IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Criminal Action No. 10-CR-00567-MSK

UNITED STATES OF AMERICA,

Plaintiff,

vs.

1. COSME MOISES GOMEZ-PAZ,
2. SERGIO ABRAHAM BELTRAN,
3. RAFAEL PELAYO-ESCARDA,
4. ESEQUIEL MEZA-TORRES, and
5. LOUIS ARMANDO CELAYA,

Defendants.

REPORTER'S TRANSCRIPT
(Rule 702 Hearing)

Proceedings before the HONORABLE MARCIA S. KRIEGER, Judge, United States District Court for the District of Colorado, commencing at 9:13 a.m., on the 27th day of May, 2011, in Courtroom A901, United States Courthouse, Denver, Colorado.

Proceeding Recorded by Mechanical Stenography, Transcription Produced via Computer by Paul Zuckerman, 901 19th Street, Room A259, Denver, Colorado, 80294, (303) 629-9285

APPEARANCES

JAMES BOMA, Assistant U.S. Attorney, 1225 17th Street, Suite 700, Denver, Colorado, 80202, appearing for the plaintiff.

SOLETTE MAGNELLI, Special Assistant U.S. Attorney, U.S. Drug Enforcement Administration, Office of Chief Counsel, 8701 Morrissette Drive, Springfield, Virginia, 22152, appearing for the plaintiff.

MITCHELL BAKER, Attorney at Law, Mitchell Baker & Associates, 1543 Champa Street, Suite 400, Denver, Colorado, 80202, appearing for Defendant Gomez Paz.

JEFFREY EDELMAN, Attorney at Law, 19201 East Mainstreet, Suite 203, Parker, Colorado, 80134, appearing for Defendant Beltran.

ROBERT DRISCOLL, Attorney at Law, 455 Sherman Street, Suite 310, Denver, Colorado, 80203, appearing for Defendant Pelayo Escarda.

MATTHEW GOLLA, Assistant Federal Public Defender , 633 17th Street, 10th Floor, Denver, Colorado, 80202, appearing for Defendant Meza Torres.

BRUCE BROWN, Attorney at Law, 1630 Miner Street, Idaho Springs, Colorado, 80452, appearing for Defendant Celaya.

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PROCEEDINGS

(In open court at 9:13 a.m.)

THE COURT: Please be seated.

The Court is convened this morning in Case No. 10-cr-567, which is encaptioned the United States of America vs. a number of defendants. I'll get entries of appearance as I announce their names.

Let me get entries of appearance for the United States.

MR. BOMA: Good morning, your Honor. Jim Boma, appearing on behalf of the United States. And with me at counsel table are Forensic Chemist Bryan Henderson, an associate lab director from the San Francisco Lab with DEA; Scott Oulton, Associate Deputy Assistant Administrator and also a forensic chemist from DEA Headquarters in Washington; Ms. Solette Magnelli, who is a senior attorney, Office of Chief Counsel, with DEA. And she also entered her appearance as a special assistant yesterday in this matter. And finally Ms. Shana Irby, I-R-B-Y. She's a senior forensic chemist and quality assurance specialist with the DEA lab in San Francisco.

THE COURT: Good morning and welcome.

Cosme Moises Gomez Paz.

MR. BAKER: Good morning, your Honor. Mitchell Baker. I'm here with Mr. Gomez Paz.

THE COURT: Good morning and welcome.

Sergio Abraham Beltran.

MR. EDELMAN: Good morning, your Honor. My name is

Jeffrey Edelman, and I'm here with Mr. Beltran. And I respectfully ask, request permission for my intern who assisted in me in this matter, who is sitting in the back and will be a first year law student Monday. May she have permission to join me at counsel table?

THE COURT: No, sir. I'm going to deny your request but not because I have any problem with your intern sitting with you. It's just simply too crowded in the courtroom with the number of defendants that we have.

MR. EDELMAN: We have made room for her with this chair.

THE COURT: I understand. Thank you.

MR. EDELMAN: Thank you.

THE COURT: Rafael Pelayo Escarda.

MR. DRISCOLL: Good morning, your Honor. Bob Driscoll, present with Mr. Pelayo, who is here at my side in custody.

THE COURT: Good morning and welcome.

MR. DRISCOLL: Thank you, your Honor.

THE COURT: Esequiel Meza Torres.

MR. GOLLA: Good morning, your Honor. Matthew Golla appearing on behalf of Mr. Esequiel Meza Torres, who is seated to my left at counsel table.

THE COURT: Good morning and welcome.

And Luis Armando Celaya.

MR. BROWN: Good morning, your Honor. Bruce Brown, appearing on behalf of Mr. Celaya, who is present in custody.

THE COURT: Good morning and welcome.

And if I've missed greeting anyone, good morning and welcome to you.

I see that some of our defendants are assisted by our court interpreters. Let me get their appearances, too.

INTERPRETER CAHILL: Good morning, your Honor. Susana Cahill and Ruth Warner.

THE COURT: Good morning and welcome to you.

Does anyone object to the qualifications of Ms. Cahill and Ms. Warner to serve in this capacity?

MR. BOMA: No, your Honor.

MR. EDELMAN: No.

MR. GOLLA: No, your Honor.

MR. DRISCOLL: No, your Honor.

MR. BAKER: No, your Honor.

MR. BROWN: No, your Honor. Thank you.

THE COURT: Thank you.

Would you please administer the oath.

(Interpreters sworn).

THE COURT: This is a 702 hearing. It concerns opinions that have been proffered by a witness, Ms. Irby, on behalf of the Government.

Mr. Boma, ordinarily we would have you identify those

opinions and I'd hear from the defendants as to their objections to the foundation for the opinions; but it looks to me as if you have done essentially that in the affidavit that was attached to your motion at Docket No. 160; is that correct?

MR. BOMA: That's correct, your Honor. And the Government would ask if the Court would take judicial notice of the declaration with attachments.

THE COURT: For the defense?

MR. EDELMAN: Beltran would object.

THE COURT: Any other defendants?

MR. BROWN: I'm not sure I know what you're asking, your Honor. Are you asking the procedure of offering the affidavit for the foundational basis?

THE COURT: I'm not asking anything.

MR. BROWN: So I don't understand.

THE COURT: What the Government has said is that the Government wants me to take judicial notice of the affidavit.

MR. BROWN: As a proffer; correct?

I don't object to that procedure.

MR. DRISCOLL: On behalf of Mr. Pelayo Escarda, we have no objection.

MR. BAKER: On behalf before Mr. Gomez Paz, we would object, your Honor.

MR. GOLLA: On behalf of Mr. Meza Torres, we would object, your Honor.

THE COURT: All right.

In light of the objections that are made, we'll proceed with the presentation of the testimony that would constitute the proffer that the Government is intending to make.

MR. BOMA: Your Honor. We'd call Forensic Chemist Irby to the stand.

(**Shana Irby** was sworn.)

THE COURTROOM DEPUTY: Please state your full name for the record and spell your first and last name for the record.

THE WITNESS: My name is Shana Irby. First name is S-H-A-N-A. Last name is I-R-B-Y.

THE COURT: You may proceed.

MR. EDELMAN: Excuse me, your Honor. On behalf of Mr. Beltran, I would like to insert an objection to this testimony and this matter proceeding on the basis of law of the case, that concept. And I believe it's issue preclusion. It's already been -- this has already been litigated once before. And I understand that you've made your ruling, but I don't believe anybody raised those legal concepts in their responses.

THE COURT: Mr. Boma, do you care to respond?

MR. BOMA: Yes, your Honor. We basically have proffered a new witness who has conducted an independent analysis of the drugs at issue here. And we're not relying on the testimony in the previous 702 hearing; so we would like to

begin anew, if we could, and start with this witness.

THE COURT: Thank you.

Reply?

MR. EDELMAN: As I've stated in my reply, losing at one hearing in the same case doesn't necessarily give a party a second bite of the apple or a third bite or a fourth bite of the apple or those opportunities to continue to try to get their evidence. If this hearing was held during trial, it's my suspicion, without trying to predict your rulings or any judge's rulings, that it would have caused too much delay and would probably have been disallowed.

THE COURT: Thank you.

This hearing is conducted under Rule 104 of the Federal Rules of Evidence in order to determine the foundational adequacy of an opinion in application of Rule 702.

I overrule the objection that is made here because the prior determination made by the Court concerned another opinion. It is not law of the case, it is not subject to collateral estoppel, it is not subject to *res judicata*. There was no determination with regard to the admissibility of this opinion.

In my prior ruling with regard to the Government's motion *in limine*, I found that the tendering of this opinion was untimely but no prejudice had been shown. And as a consequence we proceed with a new opinion, testing its

foundational sufficiency under Rule 702 in accordance with Rule 104 of the Federal Rules of Evidence.

Any need for clarification or further explanation?

MR. BOMA: No, your Honor.

MR. EDELMAN: No, your Honor. Thank you.

THE COURT: Thank you. You may proceed.

MR. BOMA: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. BOMA:

Q. Good morning, Ms. Irby.

A. Good morning.

Q. Ma'am, by whom are you employed?

A. I work for the Drug Enforcement Administration's Western Laboratory in San Francisco, California.

Q. And how long have you been so employed?

A. Since November of 2003.

Q. All right. And what is your title, if you will, with that laboratory?

A. Excuse me. I'm a senior forensic chemist as well as the quality assurance specialist for the laboratory.

Q. Could you summarize for the Court, ma'am, your educational background and experience, including any experience prior to working with the DEA?

A. I have a bachelor of arts in chemistry and a bachelor of science in biology both from Central Washington University in

Ellensburg, Washington. Those were obtained in 1993.

And prior to working for the Drug Enforcement Administration, I worked at a company called John I. Haas Incorporated -- that's H-A-A-S. And it was an analytical lab where I analyzed hops using good laboratory practices, the same techniques, the same instrumentation, as I currently use with the DEA.

Q. All right. And since you joined the DEA, what type of specialized training did you receive, starting with your initial training and then any follow-on training?

A. I went through the basic chemist's program at headquarters, our headquarters in Quantico, Virginia, as well as I was trained by a senior forensic chemist. It was about a four-month program.

In that program, we learned the theory and -- with the instrumentation that we use, as well as all of the information about controlled substances: for example, methamphetamine, cocaine, heroin. So the training involved the procedures and the analysis and the techniques that you use in the laboratory.

And when that training was finished, I was competency-tested; and I've been doing analysis ever since.

Q. All right. And approximately how many methamphetamine exhibits has DEA done, say, in the last seven years, or '03 to '10?

A. Since I have been with the Drug Enforcement Administration,

they've done over 60,000 exhibits.
Q. In terms of your experience working in the laboratory, how many controlled substance exhibits have you analyzed?
A. I've analyzed over 2,300.
And let me clarify. I'm sorry. I said over 60,000 exhibits. Those were 60,000 methamphetamine exhibits.
Q. All right. And that's nationwide, based upon your research?
A. Yes.
Q. All right. How many methamphetamine exhibits specifically have you analyzed?
A. So I personally have done over 2,300 exhibits; and of those, over 700 have been methamphetamine.
Q. You said you are a quality assurance specialist as well as a senior chemist?
A. Yes.
Q. When were you promoted to those positions?
A. In February of 2009.
Q. And what is the distinction between a senior chemist and a junior chemist or a chemist?
A. When you become a senior forensic chemist, you have learned all of the instrumentation, you have intimate knowledge with all of the instrumentation and the drugs that you analyze, and you have a specialty. And my specialty is quality assurance.
Q. And what type of training did you receive to be -- I take

it that's collateral duty in addition to being a senior chemist?

A. Yes, I'm still a forensic chemist.

Q. All right. So you still do lab work, if you will?

A. Yes.

Q. All right. What training did you receive for the quality assurance specialist designation?

A. I have taken the American Society of Crime Laboratory Directors Laboratory Accreditation boards, preparation course for their International Program, as well as I have taken their assessor training course.

And then I had a background prior with John I. Haas Incorporated. I had quality assurance duties there as well.

So no specific on-the-job training, but I have taken these outside courses.

Q. All right. Is the American Society for Criminal [*sic*] Laboratory Directors: Is that known by an acronym?

A. Yes. That's ASCLD/LAB.

Q. And can you spell ASCLD? Lab, I believe, is LAB.

A. A-S-C-L-D slash L-A-B.

Q. In terms of your quality assurance responsibilities, what do your responsibilities in the lab cover?

A. I am in charge of making sure that the laboratory -- All of the work that leaves the laboratory is of high quality standard. And in doing so, I answer any questions from any of

the chemists pertaining to quality issues. I also do audits, perform internal audits. I'm involved in external audits; and I also make sure that our laboratory is up to current ASCLD/LAB standards as well as other entities, outside entities such as the Scientific Working Group for the Analysis of Seized Drugs, which the acronym is SWGDRUG, which is S-W-G-D-R-U-G.

Q. All right. And what is that organization, since you brought it up?

First of all, let's back up and talk about ASCLD. What is the function of that organization and what do they do?

A. ASCLD/LAB is an accrediting body. And ASCLD/LAB, the International Program, comes into our laboratory and does an independent audit to make sure that our laboratory is in accordance with two documents. And those two documents are the ISO 17025 documentation, which is for the analysis -- or the testing -- excuse me -- testing and calibration laboratories. And then they have -- Because they are forensic-specific, they have gone beyond the 17205 and said we also want you to adhere to these ASCLD/LAB supplemental requirements.

So ASCLD/LAB comes to our laboratory, and they do an independent audit. They look at our policies and procedures and make sure that we are matching those two documents that I spoke about. And then they look for evidence that we are following those policies.

Q. And could you very briefly summarize the ASCLD/LAB

International standards and then the supplemental -- I don't know if you call them standards or recommendations?

A. It is supplemental requirements.

ASCLD/LAB is -- the purpose of having them come in, it's actually -- it's not a necessity. We choose to do them. It's not a requirement to be assessed or have an assessment by them. It's a choice that DEA has made.

So basically they come into the lab, they do all of the assessments to requirement. They look at our entire management. That's including our management system, documentation, our protocols, procedures. They look at environmental conditions. They look at every aspect of our laboratory and make sure that we adhere to those ISO 17025 documents.

And their supplemental is labeled exactly the same as ISO. They just say, ISO has done a great job for testing laboratories; but we're a forensic laboratory, so let's go a little bit beyond. So we also have to adhere to those supplemental requirements.

Q. Could you summarize what the more stringent requirements are just briefly?

A. The more stringent requirements? I'm sorry.

Q. In the supplemental to the ISO 17025?

A. Let me think for an instance.

Honestly, offhand, I can't think of anything. But

they might say, for example, Make sure your coffee is, you know, at such as such temperature. And ASCLD/LAB will say, Yeah, that's good, it should be at that temperature; but we're going to say it actually has to be a little bit hotter than that.

Q. Okay. So would it be accurate to state that the supplemental fleshes out the ISO 17025?

A. It's more like it adds to it. 17025 is still there. It is the requirement that you have to follow, but you also have to go a little bit beyond that. It's not saying one is better than the other, but they work in coordination with each other to make your system the best system possible.

Q. All right. And based upon your knowledge of the -- your place of employment, did ASCLD certify your lab?

A. Yes.

Q. And when was it first certified?

A. The initial certification was in 2005, and we were reaccredited in February of 2010.

Q. And I believe there was a slightly different qualification -- excuse me.

I believe it was ASCLD/LAB International, as opposed to the former ASCLD/LAB?

A. Yes. Prior to 2005, we were also accredited by ASCLD/LAB; but that was to a different document. It was called the legacy document. But then they went to the International, which is

the 17 -- the ISO 17025 document.
Q. All right. And what about the International as opposed to the ASCLD/LAB -- Is that a -- is that significant in any way?
A. ASCLD/LAB International accredits your laboratory to those two documents I spoke of earlier, the ISO 17025 and their own supplemental requirements. That is what ASCLD/LAB International -- Them has an accrediting body -- those are the two documents that they look at in your laboratory.
Q. And ASCLD/LAB: Are they internationally recognized?
A. Yes.
Q. Do they, in fact, set the standard in the field of forensic chemistry?
A. Yes.
Q. You talked about an inspection, I believe, or certification in 2005, and then recertification, if you will, in 2010; is that correct?
A. Yes.
Q. Does ASCLD/LAB do any annual assessments or perform any other assessments?
A. Yes. They do a surveillance visit. And so that's where they come into the laboratory and they do an abbreviated full assessment. So they come into the laboratory and they look at just separate parts. That's like spot-checking. And that's done annually, as well as we do internal audits ourselves. And we generate a report once a year that is sent to the ASCLD

body.
Q. All right. So you submit the required paperwork and then they send an assessor to actually come to the lab?
A. It may not be in that order; but once a year, a report is sent and they do the surveillance visits.
Q. All right. How about the five-year accreditation examination, if you will? How big is the team that comes into your lab and what's it comprised of?
A. The people that came to our laboratory in January of 2010 to do the reassessment, the reaccreditation: There was a team of two forensic chemists, a fingerprint specialist, and then they had a lead assessor, a team leader; so there were four people that came into the laboratory.
Q. In terms of focusing on the forensic chemistry expert, did that individual, man or woman, interview chemists?
A. Yes.
Q. Was paperwork reviewed as well?
A. Yes. They look at all of your documentation and then they also talk to people to make sure you're doing what you say you do.
Q. And what were the results of that inspection in 2010?
A. We were reaccredited in February of 2010.
Q. As part of your quality assurance specialist duties, you mentioned internal assessments or audits.
A. Yes. We do -- we have internal audits that we look at our

entire system once a year to make sure that we are doing things the way that we say we're doing and the way we're supposed to be doing them, as well as we have -- it's internal to DEA, but it's external to our Western Laboratory. People from our headquarters office come, and they do an independent inspection as well.

Q. All right. And are you checking not just the administrative or procedural side, are you also looking at -- in your duties at technical analysis?

A. Yes.

Q. All right. And what does that consist of? What are you reviewing in general?

A. When a technical review of case work is done, you are looking to make sure that all the policies that are in place are followed and they were done in that specific case.

Q. All right. L and do you or another individual at your laboratory conduct monthly and quarterly checks?

A. I do monthly checks of all -- I do a spotcheck of case work that goes out of the laboratory. I do that monthly of one per chemist in the laboratory.

I also do quarterly audits of different portions of our management system, as well as I assist in the internal audit and the -- I assist in preparation for the external audits; but every piece of evidence or every exhibit that leaves the laboratory has a technical and an administrative

review by a supervisor and the laboratory director.

Q. And including yourself, when you -- you work the bench or the lab?

A. Yes.

Q. And who generally approves your reports or reviews and approves those?

A. My supervisor does that.

Q. All right. In this instance, I believe someone else approved it, reviewed and approved it.

A. No, my supervisor, my actual supervisor, did the technical review. My actual supervisor also did the administrative review because it was the associate lab director of the laboratory.

Q. And who is that individual?

A. That's Bryan Henderson.

Q. Going back to ASCLD, are there any restrictions on what you can do as an ASCLD assessor? I assume that's comparable to an inspector. Is that accurate?

A. Yes, yes. I took a course in January of this year to become an ASCLD/LAB assessor. When you're finished with that course, you take or you fill out an ethics of conduct paperwork. And in doing so, you say that you are going to independently look at another laboratory. You are not going to put your own opinions on what you do. You're going to go into their laboratory, you're going to make sure that their policy

adheres to the two policies, the ISO 17025 and the supplemental documents; and then you're going to say yes or no, did they follow those policies.

Q. All right. So you can't recommend better practices, for instance, or this is the way we do it at DEA, something like that.

A. You're definitely discouraged from saying, Oh, we do it this way. That is not how an assessor is supposed to assess a lab. You say -- you would say you do not or you do follow this policy.

Q. All right. And have you participated on any teams yet doing --

A. No, I haven't had the opportunity.

Q. All right. But you do have the training and background for it?

A. I have the training and background, yes.

Q. Okay. Well, SWGDRUG: Are you familiar with how many people are with that organization?

A. Yes. They have a core group of more than 20 forensic chemists that get together. And they come up with recommendations that will be accepted internationally for the analysis of drugs.

Q. All right. And what are the requirements under ASCLD/LAB, if any, regarding tests of controlled substances?

A. SWGDRUG requires, in order to identify a controlled

substance, that you must do at least two tests. And of those two tests, you must have one -- one confirmatory and one separation technique -- or I'm sorry -- I'm sorry. One confirmatory and one presumptive test.

Q. All right. What's an example of a presumptive test?

A. That would be a color test or a reagent test or a field test that an agent does in the field.

Q. Regarding methamphetamine, what reagent is commonly used?

A. There are more than one; but the most common one would probably be the Marquis.

Q. And if you get a positive indication on that -- in other words the color change --

MR. EDELMAN: I'm going to object.

