRAILE: Looks like a fish bone.

A I have done them many, many times.

Q When you were discussing the instrument doesn't pass

the quality control check, the three standard?

A Yes.

Q You would never just stop right is there, skip everything else, and send that instrument back to an Agency for evidentiary use, would you?

A No.

Q That would be a violation of rule, correct?

A Yes.

Q When the agency send that instrument to FDLE for a Department inspection, it has to be inspected at the department successfully?

A Yes.

Q Then it has to be sent back to the Agency and the Agency has to do an Agency inspection before it's put back into evidentiary use, correct?

A Yes. We thoroughly tested it both in our controlled laboratory conditions using real word conditions and then when he send it back to the Agency inspection who also then must do the same thing. Well, a subset of the same thing.

Q And that's all required by rule, correct?

A Correct.

Q The quality control check, even though the quality control check and the Department inspection are both done in the lab in either Tallahassee or Fort Myers, correct?

A Correct.

Q Those two -- the quality control check and the Department inspection have different testing procedures, correct?

A Correct.

Q And different protocols, correct?

A Correct.

Q Is there going to be any variability between a quality control check and a department inspection?

A Yes.

Q Why?

A Number one, the quality control check, a quick snapshot only taking three measurements. You're only looking at -- I like the reference, the analogy, you're only looking at for a quick mile. But when you do the Department inspection, you're going for a longer period of time. So, you're able to actually see over a long-term repeatability of that instrument that you demonstrated it as working within 005 or 5 percent.

Q Using that same analogy when the instrument is sent back to the Agency inspection, to the Department, to the police agency for the agency inspection, would that be the equivalent of driving that car on a different road?

A Yes. I mean, it's still got to stay within the same limits, but you're driving on a slightly different road.

Q Because the Agency inspection is conducted in a

different environment, correct?

A Yes.

Q And it could be different from agency to agency, correct?

A Correct.

Q So essentially if you narrowed 8.002(1) to 3 percent, those cars wouldn't be able to be driven on other roads?

A We could not guarantee that they could be driven on all the roads through out Florida, and I'm using the analogy.

MS. JOHNSON: I have no further questions at this time.

THE COURT: Any Cross?

MR. STRAILE: Yes, sir.

RECROSS-EXAMINATION

BY MR. STRAILE:

Q How much time -- is it a situation where you drive you mile and you take the car back and you do certain stuff or you just go right into driving the 30-miles? In other words, how much time passes between the quality check and department inspection? Is it a situation where you do your quality check and then next we do the department inspection or does something happen in between there?

A It can vary.

Q How so?

A For example, I was doing one, one of the last ones I did, I got a phone call right after I did the stability check. I had to leave, came back. And in order to make sure that I was -- I ran the stability check one more time before I finally did the Department inspection.

Q All right. So, after you come back from your phone call, you do your quality control thing, then you basically immediately did your Department inspection?

A Yes.

Q Now, as far as the -- as far as the Department inspections go, it's the same road. We've already discussed that right. I mean, you said you just did it immediately?

A There are different procedures. The Department inspection is a much longer testing process. It actually uses more different standards.

Q So you have --

A Or extra standards than procedure.

Q So, the goal of this whole thing is to be as accurate as possible when we're going to use these samples as evidence against Floridians, right?

A We want to ensure that when that product leaves our lab and goes back to the Agency and the Agency then does a Agency inspection and it goes into evidentiary use, that we can have a high level of confidence in the accuracy and reliability of that instrument.

Q So, by the time you get to the FDLE all the Department annual inspections are centralized, right?

A Yes.

Q Okay. So, this procedures manual, you reviewed it, signed off on it May 14th, 2014?

A Yes.

Q And you kept the three standard in there?

A As the decision point for the calibration, yes.

Q Now, let's talk about the removal of 5000 for a little bit from the rules, okay? The 5000 went offline in 2006, right? March of 2006?

A I wasn't here. I think so, but I don't know all the specific details because I wasn't here.

Q You heard the testimony of the two that came before you?

A Correct.

Q Would you agree that the testimony the two that came before you was consistent in that the 8000 came online in March of 2006?

A Correct.

Q So, presuming then that that's correct for purposes of this question, the 5000 goes offline in 2006. The 8000 comes online March 2006. But we wait until 2015 to take out the 5000 rules, right? Is that what happened?

A Well, it was 2015 when we took out any reference to

the 5000.

Q Basically, it's because the 5000 and all the rules were obsolete, right?

A The 5000 was no longer used. So, yes.

Q Sure. Now, you were involved in that rule promulgation of 2015?

A Correct.

Q Okay. So you also took out some rules about being a repair facility, right?

A Correct.

Q And that's because the ATP actually never --

MS. JOHNSON: Objection to relevance.

