Drug Testing Advisory Board (DTAB) Meeting

OPEN SESSION

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Virtual

Proceedings by:

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MS. DAVIS: Good morning, everyone. My name is Lisa Davis. I am the designated federal officer for the Drug Testing Advisory Board, otherwise known as DTAB. I'd like to welcome everyone to the June 2022 quarterly DTAB meeting. We are conducting this meeting remotely, so please bear with us through any technical issues that may occur.

I officially call this meeting to order and want to welcome the staff of the Division of Workplace Programs, federal partners, contractors, invited guests, members of the public, and finally our board members. I wish to welcome our newest board members, Lindsey Everson and David Roberts. Thank you, Lindsey and David, and all board members for your service.

Today's open session is scheduled from 10 a.m. to 2:15 p.m. Eastern time. Just a reminder, before a board member speaks, please state your name for the benefit of the transcriptionist and all other attendees.

With that, I'll start the roll call. I'll start with the DTAB members and the chair. Please answer in the affirmative if you're present.

Jason Schaff?
DR. SCHAFF: Present.

MS. DAVIS: Barry Sample?

DR. SAMPLE: Here.

MS. DAVIS: Kristen Burke?

DR. BURKE: Here.

MS. DAVIS: Deborah Motika?

DR. MOTIKA: Present.

MS. DAVIS: Stephen Taylor?

DR. TAYLOR: Present.

MS. DAVIS: Alison Stockdale?

DR. STOCKDALE: Present.

MS. DAVIS: David Engelhart?

DR. ENGELHART: Here.

MS. DAVIS: Elizabeth Stuyt?

DR. STUYT: Here.

MS. DAVIS: David Roberts?

DR. ROBERTS: Here.

MS. DAVIS: Lindsey Everson?

DR. EVERSON: I'm here.

MS. DAVIS: Ron Flegel?

MR. FLEGEL: Good morning, everyone. I'm here.

MS. DAVIS: And now I'll call the ex officios and federal partners. Paul Harris?

Joe Kotarek?

DR. KOTAREK: Present.
MS. DAVIS: Bohdan Baczara?

MR. BACZARA: Good morning, everybody. Present.

MS. DAVIS: Captain Erin Wilfong?

Lynn Wagner?

DR. WAGNER: Present.

MS. DAVIS: Paul Harris, are you here?

Let me check that the other presenters are here.

Hyden Shen?

MR. SHEN: Present.

MS. DAVIS: Svante Vikingsson?

Paul Harris?

MR. HARRIS: Yes.

MS. DAVIS: Hyden Shen?

Svante Vikingsson? Can he speak? He is presenting this afternoon, so we can proceed and I'll check on his audio later.

So that's it for roll call. For the board members, we do have a quorum.

For the first order of business, the DTAB members were given the opportunity to review the meeting minutes from the March 2022 DTAB meeting. If the board has any comments, they can be incorporated into this meeting's minutes. Do any of the board members have any comments regarding last meeting's minutes?
Hearing none, can I have a motion to approve the minutes?

DR. SAMPLE: I'll move that we approve the minutes from the last board meeting.

MS. DAVIS: May I have a second, please?

DR. MOTIKA: I'll second.

MS. DAVIS. Thank you, Deborah.

Minutes are hereby approved. Thank you all.

In today's open DTAB session, we will discuss the mandatory guidelines for federal workplace drug testing programs. The Department of Transportation and the Nuclear Regulatory Commission will provide updates. Additionally, there will be presentations on the Drug-Free Workplace Program, Comprehensive Review, supervisor training, websites, and FAQs, and Dr. Svante Vikingsson will give a presentation on hydroxycocaine and cocaine ratios in hair.

Please, mute your phones when not speaking to prevent any background noises. We have a public comment period scheduled at 1:50 p.m. following the last presentation prior to adjourning at 2:15. If anybody would like to provide a comment, they will be able to do so at that time.

All of the information from today's open session meeting, including a meeting summary and meeting
presentations, will be posted on the DTAB website. Any questions or public comments will also be posted.

Once again, thank you, everyone, for attending. I'm now going to turn it over to Ron Flegel, chairman of the Drug Testing Advisory Board and the director of the Division of Workplace Programs, for his opening remarks.

**Agenda Item: Welcome and Introductory Remarks**

MR. FLEGEL: Thank you very much, Lisa. I would also like to welcome all board members, ex officios, federal partners, industry leaders, and representatives, and also members of the public to this Drug Testing Advisory Board meeting, and thank you, again, for taking time out of your schedule today to attend.

I would also, as Lisa did, like to acknowledge the newest members of the Drug Testing Advisory Board, Lindsey Everson and Dr. David Roberts, and I would also like to acknowledge and thank Faye Caldwell for all of her contributions to the Drug Testing Advisory Board. Unfortunately, she is not on this meeting, but her insight into the laws and legal requirements around cannabis has been very helpful for the board in the many years that she has been on the board. Thank you again, Faye, and we have a certificate of appreciation for her.

SAMHSA continues to improve the quality of services for forensic workplace drug testing and federally
regulated testing and also private sector testing by assessing the science and technology used in drug analysis. Also by improving the quality of related laboratory services and systems for drug testing and by setting standards for laboratory certification for federal workplace drug testing programs, which again extends to many of the regulated and nonregulated drug testing sectors. We are now starting to focus on the Drug-Free Workplace Program with a comprehensive review of existing practices and policies and plans which you will hear a little more about later in this meeting.

Regarding the Division of Workplace Programs status update, again, the Notice of Proposed Mandatory Guidelines for federal workplace drug testing programs using hair was published in the federal register on September 10, 2020, for public comment. The public comment period closed on November 9, 2020, and the Division of Workplace Programs is currently working on the final review of these proposed, this proposed document. Once complete, the draft final hair mandatory guidelines will undergo HHS departmental clearance and ultimately OMB final review, followed by a federal register publication.

The new proposed revisions to the mandatory guidelines for federal workplace drug testing programs using urine and oral fluid was published on April 4, 2022,
and the public comment period closed on June 6 of 2022, just recently. We received overall 47 comments, 18 for urine and 29 for oral fluid mandatory guidelines. Many of those also had attachments. We will be reviewing these in the very near future.

I will also be discussing some of the major changes in the revisions to urine and oral fluid later in my presentation. Again, the goals of these proposed revisions are to facilitate modifications to the authorized drugs and cutoffs as needed, based on the science and emerging drug trends and to aid in the detection of donor attempts to subvert their drug test. Again, Division of Workplace Programs continues to focus on other special projects undertaken by the National Laboratory Certification Program in conjunction with RTI International and Johns Hopkins University.

Again, I would like to thank everyone for attending the Drug Testing Advisory Board meeting today. I hope you find the presentations informative throughout this meeting. Thank you again, and I'll turn it back over to Lisa Davis.

MS. DAVIS: Thank you, Ron. Our next presenter is Bohdan Baczara from the Department of Transportation, with an update.
MR. BACZARA: Good morning, everybody. Thank you for the opportunity to provide a brief overview of what's going on in our drug testing program. I'll cover certain issues related to COVID-19 guidance, present some numbers related to the driver clearinghouse database, let you know where we are with our oral fluid Notice of Proposed Rulemaking, and again kind of discuss a little bit about the management information system, MIS, data that we have on our website.

With respect to our COVID-19 guidance, the three guidance documents put out by the DOT agencies, FTA, FRA, and FAA are still in effect, and a broad brush of those is basically saying that if you cannot -- number one, continue testing as you normally would, but if you cannot test for some reason, fully document the circumstances so that when the DOT agency does review that event or when they come to audit you, they'll have all the information necessary to kind of take a look at what happened.

With respect to our guidance, we had a statement of enforcement discretion for substance abuse professionals and service agents that was due to expire at the end of this month. On June 15 of this month, we had published the document again, extending the option for SAPs to conduct
remote evaluations until December 31, but we did not extend the section of that particular document for the requalification timeline of collectors, BATs, MROs, and substance abuse professionals.

In a nutshell, what happened there is that we heard from the industry that there are no issues or situations that we were aware of related to not being able to get requalified and, as such, if that's the case, then we said there's no need to have this particular statement of enforcement discretion for these service agents. So therefore, that terminates as of July 1, 2022. The document itself is posted on our website, and you can see the link that we have at the bottom there.

With respect to the Federal Motor Carrier driver Clearinghouse data, this is the latest information. Again, all this information plus more data related to that clearinghouse is on the link that you see at the bottom of the slide there. But in essence, the clearinghouse became effective January 6, 2020. Various parties were required to enter information into the database, including employers, medical review officers, substance abuse professionals, and as of May 1 of this year, there were just over 12 million queries conducted into the database, and that's basically employers checking the status of a
particular individual as to whether or not they can or cannot perform safety sensitive duties.

Just over 132,000 drug violations reported by either by a medical review officer or employers, as well as about 3,000 alcohol violations being reported. With respect to the most prevalent drugs being reported, after an MRO-verified result, you have marijuana, cocaine, and methamphetamine, and preemployment was the number one test reason with the most reported drug violations.

And at the end of the day, there are about 92,000 drivers who are in a prohibited status, which means that they were reported into the clearinghouse and they cannot continue to perform safety-sensitive duties for any employer, any DOT-regulated employer, until they complete the return-to-duty process.

With respect to our Notice of Proposed Rulemaking, we did propose back in February of this year to have oral fluids as part of our drug testing program in the DOT program. Initially it was a 30-day comment period, but we received some notices that, hey, can you please extend it for us, and we did. So we extended to April 29, at which point it closed.

We received about 417 comments to the docket, and currently we're reviewing all these comments and we're considering all of them at the same time, and all I can say
is stay tuned, keep on checking our website to see what the status is of that final rulemaking, and it will come out as a final rule.

Finally, just to kind of remind everybody again, we do have management information data on our website, and what that basically is is a data dump by industry of all the negative and positive test results that were reported by employers to DOT. There's no employee-specific information there. There's no employer-specific information. It is just a dump for each industry by itself, aviation, transit, rail, pipelines, motor carrier.

All we're asking is take a look at that information, see if there's any value to it. Let us know if we can be presenting it a different way or if there's anything more we can do with that particular data.

Some basic resources for us. Again, our home page is there. "Am I Covered" is an awesome resource if somebody does or does not know whether or not they're covered by our regulation, it will walk you through a decision tree. Highly recommend subscribing to our listserv so that any kind of DOT-related notices that we do send out, you will get and you're in the know.

Obviously our Part 40 page, which is the meat and potatoes of our regulation, the drug and alcohol testing regulations, any guidance we have out there is on our
guidance page, and at the end of the day, if you can't find the answer on our website please, email us at ODAPCwebmail@dot.gov. Thank you very much.

MS. Davis: Thank you, Bohdan. Our next update comes from Paul Harris with the Nuclear Regulatory Commission.

**Agenda Item: Nuclear Regulatory Commission (NRC) Update**

MR. HARRIS: My name is Paul Harris. I'm the senior program manager for the drug and alcohol testing provisions in 10 CFR Part 26, fitness-for-duty programs in the United States Nuclear Regulatory Commission's Office of Nuclear Security and Incident Response.

I am Bohdan's counterpart, you might say, here at the NRC. I'd like to also give special thanks to Ron, Anastasia, Lisa, and staff in the Drug Testing Advisory Board for again inviting the NRC to present an update on its fitness-for-duty program for the commercial nuclear power industry. I hope today in my 15-minute time slot to give you a brief update on the drug and alcohol testing results in the commercial nuclear industry and some other information that you may find interesting.

As of May 25, 2022, there are 54 commercially operating nuclear power plants in the United States, which comprises of 92 nuclear power reactors in 28 states.
Recently, we had a recent shutdown of the Palisades nuclear power plant, which is located on the beautiful shores of Lake Michigan. That one nuclear power plant supplied 29 percent of all the electricity used in the state of Michigan and powered 800,000 homes and employed over 600 highly skilled nuclear workers.

Our drug and alcohol testing requirements also apply to two fuel cycle facilities. These are facilities licensed by the Nuclear Regulatory Commission, and they work with what's called category 1 quantities of special nuclear material. This special nuclear material is used to fabricate the fuel used in commercial nuclear power plants, and also for the United States Naval Submarine and Surface Ship program.

This is presenting the three topics I'd like to discuss today. On this slide you'll see two different types of facilities. I just want to point out the top picture there with the water cooling tower, that's your traditional commercial nuclear power plant, and down below, you're given a little representation of what's called the Oklo commercial nuclear power plant, which is significantly smaller in design, both in megawatts thermal and megawatts electric, and I'll be talking about these advanced reactor designs under that bottom bullet there called 10 CFR Part 53.
The other two elements I'd like to discuss are the performance trend of the drug and alcohol testing results. That's typical of us giving that presentation, and also a short rulemaking update on the HHS guidelines rulemaking, which is what we call it.