BY MR. BOMA:

Q. -- what does that mean to you?

MR. EDELMAN: Objection. Lack of foundation as to a color change.

THE COURT: The Rules of Evidence do not apply to Rule 104 hearings by definition. I'll note your objection for the record.

MR. EDELMAN: Thank you.

BY MR. BOMA:

Q. You may answer, ma'am.

A. You get a color change if you put the substance in this reagent.

In my analysis, I ran it against a standard so that you could see a color change to what a known controlled substance would be.

Q. Okay. Could you briefly summarize for the Court what an unknown is, blank or negative control and a positive control?

A. Okay. Controls are something that are used in a laboratory to show that your -- that what you're doing is -- I'm sorry. Let me think about this for a minute.

I'm going to go individually.

A positive control is something there to show that your instrumentation is working as it should be.

Q. All right. And while we're on positive controls, what do you use? Is it called an authenticated standard or some terminology like that?

A. An authenticated standard could be used for a positive control. You run a sample, you know what the sample is that you place on the instrument or introduce into the instrument, and you get a result, a known result.

There are other ways to evaluate if your instrumentation is working or not, but that is one way.

Q. Okay. Regarding the authenticated standards, how are those obtained by your laboratory, for instance?

A. Authenticated standards we get in our laboratory come from two different sources. That would either be our special testing and research laboratory, or from a commercial source.

So either one of the -- those two places, it comes to us. It's already been tested by those two places, it comes into our laboratory, and then we verify that it is what it is. We just don't say, Hey, we got this, let's use it. Comes into our laboratory, we verify that it is what it is, and it becomes reference material.

Q. What about a negative control or blank?

A. A negative control is to show that the reagents and the instrumentation that you use in the unknown is not showing any contamination; so another word for it would be a "blank." And when a blank is run, you are getting baseline data or you're getting information which from that as well. So this could also be an indication that your instrumentation is working correctly.

Q. We talked about a presumptive test. Could you give me one example of a confirmatory test? I know there are probably 10 or 12, but give me an example?

A. Our laboratory, the DEA, says there are four -- four ways that you can -- or we have four instruments that are confirmatory. And an example of that would be mass spectrometry.

Q. Are you familiar with the ASD?

A. Yes. That is the -- that is the Drug Enforcement Administration's Analytical Sufficiency Document.

Q. And what does that cover?

A. There is actually numerous documents in the laboratory, the Analytical Sufficiency Document being one of them that in using these documents it gives the protocol or the procedures for running your analysis.

Q. All right. And chemists adhere to those standards?

A. That's correct.

Q. What are the other documents that you mentioned?

A. The Analysis of Drugs Manual or the Evidence Sampling Plan. All of those in themselves give the requirements or the procedures and requirements for the analysis in the Western -- or throughout the DEA.

Q. And when you do your quality assurance checks, monthly and quarterly, are you seeing if the lab chemists are adhering to those standards?

A. Yes.

If I can just clarify, our Analytical Sufficiency Document is actually the document that tells you which instrumentation that you need to use. So SWGDRUG recommendations, like I said earlier, say that you need to do one confirmatory and one presumptive.

The DEA goes a little bit beyond that and says you've got to do one confirmatory and then you've also got to do a separation technique. And what I mean by "separation technique" is a technique that tells you if there is more than one substance in a mixture.

Q. All right. So a polydrug exhibit, where it contains more than one controlled substance?
A. It could be a controlled substance. It could also be a noncontrolled substance. But it just tells you if there is more than one thing in that sample.
Q. Would that be something like a cut or adulterant?
A. It could be.
Q. Could that be something that you might find?
A. It could be.
Q. Regarding the use of a standard, have you ever seen the literature or in your education or practice a requirement of using a standard each and every time you perform an analysis?
A. No.
Q. All right. For some tests, do you use a standard?
A. Yes.
Q. And for other tests, what do you use?
A. It depends on what I'm doing with the analysis. Sometimes our reference standard is just there to compare to your unknown so that you can make an identification. Sometimes positive -- or the reference standard is there -- for instance, in my analysis, you need to run a reference standard at the same time when you're doing quantitation or you're getting a purity of a substance. You would always have that run on the same day.
Q. And the standard would have a known composition in terms of controlled substance and also a concentration or purity?

A. Not necessarily. We have specific drugs in our laboratory that are used for quantitation or purity, and that has a known value with it. We also have other substances in the laboratory: say, for instance, caffeine. That is not something that we commonly -- it is a reference standard, but it's not something that we commonly get a purity for if we find that in a sample; so that doesn't have a purity level with it. So some of them can and some of them can't. Obviously, if we're using it for quantitation or purity, there would be that known -- that known concentration in that standard.

Q. All right. Turning to the drugs in this case, did you perform forensic chemical analysis of the exhibits in this case or the exhibit?

A. Yes, yes.

Q. All right. How did you receive the exhibit in this case for testing? Could you go through the procedure that you went through to obtain access to the drugs?

A. Sure. Our drugs are kept in an evidence vault, and so I don't have access to that evidence vault. The evidence technicians and the managers of the laboratory do. So I went and told the manager that I needed this exhibit, and they checked it out of the vault. And it came into my possession.

Now, the evidence has a lab number on it which is a unique bar code number; so when it's scanned out to me, they know that that drug is now in my possession.

I checked it out from the vault; and the first thing I do once I receive it is I check for evidence of tampering and get a gross weight. Now, that gross weight is the entire package, including all of the packaging materials, the outside, heat-sealed evidence bags inside.

So the first thing I did is I went ahead and weighed those two. And I noticed that there was a difference between the weight of when it was last sealed and the weight of when I sealed that. And when that happens, you get it witnessed by another forensic chemist. And I did in this case.

Q. All right. And what do you attribute that -- first of all, was there any evident tampering with the sealed evidence bag when you received it?

A. No.

Q. All right. But the way -- would you describe that as significant, or marginal, or how would you describe that?

A. It was just a little different.

Q. And what do you attribute that to based upon your experience and training?

A. I attribute it to solvent loss.

Q. And could you explain and summarize what that means?

A. A lot of times, especially when we get large seizures there -- the samples that come in look a little bit moist or they look a little bit wet, so they lose that moisture; and that is the solvent loss.

Q. All right.

A. So the weight gets a little bit lower.

Q. And that can even happen when they're double-sealed, if you will, in plastic bags?

A. Yes.

Q. Okay. You talked about the gross weight. What did you do after you took the gross weight of the packages?

First of all, could you describe -- Let me back up one question. The barred coding number: Is that a unique identifier?

A. Yes.

Q. Does that number appear on your laboratory reports?

A. Yes.

Q. And so each and every one would have that bar code number?

A. Yes.

Q. All right. And when you receive these exhibits, I believe there were two exhibits inside the outer evidence bag, if you will.

A. Well, what I received was two heat-sealed evidence envelopes. Okay. Inside the first one was two Ziploc bags. One was smaller than the other. The smaller Ziploc bag was labeled "composite," and it had a fine-ground white powder in it. The other was labeled "threshold." And inside of those Ziplocs was another Ziploc and that was labeled "threshold" and a white crystalline substance.

In the second heat-sealed evidence envelope, there were two larger Ziploc bags. And inside of those was yet another Ziploc bag and finally containing the white crystalline substance. And each one of those bags were labeled "bulk."

Q. All right. And did you designate those for the purposes of your analysis -- did you give them separate numbers, if you will?

A. I did. I ended up doing what you call a "split" exhibit. And the three larger bags, one being labeled "threshold," the other two labeled "bulk," I called Exhibit 1.01. So when it came to me, it was Exhibit 1. I now am going to have two separate ones. And the second one, 1.02, was the smaller bag that was labeled "composite."

Q. All right. And what does "bulk" mean in laboratory parlance?

A. Bulk exhibit in the laboratory is something that is large. Okay. And in this case, for methamphetamine, anything over two kilos is going to be considered a bulk. And what we do -- or our requirement is to preserve two kilos and under; and then anything above that two kilos will eventually be burnt. Its not retained for analysis. And so that is the bulk portion.

Q. All right. And the other is "threshold" that you discussed?

A. Correct.

Q. And the third was labeled "composite"?

A. Yes.
Q. Or the other exhibit?
A. Yes.
Q. What does that mean to you, based upon your training?
A. A composite is something that is representative of the whole. And it also is a homogenous material, which means that it's the same throughout the whole Ziploc bag that it was in.
Q. All right. Is -- is that the most accurate way to perform the tests with the composite, in your opinion, based on your expertise?
A. Tests can be run prior to that; but in order to get a purity, that is by far the best way to get a representative sample of the whole.
Q. All right. Excuse me. I'm going to drop back. I forgot something on the confirmatory tests that you were talking about.
A. Yes.
Q. You said use of a standard is one method of confirming the unknown substance.
A. No, you have to use reference material or the use of a standard. You have to do that to identify a controlled substance.

I think what you're getting at -- What I said earlier is there is a positive control and a negative control. Both of those are an indication that your instrument is functioning

properly, as well as experience and familiarity with an instrument, because if you've ever seen the instrument we work with and the software that we work, with there is a lot of bells and whistles on it. So as soon as I walk up to an instrument, I know -- I generally know if it's working or not.

Q. All right. And I believe there are external documents or reference publications you can refer to in some of your -- those are available for comparison?

A. Correct. If you're making an identification of -- a comparison of your unknown to a standard, you can also use literature or reference libraries for that.

Q. All right. And could you summarize just very briefly what information is contained in those references? In other words if you ran a GCMS, would they have something that would --

A. They would have the mass spec. portion of that substance in their literature.

Q. All right. And is it the same with the other tests with the exception of the presumptive tests?

A. For confirmatory tests, yes.

Q. All right. All right. Back to the weighing, if I could: After you mark the exhibits for your purposes in the lab, what did you do next?

A. I got a net weight. And what a net weight is is just the substance itself without the packaging. So for Exhibit 1.01, I currently have three Ziploc bags with the white crystalline

substance. So I weighed each bag individually, and then I took it off of the balance or scale and I dumped it all out. And then I weighed the empty bag. And the difference between those two is the actual amount of substance that I have.

Q. All right. Do you have your laboratory report in front of you?

A. I do.

Q. Would looking at that refresh your recollection?

I believe the smaller exhibit, the composite, was designated at 1.02?

A. Yes. I'm saying in Exhibit 1.01, there were three separate bags, three separate Ziploc bags. I put each individually on the balance, and then took it off.

And then I did that for the second one; and I emptied it, and I got the net weight. Okay.

I did that as well for Unit 1.02, which is the composite. It's the one little Ziploc bag with the finer crystalline substance. I put that on the balance, I took it off of the balance, emptied it out, put the empty bag on there, and got what's called a "net weight." At this point I have four bags, the one labeled "composite," one labeled "threshold," and two labeled "bulk"; however, I have split these into two different exhibits. The one labeled "composite" is all by itself. The other three bags I'm calling Exhibit 1.01.

Q. Okay. We'll get to the weight at the conclusion of your testimony, what your findings were in that regard.

A. Okay.

Q. Turning now to the tests that you performed in the laboratory, I believe the first one you performed was a Marquis reagent presumptive color test.

A. Before I actually began any of the testing, I processed -- I did a little bit of processing, because in Exhibit 1.01, I have three units. Now, I need to test each one of those three individually to see that they all contain the same substance. So the way I did that was I poured out the substance into a cone. And you could think of that as like a birthday cap for a little child's birthday. So I put it into a cone and I randomly sampled from five different areas. And then I put that into a mortar and pestle. And then I ground that up to the size of a 20-mesh sieve. And you can think of a sieve as like a flower sifter.

Okay. So I did that for each one of those units. I made a cone for the one labeled threshold and I randomly sampled. I did the same thing for the first one labeled "bulk," and I did the same thing for the second one labeled "bulk."

And then I also took Exhibit 1.02 and I also ground that up in the mortar and pestle to a 20-mesh sieve size. So at this point, I have four different mortars and pestles, and

then I proceeded with my analysis.

Q. And how does Marquis reagent test -- What do you physically do? Can you explain what that looks like and what you do?

A. So the first test I do was the Marquis test. And that's going to give you a presumptive indication of what you have. So I put that on a spot plate, which you could think of that in general terms takes an ice cube tray. So I put the Marquis reagent in six different wells. Okay. The first well is my negative, my blank. Okay. The second, third, and fourth well, I individually put from those three separate units of Exhibit 1.01. The fifth well, I put Exhibit 1.02, which is just the one bag. And then the very last well, the sixth well, I used a reference material. I used Methamphetamine Standard No. 267.

So what happens is there is a color change into -- there was a color change in the four wells, the three from Exhibit 1.01 and the one from Exhibit 1.02. That color change was orange to a brown color.

And the Methamphetamine Standard No. 267 also changed that same color.

So in this instance, or the -- I also have the one well that is a negative. And -- excuse me -- so in this case, I actually have a positive control and a negative control.

Q. Okay. And I assume the negative was negative?

A. Yeah. There was no color change.

Q. You don't use charts or tables to compare the colors that you achieved in the reagent testing?
A. Well, in this instance there is no need for that. I actually ran a standard, so I'm using that for my comparison because it's a known methamphetamine.

Actually, color charts are ill-advised because the Marquis color reagent could actually degrade over time; so if you're looking at a color chart, you know nothing about the where that color came from. You don't know when the reagent was made, you don't know -- you don't know anything about that.

Also, with your samples, you don't know if there is any sort of cut or you have a very, very dilute sample. So the best way to do that is with the actual drug, like I did.
Q. Okay. And with the standard you're basically using the same reagent; so if it's not brand-new, if you will, or fresh, you're still going to get results from the reagent?
A. Right. The color change is going to be what it is for that standard.
Q. Okay. And the Marquis again is a presumptive test?
A. That's correct.
Q. What does that do for you? In other words, what did you find here and what did you conclude based just on the reagent test?
A. I found in each unit of 1.01 and in 1.02 that there was an indication of a phenethylamine.

Q. What are -- I can't say that.
A. Phenethylamine. It could be a methamphetamine or amphetamine.
Q. All right. So is it accurate to state that the Marquis test narrows the field for you?
A. Yes. It gives me a class of drugs.
Q. How long has the Marquis reagent test been used in DEA laboratories?
A. It has been used since its inception in 1973, since DEA's inception.
Q. Is that technique subject to peer review?
A. Yes.
Q. All right. And have there been articles written in professional journals in the field of forensic chemistry regarding the use of the Marquis reagent test?
A. Yes.
Q. And by reference, Attachment 1 to your declaration are the lab results -- excuse me -- that's your *curriculum vitae*.
A. Attachment 1, yes, is my CV.
Q. Attachment 2: What is that?
A. Attachment 2 is basically all of my case notes and data from this particular -- or these two particular exhibits.
Q. Of all the tests you conduct?
A. Yes.
THE COURT: Mr. Boma, for your record, we probably

need to specify what the attachment is to.

MR. BOMA: Your Honor, it was attached initially to Document No. 160. For some reason, that document did not get header numbers when it was filed in ECF; so it was refiled as Document 162-1, so that we would have header information. So either of those documents, the exhibit attached, they're identical, your Honor.

THE COURT: Okay. So the witness is referring to Attachment 2 to Docket No. 162-1?

MR. BOMA: Yes, your Honor.

THE COURT: Okay. Thank you.

MR. BOMA: And I better clarify for the record. Thank you, your Honor.

BY MR. BOMA:

Q. Exhibit 1: Is that attached to the file declaration in this case?

A. Yes.

Q. And Exhibit 3: Could you summarize what that is? Exhibit 3 -- or excuse me Attachment 3 to Document 162-1.

A. Attachment 3 is a bibliography showing that the methodology that I used is scientifically sound. And it's been peer-reviewed in this field.

Q. All right. And that relates to all the tests --

A. Yes.

Q. -- that you are going to be testifying to?

And I assume that's just a sampling of the literature, not an exhaustive list?

A. Yes. An exhaustive list is in the thousands.

Q. Okay. But in your view, those are representative articles?

A. Yeah. It's just a quick, representative sampling of what you can find out there.

Q. What did you do next after you had the results from your Marquis reagent test?

A. When the Marquis gave me indication of a phenethylamine, I proceeded to do the gas chromatography coupled with mass spectrometry. And this is, as I said earlier -- is one of the techniques used in our laboratory for confirmation. So I ran each one of those individual units from 1.01 as well as the composite from 1.02, and I put those on the GCMS composite.

Q. And what -- what does that instrument accomplish for you?

A. Well, the GC portion of the instrumentation is that separation technique I spoke about earlier. So it would tell me if there were multiple components in that one sample.

And then it proceeds to go to the mass spectrometer, and that breaks apart the molecule and gives you a unique fragmentation. So that's where the confirmatory technique comes in.

Q. And so could it be accurate to state that that provides unique molecular information on the substance?

A. Yes.

Q. That would be not the GC but the MS?
A. The mass spec. portion, yes.
Q. Is that one of the techniques, confirmatory tests approved by DEA and SWGDRUG?
A. Yes.
Q. What did you find when you conducted the GCMS hybrid test, if you will?
A. I found that in each of the three units of 1.01 and in 1.02 that methamphetamine was confirmed in each one of those.
Q. All right. And what did you compare the results to?
A. I compared them to a reference standard.
Q. To your knowledge, how long has the GCMS instrument been used by DEA in their laboratories?
A. It has also been there since the inception in 1973.
Q. And is that instrument and the use of that instrument subject to peer review and have there been professional articles published?
A. Yes.
Q. And several of those articles are in Attachment 3 to Document 162-1?
A. Yes.
Q. When did you perform that test?
A. I performed that on April 26, 2011.
Q. And when was the instrument, the GCMS, last calibrated?
A. April 12, 2011.

Q. And based upon your experience and training as a forensic chemist, is that sufficiently recent calibration on that instrument?

A. Yes. We perform a performance verification once a month, and that one was done on the 12th.

Q. Could you briefly summarize what the performance --

A. The performance verification is a test mix. It's got different substances in it; and it's checking the validity of the instrument, checking to see that the instrument is working properly. The responses that you get from each one of those peaks are looked at in detail by -- we have what are called "instrument monitors"; so any instrumentation that we have in the laboratory goes through this performance verification once a month.

Q. All right. And I'm calling it calibration. Is that accurate, or --

A. It's actually yes and no. "Calibration" is kind of a loose term. I would actually call it a performance verification.

Q. All right. And when those performance verification tests are done, is that noted in a document anywhere?

A. It's -- well, it's a requirement for us to run this performance verification, and that data is kept. It's at the laboratory.

Q. All right. And is there a log book or something similar where that information is recorded?

A. We actually have a log book as well. We have a log book, and then we have a separate binder that has the results from all of the performance verifications.

Q. All right. So you have basically two copies of the same information?

A. Well, the log book has the results in there. It doesn't have the actual data in it. The actual data is in the binder.

Q. Okay. What did you do next after you determined from the GCMS that you were dealing with methamphetamine?

A. Well, as we spoke earlier about the requirements per SWGDRUG and our Analytical Sufficiency Document, at this point I had done a confirmatory and I had also done a separation technique on at least two portions of the sample. So the Exhibit 1.01 that had three units, I can now combine that and say that they are all similar.

And so what I did is I took the substance in each one of those mortar and pestles and combined them all together; and I did what is called "cone and quartering," and I got a composite. I formed a composite. So at this point, I have one composite of Exhibit 1.01 and one composite, the only composite, of Exhibit 1.02.

Q. All right. And were 1.01 and 1.02 kept separate, then, at that point?

A. Yes. They're two separate exhibits.

Q. And you said you did -- I'm drawing a blank here.

Quartering. Cone and quartering?
A. Cone and quartering, yes.
Q. Yes. What is that procedure?
A. As I spoke earlier about putting each one of the substances in the bags in a corner -- cone -- excuse me -- like a party hat. Okay. Then you cut that in fourths. You cut it down the middle one way, and you cut it down the middle the other way; and so you have four quadrants. And then you take opposite quadrants, and you're mixing in a mortar and pestle and reducing the parcel size, and then you -- and then you do that again until you have in this case I had about a 35-gram composite.
Q. All right. And quartering: It's called that because there are actually four quarters of the exhibit?
A. Yes.
Q. Okay.
A. And now this composite that I have is representative of those three bags.
Q. All right. So that's done a number of times with respect to each exhibit? I mean the coning and quartering process?
A. If you're talking about regular exhibits, cone and quartering is common practice in our laboratory. In this instance, I took whatever substance I had from those three mortar and pestles that I had already taken a random sampling of and I ground that down using the cone and quartering. And

you do that until you get, you know, somewhere around a 30-gram composite.