THE COURT: Overruled.

BY MR. STRAILE:

Q That's because the FDLE ATP never actually became a repair facility, right?

A ATP has never been a repair facility, no.

Q Okay. But there were rules in there that were defining it, the ATP, as a repair facility that had to be taken out, right?

A But we were never actually a repair facility.

Q Right. It's kind of silly to have a rule that says you're a repair facility when you're not?

A Yes.

Q Okay. And you weren't around at the time. So, I'm

going to presume you do not know why that was in there. You don't know why that rule came to be?

A From dealings with the former -- Patrick Murphy and just conversations with Laura Barfield, supervisor.

Q But you don't have any personal knowledge?

A Talking to the person --

Q But you --

A -- Laura Barfield, supervisor.

Q Okay. Okay. But you don't have personal knowledge. And that was -- do you know how long that rule had been in there?

A For a repair facility?

Q Yes, sir.

A I don't know off the top of my head.

Q Okay. So, basically, going back to the five and three standard. The federal register says five, you're saying. The scientific community say fiver going back at least 60 years. CMI says, hey, we got this new machine that we're going to start using in 2006, it does three. The manual says three. The rule itself was never changed or discussed in public?

A Can you repeat the question. I don't understand your question.

Q The federal register says five, which is a recommendation for all products on the CPL?

A It's actually -- in order to get on the CPL, it's a requirement.

Q Okay. For all the machines on the CPL?

A Yes.

Q The contention here is that the scientific community says, hey, five is good enough, right?

A Yes.

Q But then CMI says this machine is better and more accurate, it does -- over semantics about accurate because they are still selling products, okay. Let's -- CMI says, hey, this machine is more accurate. It does the three. Miraculously we have a procedures manual that says three. You review it. You keep three, but the three never makes it to the next step which is a Department inspection rule or an acceptable range or any kind of rule change, right?

A I'm having a hard time -- that is a very long part -- hard time following that question. The 3 percent is not a recommendation that they provide. That's a instrument standard specification. They don't provide any recommendation on what the acceptable range should be once it's out in the real world conditions.

Q The manufacturer --

A They send it off to the federal people. I think it's called Volpay (phonetic) labs who actually test it in conformity with the NHTSA guidelines and all of that. And

then come back and say, yeah, we fit within those guidelines. It's acceptable for use.

Q On redirect you agreed with opposing counsel that if it didn't meet the three, it would be a violation of the rule to send it back for evidentiary use because it never makes it to Department inspection, right?

A Say that one more time.

Q On redirect you agreed it would be a violation of the rule to send it back and it would never pass the three standard pursuant to your standard operating procedures?

A If it never passed --

Q The three?

A That would be a decision point. Once we do the Department inspection, there is no three requirement.

Q Okay. When you did this machine, right, you're doing these inspections of the machines still, yes?

A I don't do them any more, no.

Q Okay. You used to do them?

A Yes.

Q When did you stop doing them?

A When the last time -- I wasn't necessary any more, when he we had all of our Department inspectors fully on staff again.

Q For those of us who don't work at ATP, when was that?

A I don't remember the last one, whenever it was. I guess sometime last year.
Q Okay. Last year.
A I still have the capability because I'm still an Department inspector.
Q Listen, I'm not asking you November 23, at 3 p.m. Just tell me it was at the end of last year or right after you started?
A Sure. End of -- end of last year, sure.
Q Okay. You do the quality check and then you move right to the Department inspection, almost like a phone call or something comes in, right?
A You can move very quickly to it, yes.
Q Okay. Do you ever write code or software?
A No.
Q No. So, you wouldn't know the affect of telling the machine instead of looking at five, look at three?
A I would know that that would require a software change.
Q Sure. So, you delete one number and put in another?
A I have no idea if that's the process.
Q The machine now, the software is told out of tolerance at the five standard, right? Out of tolerance is the five standard we've been discussing here today?
A When you're doing a Department inspection, Agency

inspection, correct.

Q Okay. You talked about software changes earlier today. Okay. So, basically, we're just, for all intents and purposes, we're removing the number .005 and put in the number .003 would be the change that's required; is that about right?

A Yes. But there's a lot to it. You can't just do that.

Q Well, it would be -- I understand. We're talking about software. But essentially that would be the one change, right?

A That would be one of many changes that would be required.

Q Okay. Do you know how many software versions there were or are to the 8000?

A I am currently aware of the two that have been used on the 8000.

Q The 8000.26 and 8000.27?

A Correct. That are currently in use. Two-six is not in use, but the 27 currently is in use.

MR. STRAILE: One moment. I don't have any further questions, Your Honor.

THE COURT: Anything nothing further.

MS. JOHNSON: Just a couple of questions, Judge.