This slide is typical of our presentation. It demonstrates what being fit for duty is. You both have to be trustworthy and reliable and not under the influence of any substance, legal or illegal, or any mental or physical impairment that may cause in any way to adversely affect your ability to safely and competently perform assigned duties and responsibilities.

But it's not just the fitness for duty program that protects the people and the environment. It's the items on the next slide. On this slide, we see the concept of defense-in-depth, not only drug and alcohol testing, but access authorization, which is very similar to the DOT clearinghouse. We've had access authorization maintain quite a comprehensive list of individuals in the nuclear power industry who elected to self-select themselves out of employment because they have substance abuse issues that were not corrected. We also implement fatigue management, just like that for safety organizations and regulated by the federal government, and we also implement a very strong
behavioral observation program, from both a fitness perspective and a security perspective.

On this slide number 5, sorry about the very small font, but this is very typical of our slide presentation. Again, this is draft information. Licensees give us annual information from their drug testing programs at their sites and corporate offices. We aggregate that information and we try to present it in a manner that's hopefully interesting.

What I just wanted to point out is there are typical things that we see in the nuclear industry under pre-access testing, which is the first row there in the test category. You see the columns licensee employees, those are the fulltime employees employed by the commercial nuclear facility and the contractor vendors who come on site for a short period of time, and the total is the summation of the two and the total positivity rate.

Pre-access of course has seen the greatest percent positivity rate. So we see there, we see 7,825 tests for licensee employees, and we see 55,000 tests for contractor vendors. This is not surprising, since many facilities need to bring on board short-term contractor vendors to conduct maintenance activities. What we do see, though, is just from the numbers, contractor vendors test at seven times the rate of licensee employees. That's
pretty typical. And we also see 15 times more positive test results were attributed to contractor vendors.

We can see this looking at the positivity rate with the licensee employees test at a positivity rate of 0.59 and the contractor vendors test at 1.24 percent, which is approximately three times the rate. Again, pre-access is a screening test where we do a determination whether to grant the individual authorization to access the NRC licensed facility.

Once you're inside the facility, that's when you might say the red flags go up, because you're inside the facility now having unescorted access to the facility, sensitive materials, and sensitive information.

Under random testing, you see that licensee employees are tested at 1.75 times that of contractor vendors, and yet, contractor vendors test at 2.5 times the rate of licensee employees. This is sort of baffling to my mind.

Licensee employees are there all the time. They're easier to test, because they're there all the time. Contractor vendors are only there for a short period of time. Therefore they're a little bit more difficult to test. That's why the rates are little bit skewed to licensee employees.
The industry is essentially testing the population that's prominent on site. These are the long-term employees, and the contractor vendors are the transient workforce. And yet they do result in more positive test results.

If you take a look at the positivity rates, the licensee employees are testing at .27 percent, pretty low rate, and the contractor vendors are testing at a positivity rate of 1.14, which is the typical 4-to-1 ratio that we see almost every year where contractor vendors are testing at a 4 times higher rate than licensee employees on random testing.

Slide number 6 here is our typical pie chart. This hasn't changed too much over the years. You still see that alcohol and marijuana continue to be the substances of choice, followed by cocaine and amphetamines. When I see this slide, I'm always reminded of the Denzel Washington movie Flight in which the main character of the movie struggled with alcohol for years and also used cocaine as his stimulant of choice. While the movie has been criticized for inaccurately portraying pilots and the physics of flying, if you might remember, he flew the plane upside down to land it, I discovered through a simple internet search that Alcoholics Anonymous meetings use scenes from the movie to help visualize the effects of
alcoholism. I take that to heart, because it's a good representation of what individuals may go through. Unfortunately, the movie was based upon Alaska Airlines Flight 261, which did roll over and yet it did not recover from the flight's transience.

I note that the refusal to test, which are the yellow goldish colored pie legends, are still high. The contractor vendors you can see the number is 20.8, which means that almost 1 of every 5 contractor vendors who shows up for a potential job is either not taking the drug and alcohol test or subverting the test or not following the instructions of the collector. I talk a little bit more about subversion in a slide or two.

I want to point out that anecdotal information from our drug and alcohol professionals in the industry indicate that they are having difficulties hiring good people who represent a nuclear safety culture, which is that they're free from the presence and effects of drugs and alcohol, are trustworthy and reliable, and they follow the policies and procedures associated with a licensed facility.

This is slide number 7. This is our typical chart. Marijuana continues to be a prevalent used drug, as you see in the blue line. You see cocaine listed under DTAB, but cocaine has decreased over the number of years as
you see on the x-axis, whereas amphetamines has risen. We
did have the crossover back a few years ago. It's
interesting if you do a summation of the values, the
overall value for central nervous system usage appears to
be about the same, somewhere in the mid-20s, maybe mid-25s,
somewhere around there. I didn't do the addition, but
visually that's about where it is.

Alcohol had been alcohol, it continues to be a
prevalent use drug, principally probably because it's so
readily available. Amphetamines, opiates, and of course
PCP, phencyclidine, is very low. Opiates is low because --
I'll talk a little bit about rulemaking in a second or two
on another slide. Our panel of opiates is not equivalent
to that of HHS as of yet.

This is slide number 8, this is subversion
trends. We've been discussing this with the Drug Testing
Advisory Board and others over the years. This is no
different. This is not the hidden tigers. These are the
tigers that we identify. These are the individuals who
have demonstrated beyond a preponderance of doubt that
they're not there to follow the rules and regulations of
the NRC, and they're attempting to hide their possible
substance abuse and yet they're caught.

The issue is the persons that we don't catch.
Notice that at pre-access testing we're identifying the
preponderance of subversion attempts. About 75 percent, 70 percent, three-quarters of the individuals coming. A number of reasons why you know that we're finding them there. This is a very easy test to subvert, because they know it's coming. So they make preparations to subvert their drug test.

What I do find interesting though is over the industry, we have 272 total subversion attempts, plus or minus one, and if you divide that by the number of facilities, that's about 1 per site.

This is interesting, because if we go back two slides, let me remind you what we see here on random testing. Look at the random testing row. Random testing also caught 272. So not only did we have a total of 272 randoms, but we also had 272 subversions; now go back to the subversion slide three slides later. Fortunately, 75 percent of those 272 actually, 71.3 percent, were caught on pre-access. That means 25 percent, or about 68, were caught inside the power plants. I just put that statistic out there because the numbers happen to be the same, about one per site, for subversion -- I'm sorry, I'm getting my data all screwed up. Five positive test results per site for random, which correlates to about one subversion attempt per site, on site, not the pre-access. So that's
about a one-to-five ratio, or about 20 percent. I just thought that was interesting.

I'm using 54 as the number of commercial nuclear power plants as my denominator.

This is the rulemaking update. The final rule was approved by the commission. This is what we colloquially call the HHS guidelines rulemaking, where we align part 26 of the guidelines. The bullets here, you could read them for yourself. It provides additional flexibilities for the collector on indications of the individual being unable to submit the proper amount of urine. We're aligned with the drug panels as you see there lowering cutoffs and enabling the testing of the semisynthetic opioids and the heroine metabolites, aligning on that as well, to the laboratory process.

It strengthens the subversion detection methods. This is probably in my mind one of the most important bullets of this rulemaking, by mandating special analyses, testing on dilutes, this is where we require the licensees to submit -- to conduct limit of quantification testing if the specimen is dilute. That's a good element I think that improves effectiveness.

On one of the previous slides, I mentioned the Oklo reactor. People call it advanced reactor technologies. It's innovation in design, and uses passive
safety systems, but you could read more about it on these web links that I've provided here. You could also take a look at the ADAMS accession number, this is the agencywide document, access and management system. It's on our website. It provides draft preliminary rule language, interestingly enough. We actually went out and published draft proposed rule language, and we're on our second iteration. Included within that in appendix F is an element of the FFD program which at your free time you can read about it, but on the next slide I'll show you some of the key elements of our proposal.

Here we see the three major elements. It's risk-informed. The commission has strongly enforced and directed the staff to implement risk-informed regulations, meaning it is a regulation contributing to risk reduction. Is it reducing radiological consequences? Is the severity or the significance of the requirement commensurate with the risk reduction that we're seeing? So we're trying to do that under this proposed Part 53 rulemaking. If these advanced reactor designs are indeed safer, you might say, by the way they're being published, can the regulatory framework be graded in a manner to reflect the increased safety and security proposed by these new reactor facilities.
We're trying also to be technology-inclusive. We're trying to enable urine and oral fluid testing for all test conditions, not only random or pre-access, but follow-up post-accident and post-event. Urine and oral fluid testing will only be used for the administration of part 26 sanctions. So if an individual tests positive for a drug, we would require an oral fluid test and that specimen be sent to an HHS-certified laboratory with laboratory results being sent back to the medical review officer and a sanction may be issued for that. So we're maintaining those programmatic elements that provide program effectiveness and worker protections from a false positive or even a false negative.

We're going to enable hair testing for pre-access testing of schedule I drugs. We're taking the bull by the horns here and making this proposal, knowing that we're in a preliminary draft rulemaking stage, even though we're on the second iteration of those rules. As Ron Flegel mentioned, they have not issued the final guidelines yet. However my proposal here is pre-access testing.

What we care about is whether or not the individuals are trustworthy and reliable in whether or not they're using schedule 1 illegal drugs. So we're going to focus on that first, and if public comments come in or
industry comments come in, maybe changing that to some other framework that we would consider that.

You could see that third bullet there, point of collection testing and assessment devices. This is new and exciting. It's definitely innovative. It could result in a program reduction. However, we have belts and suspenders requiring forensic toxicology reviews and a program assessment to make sure that the performance-based elements of the fitness-for-duty rule would not degrade if they're using a point of collection testing and assessment device.

Now, there's a number of elements there and the Drug Testing Advisory Board and members of the public may have questions, and I'll take them when we have time throughout this public meeting. We're going to enable passive drug and alcohol screening devices. I could talk more at length about that. That's definitely innovation and use of technologies, and we're implementing this framework as I talked about earlier that we're still using the HHS guidelines and laboratories and performance-based requirements. We're really focused on how the people are performing their jobs and making sure that the people doing their jobs are fit-for-duty and trustworthy and reliable. So that's the key element, the part 53 proposed framework.

This is the rulemaking -- I present this, because people might be interested in what we're thinking about
doing. This slide here is just the big picture on how we're transitioning from the draft rulemaking stage, publication of the rule, final draft to the commission, and similar to the HHS guidelines, we've seen public comments and we try to resolve all the public comments in a timely period of time.

Similar to the Department of Transportation, the Nuclear Regulatory has staff assigned to the Part 26, myself and my -- the technical expert with the NRC, Brian Zaleski. Unfortunately, I did not update his title. That is my mistake. He has gotten a new title, and good thing is he's gotten more money with that title. So when you have more work assigned to us, please give it to Brian, because he's getting paid a lot more money.

That's my little joke of the day. No, give us a call if you need some questions answered or would like some additional data that did not make the presentation today. That's all I have for the presentation. Thank you very much.

MS. DAVIS: Thank you very much, Paul. We are a little ahead of schedule, which is fantastic. Ron, did you have any comments you wanted to make?

MR. FLEGEL: I do want to make some comments. I wanted to thank both Paul and Bo for their presentations that they gave this morning. I do appreciate all of this
moving our rules forward and everything we're doing in standing with HHS and what we're doing with proposed rules. So I just wanted you guys to know I appreciate that.

Lisa?

MS. DAVIS: We are going to go ahead and take our break now. I'd like to come back at 11:15 so that we can -- that gives us almost 30 minutes. So we can get started on time to finish the day before lunch on time.

So break until 11:15. Thank you.

(Break.)

MS. DAVIS: Good afternoon. Welcome, everybody, back from the break. I neglected before the break to give the board members the opportunity to ask questions of the previous speakers so at this time, if any of the board members have questions for Bohdan Baczara from DOT or Paul Harris from NRC, please feel free to unmute yourself, state your name, and ask your question. Thank you.

DR. SAMPLE: This is Barry Sample. I had a couple of questions for Paul and one for Ron. I'll start with the two for Paul, he can probably take care of these in one fell swoop.

So with respect to the final part 26 rules, is there an estimated time that those final rules will be published and what the implementation date will be? Then with respect to the proposals for part 53, are those
actually proposed rules at this point or is it still with
the commission awaiting actual publication and comment, at
least with respect to the drug and alcohol component of
those proposals?