Q. All right. Okay. And what happened to the balance of the material?

A. I put it in a separate Ziploc bag.

Q. And what did you do after that?

A. I proceeded with my analysis. The next test I ran was infrared spectroscopy, and ATR, attenuated total reflectance.

Q. If you don't mind, I'll refer to that as IRATR?

A. Perfect.

Q. What is the purpose, function of an instrument and the tests you did on that?

A. An IR is one of those confirmatory techniques that we spoke of earlier. In this instance, there is a diamond window, and you -- I ran the diamond window individually as my negative control, as my blank; and there showed no source of contamination. So then I placed the sample just in its solid phase as it is on that window for Exhibit 1.01. Then I ran yet another blank to make sure the window did not have contamination, and then I ran Exhibit 1.02.

And in both of those tests, I identified methamphetamine hydrochloride.

Q. All right. So the reactant or the presumptive test tells you it's phenethylamine?

A. Phenethylamine.

Q. All right. And I'll get that down one of these days.

GCMS tells you you're dealing with methamphetamine?

A. Yes.

Q. And this particular test, the IRATR, then allows to you go one step further and determine it's methamphetamine hydrochloride?

A. That's correct.

Q. And just briefly, what readings do you rely on or how do you conduct your analysis, read the results?

A. There are no reagents. The sample is actually placed directly on the window, and infrared light is shined on to that sample. And the sample is -- or the light is absorbed or reflected from that sample to give you a unique pattern or "spectra," as we call it, of the substance that you placed on the window.

Q. All right. And based upon your experience and training, you knew that to be methamphetamine hydrochloride?

A. Yes. And I did compare it to a reference standard.

Q. Okay. Was the reference standard already loaded into the instrument, if you will?

A. It was in a library, yes.

Q. All right. So you're looking at the spectra associated with methamphetamine hydrochloride --

A. Yes.

Q. -- for instance? And how long has that testing equipment

been used by DEA laboratories?
A. Infrared has been used since its inception, but the ATR has been used for about the last 12 years.
Q. All right. Do you -- did you use a standard when conducting this particular test?
A. I compared the unknown to reference material, but I did not actually put a standard on there for comparison that day.
Q. Okay. And based upon SWGDRUG and DEA policy, is the way that you did this -- is that in accordance with proper procedure?
A. Yes. It's not required to run the sample on that day. The spectrum from infrared is very, very robust. You can run something 20 years later on the same instrumentation using the same parameters and you will get the same spectra. This is why there is literature available and reference libraries available for this type of instrumentation.
Q. And again, referring to Attachment 3 or Attachment 3 of Document 162-1, do you have articles in that attachment addressing IRATR?
A. Yes.
Q. And I assume based upon those articles it is subject to peer review?
A. Yes.
Q. And is it an accepted confirmatory test in the field of forensic chemistry?

A. Yes.
Q. Regarding the IRATR, when was that machine last calibrated before you conducted your tests on April 26?
A. It was done on April 1, 2011.
Q. All right. After you performed the IRATR testing, what did you do next?
A. I ran gas chromatography coupled with infrared detection.
Q. And what does that test -- what is the function of a test?
A. That is a test similar to the GCMS that I spoke about earlier. I didn't actually say that was a hyphenated technique, but it is, as well as the GCIRD is a hyphenated technique. It has the same separation or it has the GC portion which is used for separation of multiple components, and then that substance goes through transfer lines, through the infrared detector. And that infrared detection is a confirmatory technique. It is IR, like I just spoke about.
Q. And technique that you're describing or the instrument and use of that instrument: Is that one of the four techniques approved by DEA and SWGDRUG for confirmatory tests?
A. Yes.
Q. And when you performed that test, did you follow the procedures set forth in the manuals you previously discussed?
A. Yes. I ran a blank in between -- or I'm sorry. I ran a blank before each one of the exhibits, 1.01 and 1.02.
Q. All right. And what were the results of your GCIRD?

A. Both of those exhibits contained methamphetamine.
Q. All right. And did you use reference -- I believe you referred to them as "spectra" -- in making that analysis?
A. I did.
Q. All right. And again, this test is just another confirmatory test that the substance you're dealing with is methamphetamine?
A. That's correct.
Q. And that was the same result for all the exhibits -- well --
A. So far, other than the presumptive of Marquis, all of the tests have come to the same conclusion: that I have methamphetamine.
Q. And how long has that testing, the GCIRD -- excuse me -- yeah, that's right. How long has that been in use by DEA laboratories?
A. For the last 20 years.
Q. And again, is that subject to peer review in the field of forensic chemistry?
A. Yes.
Q. And has it been adopted by that community?
A. Yes.
Q. And do you have articles relating to that in Attachment 3 to Document 162-1?
A. Yes.

Q. When was that machine, the GCIRD instrument, last calibrated before you performed your tests on April 26 of this year?

A. It was calibrated on April 12, 2011.

Q. Okay. After you completed the GCIRD, what did you do next?

A. Next I did gas chromatography.

Q. All right. Is that flame ionization? Is that that particular test?

A. It's gas chromatography, and the detector is a flame ionization detector.

Q. Can you describe the function of that machine -- that instrument, rather?

A. Yes. It's an instrument -- as we spoke earlier about the two hyphenated techniques, the beginning of those techniques are GC. This instrument is exactly that without that identification technique hyphenated on to it. So it is used -- it's a nonselective instrument used to show you if there is different or multiple components in your substance.

In this particular case, it's actually kind of a unique case. I used it for the identification of the isomers. I'm not identifying methamphetamine. I've already done that. But in this case I need to identify the isomers of methamphetamine.

Q. All right. I believe there are two, D and L?

A. There is actually more than just D and L. There is a

racemic, which is a 50/50 mixture.

Q. All right. What are you primarily looking?

A. I'm looking for basically is it -- is it all D, is it L, is it a mixture of the two, or is it a racemic mixture?

Q. And what were the results of the testing?

A. Both exhibits contained both the D and the L in a nonracemic isomer mixture.

Q. And in this particular test, did you use a standard?

A. I did use a standard.

Q. All right. Could you describe how you did the procedure in terms of blank and --

A. Yes, I ran the blank. Then I ran Exhibit 1.01. Then I ran another blank. Then I ran Exhibit 1.02. And then I ran standards, three known standards.

Q. And those were of methamphetamine?

A. Yes. Those were the other -- the isomers of methamphetamine.

Q. Okay. And I don't believe I asked you this: Is this a confirmatory test approved by both DEA and SWGDRUG?

A. It's actually a presumptive test. It's not a confirmatory test; but, yes, it's approved by DEA and it's peer-reviewed. It's a common -- common instrument used in laboratories.

Q. So in addition to the Marquis reagent test, this is another presumptive test?

A. Yes.

Q. And how long has the GCFID been used in your field?
A. It's been used in DEA since its inception in 1973.
Q. All right. What was the date that particular instrument was calibrated before you performed your testing on April 26?
A. That was April 19, 2011.
Q. After you performed that test, what did you do next?
A. I had actually completed all my qualitative analysis, so it was time to get quantitative and get the purity of the mixture.
Q. So if we could, just to summarize for the record, what is qualitative vs. quantitative?
A. Okay. Qualitative is all of the tests that you run to where you're making the identification of methamphetamine hydrochloride.

Quantitative is where you're saying okay -- you're saying this is methamphetamine hydrochloride, but how much of that mixture is methamphetamine hydrochloride?

Q. All right.
A. So one of them is going to how much is there and the other one is going to the identification of it.
Q. In terms of purity, the quantity?
A. The quantitation is the purity, yes.
Q. And what does the HPLC -- how do you operate that instrument?
A. That instrument is similar to the GC, only it's using liquid chromatography vs. gas chromatography. It's a

nonselective instrument that will also separate components.

In this instance, I ran the samples or the ran the unknowns against a known reference standard of methamphetamine at a specific concentration. So when the known sample goes through the instrumentation, it gives a response. And then the unknown goes through and also gives a response. And because I know the concentration of the standard, I can go ahead and do some simple math and tell you what the concentration of the unknown is.

Q. All right. And did you use blank before you started the procedure?

A. I did not on this instrumentation. The blank is normally there for -- The blank is there to show contamination. This is qualitative vs. quantitative. I'm only doing it to show what the purity is, and it's not a requirement to run a blank in this instance.

Q. All right. And is this a confirmatory test adopted by DEA and SWGDRUG?

A. It's not a confirmatory test.

Q. All right. But it is --

A. But it is adopted by the -- by DEA and it's also adopted by SWGDRUG.

Q. For the purpose of quantitation?

A. Quantitation. There are other instrumentation. I just those this one.

Q. And how long has that instrument been in use?
A. Since DEA's inception in 1973.
Q. And has that been the subject of peer review and professional articles?
A. Yes.
Q. And forensic chemistry journals?
A. Yes.
Q. And I don't believe I asked you: When was that machine last calibrated before you did the tests?
A. It was on April 4, 2011.
Q. Was that the final test that you did in this case?
A. Yes.
Q. So to summarize, would it be two presumptive tests that you testified to and four confirmatory tests?
A. Yes. In most laboratories, after you have done the two tests that I did at the beginning, the Marquis and the GCMS, most laboratories, most forensic laboratories throughout the United States, they're done with their analysis at that point. They do not have to go any further. They can say, I have this much and it contains methamphetamine.

The DEA goes a little bit further because of -- because of some requirements on the evidence that we analyze to say, It contains this much. I go to the purity and the concentration. So in routine analysis, I have to do those two tests and I have to do a purity. So I technically only have to

do three tests; but in this case, I ran six, and all six of the tests told me that I had methamphetamine or I -- I came to the conclusion that they had methamphetamine.

Q. All right. And did you have sufficient data from which to reach a conclusion as an expert in the field of forensic chemistry?

A. Yes.

Q. And could you summarize what those conclusions were as a result of your examination of the data in this case?

A. In this particular case, Exhibit 1.01 contained methamphetamine hydrochloride. The net weight was 5,196 grams. The purity was 99 percent pure with an actual amount of 5,144 grams of methamphetamine hydrochloride.

Exhibit 1.2 [*sic*] contained methamphetamine hydrochloride. The net weight was 47.6 grams. The concentration was 98.9 percent with an actual amount of 47.0 grams of meth hydrochloride.

Q. All right. And could you clarify for the record what the distinction is between net weight and actual drug weight?

A. Okay. The net weight is the substance -- is the entire substance that you have. Okay.

And then the purity is saying of that whole substance, 99 percent of it is methamphetamine. So if you multiply the net weight multiplied by the purity, it's saying of all of the substance you have, the actual amount of methamphetamine is the

net weight times the purity equals the amount of actual methamphetamine.

Q. Is it accurate to state that actual is an equivalent to a hundred percent purity?

A. Yes.

Q. All right. So, for instance, if you had 80 grams of 80 percent purity, you'd have 80 grams of methamphetamine?

A. If you have 80 grams and it's a hundred percent, you have 80 grams.

Q. Okay. All right. Based upon your experience and training in the area of methamphetamine, were the purities here higher than you normally see?

A. 99 percent is very pure. I mean you can only go up to a hundred.

Q. All right. And is there a range when you conduct purity examinations of methamphetamine that's brought to you?

A. Yes. There is -- Any time you take a measurement, there is an uncertainty associated with that. So it's actually 99 percent plus or minus 3 1/2 percent.

Q. All right. And what's the uncertainty --

A. Like I just said.

Q. -- okay -- attributable to?

A. For me -- the easiest way for me to explain uncertainty is in a cooking analogy. Okay. If I'm making a cake and I need a cup of sugar and I use a cup of sugar, everybody in the room

would know that this is a cup of sugar. But the recipe calls for two cups, so I pour the first cup in and then I do the second cup. Everybody in this room knows it's still a cup of sugar, but there actually might be a couple granules less or more than the first cup. So that's the uncertainty. This is a measurement, but we can't take this measurement out to uncertainty [*sic*], so we know there is probably a little bit of variation there. So that's what the uncertainty is.

Q. And on the weight, there is also a very small margin of uncertainty?

A. Yes. The uncertainty goes with any measurement. When I'm weighing it, that's a measurement. When I'm doing the purity, that's a measurement. So that's why there is uncertainty associated with those.

Q. All right. And I'd note in your lab report, which again is Attachment 2 to Documents 162-1, the uncertainty associated with the smaller exhibit, 1.02, is plus or minus 1.07 grams, while the uncertainty associated with the large Exhibit, 1.01, is plus or minus 182 grams. Could you explain why that is?

A. Well, the uncertainty is just going to be bigger with the larger amount that you have.

Q. All right. And the quantities here in excess of 5, or almost 5.2 kilograms in 1.01, combined with 47.6 grams: Is that a significant quantity of methamphetamine, in your view?

A. Yes.

Q. Could you approximate with those if you converted kilograms to pounds approximately how many pounds that might be?
A. Yeah. It's about 11 1/2 pounds of methamphetamine.
Q. All right. During the course of your professional career, in particular as a forensic chemist with the DEA, have you ever found an exhibit not to contain a controlled substance?
A. Yes.
Q. And on how many occasions approximately, if you know?
A. Oh, boy. I don't know off -- offhand; but I mean whether it has something in it or whether it hasn't, I'm going to analyze it the same. I can't put something in it. My results are going to be what my results are. And I'm confident in my results, whether I find a controlled substance or whether I don't.
Q. Could your data be duplicated by a competent chemist in the field?
A. Yes.
Q. And based upon your submission -- and again I'm referring to Attachment 2 with all the charts and worksheets and everything else that was provided -- again that's Attachment 2 to Document 162-1 -- by reviewing that attachment, Attachment 2, could a competent chemist render an expert opinion?
A. Yes.
Q. And finally, do you have any indications that these

exhibits contained any controlled substance besides methamphetamine?

A. No.

MR. BOMA: Your Honor, at this time we'd move for the admission into evidence of Government's Exhibit 1, also captioned or having the header of 162-1.

THE COURT: Technically the Rules of Evidence do not apply, in accordance with Rule 1101(d)(1); however, I'll treat your request as a request to consider the report and the attachments to it.

MR. BOMA: Yes, your Honor. Thank you.

THE COURT: Thank you.

MR. BOMA: No further questions.

THE COURT: Thank you.

I think this might be a good time to take a midmorning recess. It's 11:35, according to the court clock; and we'll stand in recess for 10 minutes.

Yes, sir.

MR. EDELMAN: I didn't mean to interrupt, your Honor. I'm just standing before you recess.

THE COURT: And then we'll reconvene at 10:45.

Yes, sir.

MR. EDELMAN: I would request that you instruct the witness not to confer with any of the parties in this case on the prosecuting -- prosecution side to in any way -- about this

case and her testimony.

THE COURT: I'm sure Ms. Irby will not.

MR. EDELMAN: Thank you.

THE COURT: Thank you. We'll stand in recess.

(Recess at 10:35 a.m.)

(Reconvened at 10:49 a.m.)

THE COURT: Please be seated.

Let me ask defense counsel how you're going to handle cross-examination.

MR. EDELMAN: Your Honor, I think I'm going to go first.

THE COURT: Well, let me ask a little more specifically: Is everyone going to cross-examine?

MR. DRISCOLL: Your Honor, Bob Driscoll on behalf of Mr. Pelayo.

I have a few questions, two or three questions, that I'd like clarification. I was unclear regarding one portion of the testimony. My examination, I would guess, would be in the neighborhood of five minutes.

THE COURT: Okay. I'm going to ask those of you who plan to cross-examine -- and maybe there are others of you -- that you listen closely to Mr. Edelman's questions and not duplicate --

MR. DRISCOLL: Sure.

THE COURT: -- his questions.

Okay. Mr. Edelman.

MR. EDELMAN: Thank you.

CROSS-EXAMINATION

BY MR. EDELMAN:

Q. Good morning, Ms. Irby.

A. Good morning.

Q. I have a few questions.

In Exhibit 1 -- Do you have that in front of you? Your declaration?

A. Yes.

Q. You prepared that declaration?

A. Yes.

Q. And did you prepare that declaration from scratch, or did you use somebody -- something else?

A. I had assistance. But I am comfortable with everything the declaration says. It's my declaration.

Q. And what kind of assistance did you have?

A. I had assistance from another senior forensic chemist in my lab. After I had made some changes, I had somebody read it for administrative: Am I saying this clearly; is it saying it correctly? Nobody told me what to put in here. This is what happened in this case.

Q. Who was that individual by name that assisted you?

A. Bryan Henderson.

Q. And is he here today?

A. Yes.

Q. And is that the young man at the end of the table?

A. Yes.

Q. Thank you.

So did he provide you with some written materials to help formulate the language that you used in this declaration?

A. I'm not -- I don't remember the specifics of, Oh, you should say it this way, or You should say it that way. I think the bottom line is I'm comfortable with everything that's in here, and I have -- it is my word. I signed it.

Q. Okay. I understand that. Did you use a template, do any cut and paste from a Word document or another document? Not boilerplate type of language, not in the specific language in this document that pertains just to the specifics, the weights --

A. Right.

Q. -- and that sort of stuff?

A. That portion is all mine.

There are some areas in here that make reference to other entities, and some of that is verbatim from them --

Q. From who --

A. -- or from their website.

Q. Whose website?

A. Like SWGDRUG and ASCLD/LAB.

Q. And is this the way that declarations are prepared in your

lab?

A. This is my first declaration.

Q. Okay. And is it available for any of your other chemists to utilize and borrow the language?

A. I do not know.

Q. Who would know?

A. Probably the laboratory director.

Q. Okay. So your document is given to the laboratory director to put in the laboratory director's files for anybody to review for reference materials?

A. I do not know that.

Q. Okay. Do you know if anybody shared the language from your declaration for another declaration?

A. I don't know that.

Q. Okay. Now, in your declaration, I think you said there was a bibliography.

A. Yes.

Q. Did you read all of the reference materials that you referred to specifically to what you did in this case?

A. I have not read them in detail. I have glanced at the majority of them.

Q. And you said there were thousands besides the one --

A. Yes. I mean in reference to using this instrumentation in some sort of forensic field, there are thousands out there.

Q. Other than the 29. Excuse me.

A. Correct. Yes, ma'am.
Q. Okay. Now, did you read the actual language from the different standards that you placed into your declaration?
A. Yes.
Q. And at the time that you prepared your declaration?
A. Yes.
Q. And that's public record?
A. What's public record?
Q. The language that you put into your declaration that is not specific, referring to ISO, ASCLD/LAB, SWGDRUG, and all --
A. Correct. Like I said, a couple of those are from their actual website.
Q. SWGDRUG was originally put together by the DEA, was it not?
A. I don't know that.
Q. Okay. Now, I think you indicated that anybody who came into the -- your laboratory can duplicate the testing that you just testified to?
A. Well, from this data packet, a chemist should be able to see what I did, know the instrumentation, and be able to re-create what I did; and that is the requirement in SWGDRUG and ASCLD/LAB, is that somebody can re-create what I did.
Q. And in order to re-create what you did, they would have to know the procedures that you were following?
A. A lot of the procedures I followed are basic analytical chemistry things that you learn in your laboratory. My report

might say that I put 10 milligrams per mil into some sort of solvent. Somebody should be able to do that. And when the report is generated, you can compare this to this.

Q. Well, it's my understanding that you testified at some portions of your testimony that you were relying upon DEA procedures and protocols.

A. Sure. Yes.

Q. So somebody who would do an independent confirmatory review and testing of your testing -- they'd have to look at the DEA procedures and protocols manual or manuals?

A. I disagree with that because it tells you right on there how I did my sampling. Okay. Right on the data, it tells you how I went about the procedure to introduce that into my sampling.

The other part, like you say, needing those background information is not important because it's actually in this data packet, how I went about it.

Q. All right. If you would please turn to -- before you turn to any page, tell me again, if you would, please -- we'll try to be brief -- there were how many packages that were separately sealed from the evidence vault?

A. I had two heat-sealed evidence envelopes. Inside each one of those were two bags.

Q. Okay.

A. Some of them had multiple Ziplocs, but there were a total

of four.

Q. A total of two big ones when you took them out of the evidence locker; correct?

A. Yes.

Q. And you identified one as 1.01?

A. No. I took two big ones out of the vault. When I opened those up, there were two inside of each one of those, for a total of four. There were three larger ones and one small one.

The three larger ones, I called 1.01; and the smaller one was 1.02.

Q. And they weighed differently?

A. Yes.

Q. Different amounts?

A. Yes.

Q. So on page Irby Declaration 004, which is EC -- I think it says that. I'll say it on the top: Document 162.1, page 19 of 76. Do you have that?