FURTHER REDIRECT EXAMINATION

BY MS. JOHNSON:

Q The quality control checks that are done before Department inspection, there is no requirement in the standard operating procedures that they immediately proceed to Department inspection, correct?

A No.

Q So, the quality control check could be done one day and a Department inspection done two days later, correct?

A Correct.

Q And there's no requirement that a Department inspector be the person to actually conduct the quality control checks, right?

A No.

Q So, a Department inspector in training or some other ATP employee could do a quality control check, correct?

A Correct.

Q If it's done by the different user, that user could use different equipment, correct, different simulators, different tubing?

A Yes.

Q So, you would expect to see variances between the quality control check and the Department inspection, right?

A Under the circumstances you gave, yes.

Q CMI doesn't state or recommend what an acceptable range is, correct?

A No.

Q The 3 percent that opposing counsel keeps referring to is only what CMI's instrument accuracy specifications are, correct?

A Correct.

Q And regarding the software, does -- is it your understanding that the software is proprietary property of CMI?

A Correct.

Q So, that's not Florida software. FDLE doesn't write that software, correct?

A We don't write the software at all. There is a Florida specific software, but we don't write it. It's all done by CMI.

Q So, Version 26 and 27 of software are Florida specific software, correct?

A That's my understanding, or at least the 27, that's my understanding.

Q So, any software changes, it would be up to CMI to develop new software, correct?

A Correct.

Q Are you aware of any scientific body that accepts a acceptable range for breath/alcohol testing machine of .003 or 3 percent?

A No.

MS. JOHNSON: I have no further questions.

FURTHER RECROSS-EXAMINATION

BY MR. STRAILE:

Q All right. So, she gave you example, it could be done days later, this, that, and the other, whatever. But you talked about the last time you did it, you were interrupted by a phone call and that it could be done pretty much immediately. So, let's talk about the practical application instead of speculation and what it actually says. In practice is it the quick check and then the Department inspection relatively quickly? Same day?

A It varies from person to person from day-to-day depending upon the workload of whoever is doing it.

Q So, someone would do this quick check and then stop and go do something else instead of proceeding into the next step of the --

A Or they may have several instruments lined up do a quick check and a quick check and a quick check and a quick check, go have lunch, come back, do the Department -- I mean, there's lots of different variations that could be done.

Q Okay. But it sounds like the practice is do the quick check, the quick check, the quick check and then move into the Department inspection relatively quickly?

A You can.

Q Not days later?

A You can. Sure.

MR. STRAILE: I don't have any further questions of this witness.

THE COURT: Now, Dr. Kirkland took almost three hours. How long is Dr. Murphy going to take.

MS. JOHNSON: Judge, at this time point, the Respondent is going to rest.

MR. STRAILE: Well, then I would like to call Mr. Malhiot back for some rebuttal, Your Honor.

THE COURT: Let's take a five or ten-minute break. If we're not going to break for lunch. Let's take ten. All right.

(Court in recess.)

MR. STRAILE: I'll call Matt Malhiot.

THE WITNESS: I remember I'm under oath Your Honor.

THE COURT: Yes, sir. That's what I was going to remind you of.

Whereupon,

MATTHEW MALHIOT

was recalled as a witness, having been previously duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. STRAILE:

Q Matt, were you -- excuse me. I called you by your first time. Strike the first name. Mr. Malhiot, were you at the FDLE when the software change was made from the 26 to the

27?

A I was.

Q Can you -- and that was -- why was the software change necessitated?

MS. JOHNSON: Objection, relevance.

THE COURT: Overruled.

A In 2006, the implementation of the instrument of March 2006 and data started to be collected. With the release of the data through Cobra and website development, the defense bar started really scrutinizing the data. And they found a software glitch where a person has three minutes to blow into the instrument and the software said three minutes to blow into the instrument. But there was a loophole in the software where what if the person started blowing at 2 minutes and 38 seconds and continued blowing past the three-minute timer. And there was some issues with error messages generated with volume versus that three-minute time window. So, the software needed to be fixed immediately. A hundred and sixty-eight Brady notifications were sent out. And in September 2006, we went to a software revision evaluation and installation on all the instruments.

Q All the instruments in the entire state of Florida?

A Correct.

Q Every agency in the entire state of Florida?

A Yes.

Q And from the time that you discovered the issue, sent out all of your required notices, from the time you discovered, to the time it was 100 percent implemented in the state of Florida every agency across the state, how much time passed?

A Less than 40 days. We discovered the problem, contacted CMI, had the software rewritten, did an evaluation on the new software, went out to -- physically drove to every agency in the state, uploaded the software and then did a Department inspection on every instrument and it was like August 26th through September 30th.

MR. STRAILE: That's it, Judge.

THE COURT: Any cross?

MS. JOHNSON: Yes, Judge.