MR. HARRIS: Thank you, Barry. This is Paul
Harris. Anastasia, can you please go to slide 10 or 11,
the one with the HHS rulemakings there? Okay, so I
probably read this slide during the public portion, Barry.
Barry Sample's first question was the status of the HHS
guideline's rulemaking. The final rule was provided to the
commission and the commission has -- the final rule has not
been published yet. We expect that the final rule will be
published in October of this year following the OMB review
and final NRC resolution of commission comments.

So we're looking at October of this year for
publication of the final rule. Licensees will be enabled
to implement the rule after 30 days following issuance of
that final rule, and they have one year to implement the
rule. So November would be the earliest, then November of
2023 would be the latest, for the implementation of this
rule. Does that answer your question, Barry?

DR. SAMPLE: Yes, it does, on that part. Thank
you.

MR. HARRIS: So under part 53, if we can scroll
over there to the second to the last slide, the one that
looks like a snake, so what we did we've been doing on a number of public meetings. At these public meetings, they discuss all sorts of technical issues and we had a public meeting in June, one in January for fitness for duty, and we published what is called the preliminary draft proposed rule language.

That is on the ADAMS number that's on the previous slide. You can find the preliminary draft proposed ruling language. That language has not gone to the commission. It has only received management internal reviews and some public comments during the public meetings that we had on part 53.

So under this ADAMS accession number under the first bullet, you can find the consolidated rule language, and it is draft proposed. It's sort of like there is a rulemaking that involves the public early on and the commission wanted the staff to do that. So we published the rule and we're hoping to get public comments on the proposed rule at the early stages because it is so new. So that has not gone on to publication yet, Barry.

DR. SAMPLE: Great. Thank you very much. So somewhat analogous to the request for information or RFI that HHS has published before on new things. Different rulemaking process, I understand, but maybe something similar.
MR. HARRIS: Yes, something similar. I think of it as there is a terminology called negotiated rulemaking. We're not negotiating anything. We're publishing what we call preliminary draft proposed. We're accepting comments during the public meetings and we're trying to resolve the public comments during the public meetings. So that's the stage we're in. It's all communication versus anything like a draft-proposed ruling, which is for formal rule. We're not at that stage yet. We're before that stage.

DR. SAMPLE: Got it. Thank you, Paul. Then I did have one for Ron as well and I'm sorry I didn't take quite fast enough notes. Could you give a recap again, Ron, of the number of comments you received on the proposed urine and oral fluid changes?

MR. FLEGEL: Yes, there were 47 comments in total. Broken down, I think I said 18 and 29 or something like that between urine and oral fluid, but many of those comments had additional attachments to them. So not significant as far as the amount, but the quantity with the attachment was more significant.

DR. SAMPLE: Not quite like the 400 or so that Bo related in the DOT. Great, thank you.

MR. FLEGEL: I did have a question for Paul. Paul, just for clarification, in the publication, if it
does publish in October, would NRC be able to use oral fluid testing at that time if we have HHS certified labs?

MR. HARRIS: Yes, you would have to have the HHS certified lab and the FDA cleared devices. And again, for that rulemaking, Ron, it's only for the shy bladder situation on the individual. It's not for all test conditions like we're proposing for part 53.

Ron, I also want to mention to you that there is a question in the chat if no one has seen that. There is something in there. I'm not sure if it's a board member or not.

MR. FLEGEL: What I was going to say is we will gather that information in the chat sessions. If it's something significant, we will ask again during the public comment section on that.

DR. STUYT: I have a question. This is Elizabeth Stuyt. I guess this is mostly for Paul Harris. I just wondered, since marijuana is the number one drug being tested coming up positive, if any data is being collected on the type? Because clinically, I'm seeing horrific problems with the higher potency products like the high-potency THC delta-9, but also the delta-8, the delta-10, the THC acetate, and it's causing a lot of increased psychosis and violence and that kind of stuff. So I just
wondered, just that high level of marijuana in these tests is a little concerning to me, I just wondered.

MR. HARRIS: Yes, the NRC follows the marijuana testing schedule that HHS has published. We don't look for the exact metabolites.

MR. FLEGEL: And I will say, Dr. Stuyt, I appreciate that question because we are looking at that specifically in the different isomers. So in a regulated testing, of course we look only for delta-9, but we are concerned about seeing the delta-8, delta-10, the different isomers of cannabinoids.

MS. DAVIS: Are there any other questions? All right, hearing none, let's move on to the next presentation, which is the comprehensive review update.

Agenda Item: Update on the Drug Free Workplace Program Comprehensive Review

MS. DAVIS: The program, since its establishment, hasn't had an overall comprehensive review, and to just take a look at where we are and what our challenges and what we may be coming down the road. That task was initiated for the purpose of doing exactly that, to assess all the critical issues affecting the program now and, in the future, look at everything including science and policy, and perhaps identify some best practices or even tasks to address some of the challenges.
So to that end, three different working groups were formed. The first working group encompassed people with understanding knowledge and expertise in the legal, political, and social issues relating to the Drug Free Workplace program, including the Farm Bill, the FAST act, and hair testing.

Group two incorporated the scientific and laboratory issues specialty people. We have people that cross expertise across multiple groups, but these are the specific groups to address specific issues at this time. So the scientific and laboratory issues involved emerging drugs, which we were just speaking about, evolving technology and again alternate matrices.

Then working group three talked about the program itself, the nuts and bolts of the program, and issues that have come up, issues that we may need to address in the future, including telework, how we get information about all of these changes to program specialists, supervisors, employees, and beyond.

The first plenary session occurred in May where all the working groups met mostly meeting in a virtual manner, reviewed the origins and history of the drug testing program, which is fascinating, presentations given then, and surveyed the current and legal environment,
started to examine some of the drug use trends, and a brief discussion of current challenges.

The working groups were given the task to break away and form meetings over the summer to try and identify, nail down some of the specific issues, address strengths and weaknesses of each of the issues in each of the categories that were created, as well as identify challenges in science and policy, and maybe evaluate possible projects, questions, tests, that could help us figure out how to address challenges in the future.

And that's it for the comprehensive review. Do board members have any questions about that before we move on? Ron is going to talk about it a little more later in another presentation. Hearing nothing at this time, let's move onto Ron's regulatory program update.

**Agenda Item: Regulatory Program Updates and Mandatory Guidelines**

MR. FLEGEL: Thank you for that, Lisa, for general updates on that comprehensive review, and also, I'm working from three different screens right now, so I'll try to stay focused on this one.

This is the overview of the regulatory program updates in the mandatory guidelines where we currently are for the public and we wanted to also advise the board members of everything that we've been looking at.
Again, as I always do, I want to introduce the Division of Workplace Programs. We do have some different, new employees, Joshua Hunt, Sean is back, also Christie was there before, but I just wanted to introduce them again, and again, I could not do any of this without everyone on this list, so I do appreciate all their help.

As already been identified, we do have new board members, including Dr. David Roberts and Lindsey Everson, thank you. Faye Caldwell has rolled off the board. She's very active in some of the things that we're doing which we do appreciate all of the information that she shared with the board over the last several years.

Our objective and goals: our overall goal is we continually assess the science and technology used in drug detection to advance national drug policy that is based on the latest scientific findings. And again, I've already said, but I appreciate both DOT and NRC in advancing their guidelines themselves, and that would include the oral fluid, but also to look at different testing including hair. So that's one of the things that we have right now that's currently, as already mentioned, the proposed guidelines on hair. And again, the revisions that we currently have out are to make both look relatively similar in all aspects for both urine and oral fluid.
Our goal, of course, is certification of the first oral fluid lab and the Federal Register Notification of the final mandatory guidelines using hair. Presently, we're looking at program implementation of the oral fluid as an alternate specimen to, again, advance the federal workplace drug testing program.

There continues to be a lot of interest. Unfortunately, I believe COVID has decreased what we thought would be the timeline to get our first HHS certified oral fluid lab, but we're still very hopeful in this year itself that we'll have had at least one, if not more, oral fluid laboratories being able to test.

Under the Drug-Free Workplace Program, again, as Lisa just went over, we are conducting a high level review of the Drug-Free Workplace Program. That's to identify key policy and technical issues as well as existing challenges in the program. In the future, again, the referral of the proposed, or what is the proposed mandatory guideline using hair, as a final Federal Register Notice is what we're looking forward to.

Again, under the Drug-Free Workplace Program's impact, we not only have the federal executive branch agencies, we have the Department of Transportation, Nuclear Regulatory Commission, and of course, Department of Defense, which has a lot of civilian employees that also do
testing under the regulated programs. So within these, we have a significant amount of program impact as far as regulated testing. And again, as you can see on the bottom, the program impacts overall about 14 million employees.

Some of the challenges that we see, and included in some of the working group items, is we're looking at difference in federal laws, the state laws, testing issues, and we can look at urine, oral fluid, hair, as different types of testing issues through the matrices that we use, and then of course contracts and legal issues. When it comes to employee or employer, we're looking at drug testing policy, and the latest, I mean, it is the CBD or the hemp products that under the Farm Bill essentially looks at THC at a certain percentage as being legal for that, which has been a challenge for this program.

Under the Division of Workplace Programs, under the legislative authority and the main rules, of course we have the science rule under the HHS certification of the laboratory, the mandatory guidelines, National Laboratory Certification Program, of course the Drug Testing Advisory Board, and medical review officers training which is the certification standard for medical review officers.

Also under policy, the Drug-Free Workplace Program in itself, we give technical assistance to all
federal agencies. We look at the planned certification as we add new matrices which is another task that we've taken on is to update the plans to include oral fluid for the federal agencies.

We also have an executive committee that looks at the overall or policy and approvals of federal drug testing designated positions. Then of course policies and legislation around the impact of these policies and legislation.

I always show this slide in the routing process. It is a pretty lengthy routing process, as everyone is aware, as also Paul has pointed and Bo pointed out in the NPRM for oral fluid and the other, is it is a pretty lengthy process when it goes not only through a regulatory update but it goes out to public comment, those are revised, and then it goes back out as a final rule, which is OMB approval.

Again, for us, both in the proposed hair as well as the revisions to urine and oral fluid, we're sitting right now at about point 13 or 14 on this routing process. So again, as I mentioned earlier, not a significant amount of comments that we received as far as the number, but there were a lot of additional attachments to those. So again, we will be answering those in the near future,
looking to revise both the urine and the oral fluid and get that back out as a final rule.

Just the mandatory guidelines in themselves, not only urine, oral fluid, but also hair, these will be the analytes that they test.

I just wanted to give here, as far as mandatory guidelines updates, where we currently are or the links that anyone can go to. The current Mandatory Guidelines for both urine and oral fluid, they're in the proposed state, and these were published on April 7, 2022. The comments were due on June 6, 2022. So those are both of the links. If you have not read those, those are both the links that have the proposed rules of the changes in those proposed rules, which I will talk about a little bit in this presentation.

Then hair, I've already given an update on that, we had the proposed rule of September 10, 2020. We're still continuing to work on public comment regarding that and some of the issues within that proposed rule.

Again, just another slide regarding the actual link to both the urine and oral fluid, and then the public comments for both urine and oral fluid were due on June 6. Those comments are currently under review by the DWP.

I wanted to just go through some of the major revisions if you have not read those proposed rules.
Again, we revised the timeline and the process for publishing the authorized drug testing panel. For the drugs, analytes, and cutoffs, when you see emerging issues, there was significance to that in the length of time it takes to propose a rule and then publish a final rule. So we wanted to look at revising the timeline in the process of publishing the actual table or the analyte table.

We also revised to the report specimens or as substituted based on biomarker testing. I think, as Paul pointed out, subversion is a critical issue. We wanted to revise that to make the concentrations that are inconsistent with the established for human specimens. So that's for the biomarker for adulteration or substitution of those specimens.

We established the timeline and process for publishing and authorized biomarker testing panel. That would mean as we add additional biomarker testing to the guidelines that would be published in a separate federal register notice, for both the biomarker testing as well as the analyte table.

We raised the working confirmatory test cutoff from 2,000 to 4,000 in the urine mandatory guidelines, and in the oral fluid, they remained the same. We also revised the medical review officer verification process for
positive codeine and morphine specimens based on the morphine confirmatory test cutoff.

We also looked at requiring MROs to submit semi-annual reports to HHS for designated representatives for the federal agency specimens that were reported as positive for a drug or drug metabolite by a laboratory and verified as negative by the MRO. Those are some of the -- where we want to close that loop of what was a positive at the HHS certified testing level but was verified as a negative result by the MRO.

So under the current urine mandatory guidelines in section 13.5d(2), when a donor has no legitimate medical explanation for a positive codeine or morphine result. So currently we have equal to or greater than 15,000. The MRO reports the specimen as positive to the agency. If it's less than 15,000, then the MRO must determine that there is a clinical evidence of illegal opioid use in addition to the test result to report such a specimen as positive.