A. Yes.

Q. You indicate that about one-third down, this is all in your handwriting; correct?

A. Yes.

Q. And this is the actual size and a photocopy of the document you prepared?

A. This is a scanned copy and then probably photocopied.

Q. Okay, but it looks the same way as yours?

A. Yes.
Q. The one that you put the pen or pencil to paper?
A. Yes.
Q. Exhibit 1.01 says it contains methamphetamine hydrochloride, HCL, gross weight 5406 grams?
A. That's correct.
Q. Those are the one package with the three in it, did you say?
A. No, no, no, no. The gross weight. Okay. As I received the exhibit, it's all Exhibit 1; and it's two of those heat seals. I took those two heat-sealed evidence envelopes, placed them right on the balance, and that weighed 5,406. I may have done them individually; I'm not sure -- I actually did them individually.
Q. Well, you identify in that first left-hand box, which is No. 6, Summary of Findings, Exhibit 1.01 contains methamphetamine hydrochloric -- methamphetamine hydrochloride, HCL gross weight 5406?
A. Right. That was the gross weight as I received it.
Q. Okay. And then 1.02 contains methamphetamine hydrochloride gross weight 5,406 grams?
A. That's correct.
Q. Okay. Where does it say in your report that -- does it break it up and show that's what you did?
A. If you -- okay. Of the gross weight, if you'll look on the

back -- I'm sorry. Very next page. Page 20, and you'll see under the first line -- Well, it's the line labeled "gross weight." And you have unit, .001. That is an extension to the unique lab number. So one of these bags was labeled .001 and the other one was labeled .008.

So I just took that heat-sealed evidence envelope containing everything inside.

Now, this weight is just for chain of custody. This weight has no bearing on the analysis of the evidence inside. That is the gross weight. That's what it weighed as I received it.

Q. All right. Did you speak -- or look at Ms. Chan's report?

A. You know, I may have glanced at it. I never read it. I never read it all the way through. I never looked at it and reviewed it.

Q. Did you speak with her?

A. Yes.

Q. And did you discuss her methods of testing and the proceeding we were -- the last proceeding she testified in?

A. Yes.

Q. And I think you indicated that you performed an extra test that you don't have to?

A. Well, I performed the tests I needed to be comfortable with the analysis. That's a minimum of three. I did six.

Q. Who says that you do three?

A. The minimum of three comes from the recommendations of SWGDRUG as well as DEA.

Q. And how many did Ms. Chan do?

A. I do not know.

Q. I take that back -- or strike that, please.

Now, if you would please take a look at Exhibit 2. D2. In a different book.

A. I don't know where I'm going.

D2? Okay.

Q. I think you testified that there was an ASCLD/LAB certificate of accreditation?

A. Yes.

Q. I think you said sometime in February, 2010.

A. Yes.

Q. And Exhibit D2 on page 000104: Would you turn to that, please.

A. I don't think I'm in the right area. I don't know -- I went to Tab 2. Is that --

THE COURTROOM DEPUTY: Mr. Edelman, are you looking for a certain page? She's on page D2. What page would you like her to look at?

MR. EDELMAN: Bottom right-hand corner, 000104.

THE WITNESS: 104?

BY MR. EDELMAN:

Q. Right. Or 70 of 93 on the top right.

A. Okay. Yes. I'm sorry.
Q. Is that the accreditation you're talking about?
A. Yes.
Q. Now, that accreditation took place or was finalized in February, 2010?
A. Correct.
Q. Correct?
A. That's when the certificate was -- that's when the certificate was stamped. They actually backdated it.
Q. From when?
A. From September of 2010.
Q. Okay. If you take a look at page 120 on the bottom, or 86 of 93?
A. Yes.
Q. That's entitled "Corrective Action Request"?
A. Yes.
Q. And one of the corrective actions were 5.8.2 -- let's see -- doesn't that talk about the compositing of your samples, they had problems with that?
A. If you'd read at the top of that, under "Finding," it says, "This CAR was appealed by the laboratory, and the ASCLD/LAB board sustained a portion of the appeal and a portion of the findings."
Q. But we don't know which ones, do we?
A. Let me see what information you have here.

I know that the portion that was appealed was the -- was the -- the -- was the drug side of it, not forensic side. And this document is written by ASCLD; it's not written by me. So I can't really attest to the fact that -- I just know that this document didn't apply to controlled substances.

Q. But you're not familiar with the document?

A. I have seen it before; but I'm not familiar with it, no.

Q. So ASCLD/LAB says that you shouldn't composite. Somebody appeals. And is there anything in this, meaning the DEA appeals and says, We can, I suppose, composite; and ASCLD/LAB says, Okay, what we thought was a violation of our standards, we're going to ignore?

A. Well, the appeal process is us saying, okay, you didn't understand what we do. Let me give you more information.

If ASCLD still did not agree with it, they would not have -- they would not have said, It's okay, you don't need to do that anymore, or --

Q. Have you participated ever in the appeal process?

A. No.

Q. Do you know what information was provided by your lab to convince ASCLD/LAB that they didn't understand it?

A. Actually I -- I may have from behind the scenes provided them with some information. They did ask for some information and for us to like photocopy some reports and actually photocopy some evidence. And that was sent to ASCLD/LAB from

our laboratory, but I wasn't involved in talking to anybody about this appeal.

Q. And you don't know what ASCLD/LAB received?

A. I just know that --

Q. Please.

A. We would not have been accredited had they not sustained the appeal.

Q. I understand that. I just want to know what you knew or know and didn't know with regards to the information provided ASCLD/LAB -- ASCLD/LAB?

A. Well, I assisted in providing them the information. What they did with that information, I do not know.

Q. Do you know the know what -- you say you provided them. Who are you talking about?

A. ASCLD -- or I don't actually recall if I -- actually, I'm pretty sure I didn't send it directly to ASCLD. I extent to our headquarters in Washington, D.C.

Q. And those were the folks, the headquarters of the DEA, that were participating in the appeal?

A. Correct.

Q. And so one of the problems, at least in this appeal -- in this action by ASCLD/LAB was the compositing of drug samples; correct?

A. Can you give me just a minute to read what this says here?

Q. Okay. It's under "Requirements."

A. Well, the Requirements are just straight out of ISO. The findings are --

Q. And that says --

A. The findings that they found are in reference to our labeling. It has nothing to do with forming a composite.

Q. Okay. Let me just understand it. It states in the findings in the Controlled Substance section, "Multiple bags of evidence received in a single exhibit are not uniquely identified to ensure that the items cannot be confused when referred to in the records or reports"; correct?

A. Yes.

Q. And you received what Ms. Chan identified and put into the evidence locker?

A. I received the four bags that we spoke about earlier, yes.

Q. Do you know what she received?

A. I know that she had 12 units of -- in some plastic containers.

Q. And were they individually marked?

A. I do not know; but it is our policy to mark all of the evidence inside of our heat seals.

Q. Could you take a look at Exhibit 8, D8.

A. D8.

Q. Page 1. Do you see that?

A. Yes.

Q. And there are 12 -- looks like 12 different packages;

right?
A. Yes.
Q. Three white ones and the rest sort of bluish green or greenish blue or blue green or green blue; right?
A. Correct.
Q. And two white ones are in one sealed bag; right?
A. Yes.
Q. And two of those -- excuse me -- there are two packages of two blue green substances; correct?
A. It looks to me like there is three.
Q. Okay. And there were no evidence labels on that -- that picture, that photograph?
A. I don't know where this photograph came from. I don't know if this is a photograph that Anthea took or if somebody took when the evidence was seized. I don't know where this came from.
Q. So if there were no labeling on these packages in this photograph that are the packages that Ms. Chan testified to as what she received, would you agree with the findings of the ASCLD/LAB as an improper sampling -- What am I trying to think of -- sampling or initial testing and handling of this package of drugs?
A. I disagree. In looking at this picture, I believe that this picture was taken before the laboratory received it. This does not look like any table in our laboratory. There is file

cabinets in the back. It's got -- I mean it does not look familiar to me. And I know our laboratory and where photos would normally be taken, and this does not look familiar to me.

Q. Have you seen any photographs of each of the separate 12 packages of substances that were individually marked?

A. No.

Q. And you said you did not review Ms. Chance's reports?

A. I didn't.

Q. So you do not know if her sampling was -- her sampling of these packages were marked?

MR. BOMA: Objection. Relevance. We're not relying upon Forensic Chemist Chan's testimony.

THE COURT: Response?

MR. EDELMAN: I think the entire process that Ms. Irby has testified to and discussed was fatally defective by the way the drugs were handled by Ms. Chan, and it just goes down the entire defective handling, which makes these -- her testing unreliable.

THE COURT: Reply?

MR. BOMA: Your Honor, if anything, it's a chain-of-custody issue; and the Government submits that these -- the picture referred to was taken by field agents prior to the submission to the laboratory, if I could proffer that.

THE COURT: Thank you.

MR. BOMA: Because I happen to have asked them.

THE COURT: This is a chain-of-custody issue. Today we are concerned with the opinion that Ms. Irby gave with regard to the substance she tested. There is no determination that the Court is making that what she tested is the same substance as Ms. Chan tested or even necessarily the same substance as was seized in this case. We are only looking at the methodology by which she formulated an opinion as to the substance she tested.

MR. EDELMAN: Thank you, your Honor.

BY MR. EDELMAN:

Q. As part of the methods that you believe were performed by yourself and I assume up to standards of these several organizations that you've mentioned and the separate individual standards -- would require you knowing whether the drugs that you were testing had anything to do with the case you were testing them for.

A. Well, I know it's related to the case because the evidence envelopes I receive have the case information on there.

I treat them as an independent analysis, but I know that it's associated with this case because of the DEA 7 that came into the laboratory that's associated with the information that's on the evidence itself.

Q. Would your methods require you to know if the drugs were previously mishandled?

A. I -- going to if they were mishandled or not, I can only

attest to what I found, which the purity of what I found tells me that no matter what happened before, you know, saying there were 12 units, methamphetamine had to be in all of those 12 units because my results are 99 percent methamphetamine. If one of those 12 units did not have methamphetamine in it, it would be less than 99 percent.

Q. Does your methods require you to observe or have some documentation to show you how the samples were prepared for your subsequent testing?

A. I'm not sure I understand the question.

Q. Well, do you need to look -- do you need to know or look at how the samples that you pulled out of the evidence vault were prepared?

A. No.

Q. So you're just given a bunch of packages and you're supposed to test them?

A. Correct. It's a completely independent analysis.

Q. Anybody help you or assist you in your testing -- your testing and your analysis?

A. No.

Q. Anybody help you write your -- your handwritten reports?

A. No. I did have another chemist witness the gross weights, so there is an assistance; but that's it. The analysis was done by me.

Q. And who witnessed that?

A. It was another chemist in our laboratory. Its just like I said: This is before it's even opened. It's just she's witnessing the fact that the weights are a little different than they were before.
Q. So you've narrowed it down to a she?
A. Oh, yeah, it's a she.
Q. Who?
A. Oh, Marsha Lee.
Q. Sorry?
A. Her name is Marsha Lee.
Q. Lee?
A. And her initials are on my report.
Q. Is your -- do you know if your testing was representative of the drugs seized, or just the packaging, the packages you received?
A. Well, I can make the assumption that it's the same as originally because you saw that I separated out the original composite. Okay. That was Exhibit 1.02.

My analysis and my composite is Exhibit 1.01.

I did a complete independent analysis on both of those, but the results from both of those were the same.
Q. Does the DEA have a procedures and protocols manual that you are familiar with?
A. Well, as I stated earlier, we have numerous different manuals. Parts of your procedure might be in one, parts might

be in the other, parts might be in this one. You use all of those documentation to go about your analysis.

Q. And were you familiar with the provisions?

A. Yes.

Q. Can you tell me what the procedures from the DEA manual are for each of the steps you took and the date and identity or identification of those manuals?

A. Well, I --

MR. BOMA: Objection to the form if it refers to one document, because the witness has already testified that there are several documents she refers to.

THE COURT: Response?

MR. EDELMAN: I can rephrase the question.

THE COURT: Okay.

BY MR. EDELMAN:

Q. Identify by date and name of one of the several procedures and protocol documents that you relied upon.

A. I don't know what you mean by dates, but one of the documents I rely upon which I already testified was the Analytical Sufficiency Document. And that is the document that tells you -- that follows the SWGDRUG recommendations that you must run at least one confirmatory and one separatory technique.

Q. And do you know how current that document is?

A. I don't.

Q. Okay. Could you identify the next document that you considered?

A. The Analysis of Drugs Manual.

Q. I don't know. I've never seen them, ma'am, so I don't know which ones you've looked at.

A. Well, I didn't look at any of the documents. I know in my head the protocol that we take to analyze the sample. So I didn't refer to the document and, say, Oh, I have to do this step, this step, this step. I'm not a technician; I'm a chemist. I can use the discretion of my knowledge and my experience in analyzing these drugs to carry about my analysis. I don't have a recipe that I follow; however, I do have requirements that I have to meet in my analysis.

Q. And you've memorized those?

A. I know a lot of them, yes.

Q. Do you know all of the ones that you had to follow for your analysis of these drugs in this case?

A. Yes.

Q. Well, where you get your control from?

A. The control that I ran was a negative control.

Q. How about the positive control?

A. Well, I ran positive controls as necessary. Not all of the instrumentations had what your calling a positive control; but what I have is reference material, and I would get that reference material -- I would get it as needed.

Q. So when you talk about reference material, you mean some white powdery substance that someone else has determined is methamphetamine?
A. Well, somebody else may have determined it. It comes into our laboratory, and then it's verified. And I run this white substance all the time. So I am familiar with the results that I get in using that standard.
Q. Okay. Then this standard, are you saying, was methamphetamine?
A. Yes.
Q. And some white powdery substance comes into your lab; correct?
A. Yes.
Q. And you get that from some commercial source?
A. Or our special testing and research laboratory.
Q. And where is that?
A. That is in Dulles, Virginia.
Q. And how many positives did you -- how many standards or substances did you use in this case?
A. Well, I used a standard for the Marquis.
Q. Uh-huh.
A. I used a reference library with the standard on the GCIR.
Q. What's a reference library?
A. As we spoke earlier, it's a reference library -- standards don't change, so that's why there is literature out there that

has the -- what methamphetamine -- the GCI -- I'm sorry -- the GC mass spec. of methamphetamine looks like this.

There is also literature out there that says it looks like -- the IR of methamphetamine looks like this. That doesn't change. So we -- the standard that I used was run about two weeks prior to my analysis.

Q. Okay. I'm sorry. I'm not a chemist; and when I think of a standard, I think of a chunk of drugs that, you know, is methamphetamine; correct?

A. Correct.

Q. Okay. And if I understand you correctly, you receive this quantity of drugs that you were sure was methamphetamine from some commercial source or from your DEA headquarters or some lab in, I think you said, Virginia.

A. I could have been wrong when I said that. It's somewhere near D.C.

Q. D.C.?

A. Washington, D.C., yes.

Q. And how many of those chunks of known methamphetamine did you have, did you use in this case?

A. Well, I was going into the fact that I used it for the Marquis.

Q. So you used one. One?

A. Well, yes. There is more tests.

Q. So you used one for several tests?

A. No, I used more than one.
Q. Okay. How many?
A. I used -- I had three separate standards for the GC analysis to get the isomer. We talked about the three different isomers earlier. I used the one that I used in the Marquis, and then I also used the standard for the HPLC analysis when I did the quantitation.
Q. And do you know where each of those three came from?
A. Yes. They are traceable.
Q. And do you trace it on your report?
A. Yes. It has the standard number on there, which is traceable back to our laboratory.
Q. And is that subject to peer review or some independent testing person that comes in to check out the --
A. It was already tested before it came into our laboratory, and then we tested it again to make sure that it was what it was; but that data is kept in our laboratory, and that's compared against literature or reference material.
Q. So it's not on your report that it was -- it came from ABC Methamphetamine Company and was tested by such and such when it came in, so we've confirmed that it is what the ABC Methamphetamine Company says it is.
A. That is not required on my report. What is required is that it's traceable. So I have Standard, for example, No. 267 -- was used in my Marquis; and that is traceable to our

laboratory, which is traceable to where the source came from.
Q. It's not on the report, though?
A. It's not required to be on the report. It's required to be traceable.
Q. Ma'am, I understand we're having a dispute over what's required and what you believe is required. I only want to know if it was on the report.
A. It's not on the report.
Q. Thank you. Now, you indicated you did about 60,000 exhibits. That's where your background came from -- and was all methamphetamine.
A. That is throughout the entire DEA. That's not just my analysis.
Q. Okay. And how many methamphetamine tests did you perform?
A. Over 700.
Q. And did you follow this same procedure you testified to today?
A. Some of the procedures have evolved. So I've been with the DEA for almost eight years. So the requirements are a little bit different now than they used to be, but I've always followed procedures and protocol.
Q. In the same lab?
A. Yes, and it's all -- our reports are technically reviewed by somebody else, so they also make sure that I am following all the policies and procedures.

Q. Well, by "somebody else," is that somebody else in your lab, or somebody from ASCLD/LAB or one of the other accrediting organizations?
A. It's actually both. Every one of our reports that go out of the laboratory is reviewed by a supervisor. And then when ASCLD/LAB came in and did their accreditation, they look at data from each analyst and they make sure that we're following what we say we do.
Q. Now, before you came into court today, did you have an opportunity to read any of the testimony or documents prepared by a person named Janine Arvizu?
A. Yes.
Q. What did you review?
A. I reviewed a document that she wrote about my declaration.
Q. Did you read what she testified to on April 19, 2011?
A. I read it once over a month ago. I've not read it again.
Q. And did you read anything else of hers?
A. Of hers? I have glanced at the document that she wrote earlier about the previous analysis.
Q. And you used those in preparation for your testimony today?
A. Some of it, yes.
Q. And did you bring any documents today in preparation -- that you've reviewed in preparation of your testimony today?
A. Did I --
Q. Did you bring anything?

A. Yes.

Q. What did you bring?

A. I brought the document that you just referred to. I obviously brought my declaration and all of the information in that. I've also got some SWGDRUG and ASCLD/LAB requirements.

Q. And what else?

A. I have some documents that I've printed from like forensic chemistry books, like a page here and a page there.

I have some things that I've cut and pasted from like SWGDRUG and ASCLD/LAB that we've talked about earlier that are actually in my declaration.

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

THE COURT: You may.

MR. EDELMAN: Your Honor, may I request a short recess so I can review the ASCLD/LAB standards that were relied upon? Because they're unavailable to the public.

THE COURT: Response?

MS. MAGNELLI: Your Honor, if I may, ISO 17025 is available to the public.

THE COURT: Thank you.

Reply?

MR. EDELMAN: Ms. Arvizu says it's not.

THE COURT: I think you can look at this over the noon hour.

MR. EDELMAN: I'm sorry?

THE COURT: Please move on.

MR. EDELMAN: I beg your pardon?

THE COURT: You can look at it over the noon hour. Move on.

MR. EDELMAN: Okay. Thank you.

Again, one moment, please, may I have, your Honor?

BY MR. EDELMAN:

Q. I think your declaration states in paragraph 9A that you have never encountered a protocol that involves collecting a standard spectrum every time an unknown is analyzed.

Can you tell me how many non-DEA protocols have you reviewed?

A. Well, I reviewed protocols at my last lab, but we didn't have IR there, so --

Q. The "last lab" meaning?

A. The lab -- previous lab that I worked at, yes.

Q. That does some testing for hops that are used to make beer?

A. Correct. Yes.

Q. Okay. But none from DEA?

A. I don't recall offhand seeing any other protocol from other labs.

Q. Did you individually mark the three bags that constituted Item 1.01?

A. I did.

Q. Which result from your GCMS with SMI initials, which is

your initials, I assume, are from which bag? Did you do that?
A. Yes. The -- do you want me to turn to that page?
Q. Sure.
A. Okay.
Q. That would be in Exhibit 1, I think.
A. Yes, Exhibit 1.01, page 24.

Oh, I'm sorry. Page 25. You'll see that it says 7160630. That's the unique lab number.

Dash 1.01. That is the exhibit number in this case Dash 01. And the bag 01 is the bag that was labeled "threshold."
Q. On page 26 of 76?
A. 25 of 76.
Q. Oh, I'm sorry.
A. It's also actually -- the same data is on page 26. It's just zoomed into the baseline, and it's the mass spec. of the other small peak that's there.
Q. And this is for the instrument you call Smoky?
A. Correct. It's the DEA Property No. 365175 -- is the instrument that is used.

MR. EDELMAN: Again one more moment, your Honor, please.

I have nothing else. Thank you.

THE COURT: Thank you. I assume you're reserving the right after you get a chance over the noon hour to look at the

document you want to look at to ask further questions.

MR. EDELMAN: Yes, please.

THE COURT: All right.

Let me hear cross-examination from any of the other defense counsel.

MR. DRISCOLL: If I may, your Honor, bob Driscoll on behalf of Mr. Pelayo.

CROSS-EXAMINATION

BY MR. DRISCOLL:

Q. Good morning, ma'am.

A. Good morning.

Q. Ms. Irby, I'm reviewing your declaration and paragraph 3, the first page of Exhibit 1, and the -- the scope of the national testing and your personal testing; and I'm seeing that you indicate here -- and you've also testified -- that you analyzed more than 2300 controlled substance exhibits.