CROSS-EXAMINATION

BY MS. JOHNSON:

Q You're not a computer programmer, are you?

A I'm not. I've had computer programming in undergraduate, but I've never worked as a programmer.

Q You don't know what -- how extensive the computer programming -- how involved the computer programming was to change this software glitch with the blow beyond three minutes, do you?

A It's very subjective. How extensive, I don't know. Brian Faulkner was the software engineer we worked with. We

went back and forth in a few days. He had a beta version for testing.

Q And Brian Faulkner is an employee at CMI, correct?

A Correct.

Q You don't know what would be involved in changing any future software to accommodate Department inspection, Agency inspection?

A Well, I do actually. But how much time it take them to do it, I don't.

MS. JOHNSON: I have nothing further, Judge.

MR. STRAILE: Really quick.

REDIRECT EXAMINATION

BY MR. STRAILE:

Q The change from the 800 -- the 8000.26 and 8000.27, that was adding additional stuff to look for and adding stuff to the software, correct?

A Correct. It was -- in computer terminology it's a loophole in the software where the software didn't know what to do because the parameters were three minutes. Well, this guy blew three minutes and seven seconds. So, the software is like, I don't know what to do and printed out erroneous error messages. So, they had to, one, identify the problem. Two, rewrite the software and add software language to fix the problem and send out a beta version for us to test.

Q And what we're talking about here is changing one

number to existing software already?

A Well, there's -- in the Department inspection protocol software, the Agency inspection protocol software and the breath test protocol software, the 05 standard is in there because if it's outside it will flag it and tell you control out of tolerance. So, yes, technically all it is is going in there and taking the existing software and changing all of those fives to threes.

MR. STRAILE: That's all I have.

THE COURT: Anything further?

MS. JOHNSON: Just one question, Judge.

RECROSS-EXAMINATION

BY MS. JOHNSON:

Q You have no idea how involved it would take to change the number, do you?

A Yes. I have actually seen Brian Faulkner work on software and change software. It is literally -- computer language is kind of like editing a Word file and then you put it in a different file and then reload it on the instrument.

Q But you yourself don't know how involved it would be?

A I have never physically done it. I have watched Brian Faulkner change software. I've watch him do compiling and loading, but I have not physically done it myself.

MS. JOHNSON: I have nother further, Judge.

MR. STRAILE: That's it.

THE COURT: That's it. Done with the taking of testimony. You don't have anything else to put on, I'm assuming.

MS. JOHNSON: I don't, Judge.

THE COURT: Let's talk about times of post-hearing submittals. The way -- under our rule, the transcript gets filed. The filing of the original transcript at DOAH starts the clock ticking on my rule -- the final order. I have 30 days from the filing of transcript to do my final order. The parties will have ten days post the filing of the transcript to submit any proposed final orders that they wish to submit, finding fact, conclusions of law. I don't know how much administrative work you have done, Mr. Straile, but you can look it up on our website. You can pull up an order and see what they look like. Like I said, you got ten days. It can be waived. I believe in a rule case, it's got be unopposed. If somebody needs more time to do their proposed order, it's got to be an agreed upon. I tend to want it to be.

MS. JOHNSON: Judge, I can do most of it beforehand, I'll plug in the transcript information.

THE COURT: Ten days should be plenty. So, with that I believe that's everything we need to talk about on

the record.

MR. STRAILE: Can we be emailed to notify us, or I guess the system automatically notifies us?

THE COURT: Well, you can -- I think it does.

MS. JOHNSON: Yes. With the e-filing, once the transcript is filed, we'll each by notified via e-mail and we can download the transcript.

THE COURT: Ms. Johnson has a better idea. I'm never on that end of it. So, I don't know what happens.

MS. JOHNSON: Usually in the past, the court reporter usually also e-mails us a copy as well.

THE COURT: We'll email a copy or a letter or something or I would caution just look at the docket, watch the docket everyday and see what pops up. But with the e-filing, I think that's all automatic now.

That's everything we need to do on the record. I will show this proceeding closed. Thank y'all very much.

(Proceedings concluded at 1:23 p.m.)

CERTIFICATE

STATE OF FLORIDA:

COUNTY OF LEON:

I, CLAVETTE A. DONNELL, Registered Professional Reporter, do hereby certify that the foregoing proceedings were taken before me at the time and place therein designated; that my shorthand notes were thereafter translated under my supervision; and the foregoing pages are a true and correct record of the aforesaid proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor relative or employee of such attorney or counsel, or financially interested in the foregoing action.

DATED this 7th day of July, 2016.

_____

CLAVETTE A. DONNELL, RPR
NOTOARY PUBLIC IN AND FOR
THE STATE OF FLORIDA
TALLAHASSEE, FLORIDA 32317