Again, no clinical evidence of illegal use, the MRO verifies the opioid result as negative. In the proposed version, this is somewhat different, we have removed the additional decision point for codeine and morphine. As I had mentioned, we raised confirmatory test cutoff of morphine from 2,000 to 4,000, we kept the confirmatory test cutoff for codeine at 2,000, and then we
removed the additional requirement for clinical evidence of illegal opioid use. I'll explain that in the next slide.

So again, concerns about poppyseed or food products, the literature is consistent in the conclusion that regular ingestion of poppyseed-containing food such as bagels, cakes, curries, et cetera, they rarely result in urine opiate concentrations above the 2,000-nanogram cutoff specified in the current urine mandatory guidelines, and that proper handling specifically in the United States by prewashing and cooking the poppyseeds into food products causes loss of both morphine and codeine.

So we looked at a lot of the current studies and studies attempting to characterize morphine and codeine results after reasonable consumption of poppyseed or food products on an acute or chronic basis. They reported maximum working concentrations ranging from 160 to 3,000 nanograms with codeine ranging between 11 and 390.

So as you can see, the established confirmatory cutoff that we raised to were above those of what we've seen in the studies. There is only one study that we are aware of in which the urine concentration of morphine exceeded the 4,000 nanograms after ingestion of regular prepared food containing poppy seeds. The researchers reported that some of these subjects became ill due to this large amount of the poppyseed they ingested. Again, the
results of this study have not been duplicated in subsequent studies involving prepared food products.

So we're pretty sure that this was essentially in this one person that exceeded this was sort of an outlier and where again a reasonable amount of consumption of poppyseed would be which is between the 160 and 3,000 mark.

Again, if there are any questions from board members, feel free to stop me at any time if there is a question that you have.

On April 7, 2022, we published the proposed revised urine mandatory guidelines and oral fluid guidelines in the Federal Register and this is the timeline that we're trying to hold close to as Paul had given, too, with NRC. Again, we would publish a supplemental to the proposed hair guidelines and that would be revised like urine and oral fluid. We would then publish a final urine and final oral fluid and then we would publish a final hair mandatory guideline.

These are all proposed. They are not established as to the exact dates or times of when this would be, but it is sort of giving a general timeline of what we're looking at. Then starting in 2022, we are starting to conduct a high level review of the Drug-Free Workplace Program to identify both policy issues as well as technical
issues as well as existing challenges that we have in this program.

Under the hair mandatory guidelines status, under the comment review, you've seen this slide before, we organized public comments, we reviewed all comments, we continue to monitor the scientific literature. There have been some journal articles recently that came out around here that we're looking at closely. In March of 2021, DTAB had a closed meeting where the summarized public comments presented for DTAB discussion. In June of 2021, we had a closed meeting where DTAB members reviewed the draft HMG and provided input. Then recently SAMHSA held a listening session with hair testing laboratories to gather some additional information that we had questions around.

What I'd like to do is under those listening sessions, we just wanted to generally give some information about what the discussions were, what we talked about or looked at, et cetera. There were seven commercial labs that participated. They were in workplace, criminal justice, social services, were the testing purposes. Topics that we looked at were performance testing programs, that was the enrollment, if the laboratory was in a commercial PT program. Again, I believe our proficiency testing program essentially ended in 2007 so we're looking at restarting that program around PT programs for hair.
The proposed PT requirements under our federal program, and this would be types of samples and scoring. We've looked at the quantitative agreement between labs, both as a retest as well as proficiency testing samples, and again, these were just discussion topics. In the reporting for drug positive results in here, we looked at drug metabolite or discussed drug metabolite criteria. Then the other part of that, we looked at establishing some technical working groups around some of these topic areas.

Under the performance testing types of samples, we were looking at reference drug solutions supplied with a blank matrix, and this was to actually show general agreement in this as a one-time sample to set a baseline and verify quality of the labs calibrators. We looked at reference samples produced from drug user hair and we've looked at general agreement or discussed general agreement with the approach, a pilot PT to show the viability of this, new methods needed to produce equivalent PT samples for low positivity analytes such as PCP.

And we also discussed contaminated hair. We looked at general agreement overall from labs. We looked at dry or vapor contamination only as part of maybe the PT program. We also looked at studies needed; there were concerns about what is a realistic amount of contamination? Is it a low level contamination, is it a
high level contamination, what is the realistic amount when you're looking at hair when it comes to contamination?

We also looked at the quantitative agreement between labs. There was a general consensus in all labs as far as needed for the PT and the retest result quality need to be within, let's say, plus or minus 20 percent of each - the method used to liberate drugs from the hair matrix is critical that we've seen, the differences in the laboratories.

There were some suggestions around this. For instance, we are looking at a pre-application of pilot PTs that can be provided to interested labs with reference values and published methods used to generate these results. We also wanted to look to see if labs may need to redevelop their metabolites to obtain similar results. It will not be required that a lab use the reference methods. Then, again, establish working groups around this to look at this issue specifically.

Then the reporting of positive results, we know that there is a decision tree that is needed. We wanted to look at the hydroxy cocaines for cocaine. There will be a presentation later, I believe today, regarding that in public session. We also looked at amphetamine or reporting amphetamine for a methamphetamine-positive.
Some of the other issues were concerns by some labs that proposed hair mandatory guidelines do not require metabolites for reporting positive tests. We need rules reporting morphine specifically.

Then consequences of the Farm Bill around, of course, I will say THC, but the CBD products, et cetera, it's hair in those amounts of quantitative results of hair could exceed what we would call positive for cannabis.

Okay, with that, I just wanted to put up, again, this is a revised National Laboratory Certification Program studies. Some are concluded, some are still ongoing. Of course, hair labs results study is completed, the delta-8 THC cross reactivity within the HHS certified labs being looked at, urine adulterants, analysis of acidic foods containing CBD which is going to be an interesting study when we publish that.

CBD metabolites in urine, we looked at screening methods using Q-TOF, hair extract, or analyte formation regarding that, developing the hair PT program which we had the discussions I just went over, opioids and glucuronides in hair, cannabinoids of course in hair, web monitoring, and then the JHU studies for chronic dosing of CBD and the topical applications of CBD products, I will say, contaminated with THC, wanted to look at those.
We also looked at THC CBD pulse studies, the presence of fentanyl in opioid positive specimens, which I discussed that prior when it comes to the addition of fentanyl to the drug testing panel. Then to hair inventory that we tried to develop or the application and development of that and again, a JHU delta-8 dosing study we're looking at in the future.

Just some of the Drug-Free Workplace Program, the evolving environment, I've had these in previous presentations around legislations, the 2015 FAST Act, the 2018 Farm Bill, 2018 opioids crisis response act. Changes in science and technology, drug testing and specimen collecting technology are continually improving. The mandatory guidelines of course for oral fluids around the collection device is critical when it comes to collecting a sample around oral fluids. What is a split, what is essentially simultaneous collection, et cetera.

Then the evolving environment as new and novel drug use continues to emerge especially around the synthetic designer drugs. We do have increased public acceptability and availability of marijuana and CBD products and the implications for workplace safety and security specifically, we're looking at the delta-8 and other THC isomers, and of course state initiatives to decriminalize marijuana, which we are concerned about.
Also, the increased demands on the Drug-Free Workplace Program, e.g. COVID and the return-to-the-office challenges as federal employees return to the office, and a lot of people return to the office when it comes to whether it's random testing or reentry into the workplace.

So our ongoing challenges, the review of the technical and scientific studies to support hair decontamination procedures and unique biomarkers and metabolites to rule out specifically external contamination, finalizing the hair mandatory guidelines is very important, implementation and funding new programs as we bring on both urine as well as oral fluid and/or hair laboratories.

As I mentioned, addressing emerging issues such as marijuana or hemp products, opioids, synthetic drugs, and legislation, and then implementing the final hair mandatory guidelines or the final mandatory guidelines for all three, actually, oral fluid, urine, and hair.

I mentioned the marijuana studies. We continue to do some of the marijuana studies. As you saw from the chart earlier under the NLCAP, we have a lot of technical and scientific peer reviewed journal articles that are on our website. Please feel free to download those. DWP continues to update this list of reference articles on the website. We continue to publish more journal articles,
several were just accepted. The contributors to all this, couldn't do it with them, Dr. Ed Cone, Dr. Ryan Vandrey, Dr. Tory Spindle, and Dr. David Kuntz for all their work on these projects that have been done over the last couple of years, specifically last five, six years overall. DWP continues to share their study findings and data with other federal agencies as we can. There are a lot of working groups that want to look at this data. We have tried to complete a lot of this data so the other federal agencies can see that.

Under the Drug-Free Workplace Program comprehensive review meeting, as Lisa had given a presentation a little earlier there, we looked at assessing critical issues affecting the program now and in the future. We have reviewed the state of the art and science and what will be the state of the art and science in the future, we hope. We identified key policy and technical challenges and also highlight best practices for the future of the Drug-Free Workplace Program.

A list of resources here, the Division of Workplace Program's main website which we are actually redoing as we speak. That will be different looking. So we have a much better approach, I believe, to being simpler, finding the information you want to find when it comes to our website.
Executive order, public law, model plan which we just updated, and then the 2013 guidance, we've actually just issued basically a new 2022 guidance with some revised versions around the guidance of selecting testing designated positions.

With that, I want to thank everyone for being here at this meeting and I will open it up to any questions from board members.

DR. TAYLOR: Thanks a lot for a great presentation, Ron. This is Steven Taylor. I just had a question regarding the revised morphine cutoff and the revised criteria for MROs to deem a test result positive for morphine or codeine. When does that go into effect, or has that already been implemented?

MR. FLEGEL: No, this is in the proposed version of the mandatory guidelines. We don't have an implementation date, but currently, if it's accepted and public comments, if we revise it accordingly, we send out a final rule, once we have the final rule, then we will send out an implementation date of when that actually is effective.

The laboratories, there are a lot of moving parts. We'll have to send out proficiency testing to the laboratories as far as the cutoff established because that will change. It may take a little bit of time actually
after the final rule, but it will probably be several months, if not three to four months after when we've actually implemented. So it's hard to give an exact date, but generally it's after we set an implementation date after the final rule.

DR. SAMPLE: Ron, I had a question for you. In light of the recent Ninth Circuit decision with respect to delta-8 essentially saying it's up to Congress to fix it if that wasn't their intent, what impact, if any, is that going to have on the federally mandated program and looking at the possibility of adding delta-8 THC to the list of substances it's tested for? Or, I should say, its metabolite, strictly speaking, or parent depending upon the specimen type.

MR. FLEGEL: I cannot comment on legislation or policy around legislation, but again, currently, depending, delta-8 is a schedule I drug, but it does, and we've had several discussions around that when it comes to delta-8, whether it's made from a hemp product or it's made from delta-9, so it is significant as to where it's made from.

But with that said, that would be as a proposed analyte in a Federal Register Notice. If adopted as a proposed rule for urine and oral fluid as we currently have out, it would be added to the analyte table if that was one of the emerging drugs that we looked at as adding to the
analyte table for federally regulated testing. That's about as specific as I can be right now without commenting on any legislation or policy issues around that. So we would look at that.

MS. DAVIS: Are there any additional questions from the board? All right, well, with that, I'm going to remind everybody that we are currently at our lunch break. We'll come back at 1:00 PM Eastern time and if the board members could please come back a few minutes early so we can make sure we get a good roll call and start right on time, and also our speakers, I'll include you on the roll call, as well, Hyden and Svante. So with that, we'll break for lunch and be back at 1:00 p.m. Eastern. Thank you.

(Brief recess for lunch.)
Agenda Item: Update on the Drug Free Workplace Program Supervisor Training Website

MS. DAVIS: Good afternoon, everybody. Welcome back from lunch. This is the second half of the open session of the Drug Testing Advisory Board, and our first speaker this afternoon is Hyden Shen, who will give an update on the Drug-Free Workplace Program supervisor training, website, and FAQs.

MR. SHEN: Thank you, Lisa, and good afternoon. Since the last Drug Testing Advisory Board, the Division of Workplace Programs continues to take steps to increase the consistency, viability, and stability of the program.

There are three initiatives that we have implemented that are as follows. The first one is a Drug Free Workplace program supervisor training module. As you are well aware, a key element of a successful Drug Free Workplace program is the requirement to educate agency supervisors on the programs and their responsibilities. In the past, agencies were responsible for creating and implementing their own training modules, which we have found to oftentimes be outdated or inaccurate. So in order to ensure the standardization and consistency government-wide for supervisors and employees in the agency programs, the Division of Workplace Programs has developed an online
Drug Free Workplace supervisory training module that is free to all agencies.