Would it be more accurate to say that those were suspected controlled substance exhibits?

A. Absolutely, yes.

Q. And of those, some 700 were suspected methamphetamine exhibits.

A. They came into the laboratory as suspected -- well, actually I don't know offhand what they came from; but where I got those numbers from, those were more than 700 exhibits where I actually identified methamphetamine. So there is not a

speculation with that 700 number.

Q. So of 2300 suspected controlled substance exhibits, you identified the presence of methamphetamine in a solid 700 or so?

A. Correct.

Q. The balance of the exhibits, the balance, the 1600, using round figures of course -- the 1600 other suspected controlled substance exhibits, you did not find the presence of methamphetamine.

A. Actually, I wasn't there when he pulled the report. And sometimes when methamphetamine is the secondary substance, it may not have been in that; but I actually -- I don't know.

Q. And then going to questions by Government Counsel regarding your personal examination of suspected controlled substance exhibits --

A. Correct.

Q. -- I believe the question was asked, Did you ever -- did you ever -- did your findings result in a negative finding that there was not a controlled substance?

And I remember your answer being, I always tell the truth and I always present an accurate report.

But you didn't answer the question. And so now I'd like to reask the question: In those 2300 examinations, did you -- and I'd like a yes or no answer, please -- in those 2300 -- well, actually in the 1600 that weren't methamphetamine

findings, did you ever come to the conclusion that there was not a controlled substance present?

A. Yes.

Q. And in how many of those examinations roughly were the findings? And you can do it by number or by percentage or a comfortable layman, understandable answer. But I'd like it to be a quantitative answer.

A. Yes. This is a very rough estimate; but I would say probably of all of the controlled substance I've analyzed -- I would say it would maybe be a 10th of a percent, so 20 exhibits out of those 2300 I may not have found a controlled substance.

That's a guess. I really don't --

Q. So 20 of the 1600?

A. Yeah.

Q. Because the other 700 we know were methamphetamine findings.

A. Correct. That's a fair statement.

Q. Okay. Thank you.

Refocusing to another area of your testimony, I was unclear, and I may have heard it wrong; but I'd like you to enlighten me, if you would. After you quartered in the cone and combined 101 and 102 and then proceeded to two additional qualitative exams before your quantitative exam, the third, you ran an infrared exam and then a GC exam. Am I right?

A. No.

Q. All right. Thank you for correcting me.

You ran an IRACR exam. Am I correct?

A. It's ATR.

Q. Excuse me. But that's an infrared exam?

A. Correct.

Q. And that infrared exam, as I recall from other experiences -- at least my impression is that a infrared exam produces a light spectrum; is that right?

A. It produces a picture of how the molecule reacts to the light spectrum, as you say.

Q. Okay. And do you actually look at the light spectrum, or do you just look at the results of the light spectrum?

A. You look at the results.

Q. And then how about the gas chromatography? Does it produce a light spectrum?

A. No. It -- the only thing the gas chromatograph produces is a peak.

Q. It burns them. Does it burn --

A. It does not burn them. That actually has to be in some sort of organic substance in order to introduce it into the instrument. Okay.

Q. An organic substance like water?

A. Like alcohol. Water is not an organic substance.

Q. Okay. Alcohol.

A. You can't introduce that into the gas chromatograph.

But you -- what happens is the sample that you introduce goes through the column, and it separates different components; so -- and then you get a picture of a straight line with a peak here like -- kind of like an EKG when you see those, a flat line and then you a sea a peak and a flat line and then you see a peak.

Q. And you've produced those charts in your packet?

A. Yes.

Q. My question goes to is you're moving from the IR test, the infrared test, to the gas chromatograph?

A. Yes.

Q. Do I understand that those are two different machines?

A. Correct.

Q. So they're in two different places in your laboratory?

A. Yes.

Q. But in the same room?

A. It depends on which instrument you're talking about.

Q. Well, I'm talking about the two instruments you used in testing these exhibits.

A. The ATR and the gas chromatograph by itself are in the same room, but there is a large wall separating the two.

Q. All right. And so you went to two different places to perform the tests?

A. Correct. They were actually applied very differently.

Q. Excuse me. So that's a yes.

A. Yes.
Q. Okay. And did I hear you to say that the sample was channeled?
A. No.
Q. From the infrared?
A. Oh, I said there was a transfer line; but that's a completely different instrument.
Q. Okay. Let's talk about the transfer line.
A. Yes.
Q. When you perform the infrared testing, you took a measurable amount of these the suspected control substance and you put into the machine or the infrared machine. Is that right? Yes or no?
A. Correct.
Q. And did you introduce it into the machine on a slide or in a baggie with an eye dropper? How did you introduce the unknown or the sample into the infrared machine? How did you mechanically perform that task, please.
A. Well, if you're referring to the ATR, you just place the sample directly onto the diamond plate.
Q. Okay. And how did you place it there? Did you use a tweezer?
A. I used a spatula.
Q. Okay. And you put it onto the machine itself?
A. I did not put the spatula on there. I just placed the

sample right onto the instrument.
Q. And was it consumed in the testing?
A. Yes.
Q. And then did you locate a second sample, a new sample from the exhibit and take it to the gas chromatograph?
A. Yes.
Q. And then tell me about the transferring that I heard you comment at that point in your testimony. What was the transferring or the channeling that I understood you to testify about?
A. Okay. If we're talking about the gas chromatograph, as I just said, you have to put the sample into an organic substance. So I took that little portion that you are talking about and I put it into a test tube and then put it in the organic solvent. And then I placed it into a little test tube and brought it over to an auto injector on the gas chromatograph.
Q. Affixed to the gas chromatograph?
A. Correct. You just place the little vial into a little well and it -- the auto sampler picks it up and runs it.
Q. And was that sample also consumed in the testing?
A. Yes.
Q. Did you perform a microcrystalline test relative to the exhibits?
A. No.

Q. Can you explain to us what microcrystalline test is?
A. A microcrystalline test is to look at the actual substance under the microscope.
Q. So you Just put a piece of it on a slide, introduce the slide into a microscope, and look an at it?
A. I actually have never actually done a microcrystalline test, because so I have all these other instrumentations in our laboratory. So I'm really not comfortable going to that area.
Q. You're not comfortable looking through a microscope at a crystal?
A. I am comfortable with looking through a microscope. I'm not comfortable saying anything about that because that is not something that I -- I'm used to doing.
Q. But how about just answering my questions? Are you comfortable doing that?
A. Yes.
Q. Okay. Are you familiar with the use of a microcrystalline test?
A. Yes.
Q. And is it not a fact that microcrystalline testing of crystalline substances like methamphetamine hydrochloride is and has been a common examination technique that was used in tens of thousands if not hundreds of thousands of examinations of methamphetamine hydrochloride? Yes or no.
A. Yes.

Q. And it is a recognized technique that is sanctioned by the Drug Enforcement Administration for decades. Is that a fact?

A. Yes.

Q. And it was not performed in this examination?

A. That's correct.

Q. And the examination is as simple as taking a piece of Exhibit 101 and 102 and looking at it and then taking a little piece of the standard sample and looking at it and drawing a conclusion as to whether they look the same?

A. Again --

Q. Yes or no. Is that what it is?

A. I can't -- I don't know because it's not something I've done.

Q. You don't -- you've never done a microcrystalline test?

A. I have not.

MR. DRISCOLL: No further questions, your Honor. Thank you.

THE COURT: Thank you.

MR. BAKER: Thank you, your Honor.

CROSS-EXAMINATION

BY MR. BAKER:

Q. Good morning, Ms. Irby. My name is Mitchell Baker.

Could you take a look at Exhibit 1? And I don't know whether it's easier to go to page 22 of 76 or Irby Declaration 007.

A. Yes.
Q. Do you see what I'm looking at?
A. I do.
Q. And do you have sort of like a black kind of blobby thing in front of you?
A. Yes.
Q. Can you tell us what those are, please.
A. Those are photos that I took in this case. And I knew when I made this photo that it wasn't good, so I put color copies at the end of this.

MR. BOMA: Your Honor, those have been served in discovery in this case, the photographs that he's referenced.

MR. BAKER: Okay. As long as we have them someplace, we'll figure out what goes with what.

And they're identified how? I mean is there a way we're supposed to know?

(Discussion off the record between Ms. Magnelli and Mr. Baker.)

BY MR. BAKER:
Q. Do you have the color photos with you?

THE COURT: Can you speak in the microphone, please.

MR. BAKER: I'm sorry.

BY MR. BAKER:
Q. Do you have the color photos with you?
A. I do.

Q. Can we just see what they are, please.

A. They're not -- I don't have them with me here.

MR. BAKER: I'm just trying to pair up. I'm not sure that anything I have -- I have color photos, your Honor, but trying to --

THE COURT: Let me ask this question: Was this served electronically? Was this served electronically?

MR. BOMA: No, your Honor, but color copies were made.

THE COURT: You served in paper and you attached color copies to what you served in paper?

MR. BOMA: Yes, your Honor.

THE COURT: Okay. Does that answer your question, Mr. Baker?

MR. BAKER: I believe I was given color copies, your Honor. The problem is that there is no way that I think was available to us to determine the color copies we have received bore any relationship to what's on this page. Now that they've been identified for us, we know what they are. That was all I needed to do.

THE COURT: Thank you.

MR. BAKER: Thank you.

MR. GOLLA: Your Honor, I have no questions at this time.

THE COURT: Thank you, Mr. Golla.

MR. BROWN: Thank you.

CROSS-EXAMINATION

BY MR. BROWN:

Q. Good morning, Ms. Irby.

A. Good morning.

Q. You indicated early in your testimony when Mr. Boma was asking you questions that when ASCLD inspection took place in February of 2010 that they looked at all documentation. You also, I think, indicated that there was spot-checking. Is it fair to say that they didn't look at all the documentation in the lab but it was merely a spot-checking exam?

A. There were surveillance visits between 2005 and 2010, and they -- they do do a spotcheck. But as I said earlier, we also do an internal audit of our documentation as well as external coming to our laboratory. And that information is sent to ASCLD along with the surveillance visit.

Q. So their responsibility is not to double-check all the work within the lab.

A. I -- when they do the initial assessment and when they did the reaccreditation, they're looking at everything; but when they --

Q. February, 2010, was a reaccreditation?

A. Correct.

Q. Is your testimony that they inspected the underlying data for all the testing that was occurring in the lab between 2005 and 2010?

A. They did not look at every exhibit, but they spot-checked an exhibit. They looked at every part of our system against those two documents, ISO 17025 and the ASCLD supplemental.
Q. So they might pull a particular test that was performed. Then it would be retrieved by a lab person, and that particular folder would be tested as perhaps a representative sample of what was going on in the lab; correct?
A. They don't retest anything. They look at the --
Q. I didn't ask you about retesting. I asked you whether or not they looked at the underlying data, meaning the documentation?
A. Yes. I'm sorry. I thought you said "tested."
Q. So they reexamined the documentation. From that they try to extrapolate whether the -- whether the lab's practices are consistent with or inconsistent with their protocols.
A. Well, it goes further to that. It's to -- to their protocols and also our protocols. They -- our protocols have to match those two documents. And then they look at objective evidence to make sure that we're doing what we say we do.
Q. If you had generated a thousand documents hypothetically -- okay -- representing a hundred percent of the documentation within the lab between the original accreditation in '05 and the reaccreditation in 2010, how many pages, to kind of correlate to a percentage, of that documentation would have been looked at during the reaccreditation visit in 2010?

A. Also just to let you --

Q. It's okay. I don't want to know. I just want to know the answer to that question.

A. They look at all of our documents.

Actually, before they come into the laboratory and do the visit, they look at the documentation prior to that so that they don't have to spend the whole entire time that they're at the laboratory looking at the data. They've already looked at the policies and procedures.

Q. So let me ask you this: There is reaccreditation, I assume, that will take place in 2015.

A. Correct.

Q. And at that time, will the examiners from ASCLD look at the documentation that is the underlying data that's contained in peoples exhibit -- Government's Exhibit 1?

A. Yes.

Q. When you were asked -- You have responsibility as a senior forensic chemist; correct?

A. Yes.

Q. And in the course of that responsibility, you do spot-checking of other lab technicians?

A. Actually, it's not -- it's my quality assurance duties where I spot-check other people's work.

Q. Okay. So kind of more of your administrative hat?

A. Yes.

Q. And you have that responsibility in November of 2010?
A. Yes.
Q. And you have spot-checking responsibilities for Ms. Chan?
A. Yes.
Q. During the course of your spot-checking responsibilities of Ms. Chan during November of 2010, wearing the quality assurance hat, did you review her work in connection with this case --

MR. BOMA: Objection. Relevance.

MR. BROWN: -- the testing that we're referring to in this proceeding.

THE COURT: Mr. Brown, this is far outside the scope of a 702 determination with regard to the opinion formulated by this witness. Please move on.

MR. BROWN: If I may --

BY MR. BROWN:

Q. When you -- when you retrieved the items, when you broke them down, Items 1.01 and 1.02, from the two evidence bags that you retrieved from the DEA locker -- do you recall doing that?
A. Yes.
Q. Was there an accompanying packet of documents that corresponded to those exhibits that you reviewed?
A. There was one sheet of paper, and that's called a DEA 7.
Q. Okay. And the DEA 7 basically documented the original seizure of the narcotics?
A. Yes. That's filled out by the agent. That is just a paper

trail for me.
Q. So you didn't go to any other data to see what other prior testing had been done?
A. No.
Q. Now, when you looked at those, the DEA 7, you could see that there were 12 individually packaged items that had originally by virtue of the DEA 7 been delivered to the DEA lab?
A. Yes.
Q. You didn't see the 12 individually packaged items, the did you?
A. I have seen them in a photo.
Q. But they weren't in that condition when you received them?
A. That's correct.
Q. And, in fact, they had been broken down into two packets and, is it three, sub-packages?
A. It's two heat-sealed evidence envelopes and four Ziploc bags.
Q. And the mass of what you received -- had any of it been disposed of between the authoring apparently of the DEA 7 and your examination, or did it appear to be in at least the original quantity, if not the type of packaging?
A. I'm not sure I understand your question.
MR. BOMA: Objection. Chain of custody.
MR. BROWN: I think what we're trying to understand,

your Honor, is the methods by which the evidence was tested. And as such, the condition that this witness tested them in comparison to the other documentation regarding the substances is important to understand the results.

THE COURT: No, it isn't. This witness has proffered an opinion based on what she tested. If you want to inquire as to how the substance that she tested was dealt with before she tested it, it is a chain-of-custody question.

MR. BROWN: I understand.

THE COURT: And that, you can raise at trial but not in the scope of the 702 hearing.

MR. BROWN: I understand the legal distinction the Court is making. Thank you.

BY MR. BROWN:

Q. Ms. Irby, with respect to the individual standards that you used, I understand you used a total of five positive standards. There were three for the isomer testing, one for the Marquis, and one for the HCPL?

A. Yes. The HPLC.

I used three -- or I mean that's five what you would call a "positive" standard.

Q. Fine. And you said one of them you're able to identify by number, 267.

A. Oh, no. The other ones I can identify by number as well.

Q. Okay. Let's talk about -- okay. So were there five

separate identifiable standards including 267?

A. Let me clarify. For the Marquis, I used Methamphetamine No. 267. Okay.

In my GC analysis for isomer, I used 267, 285, and 570.

And for my HPLC, I used No. 618. And all of those standards are traceable in the laboratory.

Q. Okay.

A. They're my documents, so that -- so they can be traced.

Q. Okay. Let's talk about first of all do you know -- Well, each of those standards: Were they produced commercially, or were they produced at a DEA lab somewhere around Washington, D.C.?

A. I do not know.

Q. And with respect to when they have been received at the Western Regional Lab, because no matter how the source came, from which source, they're always delivered to the Western Regional Lab. And you said a retesting will occur there; correct?

A. Correct.

Q. To verify, for example, that it's methamphetamine?

A. Yes.

Q. Now, when that occurs, for example, with the HPLC testing and that one you said was Standard 618, it could be done on any one of several instruments within the lab that do HPLC testing;

correct?
A. That Methamphetamine Standard No. 618, I could have used that on the Marquis.
Q. We're not -- It's really easy for me to get confused here. So that HPLC is not the Marquis; correct?
A. Correct.
Q. I want to talk about the HPLC testing. When 618 comes into the lab and it's going to be used in HPLC testing you have more than one instrument at the lab for HPLC testing?
A. Yes.
Q. And when it comes into the lab in, when, 2002, 2006, 2009? When did 618 come in?
A. I don't know. That is traceable back to the laboratory.
Q. Which piece of equipment was it testified [*sic*] in order to verify it was a reliable standard?
A. I don't know.
Q. And you cannot tell this court whether or not, then, in fact that the confirmation of that as a viable standard at the lab was done on the same type of -- the same instrument that you used; correct?
A. That's correct.
Q. And in your declaration, which is People's [*sic*] Exhibit 1, you indicate that that can be a very important criteria in establishing whether the standard utilized is scientifically valid; correct?

A. I'm not sure I understand your question.

Q. Let me direct you to page 4 of your declaration, which is contained in Exhibit 1. And it's under section No. 8, 8H, which is at page 4.

A. Okay.

Q. And I'll just read it. It says, quote, "There are some other instrumental techniques, including chromatographic methods where the data is not necessarily invariant between different instruments and at different times. In these instances, it is prudent to include a positive control when the data is collected for an unknown sample for the added purposes of comparison," end of quote.

You authored that; correct?

A. Correct.

Q. And that deals with the topic that we're talking about, which is the instruments can have variations in the graphical information they produce, even if you're testing the same substance; correct?

A. Yes.

Q. And so it would be important to identify that the standard that's received in the lab and which is being used by you for comparison to determine that it's methamphetamine was done on the same machine as that which you're testing the received evidence from?

A. No. You're misunderstanding the purpose of a standard. A

standard coming into the laboratory -- and that standard is going into our reference material -- that standard can be run on any instrument.

On HPLC, we're saying that that be invariant. I've ran a standard. It's -- okay.

Let me start over.

The initial verification of that has to be done on those one -- on one of those four instruments that are confirmatory in our laboratory. Okay. As we said, HPLC is not confirmatory.

So when I ran that standard 618, it had already been verified to be what it is on another instrument that is able to confirm that. So now that standard is able to be used in the laboratory.

So now I use that standard on the HPLC to compare it against the unknown. That standard is a known substance.

When I run that standard on the HPLC, it's being run as a known. I know what it is, I know the percentage of it.

Q. Okay. Let me ask you this: With respect to these standards -- particularly, to identify, we're talking about 618 -- do they have a usage life like, you know, what would appear on a medicine bottle as an expiration date?

A. No. But let me tell you about our standards --

Q. Well, let me ask you -- thank you for answering the question.

They don't have an expiration date on them; but they do have a scientifically expected date that they would expire; that they would no longer be usable based upon time; correct?

A. Not that I'm aware of.

Q. Do these -- does everything in this courtroom, in a laboratory, have a half life?

A. I'm not sure where you're going. I can go back and say that our standards are verified once every three years.

Q. Do they degrade over time?

A. No.

Q. They don't degrade over time. So if I took 618 and I take it out of its packaging on the day it's received at the lab, do you expect that it will be in the identical chemical competition [*sic*], the same quality and integrity on that date as in 20 years from that day?

A. Yes.

Q. Same -- same would apply in the other laboratories that you've worked with other materials which constitute standards? For example, when you were testing hops, you would expect -- did you ever test them against standard, the hops that you received?

A. Yes.

Q. Does hops degrade over time?

A. Hops do, yes. They're a plant material.

Q. It's an organic material. Is this -- is -- and it's

comprised of chemical compounds; is that correct?

A. Yes.

Q. So you'd say, to take this to, I guess, absurdity, you would say to infinity, 618 is still going to be viable and usable in the lab?

MR. BOMA: Objection. Calls for speculation on the part of the witness.

THE COURT: I'll allow the witness to answer.

THE WITNESS: I'm sure -- I can't attest to infinity because I'm not going to be around to test it; but -- I'd also like to clarify that there are some substances in our laboratory -- each substance is individually -- individual and unique; so there might be a substance that does degrade over time. Methamphetamine to my knowledge does not degrade.

BY MR. BROWN:

Q. But it does evaporate.

A. Yeah.

Q. So that when you took the material from the initial vault and took it out and you crossed -- cross-checked the gross weight, you determined that the material had degraded because you have evaporation?

A. And let me clarify.

Q. Yes or no.

A. It's not the methamphetamine that is degrading. It's the solvent that's -- the methamphetamine is losing the solvent.

The methamphetamine is not changing.