Over the past month, we have been working closely with the agencies and their IT to roll out the training. At the next DTAB we might be able to give some statistics on the success of the program.

The second area that DWP has put into place is updates on the website. As you heard earlier this morning, there have been a number of changes and updates within the program, and we are currently in the process of readapting the DWP Drug Free Workplace program website to streamline the way information is being displayed and found, updating current files, going through and reducing duplicative sections, and removing outdated files.

The third initiative we have implemented is a frequently asked questions or FAQ section. Because of the changes in the program and updates, we have been receiving reoccurring questions and common questions that we felt would be important to post online, so once that information is consolidated we will have a section on the website to post the FAQs.

That is kind of a summary of three sections. I'll turn it back to you.

MS. DAVIS: Thank you, Hyden. Does any board member have any questions?
Hearing nothing, next up is Barry Sample, with a discussion of the workforce drug testing for marijuana in 2021.

**Agenda Item: Presentation: Workforce Drug Testing for Marijuana in 2021**

DR. SAMPLE: Thank you, Lisa. I appreciate you asking me to give an update on some interesting findings from the most recent Quest Diagnostics drug testing index. I'm just going to focus on a few things here.

I want to give an overview of the drug use trends, focusing on overall positivity, and really going to go a little bit beyond marijuana in this presentation, as well. But obviously, talk about marijuana, cocaine, look at the impact that the marijuana legalization at the state level has had, both on positivity as well as employer behavior, where they have a choice as to whether or not they want to include marijuana. Talk a little bit about specimen validity testing, and some, I think, really interesting data with respect to analysis by testing reason, and hopefully if the board has questions, we'll have some time left for that.

For those of you who have heard me talk about the drug testing index in the past, just a little reminder, this is all laboratory positive data, focusing on the workplace, workforce drug testing. So it'll exclude
rehabilitation, criminal justice, point-of-collection confirmations. So just really trying to focus on pure workforce testing data.

Again, this is laboratory data prior to any MRO review, so there may be an alternative medical explanation for some of the positives that the laboratory finds, and then there's two major groups: the federally mandated safety-sensitive workforce and the general U.S. workforce. But we'll be focusing to a large extent on the federally mandated safety-sensitive workforce for this presentation.

As we look at the overall positivity for all the drugs, federally mandated safety-sensitive urine, general workforce urine, oral fluid, and hair, which are both obviously still general workforce at this point in time -- between 2020 and 2021, in the federally mandated safety-sensitive workforce that positivity rate was 2.2 percent in 2021, no change. We've actually seen declines two out of the last five years in the federally mandated safety-sensitive workforce, but still the positivity rate is a little under 5 percent higher than it was in 2017.

In the general workforce, a slight uptick between 2021 and 2020, it went up 1.8 percent. It's at its highest that it's been since 1996. In 1996, the positivity rate was 6.5 percent. Seeing five consecutive years of increases, and it's up 12 percent since 2017. And
marijuana, not surprisingly, we'll talk about that data in just a second, continues to be the main driver in the positivity rate.

In oral fluid testing, that positivity rate went down 46.3 percent, so in 2021 it was 7.3 percent. However, that doesn't mean that oral fluid is not doing as good a job of detecting marijuana positives as it used, or that there was a change in donor behavior. In fact, it's reflective of employer behavior and the impact of removing marijuana from the panel. So in 2021, only a little under 36 percent of all of those oral fluid tests included marijuana. So you take out the highest positivity drug, it's not surprising that the overall positivity will go up. You'll see at least for those tests that still included marijuana, what the positivity is in just a minute.

In the case of hair, positivity rate was 13.1 percent. Overall positivity, it's an increase of 2.3 percent. Seeing increases five out the last five years. And I would point out that in the Quest testing for hair specimens, they changed the technology that they were using from an immunoassay to a fast mass spectrometry-based technology in 2021. So the last half of the year, that technology changed for all drugs, I should have added, for all drugs other than marijuana. But the cutoff changed for several of the analytes, specifically the amphetamines and
the cocaines, and that could have impacted the overall numbers, but we'll look at that in a little more detail when we look at the drugs.

Marijuana positivity. In the federally mandated safety-sensitive workforce, 2021, the positivity rate was 0.86 percent. That's an increase of just under 9 percent between 2021 and 2020. And if we look back to 2017, it's up about 2.4 percent, and what we saw in 2021 really offset the slight dip, nearly completely reversed the slight dip that we saw in 2020.

In urine general workforce testing, positivity rate went up 8.3 percent, finished the year at a positivity rate of 3.9 percent, it's at its highest ever, going back to when they first started tracking positivity by drug. In 1997, it was 3.4 percent. And the increase since 2017 has been 50 percent.

If you look at the oral fluid positivity rates, they're in the orangish color, you can see that although the number of tests for marijuana -- even in the face of the number of test for marijuana going down, the positivity rate still increased slightly over 20 percent, between 2021 and 2020. There have been increases four out of the last five years, and as compared with 2017, positivity rate is up just over 68 percent. So marijuana still continues to be the highest positivity drug across all of the specimen
types and still seeing significant increases in the oral fluid test.

In the case of hair, positivity rate for marijuana went up 11.5 percent. And as compared with 2017, it's up 51.6 percent. We'll point out that hair, traditionally, has been more volatile, but I think clearly it looks like the trend over time is still seeing increases in marijuana positivity.

Moving now to cocaine, while there have been year-over-year increases between 2012 and 2017, within the urine testing there were declines in both the federally mandated safety-sensitive and urine, between 2017 and 2020. However, one of the two drugs that went up in the federally mandated testing was cocaine in 2021, and it's up 5 percent, which is the first time it's been up in five years.

As we look at general workforce testing, it's somewhat contrary and mixed data, because we look at oral fluid as compared with urine. Urine positivity are for cocaine want down 4.5 percent. It's a positivity rate of 0.21 percent in 2021, and that's a 30 percent decline since 2017. On the other hand, in oral fluid, the positivity rate went up over 46 percent, with a cocaine positivity rate in 2021 of 0.85 percent. It's at its highest level since 2006, when the positivity rate was 1.1 percent, and
as compared with 2017, it's up 16.4 percent. So as I said, somewhat contrary data in this general workforce testing, urine went down while oral fluid went up dramatically between 2020 and 2021.

Hair, the combined data using that older immunoassay data and the fast mass spec with different cutoffs, so the positivity rate finished the year down 12.5 percent, it was 2.8 percent positivity. However, the cutoff increased from 300 to 500 picograms per milligram, and as we've seen repeatedly over time, when cutoffs are lowered, positivity rates go up; when cutoffs are raised, positivity rates tend to go down. So I don't think you can draw any conclusions about -- or as many direct conclusions -- about the change in positivity rates for hair cocaine in 2021 as compared with 2020.

Pivoting back now to marijuana. This is a map of the United States depicting the recreational use status at the end of the year in 2021. Looking at three groups, the recreational states that have legal recreational marijuana use, the medical-only states -- generally speaking, all the recreational states are also medical states. Virginia is one that's a little bit different in terms of exactly what they permit from a medical marijuana perspective, but generally, all recreational states are also medical states.
And then the third category are the nonrecreational, nonmedical states.

So if we could move to the next slide, where we look at the marijuana positivity based on the state recreational use stats. Nationally, on that red line, there's been a 24.6 percent increase in the positivity rate between 2010 and 2021. It went from 0.69 percent to 0.86 percent. As we look, break that down then by the status, in the nonrecreational, nonmedical states, positivity rate increased 16.2 percent since 2010. Medical states, actually was a little bit lower than that, but let's just essentially call it roughly the same, increased 13.3 percent.

But it's interesting, while they historically have been fairly comparable, it now it looks like the recreational use states may be pulling ahead, so that will be something interesting to watch over time. And in the recreational use states, the increase since 2010 has been 44.6 percent. So it went from a 0.65 percent positivity rate in 2010 to a 0.94 percent positivity rate in 2021.

So those macro numbers, high-level, don't always tell the whole story. This chart breaks down the positivity rates by the individual states that have recreational use statutes. The solid colors indicates that they have enacted the recreational use statutes. The
hashed bars would indicate the same states, but they had not yet implemented or passed the recreational use status. So I think some interesting data there.

If we look at the changes, let's start with Colorado and Washington, the two longest-standing recreational use states. Since 2010, Colorado went up 17.7 percent in the federally mandated safety-sensitive workforce. By comparison, Washington went up 94.7 percent. Nevada, which we've been tracking for some time, the state with the highest marijuana positivity, increased just under 208 percent since 2010, and 69 percent since they legalized recreational use in 2016. As you can see from this chart, a lot of variability in the positivity rates state by state, and not necessarily reflective of when they flipped from not being legalized to being legalized.

Within the general workforce testing, it's been somewhat interesting that some of the longer-standing recreational use states are starting to see lower positivity. Maybe that's a reflection of fewer tests, and we'll touch on that employer behavior in just a second. Perhaps some of those employers have opted to remove marijuana from the panel where they still have a choice from a state law perspective, where they can make adverse employment decisions about that employee.
Maybe, because of high positivity rates they decided via a business decision, a risk-based decision, to remove marijuana from their panel, because they were seeing so many positives. So it's possible that the lower data that we're seeing in the general workforce testing is a reflection of having some of those higher positivity tests removed from the dataset.

Moving now to the employer behavior on the next slide. This obviously would be just the general workforce data, where employers have a choice, not the federally mandated safety-sensitive data. Nationally, we've seen an 11.4 percent decline in the rate at which marijuana is included in those urine general workforce tests. It decreased from 99.6 percent in 2015 to 88.2 percent in 2021, and as you can see, the largest decline was in 2021 as compared with 2020.

In the nonrecreational, nonmedical states, the rate at which marijuana was included declined 7.7 percent. Medical states has declined 8.4 percent. So again, recreational/medical are tracking fairly well together. So you look at the bar charts, not much historical difference between the recreational and medical states. But in those recreational-use states, a very large drop, particularly in 2021, but as we look back since 2015, it's declined 17.5 percent.
Now, in 2021, we're now at a level of about a little under 90 percent of all of those urine tests are now including marijuana.

On the next slide we will see what's happening at the state level. And again, some dramatic differences, depending upon the state. Colorado and Washington, the first recreational-use states, they're both down 13.7 percent, the rate at which marijuana is included in the panel. Not much different than what's happening at the national level.

And perhaps, not surprisingly, one of the states that's leading the pack is Nevada. It's down 21.9 percent between 2015 and 2021. New York declined 26.6 percent, and that's even without a full year of the new requirements in New York pertaining to the allowability of including marijuana in those general workforce testing patterns, so I would expect next, when we look at next year's data, it'll be very close to zero percent of all of those tests, urine workforce tests in New York, include marijuana.

Moving now to specimen validity testing. And I wanted to include this slide mostly because of what we're seeing in oral fluid. I think it's somewhat informative. But looking first at the urine in the federally mandated safety-sensitive workforce and general workforce, they went up 30 percent and 52.9 percent respectively, for the
invalid rate. Certainly suggestive of attempts at subversion. Both are up over 70 percent since 2017.

In oral fluid, you see how the invalid rate was relatively consistent up through 2019, but then there was a big jump in 2020 and 2021, 75 percent increase in 2020, and while there was still a slight decline in 2021 in the rate of those invalid tests, it's still nearly twofold higher than historical levels. This is why I think it's somewhat instructive: because of the pandemic, some employers opted for, let's call it, a more contactless experience, where the collector or test administrator had greater physical separation from the donor, and even though the collection device had a sample adequacy indicator, perhaps it's an indication that collectors were not observing the collection process as closely as they should have.

So the question I think that arises, particularly as the program is considering biomarkers, does this data demonstrate the potential power of having some sort of specimen validity test in oral fluid testing? So monitors, perhaps, not just attempts at subversion, but also the collector in monitoring the collection process appropriately.

This is a question that comes up from time to time, and I haven't really talked about this in some time, but if we look at the rate of dilute tests in urine
testing, it has remained relatively flat. We had a decade and more without any significant change, and as we look at the invalid rate, I'm thinking that perhaps donors are employing different strategies other than hydration to try and subvert the testing process.

We're going to pivot now to positivity by testing reason. First, we're going to look at overall positivity rates by testing reason in the federally mandated safety-sensitive workforce. Between 2012 and 2020, there's been an 83 percent increase in the positivity rate on those post-accident tests. It's gone from 2.4 percent to 4.4 percent. During that same period of time, preemployment positivity has, I won't say only, but it's a lower number, it's increased 35 percent from 1.7 percent to 2.3 percent. I think it's interesting that there is such a big jump in the post-accident positivity rate on federally mandated tests in 2018, and I wonder if that might be coincidence or a result of the inclusion of the prescription opiates -- hydrocodone, hydromorphone, oxycodone, oxymorphone -- in that timeframe. But we'll touch on that in just a little bit.

I will preface this, as I always like to do, is that correlation does not equate to causation. Nevertheless, I think the data is extremely interesting. If we look at preemployment positivity between 2012 and
2021, it's increased 34 percent. Again, this is preemployment positivity for marijuana in the federally mandated safety-sensitive workforce. It's gone from 0.82 percent to 1.1 percent, between 2012 and 2021. Post-accident positivity, on the other hand, has increased 114.3 percent. It's gone from 0.84 percent to 1.8 percent, and if I could just have you click once, I want to stay on this slide please. If we look at the difference in positivity rates post-accident as compared with preemployment positivity, that delta in 2012 was only 2.4 percent.

I always used to say that not surprisingly prescription opiates, we had larger differences, but the more commonly abused drugs, marijuana, cocaine, methamphetamine, et cetera, we didn't see that type of difference, and clearly in 2012 we didn't. But look at how that delta has been increasing over time. And in 2021, that delta had increased more than 25-fold and was 63.6 percent. So 63.6 percent higher positivity rate on post-accident tests as compared with preemployment tests for marijuana in 2021.

Again, this data doesn't prove that somebody who was using marijuana and they were impaired and that's why they were involved in a workplace incident that prompted that post-accident drug test, but it certainly raises the level of suspicion that there may be something, that they
weren't necessarily impaired at that time, something about someone's usage pattern, or somebody who's regularly using marijuana, and whether or not they might be more likely to be involved in some incident that prompted this workplace drug test.

While I'm not showing it, this delta in 2021, for post-accident versus preemployment positivity in the general workforce, was similar to marijuana. However, while the federally mandated safety-sensitive workforce had this greater than 25-fold increase, the general workforce difference in those positivity rates increased only twofold between 2012 and 2021.

Looking at cocaine, preemployment positivity for cocaine declined 25 percent between 2012 and 2021, while at the same time, post-accident positivity increased 12.2 percent. So clearly we have a widening delta, and if you could just click it once, please. In 2012, the difference in positivity rates post-accident compared with preemployment was 46.4 percent, and in 2021, it had more than doubled to 119 percent. And I would note that somewhat similar data in the general workforce, so while the positivity rates are different, they both had a twofold increase in the post-accident versus preemployment positivity between 2012 and 2021.
If we move now to the opiates on the next slide, starting with the semisynthetic opiates, which would be hydrocodone, hydromorphone. Hair, in the face of year-over-year declines in positivity, the delta between post-accident versus preemployment remain more or less the same, although there really was a slight increase, from 250 percent in 2018 to 257 percent in 2021, and on the next slide you're going to see similar data for the oxycodones. So, year-over-year declines in positivity, but the difference in 2018 was 157 percent, as compared with 194 percent difference in 2021.

To summarize, the difference in post-accident positivity as compared with preemployment positivity, it increased in both workforces. In the case of marijuana there was more than a 25-fold increase in that delta for the federally mandated tests, as compared with about a twofold increase in the general workforce between 2012 and 2021.

Cocaine, post-accident versus preemployment positivity in the federally mandated workforce, has more than doubled since 2012. Overall positivity in the combined U.S. workforce went up 4.6 percent in 2021, which represents a 31 percent increase from an all-time low of 3.5 percent ten years ago. Held steady between 2010 and 2012. Marijuana continues to be the main driver here,
which continues to have historically high positivity rates and a significant decline at the rate in which marijuana was included in general workforce urine tests, especially in those recreational-use states. While all the other drugs went down, positivity rates in the federally mandated safety-sensitive workforce, cocaine and marijuana both increased in 2021.

Just a little callout to a resource, if people are interested in looking at positivity rates for the combined workforce, both overall and drugs, and next slide, and we'll open it up for questions, please.

MS. DAVIS: Thanks, Barry, for that. That was great information. Any of the board members have any questions for Dr. Sample?

MR. FLEGEL: I do have a question, Barry, myself. Quick question. Have you seen any employers actually going the other way and having concerns about testing for the other isomers like delta-8, delta-10, et cetera? In non-regulated safety sensitive positions.

DR. SAMPLE: There has been some interest. Haven't necessarily heard of employers really insisting. I think it's really at this point more exploratory, and the legal landscape for delta-8, the ambiguity around that I think complicates matters. So at least at the moment, at least the employers that I've talked to, while there's
interest, they've not yet made a decision to look at adding delta-8.

MR. HARRIS: A question for you on the post-accident testing associated with marijuana. In your backup slides, is there any data that you might have, do you have a listing of like how many post-accident tests were actually conducted to get that positivity rate?

DR. SAMPLE: Yes. I don't have it at my fingertips, Paul, but if that's something you're interested in, I could get that to you, and actually to the whole board.

DR. STUYT: I just have a comment I guess. That post-accident increase in marijuana, you're talking about correlation is not causation, but your graph really reflects the increased potency of the THC available, and I think that in places that are not testing need some more education, because that's the problem is the increased potency that people are using and causing cognitive problems and psychotic problems, paranoia, that kind of stuff.

DR. SAMPLE: I would certainly agree with you that employers probably do need some more education regarding the potential impairing effects. Now, in some cases, the newer recreational use states and I'm sure Lindsey could opine on this until our eyes all glaze over, but at least
the newer recreational use states generally have explicit employee protections, which makes it more difficult at least in those states and, quite frankly, Nevada is one of those that has some fairly stiff explicit employee protections.

So while they may be able to test, they may not be able to make adverse administrative decisions. But yes, there is clearly a safety sensitive impact and at least to me with respect to the potency, I think probably where that becomes a little more worrisome is with the edibles. At least with the smoked marijuana and data that Dr. Huestis and Dr. Vandrey have published previously is that users tend to self-titrate. So when the marijuana and the cannabis -- use the new terminology -- when the cannabis has a higher delta-9 content, they tend to take fewer puffs or less deeper puffs. So there's a little bit of self-titration that occurs. But no, I would agree that the potency should be very concerning for employers.

DR. STUYT: It also has to do with the frequency. I mean, it's not just them self-titrating. There's a lot of data now that the significant impacts on cognitive function and if you're in a safety-sensitive position, that's to me quite concerning.

DR. SAMPLE: I would agree, and if you look at the federally mandated safety-sensitive workforce and that
delta going from 2.5 percent to over 62 percent, that's scary. These are primarily DOT tests and people that are behind the wheel of a truck or a bus.

DR. STUYT: I am not sure, I'm totally unclear, are people allowed to use medical if it's recommended by a physician?

MR. FLEGEL: Not at federally regulated.

MS. DAVIS: Any additional questions? All right, thanks, Barry, for that. Our next presenter is Svante Vikingsson, and he will discuss some of the hydroxy cocaine and cocaine ratios in hair.

Agenda Item: Presentation: Summary of Hydroxy Cocaine and Cocaine Ratios in Hair

DR. VIKINGSSON: Thank you. My name is Svante, and I am a research forensic scientist with the NLCP program at RTI.

If you go to the next slide, I just want to tell you that these are my own opinions and views.

So I'm here today to talk about hydroxy cocaine and some of challenges with developing mandatory guidelines in hair for cocaine. We have been testing for cocaine for around 30 years in hair, and some of you might wonder why we haven't figured out and put down how to do it properly, at least not from the SAMHSA level. Part of it is to do with the cocaine incorporation into hair, and that's the
graphic I have here on the right side that cocaine can actually end up in hair through at least three different mechanisms.

So it can be incorporated from the blood, illustrated in blue here, to the hair follicle. It can also be incorporated in through sweat and sebum into the forming hair shaft below the skin, which is shown in yellow, and both of these create bands and for practical purposes is going to show up as one band in the workplace drug testing, and it moves by the speed of about 1 centimeter per month as the hair grows.

But then we have the green incorporation on the right there, which is external contamination in the broadest sense, incorporating everything from sweat from the individual using drug contaminating their own hair to powder and smoke contamination from the environment they're in, and this will affect the whole hair and not form any bands. It will just affect the whole area of the exposed hair shaft, and this is the problematic contamination for us as it's very difficult to completely remove to the contamination and washing procedures, which means that it's difficult for us to, based on cocaine, on just cocaine, to differentiate between drug use and other sources of cocaine in hair.
We also see differences between individuals in how cocaine is incorporated, and an important factor there is hair damage. Hair can get damaged from treatments such as dyeing or bleaching, but also to extensive brushing or hair ties, for example. And what happens is that the hair gets more porous, which makes it easier for contamination to be absorbed by a porous hair or damaged hair, but it's also more easily removed during decontamination. So in essence, we might end up with the situation with damaged hair that there's a risk of both false positive results in individuals not using drugs and false negative results in individuals using drugs.

We knew already back in 2004 when we proposed the first mandatory guidelines for hair testing that cocaine was tricky. So in addition to having a cocaine result above the threshold, it was proposed that you either needed to have a benzoylecgonine concentration at least 5 percent of the cocaine concentration or have cocaethylene present above the cutoff.

The rationale behind this is that both benzoylecgonine and cocaethylene are major metabolites of cocaine which are produced when the body degrades cocaine. So the idea is that if you've used cocaine they will be present, and if it's external contamination they won't be
present. While that's a clever idea for these two analytes, further research has shown it's problematic.

So if we start with cocaethylene, which is formed when cocaine is co-ingested with alcohol, it has been shown to be present in both pharmaceutical grade cocaine and street cocaine, and the levels have been reported to be up to 2 percent.

If we talk about benzoylecgonine, there's more work done there, but in brief, it has been shown with both volunteers and in laboratory-based studies that benzoylecgonine is formed in the contaminated hair. The 5 percent proposed cutoff is frequently surpassed, and in fact, ratios up to 57 percent have been reported. So a take-home from this is that for both benzoylecgonine and cocaethylene, it's difficult to establish a cutoff concentration or a cutoff rule to distinguish use from contamination.

So we have to look elsewhere, and I think you can skip two again, because I think it's one of those in-between slides. So where we went and looked was -- and I would say other researchers did this first -- was to start looking at the hydroxylated metabolites of cocaine or the hydroxycocaines. These are the three isomers that we're looking at, and compared to cocaine, they all three of them have an extra hydroxyl group on the phenyl ring there on
the left. That's highlighted in red. That ring can be in the ortho, meta, and, para positions, as illustrated here, which are also known as 2, 3, and 4 positions.

Now, the hydroxy cocaines are metabolites of cocaine, which is the part that we're trying to use. But they can also be formed chemically in an oxidative environment, and in fact, there are studies indicating that ortho-hydroxy cocaine is more formed chemically, while the other two are more specific to metabolites, which is why we're going to focus on the meta and the para isomers for this talk.

So if we jump to the next slide, and before we're going to talk about the studies, I'm just going to talk a little bit about the process in general, when establishing a cutoff. There's really two populations that we need to concern ourselves about, and the first one is how high concentrations can we get in contaminated hair. That would be the red population on the bottom there.

Other population is what concentrations will we see of the drug use, and that would be the green population, and we try to establish cutoffs that excludes contamination. That's what the aim here is and the reason for that is to protect the donor and the employee and make sure that no employees that do not use cocaine get falsely accused of doing so, or get a false positive result. If
you want to use that terminology. But a positive result that's not from drug use. That's what we're trying to avoid.

As you can see in this mock example, there might be an overlap, and in fact, for most drugs in most matrices, there is, and in that case, a cutoff concentration might lead to a number of actual drug using individuals having specimens reported as negative. I just want to highlight that this is not something that's unique to hair or cocaine by a couple of examples from the urine program where, for example, THC-carboxy cutoffs are established and maintained to ensure that passive exposure to marijuana smoke won't give a positive THC-carboxy result in urine and previous studies from our side have shown that about two-thirds of all THC-carboxy positive results in our program is below the cutoff, and therefore reported as negative. This is because we cannot distinguish between drug use and the passive exposure in that range.

Similarly, as Ron talked about this morning, the cutoffs for morphine in urine are adjusted to make sure that the poppyseed ingestion cannot lead to a positive result.

So this is a little bit of how we're thinking, and if we move on to the next slide, we have been trying to gather information for SAMHSA and for the decision-making
process from various studies. For the contamination population, we have looked at a number of studies and conducted a few of our own, so it's a mixture of studies with volunteers, laboratory-based studies, studies of street cocaine specimens, and studies from people who are exposed to cocaine in their workplace.