Q. What was the period of time over which you determined the solvent had degraded and evaporated?

A. I don't know. I just know that I got the evidence on April 26.

Q. And from that you made a determination that it was a small amount that had been lost in the gross weight; correct?

A. Yes. I don't know the numbers offhand.

Q. But small amount would be in proportion to time; correct?

A. Not necessarily. It can also be to a weight.

Q. Correct. One of the factors would be time, wouldn't it?

A. It could be time and weight.

Q. If you see that the material is degraded over a very short period of time, a period of seconds, then whether or not it's a small or large manner of degradation would be different; correct?

MR. BOMA: Objection. Asked and answered. She said it didn't degrade.

THE COURT: I'll allow her to answer.

THE WITNESS: I think it depends -- it's dependent on what you're talking about. You know, if something is going to go away in the air right away, then time might be a necessity. Alls I can attest to is the fact that I noticed the weights changed. And I got them initialed so that that other witness says, At this time, this is what they weighed. That was the

purpose of that.

BY MR. BROWN:

Q. You tested the purity of 1.01 and I believe 1.02 as, I think, respectively 99 and 96 percent rounded to the nearest percentile?

A. No, 99 and 98.9 respectively.

Q. Thank you. And were you aware that that -- that substance had been previously tested in the lab?

A. Yes.

Q. For purity?

A. Yes.

Q. Were you aware that the previous determination in the lab was 96.3 percent?

A. No.

Q. Would you like to review a lab report dated November 10, 2010, which indicates that the purity was 96.3 percent?

MR. BOMA: Objection. Relevance.

THE COURT: Sustained. Whether she wants to review a lab report or is not isn't relevant, and whether there is a lab report or not is not relevant for purposes of the 702 determination.

MR. BROWN: May I have one moment, please, your Honor?

THE COURT: Uh-huh.

MR. BROWN: Nothing further at this time, your Honor.

THE COURT: Thank you. I think we've addressed the

cross-examination of all defense counsel who wanted to examine. Am I; right, Mr. Baker?

MR. BAKER: I had my moment in the sun there. Thank you.

THE COURT: Okay. Good. Then we'll take a noon recess and we'll all go back to our organic chemistry textbooks that we studied in high school and college. And over the noon hour Mr. Edelman will have an opportunity to review the standard he wanted to review. When we reconvene, if you want to ask some more questions along that line, you're free to.

MR. EDELMAN: I have an additional request, if I may. I'd like to see all of the DEA laboratory's procedure manuals and protocol manuals to help prepare for my cross-examination, which we've asked for and never received.

THE COURT: Response?

MR. BOMA: DEA does not disclose their internal -- the ASD, I believe it is, the manual; and the Government submits that with Ms. Irby's packet, if you will, of data, it lays out clearly what tests were done, what the results were. And as the witness has testified to, a competent chemist could replicate those results or come to the same conclusions based upon the data so far.

THE COURT: So Mr. Coma, is it fair to say that the Court should disregard, then, all of Ms. Irby's testimony that what she did complied with DEA standards?

MR. BOMA: No, your Honor. The DEA's position is that the manual itself is not discoverable.

THE COURT: Well, I will be disregarding all of that testimony that she complied with DEA standards unless you want to share the standards that she complied with, with defense counsel. I'm happy to consider whatever protective order you'd like to request.

MR. BOMA: Your Honor, we also have testimony regarding SWGDRUG, and those documents are available in the public domain.

THE COURT: Well, that's fine; but that's not what's been requested.

MR. BOMA: So they have access to that, SWGDRUG.

THE COURT: Do you want to ask for a protective order and disclose the DEA standards that this witness testified she complied with, or do you want me to disregard all of her testimony that she complied with DEA standards?

MR. BOMA: Your Honor, the Government, after conferring with Ms. Magnelli, we'll rely upon the SWGDRUG and the open source materials which were referenced during the testimony. And we do submit that the attachment to -- in conjunction with Attachment 3 and also her resumé --

THE REPORTER: I'm having trouble hearing you, Mr. Boma.

MR. BOMA: I'll go to the podium.

-- that 162-1, including the three attachments thereto, satisfy our Rule 16 and 702 requirements and that we -- I don't believe the Government's under any burden to supply documents that are in the public domain, such as SWGDRUG.

THE COURT: That's not the issue, Counsel.

MR. BOMA: In terms of DEA internal documentation or manuals, this is not like a report or something that we turn over. So we would not be disclosing the manual. There are, however, 4 pages of excerpts from the manual in the Government's earlier submission relating to Ms. Chan.

THE COURT: Well, but you've told me we're not relying on what Ms. Chan did --

MR. BOMA: But there are manual excerpts that are in there, your Honor, four pages. And that's the extent of what I know of.

THE COURT: I'm going to disregard all references to the fact that Ms. Irby followed DEA standards. You're not relying -- you've told me you're not relying on what was supplied with regards to Ms. Chan's opinions. You've told me that it's DEA policy not to disclose its standards. And therefore, the Court cannot consider whether the witness complied with those standards as part of evaluating the reliability of the methodology.

That resolves Mr. Edelman's request for copies of the

standards, and we'll stand in recess until 1:30.

(Recess at 12:13 p.m.)

(Reconvened at 1:38 p.m.)

THE COURT: Please be seated.

MS. MAGNELLI: Your Honor, if I may address the Court.

THE COURT: You may.

MS. MAGNELLI: Your Honor, again, my name is Solette Magnelli; and I've been cross-designated as Special Assistant. I actually used to be an AUSA, so it's kind of nice to be home, so to speak.

What I have done, just so the Court understands -- DEA, given how large we are and the fact that we operate in every jurisdiction -- we have these policies in place about what we produce and what we don't produce. However, I am not authorized to deviate from that policy.

So during the lunch break, I called back to headquarters and explained the situation. And through some conferencing on their behalf, we have identified documents to produce to the defense that we are in the middle of trying to gather. We have half of it together with enough copies. And these are the procedures and protocols with regard to methamphetamine that Ms. Irby has been testifying about.

THE COURT: All right.

MS. MAGNELLI: I also wanted to clarify that there seems to be a confusion on some behalves in terms of the ISO

17025 and the supplemental requirements. As I said on the record, ISO 17025 is publicly available; however, both documents are copywritten [*sic*]. The supplemental requirement is not something that we have, nor if we had it here could we turn it over. When we are accredited, we are provided with a copy of that; and we sign a contract, a nondisclosure agreement. So the defense would have to go to ASCLD/LAB directly to Executive Director Bud Keaton, I believe, and request that information. That is just simply not ours to give.

THE COURT: All right.

MS. MAGNELLI: And I believe Mr. Boma has some additional items on the documents.

THE COURT: Thank you.

MR. BOMA: Your Honor, just to follow up on Ms. Magnelli, what we have in hand right now is what's known and been referred to as excerpts or -- excuse me. It's the entirety of the ASD, Analysis Sufficiency of Drug Evidence, referred to as the ASD. That is what I would term a generic document dealing with drug evidence in general.

There is another -- DEA's lab operating manual section 7002. And this is also what I would term a generic document dealing with lab procedures that were testified to this morning.

And finally we do not have or -- excuse me -- there is

an Evidence Sampling Plan, which I don't think I mentioned. That's relates to analysis or sampling from controlled substances in general, and that is not here yet.

The lab operating manual Section 7002 is in the process -- they're both in Denver in terms of being on a computer and they're being printed and copied at this time.

And we would seek a protective order from the Court. No. 1, we'd ask that no photocopying of any kind be permitted of these documents --

THE COURT: How do you plan on getting these to Defense Counsel?

MR. BOMA: Your Honor, they're in the process of being duplicated now; and we'll get them as soon as they're photocopied.

THE COURT: So what you're planning on doing is giving hard copies to each of defense counsel?

MR. BOMA: That's correct, your Honor. Photocopies.

THE COURT: And then you're asking them not to photocopy it.

MR. BOMA: Yes, your Honor. And we're asking no disclosure of these documents beyond the confines of this courtroom. And we're numbering the copies of the documents similar to what we do with indictments before the grand jury.

And we would ask that all these documents that are being disclosed pursuant to our requested protective order be

returned to the Government at the conclusion of this hearing. And I've asked DEA to allow me to maintain one copy of all these documents in my office. If someone wants to come by and refer to them, read them again, they can do that; but we would not -- request that they not be allowed to photocopy them or remove them from the premises.

THE COURT: Thank you.

What's the defense's perspective?

MR. EDELMAN: Your Honor --

MR. BOMA: Your Honor, if I might. I forgot one thing.

If the Court retains a copy and wishes to file it, we'd ask that that filing be done under seal so that it's not public domain.

THE COURT: Thank you.

MR. BOMA: Thank you.

MR. EDELMAN: Good afternoon, your Honor.

The first thing I would like to address is what I understood your order during the latter part of the morning session and at the end of the session for the Government to turn over the ASCLD/LAB supplemental documents that I believe the witness testified she had with her and had relied upon to give her testimony.

THE COURT: Sir, I didn't order that.

MR. EDELMAN: Okay. In any event, we didn't get it.

THE COURT: Okay.

MR. EDELMAN: And it may be copyrighted, it may not be copyrighted; but I think your order would probably supersede copyrights.

There may be an agreement that was signed between the DEA and ASCLD/LAB. There may not have been. But copyrighted documents are shared all the time: books, Westlaw documents. That may or may not be a violation of copyright law. It may. I think it's the -- the responsibility of ASCLD/LAB to enforce their copyright rights.

In any event, we didn't get it; and it's not subject to public domain.

With regards to whatever the Government is offering to give Defense Counsel at this time, I don't know if it's going to be sufficient. They have to show it -- the documents to us, and Ms. Arvizu has to look at them because I wouldn't know if they're accurate, not accurate, current, not current, or those standards that were utilized by this witness during the time that she did the testing.

The Court recalls she testified that she memorized them; she doesn't recall what year they were promulgated or effective.

THE COURT: This sounds like it comes to the defense counsel as somewhat of a surprise and you haven't had an opportunity to talk with the Government about what is being

supplied, when it would be supplied, what you need to review, who you'd like to have review it. Is that fair?

MR. EDELMAN: Yes.

THE COURT: Well, would you like a continuance right now so that you can confer?

MR. EDELMAN: If that's the only option available to the Court, then -- and defense counsel --

THE COURT: Well, what would you prefer?

MR. EDELMAN: The evidence be excluded because of discovery abuses.

Now, if I may, on 11-19, 2010, I asked for all this in my motion for additional discovery. The Government, as I understood it, offered to give this information at the conclusion of the 702 hearing on April 19, 2011. We rejected that offer because we didn't need it. The Court already ruled, excluding the evidence.

Subsequent to that time, the Government filed Ms. Irby's declaration and opinion. The Government did not volunteer to give us any of that information that they apparently in a broad sense offered to give us. And I don't know exactly what they offered because it was general in nature. So they've had another opportunity to give it, give the information to us so Ms. Arvizu can adequately consider it.

And a transcript was prepared of that hearing. I think the Government had access to it. Certainly they could

have ordered their own transcript to know specifically what Ms. Arvizu testified about with regards to documents she has not seen or did not see. And if the Court denies the motion *in limine* and disallows the opinion, at a minimum we're going to need the evidence, the documents at trial, because at that time it's my understanding that Ms. Irby's testimony will be subject to cross-examination for the fact-finder to give it whatever weight the fact-finder would like.

So that's my position, your Honor. They've had -- the Government has had more than adequate opportunity. They've never asked for a protective order before.

By the way, a protective order for -- just to give me the documents, without allowing at least one copy for Ms. Arvizu to review, is unacceptable. And I'd ask that she be included in the protective order at a minimum.

THE COURT: Other counsel: Are you prepared to address this, or would you like to confer?

MR. BROWN: May I have one moment to address the Court? May I address the Court?

THE COURT: Sure.

MR. BROWN: I did have an opportunity to speak a little bit with the Government, so I think we've made some progress on particular items that they're willing to disclose.

For example, your Honor, there are certain topical areas that we've identified that the Government is prepared

shortly -- I don't know how shortly; timing is an issue -- to provide to us. One is an analytical sufficiency document. The other is a sampling plan, and the other is an analysis of the drugs manual as pertaining to methamphetamine.

These broad areas of disclosure should for the most part satisfy our ability to investigate the policies of the DEA lab. Perhaps one other document, a table of contents, may clarify.

But I think that the Court's proposal that we confer on this is sound, and I think that the chances that we'll be able to conclude our hearing today are unlikely; so understanding that the Court is willing to allow the Government to disclose the policy, procedures, and manuals information that have been previously been presented [*sic*] to us, I am moving to continue this hearing so that we would have an opportunity to review the documentation.

I do think that Mr. Boma's plan as stated regarding the protective order would be difficult to comply with. It seems like, as Mr. Edelman was proposing, that we could take the documents from the courtroom, we could make copies in order to provide them to our expert, and then return them to the Government at the conclusion -- seems sound. But I think we'll need at least a week, given the complexity of the documentation, in order to complete that review.

Can -- may I confer with Mr. Edelman and cocounsel?

THE COURT: No. We're going to take a recess. And we're going to take a recess because all defense counsel need to confer together and figure out what your positions are with regard to this. I think you also need to talk with the Government to determine whether or not the suggested protective order is something you can live with. These are issues that we're not going to process sort of in the courtroom. Please confer, discuss; and when you're ready to reconvene, let Ms. Glover know and we'll be glad to reconvene.

MR. BOMA: Your Honor, if it please the Court, until the Court rules on the terms of the protective order, we would defer turning over the documents at this time.

THE COURT: I haven't authorized the turnover of the documents at all yet.

MR. BOMA: Yes, your Honor.

THE COURT: So we'll stand in recess.

(Recess at 1:51 p.m.)

(Reconvened at 2:24 p.m.)

THE COURT: Please be seated.

MR. BOMA: Your Honor, we'd ask that Ms. Irby be allowed to step down, remain in the courtroom.

THE WITNESS: Thank you.

THE COURT: Absolutely. She may step down.

MR. BOMA: Thank you.

THE COURT: All right. Where do you stand?

MR. BOMA: Your Honor, Mr. Baker is going to be --

THE COURT: Are you the lead?

MR. BAKER: No. I think -- I think when you're at the other end is when you get to do things like this, your Honor. I'm not the lead.

THE COURT: Okay.

MR. BAKER: So as I understand things, the defense as a group would like to join in Mr. Edelman's motion that he made initially that the evidence all be stricken because it wasn't turned over; any reference to any of this be stricken because the discovery wasn't turned over in a timely fashion.

We understand that the Court -- or we don't understand for sure, but it did not seem like the Court was terribly receptive to that idea. If the Court is not receptive to that idea, we've reached an agreement with the Government, subject to the Court's approval, which would involve the Government turning over what they described as approximately 40 pages of documents to us. They have copied them. But rather than doing it in a sort of piecemeal way, we've agreed that they would Bates stamp them and do them in a formal way and get them to us. They'll have them in the mail by next Friday, June 3.

We would agree that those documents would be subject to a protective order that would involve nobody copying the documents. The documents would be kept in the custody of the attorney and Mr. Edelman's expert, who would also be subject to

the protective order. So there be one additional copy beyond the attorneys currently on the case.

If any other attorney decided to hire another expert or do anything along those lines, we could apply to the Court to have that expert have access to these documents with notice to the Government.

At the end of the case, all of the documents would be returned to the Government.

That's that part of it.

Then the rest of it, I think, is going to depend somewhat on the Court's schedule and on the expert's schedule. It's not my expert, so I don't have an in-depth knowledge of her schedule. My understanding is that she's got a very, very busy June and will need some period of time to review the documents.

Also, we don't know what the documents are. The Government -- it's a little bit of a Catch-22. They can't tell us what they're giving us until there is a protective order. We don't know whether they're giving us what we're asking for until we see them.

So we may need to have a little bit of time built in so that if we feel we haven't gotten what we think we're entitled to we can make a further request either upon the Government, or if that doesn't work, upon the Court.

And then at a time after that, convenient with the

Court's schedule, we have to pick up where we're leaving off at this hearing. And we've all spoken; and, of course, it's totally up to the Court. If that necessitates a continuance of the trial, then so be it. We need to get this done.

So that's kind of as best we could, covering all the issues that we have any control over.

THE COURT: Mr. Baker, I have a question for defense -- for the defense counsel; and it may be that in answering this question you need to confer with your colleagues. And let me start with a predicate before I ask the question: There seems to be some confusion here between what the purposes of this hearing are and general discovery. And, in fact, that was one of the problems that became apparent when Mr. Edelman was stating what his client's position was.

Is it the defense's position that you want to proceed with this hearing based on the record that's been made without reference to the DEA regulations?

MR. BAKER: May I -- I'm sorry.

THE COURT: Hold on -- but that you want discovery for purposes of trial, or is it that you want to proceed with regard to this hearing without regard to the DEA regulations and you don't need any discovery for purposes of trial?

MR. BAKER: Just so I'm clear -- and I think we definitely do need to consult -- does this go back to the statement that the Court made prior to the recess, which was to

the effect that the Court would not consider compliance with DEA regulations?

THE COURT: Yes, sir.

MR. BAKER: And then the Court -- that ruling of the Court is still in place.

THE COURT: What I said was that the Government could either give the defense the DEA regulations, to which Ms. Irby said -- with which Ms. Irby said she complied, or I wouldn't consider her compliance with those regulations in determining whether her methodology was reliable.

And let me share my reasoning with everyone so that you know where I'm coming from. This has to do -- this hearing has to do with reliability of methodology. Standards or regulations are a shorthand for describing methodology. And if you comply with those, you're essentially saying, I did all the things that the standards and the regulations require.

Now, if the defense and the Court doesn't know what those standards and regulations are, then compliance with them is absolutely meaningless for purposes of determining the reliability of the methodology. Instead, the reliability of the methodology would hinge upon only the evidence that was presented here in the courtroom by Ms. Irby as to what she did and whether that was a reliable methodology.

The analogy is like this: If I were to say that I considered all of the objectives and factors in 18 U.S.C.

Section 3553(a) in imposing sentence but you didn't know what those objectives and factors were, my reference to that would be meaningless.

So where we left this at the end of the morning session was at the place of the DEA -- Government saying that the DEA would not supply its regulations and standards. And the way we left it was that if they were not going to supply that, then I would not consider the compliance with those regulations and standards as being evidence of reliability of methodology.

When you all came back, the train was on a different track.

MR. BAKER: Right. We were told that they were now going to supply those.

THE COURT: Or some of those.

MR. BAKER: Yes. Yeah. We don't know exactly what.

THE COURT: And so then as I saw it, Mr. Edelman was talking about discovery and the need for this information for purposes of trial.

Today's hearing is 702 hearing, and I'm only looking at the reliability of the methodology used by Ms. Irby in testing what she tested, not looking at discovery. I'm not looking at whether it's persuasive opinion. I'm not looking at chain of custody. I'm not looking at what arguments you may want to make at trial. I'm only determining the reliability of

the methodology used by Ms. Irby with regard to the opinions that were produced from that methodology.

So I need to know whether you want to proceed with this hearing with me not looking at compliance with the DEA regs and standards, or whether -- and whether you need this information for discovery purposes for trial, or whether you don't want to proceed with this hearing because you need this information in order to proceed, whatever regs and standards the Government is interested in supplying.

MR. BAKER: I think our confusion, your Honor -- at least my personal confusion, and I'll consult with everybody before stating any position -- came from the fact that the Government was now agreeing to offer us something and as a result we were under the impression that the Court's earlier comments about not considering that was no longer applicable. But maybe I have misunderstood that.

THE COURT: I didn't say anything with regard to that.

MR. BAKER: I know that. And so we sort of added 2 plus 2 and came up with 5, which is why most of us aren't good at chemistry, I suppose.

THE COURT: No, we went to law school because we weren't.

MR. BAKER: Yeah, exactly. So maybe we should consult. If you'll give us a couple of minutes for the defense to consult, because I'm certainly not in any position to speak

for --

THE COURT: We'll take another recess; but I need to know what your position is with regard to the limited scope of this hearing.

MR. BAKER: We understand what that scope is, your Honor. And we understand -- it's been our intention to seek only those documents -- and whether the term "discovery" was used or not -- was to seek only those documents that were applicable to the scope of this hearing, not stuff generally applicable to the expert opinion at trial.

THE COURT: And please keep in mind that we really only for purposes of this afternoon's proceedings have about an hour left. So we'll stand in brief recess.

(Recess at 2:34 p.m.)

(Reconvened at 2:40 p.m.)

THE COURT: Please be seated.

Mr. Baker? I think you're the last person to -- who spoke on behalf of the defense counsel.

MR. BAKER: The group has met, your Honor. And based on the Court -- our understanding of the Court's position, we would like to proceed with the hearing today with the understanding that the DEA material would not be considered by the Court.

THE COURT: Okay. Then what's what we will do.