And the trick here is to identify studies that represent the worst possible scenarios that we can think of in real life and that an employee would be exposed to in the workplace and in their home environment, but we also don't want to include studies that have unreasonably harsh contamination protocols, for example, in the laboratory-based study. So that's a consideration that we have to make.

If we move to the next slide, we also look at the population of positive cases or drug users and that's actually an easier population to study. Our friends at Psychemedics have published a couple of papers with very large datasets of hydroxy cocaine data in workplace drug testing specimens that have been most useful. We also have our own data and data from a study in Europe that looks at confirmed drug users and their levels.

So if we move to the next slide, there's really two ways that we want to look at these -- that we can look at these cutoffs in order to use the hydroxycocaine. We
can either establish a cutoff for the hydroxycocaine metabolite, be it 10 picograms or 20 picograms or whatever, and the benefit here is that we only have one analyte that we need to care about, and that makes it a little bit easier to actually do it.

However, we run into the issue of the fact that the proposed cutoff for cocaine is 500 picograms, but we have seen at least 200 times higher cocaine levels in hair and a certain concentration level of a metabolite might mean two very different things in the high end and in the low end in the labs.

To deal with that, one way to approach it is to look at the ratio between the metabolite and the parent, like what was proposed for benzoylecgonine, and that sort of solves the issue of the range of concentrations, but it does require to quantitatively measure two analytes, and it will also be much trickier to deal with the concept of reporting it above the upper limit of linearity, might mean that we need a quantitative number for both the metabolite and cocaine which will be more cost -- labor and cost intensive. So if we move to look at some of the data we have found, what we're looking at here is concentrations of meta-hydroxycocaine in hair on a logarithmic scale.

So the red boxes are on the left are contamination studies, and the green boxes on the right are
studies of drug users. The black bars are the median concentrations. As you can see, the highest concentration we have observed in a contamination study is 92 picograms per milligram, and if we were to imagine a cutoff at that concentration, we would see that that's above the median concentration in most of the drug users studies, which would mean that more than half of the specimens would be reported as negative.

If we move to the next slide, we see that for para-hydroxycocaine, it looks very similar, and that is in general what we see for the meta and para-hydroxy cocaine is that they behave very similar, and we also see, which is encouraging, that there is a strong correlation; we get similar results from the different studies that we've pulled together.

So what looks more promising is, if we move to the next slide, is instead to look at the ratios between meta-hydroxy cocaine and cocaine. Again, the highest ratio that has been observed is .1 percent, and an imaginary cutoff there, if we establish a cutoff there, we can see that that's well below the median concentration of what we see in the workplace specimens which would indicate that there is a possibility to establish a cutoff somewhere in this range that would be able to reasonably well differentiate between external contamination and drug use,
and we move to the last slide of these graphs, we see again a similar pattern for para-hydroxycocaine to cocaine ratio.

Now, again, as I mentioned before, it's not quite that simple, because again, these red boxes represent specific contamination models and it's not certain that those contamination models capture all the types of contamination that would be of interest in a workplace drug testing setting.

To summarize on the last slide here, some take-home messages for you. The literature kind of shows that cocaine is a difficult marker to use by itself, because it's hard to decontaminate. Benzoylcegonine and cocaethylene are difficult to use, because they are either represent in the street cocaine or they are formed in the contaminated hair. The hydroxycocaines offer more possibilities, especially if we look at the ratio between the metabolite and cocaine, and it might be possible to establish a cutoff there.

On a final note, cocaine is probably one of the most studied analytes in hair, if not the most studied analyte. So we have a very good dataset from cocaine. They are more limited on other analytes, and we will have to look at and do similar analysis for all the different analytes in the program.
With that, I would like to thank you for your attention and I would also like to give a shoutout to our PT, production team, and also to Dale Hart, our senior researcher, who helped conduct most of the work in the NLCP studies that I have reported on today.

Thank you so much.

MS. DAVIS: Thank you very much, Svante. Does anyone on the board have any questions?

**Agenda Item: Public Comment**

MS. DAVIS: Okay, hearing none, I want to thank all the presenters today for your presentations and for bringing your information to the board, and I want to at this time open it up to public comment.

First, we had several individuals who requested on the website to provide a public comment. As I call your name, I'm going to call the names of the people that requested to make a public comment on the website first, and as I call your name, please unmute yourself and state your name again for the record and who you're with. Feel free to state your comment, and then we'll move on to the next.

The first public comment is from Andrea Steel.

MS. STEEL: Good afternoon, everybody, and thank you for the very informative meeting and information that
was presented today. Thank you for allowing me the opportunity to provide comments.

My comments are specifically to the proposed revisions to the mandatory guidelines for federal workplace drug testing programs. I apologize, I had a conflict earlier, I was not able to listen in when that was being discussed, so I assume that these comments are still relevant.

I am Andrea Steel. I'm an attorney based in Houston, Texas. I represent multiple businesses across the cannabis industry supply chain. I'm also the co-chair of the legislative advisement committee of the International Cannabis Bar Association. I'm vice chair of the American Bar Association Cannabis Law and Policy Committee and a member of the Minority Cannabis Business Association. I'm providing comments today based on my knowledge and experience over the last several years representing various businesses in the cannabis industry and not on behalf of any client or any of the aforementioned organizations.

Although the International Cannabis Bar Association did separately submit its own written comments to those drug testing program rules, the comments I'm making today are my own opinion and not intended to be representative of any other person or organization.
Testing for THC is problematic for a multitude of reasons. First, there are numerous consumable hemp-derived products that are federally legal under the 2018 Farm Bill beyond CBD. As most of you know, the 2018 Farm Bill gave a definition for hemp, and it removed hemp from the Controlled Substance Act. That definition of hemp allows for a very small percentage of delta-9 THC and deems those products and others federally legal with respect to no longer being a controlled substance.

The definition limits only delta-9 THC but allows for higher concentrations of several other forms of THC outside of delta-9 that would likely result in a positive test result and we discussed that earlier, I heard people talk about delta-8, delta-10, THC-O, et cetera. Therefore, if those tests are not able to differentiate among those different isomers, then a positive test result for THC is no indication of illegal use of marijuana.

Pile on top of that there are also hemp-derived cannabinoid products right now that have higher milligram levels of delta-9 THC but still meet the 2018 Farm Bill definition. These products are out here on the marketplace especially in states where legal access recreationally or medically are very limited if accessible at all. So those products are out here in all of those other states.
Maintaining provisions that would allow for adverse consequences in the workplace for a positive THC result could lead to civil liability and confusion, all with no evidence of illegal use of a controlled substance. For this reason, agencies should strongly consider removing testing for THCA metabolites until scientific research can establish reliable means of testing able to differentiate between the legal and illegal cannabis-derived substances, or at least testing only in cases of suspected impairment on the job, and only for positions where public safety could be at risk.

Second, there are now 37 states which have passed medical marijuana laws and another 10 that have approved low THC cannabis for medical purposes, meaning all but three states in the country have found valid medical use for THC, and a vast majority of people in the United States live in an area where access to marijuana on at least the medicinal level is legal. I noticed on the map earlier there were several states that indicated they didn't have medical use, and that's not entirely accurate, because ten of those states allow for low THC, including Texas, so there actually is medical access in several more states than that map indicates.

Yet, the rule expressly states that, or is adding language that says, a physician's authorization or medical
recommendation for a schedule I controlled substance is not a legitimate medical explanation for a positive test result. This position completely undermines physician competency and disregards 94 percent of the states which have found reason to excuse use of THC where a physician deems it appropriate.

So for that reason, I ask the agency to strike that proposed language and instead add a specific carve-out for cannabis patients who test positive for THC if she or he provides evidence of a state-licensed physician recommendation for cannabis in compliance with a state legal medical cannabis program, such that the test not be reported as positive for marijuana.

Lastly, THC can cause positive urine test results for up to 30 days and in rare cases even up to six months. All of the other substances on the urine testing panel trace back no more than about a week prior, but with THC, we're dealing with a substance that has been found to have accepted medical use, again, in 94 percent of the states, and has not caused a single overdose according to the DEA, but the urine testing would scrutinize prior use more harshly than any other substance on the panel.

Oral fluid testing for THC tracks prior use over the preceding few days which is a timeline much more in line with the other substances. So for that reason, I'm
requesting that if there must be testing for THC at all, that it be conducted via oral fluid testing and not urinalysis.

Because of those reasons, I suggest removing THC from preemployment testing altogether, and when it is tested for, it should only be in cases of suspected impairment, and in those cases, only be oral fluid testing and not urine testing. There should also be a valid excuse for individuals who test positive for THC and can provide current valid proof of being a medical cannabis patient in a state-approved program. Thank you.

MS. DAVIS: Thank you very much for your comment. Our next public commenter is Daniel Horvath.

MR. HORVATH: Good afternoon. I appreciate the opportunity to provide comments here. We filed written comments prior to this. I'm not going to read them verbatim, but just to give a highlight.

I'm with the American Trucking Association. I'm currently the vice president of safety policy here. Kudos and hats off to DTAB and all of the presenters today for discussing important issues in drug and alcohol testing. Certainly, this is something that is plaguing the industry today and something we think should always be improved from a highway safety perspective.
My comments are specific to hair testing today. ATA has long advocated for the use of hair testing and we do appreciate the strides that HHS and SAMHSA have made over the years in advancing that and getting it closer and closer to the finish line.

Unfortunately, based on the 2020 proposal, we do see that as problematic requiring an alternative specimen in the event of a positive hair test. There are a lot of implications if HHS were to move forward with those guidelines and finalize those guidelines.

We have carriers that utilize hair testing today. We believe that any discussion of a secondary test as a result of a positive hair test ultimately delegitimizes the hair testing program as a whole. So we do encourage SAMHSA to review that. I know they're working on that, and we encourage them to work expeditiously to getting that taken care of.

Secondary to that, and this was discussed earlier on the presentations this morning, hair testing today cannot be reported to DOT's drug and alcohol clearinghouse. We're seeing higher and higher numbers in that clearinghouse, and that's based on marijuana testing alone.

So this is a safety issue. This is not necessarily about identifying controlled substance users.
and banning them from an industry altogether. It's about getting them help, it's about identifying them, removing them from our nation's highways before we allow them to return back to duty. I know a number of our motor carrier members are going through that very process of making sure drivers can find help and seek substance abuse professionals.

We encourage this group to, again, work expeditiously to address the concerns that were raised as a result of the 2020 proposed guidelines and work to move the needle forward in getting that across the finish line. Again, we did file written comments for this, and I encourage folks to reach out to ATA if they have any questions, but I do appreciate the time and the opportunity to provide these comments today.

MS. DAVIS: Thank you very much for that comment. The next person who has requested to make a public comment is Doug Voss.

DR. VOSS: Good afternoon and thank you for the opportunity to submit comments in this open session. My name is Doug Voss. I serve as a professor of logistics and supply chain management at Scott E. Bayer Arkansas Highway Commission Endowed Chair of Motor Carrier Management at the University of Central Arkansas. I hold a PhD in logistics from Michigan State University as well as master's and
bachelor's degrees in transportation and logistics management from the University of Arkansas.

I'd like to briefly share major conclusions reached concerning urine and hair drug testing in peer reviewed research that was recently published in the Journal of Transportation Management. I served as a lead researcher on this project. In 2020, the Trucking Alliance, a safety coalition of nine major United States transportation companies, asked the University of Central Arkansas to engage in two studies comparing preemployment urine and hair test results.

The first study determined whether their sample of hair and urine preemployment drug test results are generalizable to the broader U.S. truck driver population, thereby supporting their previous claim that if all U.S. truck drivers submitted to a hair drug test, roughly 275,000 drivers would be disqualified from the workforce.

We utilized a sample of 41,922 commercial truck drivers for this aspect of the study, which greatly exceeds the sample necessary to draw inferences to the national truck driver population.

The second purpose of our research and the crux of my comments today was to determine whether hair testing is biased against ethnic groups by comparing urine and hair drug pass/fail rates. These results were obtained by
examining a sample of more than 72,000 commercial drivers whose ethnic groups were listed in their preemployment application and also matched with their drug test results.

On the first aspect of the study, our research concluded that in fact about 275,000 truck drivers would be removed from their positions if they were required to pass a hair drug test.

There were two methods utilized to determine that the hair drug testing has a disparate impact on ethnic minority groups. The first method compared urine and hair drug test results using the four-fifths rule. This rule is defined in the Code of Federal Regulations under a section titled Uniform Guidelines on Employee Selection Procedures. These guidelines apply to all selection procedures that are used to make employment decisions in order to make sure that no disparate treatment has occurred in hiring decisions.