MR. BOMA: Your Honor, if the Government might be

heard briefly.

THE COURT: Sure.

MR. BOMA: Your Honor, it's the Government's position until the Court made that ruling right before lunch that without the production of the written methodologies the Court would not consider references to those documents made by the witness -- the Government thinks there is a middle ground.

Ms. Irby has testified that she is familiar with those documents and has set forth the procedures that she followed in conformity with those documents referenced. So the Government would submit that she's knowledgeable as an expert in the area of the DEA's procedures and their methodologies. She's been a chemist there for eight years and has examined 2300 -- over 2300 controlled substance exhibits.

So we would conclude that she's authorized as part of her expert testimony, if you will, to refer to documents that she's familiar with. And in some cases she testified that she has the different methodologies that she went through and the confirming tests and the other tests -- she has them committed to memory because she's done, for instance, 700-plus methamphetamine exhibits.

So that would be our opening position.

The alternative position would be that the Government does intend to rely upon the methodology employed by the DEA in general and by Ms. Irby in particular in conducting the

analyses that she did on the controlled substance exhibits in this case.

So in the alternative, we would seek a brief continuance, have the opportunity to provide the documented materials, and seek leave to file them with the Court under the appropriate protective order. And if the Court were to agree to disclosure, we would still seek the protective order Mr. Baker had earlier referenced: no copying, no dissemination of the documents, no disclosure beyond Counsel and identified retained experts, and their return at the conclusion of the F.R.E. 702 hearing.

So those would be the Government's positions, because we think we have ample testimony from a knowledgeable expert who works daily, if you will, with those DEA methodologies and is intimately familiar with the tests that she conducted and their conformity with DEA procedures, standard procedures, methodologies, and the other requirements imposed by SWGDRUG and the other entities cited.

So we're making an argument in the alternative, your Honor.

THE COURT: Thank you.

We'll proceed with the hearing, and the Court will consider the testimony of Ms. Irby as to what she did. The Court will regard that testimony as being a description based upon her experience and her testimony that this comports with

industry or discipline standards.

The Court will totally disregard that this testing was done by the DEA. This will be just as if the testing was done by some private organization or private lab and Ms. Irby performed the testing in accordance with the methodology that she described. In that way, the Court disregards any rules, regulations, or standards that the DEA might have imposed and will rely upon the expertise and description and testimony that Ms. Irby has given as to the methodology she used.

Is there any further cross-examination that any of the defense counsel wish to engage in?

MR. EDELMAN: None from Beltran, your Honor.

MR. DRISCOLL: None from Pelayo, your Honor.

MR. GOLLA: None from Mr. Meza Torres, your Honor.

MR. BAKER: None from Mr. Gomez Paz, your Honor.

MR. BROWN: None from Mr. Celaya.

THE COURT: Do you care to recall Ms. Irby for redirect?

MR. BOMA: Yes, your Honor. If I might have just a moment.

THE COURT: Ms. Irby please step up. You remain under oath.

REDIRECT EXAMINATION

BY MR. BOMA:

Q. Ms. Irby, utilizing the confirmatory tests that you

testified to earlier -- and I believe there were four of those --

A. Confirmatory. One, two -- there were three confirmatory tests.

Q. All right. And there were two separation or other types of tests along with the presumptive test?

A. If I could go through all of the tests, it would be easier.

Marquis is presumptive.

GC mass spec. is confirmatory. That does have that separation technique.

IR --

MR. EDELMAN: Your Honor, this is going over testimony I think that was already elicited by this witness; so I know you indicated that the Rules of Evidence might not apply, but I think it's a waste of time.

THE COURT: Response?

MR. BOMA: Your Honor, I'd just like her -- I have a question relating to the confirmatory tests; and I believe what the witness is trying to do is just ensure that she's talking about confirmatory as opposed to other tests, presumptive tests.

THE COURT: That's fine. I'll allow her to answer.

BY MR. BOMA:

Q. Could you start over with the Marquis?

A. Okay. Marquis is the first test, and that was presumptive.

The second test was GCMS, which is a confirmatory test.

Then I did infrared spectroscopy, the ATR, which is a confirmatory test.

Then I did GC, which is a presumptive test; however, in this case, it was able to tell me which isomers I had.

The -- I did GCIRD, which is a confirmatory test.

And then I did HPLC, which is a presumptive test that I utilized to get the purity.

Q. All right. And utilizing the three, then, confirmatory tests -- is that correct?

A. Yes.

Q. I just want to make sure the record is correct that you did -- Could you, in fact, determine the structure of the controlled substance based on the data alone without the use of controls or other means?

A. Yes. The science of that is sound of the spectra that you get from those. When the sample is fragmented, those fragments, you are able to put those back together and tell you what your molecule is.

Q. All right. So even without the use of, well, blanks you would have used, as you stated; but in terms of a control standard or known, you wouldn't necessarily have to use those?

A. That's correct. The science is the same whether the quality assurance is there or not. The science of the

technique is there.
Q. All right. So the use of the standard would be for quality assurance purposes?
A. Yes.
Q. And is that basically a way for you to check your own work? If you were doing a math problem, you'd check it at the end and make sure you're correct?
A. Yes.
Q. Except you're doing it simultaneously, I take it?
A. Correct.
Q. All right. And to go back to the SWGDRUG, could you say what that acronym stands for one more time, please.
A. The Scientific Working Group for the Analysis of Seized Drugs.
Q. All right. And they have -- they have standards that they promulgate?
A. They're an internationally recognized entity that gives recommendations to the community that is analyzing seized drugs.
Q. Is that open source? In other words, is that publicly available information --
A. Yes.
Q. -- on SWGDRUG?
So if someone wanted to see what those were, they could pull up a website somewhere and find those?

A. Yes.
Q. All right. In your testing that you did, first of all, how many tests, confirming tests or other tests, does SWGDRUG require?
A. SWGDRUG requires two, one confirmatory and one presumptive.
Q. In this case, you had three confirmatory?
A. Three confirmatory, yes.
Q. And one presumptive and the other two were the quantitation and I believe the isomer determination? Is that accurate?
A. That's correct.
MR. BOMA: Your Honor, if I might have a moment.
THE COURT: Sure.
MR. BOMA: No further questions.
Thank you, ma'am.
We'd ask that Ms. Irby be allowed to step down and remain in the courtroom at counsel table.
THE COURT: Thank you. You may step down.
Further witnesses?
MR. BOMA: Yes, your Honor.
MS. MAGNELLI: Your Honor, we call Scott Oulton.
THE COURT: Please step up and be sworn.
(**Scott Oulton** was sworn.)
THE COURTROOM DEPUTY: Please be seated.
Please state your name and spell your first and last name for the record.

THE WITNESS: My name is Scott Oulton. My last name is spelled O-U-L-T-O-N.

DIRECT EXAMINATION

BY MS. MAGNELLI:

Q. Sir, if I might, where are you currently employed?

A. I'm currently employed for the Department of Justice Drug Enforcement Administration at the DEA headquarters in Washington, D.C.

Q. What is your position there?

A. My current position is Associate Deputy Assistant Administrator.

Q. Okay, sir. I'm going to back up a little bit so we can give context to your testimony today.

Can you tell us a little bit about your education?

A. Yes. I have a bachelor of science degree in chemistry with an emphasis in criminalistics from Northern Arizona University.

Q. And after college, did you go straight to work for DEA?

A. I did.

Q. Okay. And where did -- what did you start out doing?

A. I started out actually as a cooperative education student with our college and DEA. And once I completed my coursework and received my degree, I started as a forensic chemist with the Drug Enforcement Administration in 1991.

Q. How many years were you working -- Well, can you tell us what "on the bench" means?

A. Yes. Once I completed the in-house training program and all the programs that teach me how to do that job, I then was placed on the bench, analyzing controlled substances.

Q. What does being "on the bench" mean?

A. "On the bench" is competency-tested; I've been proficiency-tested, I completed the -- I successfully completed the training program in order to be able to analyze controlled substances.

Q. And actually, is "on the bench" a reference to the long table you do the analysis on? Is that what, quote/unquote, "on the bench" means?

A. That is correct.

Q. So when you use that term, that's what you mean?

A. Yes.

Q. And did you find you had a specialty when you were on the bench?

A. I did. I enjoyed using -- investigating clandestine laboratories; so I tried to do a lot of those types of investigations as a chemist particularly in methamphetamine. So during that period of time, I participated in many clandestine laboratories regarding methamphetamine, in which case I've also authored several papers regarding those types of analyses and how to identify methamphetamine, things like that.

Q. And, sir, have you, yourself, tested methamphetamine?

A. Yes, I have.

Q. Do you have any idea how many times?
A. I have analyzed methamphetamine approximately 1,000 times.
Q. And that means identifying a substance to contain methamphetamine?
A. That is correct.
Q. And that would be the primary substance that came out as a result, as opposed to secondary?
A. That's correct.
Q. Okay. Now, you've heard the Court's ruling today; correct?
A. Yes, I have.
Q. Now -- so I'm not going to get into DEA protocols; however I'm going to get into our training a little bit because I think that's informative.

Are you familiar with the training criteria at DEA?

A. Yes, I am.
Q. Can you tell us about the hiring and the training criteria, please.
A. Sure. The hiring process begins with an advertisement, of course; and we bring in the best-qualified list. We examine them and we look for specifics. So they have to have a bachelor of science degree, for example; and they have to have certain attributes. And once we go through that process, we would hire them.

We place them into an internal training program, regardless if they've had experience outside or not. We put

them through a training program which is very intensive. It can take upwards of six to nine months in some cases, depending upon what level that they come in on.

And once they've completed that proficiency training or that training program, they are competency tested, they're proficiency tested, they're certified and, in essence, by the laboratory to conduct analysis on controlled substances.

Q. Just to clarify, when you say bachelor of science, what you mean is a degree from a four-year university or college?

A. Yes, it would be a baccalaureate, a bachelor's degree --

Q. Whether it's science or art?

THE REPORTER: Excuse me. You're both speaking at the same time.

MS. MAGNELLI: Apologies.

THE WITNESS: Yes, that would be a bachelor's degree in science or arts.

MR. EDELMAN: Judge, I'm going to object at this time as to the relevancy of training and education. I think I said on the basis of relevancy -- on the basis relevancy. And I think Mr. Boma was given an opportunity to object as to relevancy to this proceeding. And also because it may go to their procedures and protocols about how they hire somebody, which you've indicated you're not going to consider.

THE COURT: Thank you.

Response?

MS. MAGNELLI: Your Honor, we're not talking about the policies and procedures of the methodology Ms. Irby employed; however, any chemist training, I would submit, is important to this hearing. And Mr. Oulton can tell you more about the training criteria at DEA. And even if you take out the acronym "DEA," this is the training program that Ms. Irby went through. For that reason --

THE COURT: Ms. Irby has testified to what her training and expertise is. How does this witness' testimony add to that?

MS. MAGNELLI: Because he can expand on that program.

THE COURT: Why is that relevant? She's testified as to what her expertise is.

MS. MAGNELLI: I can move on, your Honor.

THE COURT: All right.

BY MS. MAGNELLI:

Q. Sir, do you belong to any professional associations?

A. I do.

Q. Such as?

A. I belong to several. I belong to the American Society of Crime Laboratory Directors, ASCLD. I belong as a delegate assembly member to the American Society of Crime Laboratory Directors Laboratory Accreditation Board, ASCLD/LAB. I belong to ASTM, which stands for the American Society of Testing and Materials. I belong to SWGDRUG, which stands for the

Scientific Working Group of the Analysis of Seized Drugs -- for the Analysis of Seized Drugs. I also belong to the ENFSI Drugs Working Group, which stands for the European Network Forensic Science Institutes Drugs Working Group.

MR. DRISCOLL: Objection, your Honor. Relevance of the witness. Unless this witness examined the drugs, I think he's irrelevant to these proceedings regarding 702; so I would object to the testimony of the witness in its entirety unless, of course, he's examined the substance in Exhibit 101 or 102.

THE COURT: Response?

MS. MAGNELLI: Your Honor, I do believe Mr. Oulton's testimony is relevant. The Government's standard is, granted, preponderance of the evidence; but if the Government is to meet that standard or is to be sure to meet that standard, I think the Court is entitled to all the information it can have in terms of -- for example, there was cross-examination about the appeals process for ASCLD/LAB, which Ms. Irby didn't have specific knowledge of, although she knew she turned some documents over. Mr. Oulton can fill in those gaps.

THE COURT: Why is that relevant?

MS. MAGNELLI: Your Honor, it was a sore subject of cross-examination in terms of the accreditation process. And I understand that the Court has sort of thrown out DEA protocols.

Mr. Oulton can also talk about SWGDRUG recommendations. He can talk to all manner of the science and

the methodology, having been a forensic chemist himself.

THE COURT: Why don't you make a proffer as to what this witness would testify to relative to the methodology that was used by Ms. Irby, whether it was reliable and whether it was reliably applied.

MS. MAGNELLI: Your Honor, if I may have a moment --

THE COURT: Uh-huh.

MS. MAGNELLI: Mr. Oulton is not only the chair of SWGDRUG, he also is a forensic chemist, has been for years. He can tell this court, he can tell -- he can take Attachment 2, which is all the lab work of Ms. Irby, and he can reconstruct those tests, he can replicate them, he can tell the Court that the science, the actual disrupting of a molecule's energy state causing it to burst and measure the fragmentation is a science that has been around for a hundred years. And the instrumental technique that was used, say the GCMS, or what have you, that is a technology. It involves. The science, the methodology at question is proven; it is reliable. These particular -- and that's the overall scope. The method is reliable. Science -- It is the science.

He would be able to say, looking at Ms. Irby's results, I know exactly what she did, I can read these results, and a competent examiner should be able to replicate them. And he can tell the Court that the methods she applied from a scientific point of view are reliable. He can tell you that

there are facts and data upon which to form an opinion, and he can talk about the science as well.

THE COURT: All right. Then why don't you limit your inquiry to his qualifications to do that and those opinions.

BY MS. MAGNELLI:

Q. Sir, do you have before you Ms. Irby's declaration?

MS. MAGNELLI: I apologize to the Court. I don't know what document number that is.

MR. BOMA: Your Honor, if I might assist, 162-1 is the declaration itself; and it has three attachments.

THE WITNESS: Yes, I do.

MR. BOMA: And they've already been described on the record.

THE COURT: And there are copies of that up on the witness stand; right?

MS. MAGNELLI: Yes, your Honor.

BY MS. MAGNELLI:

Q. Mr. Oulton, do you have a copy of Document 162-1?

A. Yes, I do.

Q. And can you turn to Attachment 2, which I believe is -- starts -- it actually says Attachment 2. Page 15, sir.

A. Yes.

Q. Okay. And have you seen this packet? When I mean "packet," I'm talking just about Attachment 2. Okay. Have you seen this packet?

A. Yes, I have.
Q. Can you describe what that is?
A. This packet contains the laboratory report issued by Ms. Shana Irby with accompanying DEA 7, which is a form that was submitted, in addition to handwritten notes, observations, analytical data, and so on.
Q. Okay. And let's look at the first few pages. Is that sort of a narrative, a step-by-step, if you will, of what happened?
A. Yes. The entire thing actually is a narrative that shows all of the tests that were performed, what was done, and where it went and what the conclusions were.
Q. All right. Now, sir, you've testified that you've been a forensic chemist since 1991; is that correct?
A. Correct.
Q. And you have seen these types of lab reports and data before?
A. Yes, I have.
Q. And have you seen those both because you've generated them and you've reviewed them?
A. I have generated them, I've reviewed them, and approved them, yes.
Q. And approved them. Okay.

Now, sir, what can you tell me from that first page of that attachment? What do you interpret from that page?

A. The first page being page 16?

Just for clarification, page 16?

Q. I believe so.

A. Okay. This is the laboratory report in which Ms. Irby stated her conclusions of what she's identified and the percentages, the weights corresponding to the specific exhibits.

Q. If you would turn to page 17.

Actually now that I have a copy of the document, page 19, please.

A. Yes. Page 19 is Ms. Irby's worksheet, in which she documented and recorded all of her tests that she performed or the description of the evidence as she received it, a summary of her results as she concluded them, and what she did with the evidence when she was done. And she signed it and dated it. And it also shows that it was technically reviewed by one of the supervisors.

Q. I see. And gleaning from pages 19 and 20 -- or reading them -- actually 19, 20, and -- 21, can you discern what tests she ran?

A. Yes. It's extremely detailed to show all of the tests that were performed, how she approached her analysis, what she did to make her sample, what she did to test each one of her samples, and her conclusions.

Q. And is this series of tests considered an analytical scheme?

A. Yes.
Q. When you look through these pages, are you able to interpret that data?
A. Yes, I am.
Q. When you look through this attachment, are you able to discern the methods, the scientific methods that Ms. Irby applied?
A. Yes, I am.
Q. Can you explain some of those?
A. Yes. She's employed several scientific methods. She's utilized, in fact, mass spectrometry. She's used or utilized infrared spectrophotometry, gas chromatography, HPLC or liquid chromatography. She's employed -- included quite a few, a number of tests.
Q. And are you familiar with all these tests?
A. Yes, I am.
Q. Have you used all these tests?
A. Yes I have.
Q. So you are familiar with the data that comes out of these tests; is that right?
A. Yes, I am.
Q. What is the science behind these tests?
A. The science, as we've discussed before, has been around for a long time, a hundred years in some cases. Infrared spectrophotometry and mass spectroscopy: These techniques are

very reliable in the world of science. In fact, as a chemist, this is how we -- Our core structure is based off of these types of techniques.

And this expands well beyond drug chemistry into other fields, into pharmaceuticals and pesticides and testing foods, in some instances. So this science, the science that's employed, has been determined reliable time and time and time again. It's actually standed [*sic*] the test of time.

Q. Tell me about the science behind the GCMS.

A. The GCMS: The way that the science works is that essentially the sample is introduced into the mass spectrometer, is what we're calling it. And as you described earlier, it sort of bursts the molecule into pieces; and those pieces are measured and detected at some capacity.

And the unique part about mass spectrometry is that it actually reassembles -- it breaks apart the same way every time. So it gives us what we would like to call, for example, a fingerprint. So that spectra that is produced is unique to methamphetamine. It is specific. It shows us that it only breaks apart the same way, as in most of these techniques, such as infrared -- is exactly same way, where the science hasn't changed. An infrared that was done 20 years ago of methamphetamine would be the same infrared spectrum of methamphetamine today.

Q. And what is the science behind the infrared?

A. Infrared, for example, would be something like, as an analogy, shining a light through the sample and measuring how much that is absorbing and letting the light through. And again, this science is actually -- tells us core structure information. It tells us what the molecule is in some -- it tells us that it's got an amine group, it's a carbon attached a hydrogen. It tells us the core structure of the molecule.

In fact, it is so unique that there is no other structure that has the same structure as methamphetamine or the spectrum of methamphetamine, for instance.

Q. Okay. And so this science: Before we had all these machines, what were scientists doing to measure these fragments?

MR. EDELMAN: Objection, your Honor. I don't think that's -- relevancy as to what the science a hundred years ago did.

THE COURT: Well, actually the question is vague and ambiguous. "Before we had all these machines," machines that were developed at different times, "what were scientists doing to measure these fragments?"

And we're talking about fragments of what?

MS. MAGNELLI: I can be more specific.

BY MS. MAGNELLI:

Q. Mr. Oulton, these instruments you've just referenced: Was science able to detect and identify drugs before these

instruments existed?

A. Yes.

Q. And is that by the application of the science?

A. Yes. There are various sciences that were used to identify drugs before this stuff existed.

Now, for example, one of the discussions was even -- was the crystal test. It's an old science. It's been around for quite some time. And it is, in some capacity, with a trained forensic chemist -- would be able to use that test to indicate the presence of methamphetamine, for example.

Q. But the technology evolves; is that right?

A. Yes. The technology has evolved. Even in my experience 20, 21 years ago as a forensic chemist, the mass spectrometer, for example, took up the entire room. The resolution, the preciseness of the equipment, wasn't as good as it is today; but it still resulted in a mass spectrum, it still resulted in the same mass spectrum. But now those instruments as we find them in laboratories today, are actually -- are bench-top. They are small enough -- size of a computer, in some instances.

Q. Sir, looking Attachment 2, you've already testified you can interpret that data. Would you consider that a standalone packet?

A. Absolutely.

Q. Why?

A. This -- this packet contains all detailed information on

how the analyst approached their analysis, the description of what it looked like, how they tested each individual unit, confirmed the presence of each individual unit, formed a composite, and then continued to test it and test it and test it, all of which showed the presence of methamphetamine.