The four-fifths rule states that if the selection rate for a certain group is less than 80 percent of the group with the highest selection rate, there is an adverse impact on that group. In other words, disparate impact is assumed if any ethnic group does not pass at a rate of at least 80 percent of the ethnic group with the highest passing rate.
We examined 73,176 urine test results and 99 percent of drivers in the Asian ethnic group passed their preemployment urine screen. To comply with the four-fifths rule, each of the other ethnic groups must pass at a rate that is equal to 80 percent of this figure or 79 percent. So, to avoid any disparate impact, each of the eight ethnic groups studied would have to pass at percentages greater than 79 percent. All ethnic groups greatly exceeded this 79 percent threshold.

We subsequently examined hair test results. Each ethnic group passed their hair test at a lower rate than they passed their urine tests. Hair test pass rates ranged from 96 percent of drivers in the Asian ethnic group to 88 percent of drivers whose ethnic group was not specified.

If we apply the four-fifths rule, all nine ethnic groups needed to pass the hair test at a percentage greater than 80 percent of the Asian ethnic group, or 77 percent. Each ethnic group exceeded this benchmark, and we found that hair testing did not pose a disparate impact. So if we apply the four-fifths rule to the urine and hair test results of this driver population, we clearly show that hair testing is not racially biased against any ethnic group.

We also utilized chi-squared analysis to determine whether hair testing has a disparate impact.
Chi-square results have indicated disparate impact of ethnic groups, urine tests were statistically equivalent, but their hair test results were statistically different. Chi-square analyses did not indicate disparate impact resulted from the use of hair tests. The ethnic groups' pass/fail rates were significantly different for urine tests but were also significantly different for hair tests.

Therefore, given significantly different pass/fail rates across ethnic groups for both drug testing methods, our results do not support the hypothesis that hair testing has a disparate impact. So in conclusion, if hair testing were racially biased, we believe the research described heretofore would have yielded different results. As it stands, we did not find racially disparate impacts between urine and hair drug test results.

If anyone would like to see the complete copy of our research, please contact me at voss@uca.edu and I will more than happily email the report to you. Thank you again for this opportunity.

MS. DAVIS: Thank you very much for your comments.

The next public commenter to register was Greer Woodruff.

MR. WOODRUFF: Good afternoon. My name is Greer Woodruff and I serve as the senior vice president of safety, security, and driver personnel at JB Hunt Transport. Our company employs nearly 37,000 people who
operate and manage 22,864 trucks and 132,000 trailers and containers to serve our customers throughout the nation's supply chain. My comments are related to safety-sensitive occupations, specifically commercial truck drivers.

JB Hunt has utilized preemployment and random hair testing of its truck driver population since 2006, in addition to the DOT-required urine testing requirements. Hair testing was implemented following two fatal collisions, one in late 2005 and one in early 2006, in which the drivers failed post-accident drug tests for cocaine. Both drivers had previously passed DOT-required preemployment urine tests. Drug use by commercial motor vehicle drivers resulting in fatal collisions was unacceptable to JB Hunt leadership and we began to seek a better way to ensure operators of JB Hunt trucks were drug free.

JB Hunt representatives, including myself, have presented to the DTAB and have met with SAMHSA staff on a number of occasions over the past 15 years. We have shared our results and our experience with urine and hair testing, including comparative results of hair and urine from the same donors.

Protocols addressing external contamination have been addressed and we have presented data and research demonstrating that there is no racial or hair color bias.
based on specimen type. We have provided a number of legal cases in a variety of jurisdictions where hair testing has been upheld. Over the past 15 years, JB Hunt has had zero cases in which persons challenged the results of hair tests. That's zero cases. There have been no legal challenges of a false positive due to external contamination or hair color bias or any other reason.

As of March 31, 2022, 191,972 drivers have submitted to both a urinalysis and a hair test at JB Hunt. Our experience clearly shows that a hair drug test is more reliable and accurate at identifying regular drug use than is urinalysis. For example, of the 7,159 applicants who have tested positive for drug use with the hair test, 9 out of 10, or 90 percent, actually passed their urine test. While our company disqualified them for employment at JB Hunt, many of them likely applied for work at trucking companies that rely only on the DOT-required urinalysis.

That's why we're concerned about the proposed federal workplace drug testing guidelines, a proposal that if adopted would compromise public safety. As proposed, the rule would prohibit JB Hunt from denying employment to these drivers provided that they could pass a urine test. Our data demonstrates that 9 out of 10 illegal drug users would be permitted to get behind the wheel. This would create a tremendous liability for employers while creating
a significant safety risk that would jeopardize the general public.

For this reason, public comments to the proposed rule overwhelmingly objected to the requirement that in order to verify a positive hair test and disqualify an applicant, the person would also have to test positive for a urine test.

In 2015, Congress directed the Department of Transportation to, quote, use hair testing as an acceptable alternative to urine testing, close quote. That applied to both preemployment testing and random testing for drug use of commercial truck drivers. Requiring a positive hair test to be validated by a urine test does not conform to the requirements of section 54.02 of the FAST act. For hair to be an alternative as intended by Congress, it must stand on its own within dependency on another specimen type for confirmation.

I encourage the DTAB to review JB Hunt's comments to the proposed rule submitted in November 2020 and I urge you to strongly recommend that this dual positive drug requirement be deleted from future proposed rule.

Very good information covered today. Thank you for the opportunity to participate in that and to make comments and share my concerns.
MS. DAVIS: Thank you very much for your comments today. Our next public commenter is James Rector.

OPERATOR: He is not on the call, ma'am.

MS. DAVIS: Okay, we'll skip him for now. Our next commenter is Jo McGuire.

MS. MCGUIRE: Thank you so much, Chairman Flegel and members of DTAB, for allowing comments today. My name is Jo McGuire. I am the executive director of the National Drug and Alcohol Screening Association. NDASA is a nonprofit, professional association representing over 3,000 private and public sector employers and service agents to administer and manage workplace drug and alcohol testing programs mandated by the Omnibus Transportation Employee Testing Act, DOT agencies, federal HHS drugfree workplace program testing, as well as nonfederal, non-mandated drugfree workplace programs.

NDASA's membership includes employers, substance abuse program administrators, consortia for party administrators, specimen collection facilities, collectors, breath alcohol technicians, screen test technicians, laboratories, medical review officers, and substance abuse professionals to support employers in their drug free workplace program initiatives.

The members of NDASA would like to submit comment on the recent proposal noted in the Federal Register that
in future changes may be made by SAMHSA to the drug test panel without issuing requests for public comment. While the NDASA membership fully supports the ability to maintain flexibility in adding and removing drug panels as needed, industry professionals believe it is vital that public comment remain as necessary, critical component in the process which governs federal drug testing protocols.

The decisions made by SAMHSA have far-reaching impact across the industry, particularly to the laboratories and the medical review officers and in the long term to the U.S. Department of Transportation program that will follow suit on whatever changes SAMHSA deems necessary.

Creating annual changes without public comment, even for the federal program only, is a precedent that should not be set and has the potential for unintended consequences when the industry experts are not given the opportunity to speak into these important matters. The members of NDASA would appreciate reconsideration of this proposed change in order to maintain appropriate protocols and procedures that affect our industry.

As always, we value and appreciate the vital work performed by SAMHSA that contributes to workplace safety across our nation and we are very grateful for the opportunity and the important work each of you do and offer
us to be involved as members of the advisory board. Thank you so much for allowing us to make these comments. I really appreciate it. Thank you.

MS. DAVIS: Thank you very much for your public comment. Tom Rector, are you there? I saw your note in the chat. Feel free to unmute yourself and state your comment for the record.

Just for the information, anyone else in the public who wishes to make a public comment, please make a note in the chat and we will get you on the record.

MR. FLEGEL: Lisa, maybe the operator can unmute Tom if he can raise his hand or something.

MS. DAVIS: Tom, can you hear me? Operator, while we're waiting for Tom, do you have any special instructors for anyone else who would like to make a public comment at this time?

I see one other person who would like to make a public comment. Michael Schaffer?

DR. SCHAFFER: I'd like to make two or three comments together. I served on the Drug Testing Advisory Board and I cherished that time, but I never agreed to the structure or the contents of the guidelines that were published. I don't know why that was published, I don't know how it was published, but I don't know if any other members of DTAB were given the opportunity to review that.
That was brought up many years ago for comment at one of the meetings, and I rejected it. To me, it was insane. It was made to adversely impact hair testing, and I never agreed to it.

With that said, I would like to make a comment on the hydroxy cocaines. I think we've been working with hydroxy cocaines probably for 15 years now, and it has grown and evolved. If you do the proper washing of the hair sample, which perhaps is not in the rules and regulations, it should be, and you measure the content of the drug in the last wash and you use the hydroxy cocaines, we feel very reliably that we are accurately portraying differentiation of drug users from non-drug users.

We also did a study very similar to what JB Hunt and other trucking companies, and we showed that the use of hydroxy cocaine removes any hair color bias which has appeared in the literature over the years.

The last comment I would like to make has to do with the Farm Bill which purports to introduce marijuana if the THC content is below a certain percentage. I have a master's degree in pharmacognosy, and I know a lot about plants. What you can do if you grow something and the content is higher than the 0.3 percent, you just throw in some limbs and the tree trunk and the roots, they're all part of the plant, and it drops below the 0.3 percent.
There's nothing there that alludes to anything like that, but to me, it's kind of silly and it's kind of foolish. It's very sad.

The use of CBD to produce delta-8 instead of delta-9 THC, to me, is one of the worst issues that I've seen coming across a long time. We do school drug testing, and we see a huge increase in the use of vaping with delta-8-THC that comes from CBD. It has serious consequences in use of developing personnel, people, youngsters in school age, that are using it at very, very high concentrations. The concentrations that we see are extraordinarily high, and they produce hallucinogenic effects.

If you only look for delta-9, you're going to allow a whole bunch of people to operate trucks and other security positions that are going to be out there and seeing the effects of these drugs. I think you really need to take a serious look at that, and obviously it's embroiled in a lot of politics, but I think you need to look at the science. Thank you very much for allowing me to make these comments.

MS. DAVIS: Thank you very much for your comment. Tom Rector, you want to give it one more try before we break?

MR. RECTOR: Great. Well, I'm listening to this presentation, and I have to say, I think you are missing
the forest for the trees. I've always known that drug testing was a mistake. It really doesn't work. The data from the Federal Aviation Administration proves it doesn't work. There is a toxicology database over the last 30 years, and what it shows is over 10,000 accidents the THC only shows up in 2.3 percent of the accidents over a 30-year period, and that's way below the likely usage rate of general aviation non-drug tested pilots.

The usage rate is probably closer to 10 percent so the data from the FAA would show quite clearly that cannabis-consuming pilots are actually safer, only one-fourth is likely to be involved in a fatal crash. The data that I submitted to you from the National Transportation Safety Board was done from a study after the crash of UPS 1354 in August of 2013. I sent this toxicology data from the FAA to the NTSB and I said, look, you're not testing for fatigue. We need to move away from drug testing and move toward computerized impairment testing, because the pilots who crashed that plane, they passed their drug test, but they wouldn't have passed the fatigue test, the computerized impairment test, that would actually show fatigue, illness, drugs, or alcohol.

The other thing that's very noticeable in that data from the FAA is diphenhydramine, which is a sedating antihistamine sold over the counter, shows up in almost 10
percent of the fatal general aviation crashes. But that's not on any drug test and I could go buy it over the counter.

So I don't believe your drug test works at all. I'm quite certain it doesn't. I think I can prove it. Anybody on this panel that wants to sit down and discuss it with me, you have my email. I'll be glad to share with you this data from the FAA. It's a 30-year toxicology database, and it proves that the drug test doesn't work at all.

MS. DAVIS: Thank you very much for your comment. Is there anybody else whose name wasn't called who wishes to make a public comment? All right, seeing nothing, this now ends the public comment session.

Before I adjourn, I have one bit of housekeeping. For those joining the closed session this afternoon, we're going to start it a little later than on the agenda. We'll go ahead and start at 3 o'clock, but I will need you to join by a separate link in the separate email that I sent regarding the closed meeting. Please be sure to log in a little early so we can get the meeting started on time. I'll now turn it over to Ron Flegel, the chair, for closing remarks.

MR. FLEGEL: Thank you, Lisa. I just want to thank all the board members, federal partners for
presentations, presentations that were given on all the information. I thought it was a great meeting. I liked a lot of the information.

I also want to thank public comment on all of that. We do hear exactly what you're saying. We'll take those all into account. Thank you for everything and we will rejoin again, as Lisa said, in closed session. I'll turn it back over to Lisa.

MS. DAVIS: Thank you, Ron. With that, I adjourn this open session of the Drug Testing Advisory Board. Thank you.

(Whereupon, at 2:37 p.m., the meeting adjourned.)