Q. And, sir, based on your knowledge, training, and experience, could you replicate what Ms. Irby did in this case?

A. Absolutely. I can reconstruct all the tests that she performed. I can look through the data and examine the data for accuracy, compare it to literature values that show what a mass spectrum would look like. I can compare the infrared spectrum to literature, to show what it looks like. And I can do all of that right here to show that without a doubt, this substance contained methamphetamine.

Q. When looking at that data, can you make any interpretation as to whether those -- the science was reliably applied to this substance?

A. Yes.

Q. And how can you do that?

A. Primarily from my experience with SWGDRUG. As the chair of the Scientific Working Group for the Analysis of Seized Drugs, we recommend standards to the forensic science community on how to analyze drugs. We have recommended, for example, in SWGDRUG lingo, language that two tests is sufficient to identify a drug.

In this case, just looking at this particular work, there are six tests. All six tests confirm the presence of methamphetamine; so as far as SWGDRUG is concerned, it was -- this test was met at the second step, at the second test. In fact, this is three times what is required to identify a drug according to SWGDRUG, according to international recommendations.

Q. Now, you just testified that SWGDRUG recommends two tests; is that right?

A. That's correct.

Q. In your -- in your professional associations, have you had occasion to look at lab results from other labs?

A. Yes, I have.

Q. And can you tell this court whether or not any other lab ever stops at two tests, the recommended SWGDRUG requirement?

MR. EDELMAN: Objection. Not relevant.

THE COURT: Overruled.

BY MS. MAGNELLI:

Q. Please answer the question.

A. Through my experience with ASCLD/LAB, I serve as a board member on their board. And part of our duties is to assess these laboratories. And part of my duties is reviewing work from many, many different laboratories so we can make accreditation decisions.

And in that, I have seen numerous times, not only that

with my experience with SWGDRUG and just in forensic community itself -- I attend meetings, Academy of Forensic Science meetings, and things like that. And with all that, it is predominantly through my experience and my discussions and everything else -- predominantly most, especially state laboratories, would stop at that second test.

Q. And that would meet SWGDRUG recommendations?

A. Yes, SWGDRUG sets minimum recommendations, and that is two. And they would stop.

Q. And the method, the science, you've testified is well-tested; is that right?

A. Correct.

Q. Peer-reviewed; correct?

A. That's correct.

Q. The instrumental techniques themselves: Are they well-accepted in the scientific community?

A. Yes, they are.

Q. In fact, is GCMS known as anything in particular?

A. I'm sorry. I didn't hear you.

Q. GCMS: How is that viewed by the scientific community?

A. It is predominantly used as the most commonly used instrument in forensic drug chemistry.

Q. And that's based on your knowledge, training, and experience and all of that combined; correct?

A. That's correct.

MS. MAGNELLI: Court's indulgence.

BY MS. MAGNELLI:

Q. And I don't want to belabor the point. I know we're running short on time. IRATR, the GCFID, all of the other tests that have been testified to extensively today -- how are those recognized in the scientific community?

A. All of those tests are recognized as qualitative tests that are highly discriminatory. And what SWGDRUG would say is they would fall under what we call Category A, which means it's the highest discriminating power. And those are all confirmatory tests showing conclusively that the product contained a certain material.

Q. And we're not talking about -- When you were talking just then, you weren't including the Marquis color test; is that correct?

A. That's correct.

Q. And the Marquis color test: What's its purpose?

A. The Marquis color test would be -- it is a presumptive test. It does give us an indication of the class of compounds and gives the analyst, a trained analyst, direction in which way to go next. Maybe if it's it a phenethylamine, if it's a barbiturate, if it's a heroin, or something like that. We would be able to get an idea up front so that they could work within the confines of the -- of maybe their procedures or certainly the international recommendations on how to proceed

with their analytical scheme, how to get to the answer at the end.

Q. And are you familiar with the -- a method parameter?

A. Yes.

Q. And the United Nations on -- I always forget what that stands for?

A. United Nations Office of Drugs and Crime, I believe.

Q. Thank you. I believe that's correct. United Nations Office on Drugs and Crime: They publish papers; correct?

A. They do.

Q. And they published recommended parameters; is that right?

MR. DRISCOLL: Objection. Relevance. None of the United Nations standards were referred to by the initial witness, nor are they relevant to these proceedings.

THE COURT: Response?

MS. MAGNELLI: Your Honor, if there are international or other standards out there, I think that is relevant.

THE COURT: Was this something that the witness originally based her opinion on, compliance with these particular regs or standards?

MS. MAGNELLI: Your Honor, this is -- this is an area the defense expert brought up in her criticisms of Ms. Irby's methods; so it has been brought up in that context before. And the point of the testimony is to show that the method parameters, which have been accepted, are acceptable under

these United Nations documents that have been referenced by the defense expert.

THE COURT: I'll allow the witness to answer.

BY MS. MAGNELLI:

Q. Sir, are you familiar with their publications?

A. Yes, I am.

Q. Okay. And have you had occasion to look at their method parameters for various instruments?

A. Yes, I have.

Q. And you know the method parameters that Ms. Irby used in this case; is that correct?

A. That's correct.

Q. In fact, they're right in that packet, aren't they?

A. It's all contained within this packet.

Q. And how do Ms. Irby's parameters compare to the United Nations documents cited by the defense in this case?

A. In my opinion, it certainly is met, everything that I've read in that document.

Q. So the actual method parameters, the ranges of what you set an instrument at or how you measure the liquid -- is that correct?

A. That's correct. You know, they had set out certain parameters. Let's say, for example, anywhere from 200 degrees to 280 degrees. And the method that she employed was 260, for example. So, yes, I have actually taken a look at that, and

she has met all of those for that particular one alone, yes.
Q. And in your opinion, does that also go to the reliability of her application of those instrumental techniques in this case?
A. Absolutely, yes.
MS. MAGNELLI: Court's indulgence.
BY MS. MAGNELLI:
Q. Actually, sir, I think you've already testified about this: You said testified that you could pull reference standards from literature in the public realm and use them with Ms. Irby's data that she's presented there?
A. That's correct.
Q. In fact, they're in science journals?
A. They're published, as I think Ms. Irby testified to, in thousands of article on drugs and what the infrared spectrum looks like and mass spectrometry. And like I said myself that I've even published five articles about particularly clandestine laboratory manufacture of methamphetamine.
Q. And everything that you've seen in that Attachment 2: Based on those standards, can you tell whether or not Ms. Irby ran her tests, applied the methods reliably?
A. Yes, I can. And I would say that she did apply the methodology reliably and formed the correct conclusion.
MS. MAGNELLI: Nothing further at this time, your Honor.

THE COURT: Thank you.

We'll begin cross-examination, but we'll have to recess at 3:30; so at that point, we'll reset the remainder of this hearing. I'll ask you to all have your calendars available so that we can continue it.

MR. EDELMAN: I'm sorry. Will I be able to cross?

THE COURT: Right now.

MR. EDELMAN: Oh, this very moment.

THE COURT: No, that's what I just said.

MR. EDELMAN: I'm sorry. Thank you. I was confused.

CROSS-EXAMINATION

BY MR. EDELMAN:

Q. Mr. Oulton, do you know a William Moriwaki?

A. Yes, I do.

Q. He is the supervisory chemist for the DEA Western Laboratory in San Francisco; is that correct?

A. He is one of the supervisory chemists.

Q. Okay. And are you familiar with him signing a document, a Document 91-2, filed on March 11, 2011, in this case?

A. Is that up here?

Q. Well, I just want to know if you're aware of it?

A. You have to refer -- what was the content?

Q. Did you review the documents that have been filed in this case before you came to testify today?

A. I did have a chance to review them, yes.

Q. Okay. And does -- Tell me the qualifications or if you regard Mr. Moriwaki's opinion and knowledge of the way the Western Regional Laboratory operates --

MR. BOMA: Objection. Relevance.

THE COURT: Response?

MR. EDELMAN: If the Court will give me some leeway, I will tie up the relevance.

THE COURT: I'd like a proffer.

MR. EDELMAN: Mr. Moriwaki signed a document on 3-11, 2011, filed in this case that states the other documents listed -- this is on page 9 of Exhibit 4, your Honor, in my exhibits. He states in the middle of his paragraph -- last paragraph on that page, or second-to-last paragraph, "The other documents listed by Ms. Arvizu --" and this is a response to Ms. Arvizu's comments that I think Mr. Oulton testified to "-- are international laboratory accreditation --"

MR. BOMA: Your Honor, I'm going to object because this is obviously referring to the previous hearing regarding Forensic Chemist Chan. And Mr. Oulton didn't refer to that, and I just heard him testify.

MR. EDELMAN: Can I finish, your Honor?

THE COURT: No. Mr. Edelman, I want to know what your proffer is, not to read the document to me. But why is this relevant.

MR. EDELMAN: Because Mr. Moriwaki says while there

are Scientific Working -- the SWGDRUG standards exist, this laboratory, the DEA Western Laboratory, follows ASCLD/LAB ISO/IEC 17025 requirements. So all the testimony about SWGDRUG is not relevant because the lab doesn't use them or apply them or rely upon them.

THE COURT: All right. I'm going to sustain the objection as to relevance, because again you're focused on a particular laboratory and a particular -- and DEA. And we're not looking at that right now. We're looking at the methodology that Ms. Irby used, so please move on.

MR. EDELMAN: Thank you.

BY MR. EDELMAN:

Q. Have you reviewed Ms. Irby's personal methodology and procedures manual. Not the DEA's; her own?

A. I don't understand. Does she have a personal -- what do you mean?

Q. That's what I'm asking you. Have you reviewed her personal methodologies and procedures manual?

A. I have reviewed --

Q. Yes or no, sir.

MS. MAGNELLI: Objection, your Honor. Relevance. She's never testified she had a personal methodology.

THE COURT: It assumes facts not in evidence.

You may proceed, but please reframe your question.

MR. EDELMAN: Thank you.

BY MR. EDELMAN:

Q. Are you aware if Ms. Irby has a personal procedures and methodology manual?

A. Am I aware?

Q. Yes.

A. No.

Q. Does she have one?

A. I'm not aware if she has one.

Q. Okay. And do the SWGDRUG and ASCLD/LAB requirements require the technician, the laboratory chemist, to use a procedures and methodology manual?

A. Could you rephrase the question?

Q. Do SWGDRUG or ASCLD/LAB require that the chemist use a procedures and methodology manual?

A. Under the -- yeah, SWGDRUG would have recommendations --

Q. Yes. The answer is yes?

A. I'd have to clarify.

MS. MAGNELLI: If he would let the witness answer the question.

THE COURT: Thank you.

Mr. Edelman, would you let the witness answer the question.

MR. EDELMAN: Certainly, your Honor. Thank you.

THE WITNESS: SWGDRUG recommendations would have criteria that says that you should have policies and

procedures, of course, to follow. The laboratory needs to have policies an procedures.

ASCLD/LAB would have standards that they would accredit laboratories to, and they would expect to see policies and procedures.

MR. EDELMAN: I have nothing else, your Honor. Thank you.

THE COURT: Thank you.

Is there any other defense attorney who wants to cross-examine this witness?

MR. BROWN: Yes, your Honor.

THE COURT: Okay.

CROSS-EXAMINATION

BY MR. BROWN:

Q. Good afternoon, Mr. Oulton.

A. Good afternoon.

Q. Have you ever participated in an ASCLD or a SWGDRUG inspection of a DEA lab on behalf of either ASCLD or SWGDRUG?

A. No, I have not.

Q. And that would be somewhat inappropriate for you to do in the capacity -- since you're currently employed by the DEA?

A. In my capacity as an ASCLD/LAB board member, I have to recuse myself from any decisions, accreditation decisions regarding Department of Justice laboratories, the DEA laboratories, all that. I have to recuse myself from any of

those decisions.

However, in my position of Associate Deputy Assistant Administrator, I do utilize SWGDRUG recommendations to establish policies for our forensic chemists.

Q. So to use a legal phrase, to some degree -- and if you're unfamiliar with the phrase, I'll be more specific -- it would be somewhat of a conflict of interest for you on behalf of SWGDRUG to be inspecting the DEA lab?

A. SWGDRUG does not have any enforcement end of it. It does not do any assessments. That body is a scientific working group that recommends standards on how to analyze seized drugs. So we bring in 20 scientists from across the world and we write standards and come up with recommendations. And we go out and post it on our website for the forensic science community.

Q. But as far as ASCLD, you would agree that would present a conflict of interest?

A. Yeah. As an ASCLD/LAB board member, I would not be allowed to participate in any accreditation decisions regarding a DOJ or DEA laboratory.

Q. Are you generally familiar with the way in which an ASCLD/LAB inspection occurs?

A. Yes, I am.

Q. And you were present when we discussed kind of the recertification that occurred -- I think it was February of 2010, of the Western Regional Lab?

A. Yes, I was.
Q. You heard the line of questioning that I asked regarding the review of particular lab testing and results that would occur, when Ms. Irby testified?
A. Yes, I am.
Q. Would you degree that it would be a misstatement for Ms. Irby to have made regarding the fact that ASCLD would likely review basically each and every lab report that's generated within the regular course of business at the DEA lab?
A. I don't recall what she testified to; but ASCLD/LAB would look at all of the policies and procedures in that laboratory when they do an accreditation, and they would select on average of about five pieces of evidence to be reviewed from a technical assessor to determine if the testing was done in accordance with the procedures.
Q. So the five particular tests would be over the duration that either that employee had worked at the lab or since the last certification occurred?
A. They do -- within the last certification. Exactly.
Q. So we would expect on average that a DEA chemist would do hundreds of examinations between certifications and only really a very small few would be reviewed by ASCLD?
A. That's a key auditing function. There is not enough time to review all the records, so they would take a snapshot, and they get indications on if there is any particular issues.

Q. You've never personally worked with Ms. Irby?

A. I have not. She works in the Western Laboratory. I've never worked there.

MR. BROWN: Thank you. I have no further questions.

THE COURT: Thank you.

MR. DRISCOLL: May I, your Honor?

THE COURT: Yeah. We've just got a couple of minutes.

MR. DRISCOLL: It will only take a couple.

CROSS-EXAMINATION

BY MR. DRISCOLL:

Q. Mr. Oulton, good afternoon.

Sir, you referred to and examined pages 19, 20, and 21 of the exhibit that's before you. And I think you called a freestanding document, self-supporting document?

A. This entire packet is a self-supporting document.

Q. Self-supporting document. And referring specifically to 19, 20, and 21, there is no description of the standard to which the examination results were compared other than the reference to a standard number. Is that a fact?

A. Are you talking about the reference material or standards --

Q. Yes. The standards with which the unknown was compared.

A. For example, on page 20, she does refer to, down there in the standard, methamphetamine HCL; and she also puts in that it was from a certain lot number, for example, for the

traceability standpoint.
Q. Right. But there is no way of you knowing the source of the standard or to -- or its origin other than the self-serving statement on the report itself; is that correct?
A. The laboratory maintains those records in house.
Q. I'm talking about the report itself.
A. Would I be able to -- I'm sorry?
Q. There is no way for you to examine the standard other than the self -- the statement on the report itself; right?
A. Other than the report itself; but I can also look at the data that came from that and compare it to a known literature value and see that it produced the same result.
Q. But those aren't contained in those three pages in the self-sustaining report?
A. Which is not contained?
Q. The standard. The information regarding the standard. You have to go someplace else to find that?
A. Yes. She records that she used a methamphetamine hydrochloride standard. And she also included that it was a verified traceable number; correct.
Q. However, had there been a microcrystalline test -- in other words, an eyeball examination by the forensic chemist -- of the crystals in the unknown and a comparison to a known crystal and that -- had that been included in the report, you could then know that the forensic chemist referred to a -- to --

identified it with her eye as a chemist; am I correct?
A. No. I don't think so.
She didn't do that particular test. Had she done it, it would be another test showing that it contained methamphetamine. So it would be a seventh test.
Q. And it would be a confirmation that the chemist actually identified it with her eye as a forensic chemist and identified the crystals to be methamphetamine crystals?
A. She's testified she used her eyes to look at the data that came out, the color testing from the Marquis reagents, so she had to use her eyes to do that.
Q. Right. She had to use her eyes to read the product of a machine.
A. Of all the tests that she performed, yes.
Q. Right. She looked at the results from a machine. Is that correct?
A. She looked at the results of instruments, of chemical testing. The results of all these different tests, six of them, to show again in aggregate that all of these contained methamphetamine.
Q. And all of those tests were produced by machines. All of those results were produced by machines, and she recorded them?
A. No, the Marquis test was a presumptive test.
Q. The presumptive test. But that's not a specific test. That simply excludes other substances. Am I correct?

A. Not necessarily. The microcrystalline test you're referring to is also considered in the international community today not a confirmatory test, so --

Q. Didn't ask you --

A. I'm explaining my answer.

Q. Go ahead. I'm sorry.

A. The microcrystalline is considered a Category B. It is corroborating information, but it is not no longer considered a qualitative Category A technique.

Q. But it's firsthand examination by the chemist of the substance, rather than the chemist reading a result produced by a machine and recording it in the notes?

A. Based on Ms. Irby's notes, all of this was firsthand. She said she took it and she added it to the Marquis reagent and got a result.

Q. She got a result from a machine and she recorded it.

A. That's not correct. The Marquis is not a machine. She used the methamphetamine standard, she -- she documents the fact that she did and compared it to a known result, which was the methamphetamine, and got a color test.

Q. Okay. The Marquis --

THE COURT: Ms. Driscoll, I regret we're going to have to conclude this.

MR. DRISCOLL: Thank you, your Honor.

THE COURT: Would you like to continue this when we

reconvene?

MR. DRISCOLL: If I may, please, your Honor.

THE COURT: All right.

MR. EDELMAN: Excuse me, your Honor. If we may inquire of the Government if they've rested. I have a motion that may be dispositive.

THE COURT: They have not rested. This witness hasn't been completely cross-examined. They have an opportunity for redirect examination. And so we will have to continue this hearing to another date to complete the Government's presentation.

Here are the dates that are available: July 29 at 9:00 a.m., or August 18 at 9:00 a.m.

MR. DRISCOLL: Your Honor, I'm unavailable on July 29.

THE COURT: Is that an unavailability that could be modified?

MR. DRISCOLL: Your Honor, I'm -- it could be modified. I'm scheduled to be in the national forest on a five- day pack trip; however, because of the H1 virus that's restricting equine activities, you know, it could be canceled; and so I need to be candid in that regard. There is an epidemic that's going around the country in the equine community that could cancel the whole thing. But barring that, it's 100-man committed and it's been planned for a year.

THE COURT: Okay. I understand. Thank you.

MR. GOLLA: Your Honor, Matthew Golla on behalf of Mr. Meza Torres. I'm scheduled to be in a two-week trial with Judge Arguello during the August 8 --

THE COURT: 18th.

MR. GOLLA: I'll be in trial.

THE COURT: Okay. Do you have cocounsel?

MR. GOLLA: I do. Mr. Edelman.

THE COURT: Well, actually I was thinking cocounsel that could cover for you in that trial.

MR. GOLLA: I may be able to, your Honor.

THE COURT: Or is there any possibility that that trial will not go as to your client?

MR. GOLLA: It may not, but I can't be definite about that right now. It's very likely to go to trial.

THE COURT: When will you know?

MR. GOLLA: I won't know for at least another -- there is a motions hearing scheduled in early July. Actually July 7 is the motions hearing in that case.

THE COURT: Okay. Any other problems with August 18?

MR. BROWN: I'm in a similar position with respect to a trial. I'm certainly would anticipate that the case will be resolved prior to the anticipated trial date of August 15, and I should know by July 22 whether or not that other trial, which is scheduled for federal court, will go.

THE COURT: Okay.

MR. EDELMAN: Your Honor, I'm in that same trial with Mr. Golla. I think it's scheduled for two weeks; and I do not have cocounsel, and it is likely to go to trial.

THE COURT: All right. We're going to set this for August 18 at 9:00 a.m. And if it appears that that conflicts with an already scheduled trial, you can move to continue.

MR. EDELMAN: In this case?

THE COURT: Yes.

MR. EDELMAN: Thank you.

MS. MAGNELLI: Your Honor, may the witness step down?

THE COURT: Actually, he certainly can; but that's going to conclude our hearing, so I think probably everybody will be stepping down, so to speak.

Thank you, sir.

Thank you to Counsel; thank you to our court staff and our marshal's staff. That will conclude our hearing for today.

In light of the fact that this hearing is being continued and there is a pending motion, the Court vacates the trial that's currently set and the final pretrial hearing preceding it. It will be reset at the time that we conclude this -- the ruling on this motion.

We'll stand in recess. I wish you all a good Memorial Day weekend.

(Recess at 3:37 p.m.)

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INDEX

PLAINTIFF'S EXHIBITS

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REPORTER'S CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter. Dated at Denver, Colorado, this 1st day of June, 2011.

S/Paul A. Zuckerman
Paul A. Zuckerman