FOOD AND DRUG ADMINISTRATION (FDA)
CENTER FOR TOBACCO PRODUCTS (CTP)

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TOBACCO PRODUCTS SCIENTIFIC ADVISORY COMMITTEE (TPSAC)

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THURSDAY
MAY 18, 2023

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The Committee met in the Great Room, Building 31, FDA White Oak Campus, Silver Spring, Maryland, at 9:00 a.m., Cristine Delnevo, Chair, presiding.

MEMBERS PRESENT

CRISTINE DELNEVO, Ph.D., MPH, Rutgers School of Public Health, Chair
MIGNONNE C. GUY, Ph.D., Virginia Commonwealth University
SVEN-ERIC JORDT, Ph.D., Duke University School of Medicine (by teleconference)
ADAM LEVENTHAL, Ph.D., University of Southern California
LUCY POPOVA, Ph.D., Georgia State University
RISA ROBINSON, Ph.D., Rochester Institute of Technology
SCOUT, Ph.D., M.A., National LGBT Cancer Network
DONA UPSON, M.D., M.A., Raymond G. Murphy Medical Center

INDUSTRY REPRESENTATIVES (NON-VOTING) PRESENT

WILLIAM ANDY BAILEY, Ph.D., University of Kentucky Research and Education Center

MARIA GOGOVA, Ph.D., M.D., Altria Client Services, LLC

DAVID JOHNSON, Ph.D., Tobacco Technology

EX OFFICIO PARTICIPANTS (NON-VOTING) PRESENT

ALBERTA BECENTI, MPH, Indian Health Service

DEIRDRE LAWRENCE KITTNER, Ph.D., MPH, Centers for Disease Control and Prevention

LISA POSTOW, Ph.D., National Institutes of Health

FDA PARTICIPANTS (NON-VOTING) PRESENT

MATTHEW BRENNER, J.D., Senior Regulatory Counsel, Office of Regulations, CTP (by teleconference)

ELE IBARRA-PRATT, R.N., MPH, Deputy Director of Public Affairs, Office of Compliance and Enforcement, CTP

DIANA KANEVA, J.D., Associate Chief Counsel, Office of the Chief Counsel, Office of the Commissioner

DYLAN LEISCHOW, M.A., Economist, Office of Regulations, CTP

CRISTINA MCLAUGHLIN, Economist, Office of Economic Analysis, CTP

MAY D. NELSON, J.D., MPA, Director, Office of Regulations, CTP

SARAH SEAGER STEWART, J.D., Senior Counsel, Food & Drug Division, Office of the Chief Counsel, Office of the Commissioner

DALE SLAVIN, Ph.D., Supervisory Science Policy Analyst; Branch Director, Science Policy Branch, Office of Science, CTP

THOMAS SUNDLOF, J.D., Assistant Deputy Chief Counsel (Acting), Office of the Chief Counsel, Office of the Commissioner

MATTHEW WALTERS, Ph.D., MPH, CDR, U.S. Public Health Service; Deputy Division Director, Division of Product Science, Office of

Science, CTP

EMIL WANG, J.D., Chief Engineer Officer, Rear Admiral, U.S. Public Health Service; Senior Regulatory Counsel and Senior Advisor for Manufacturing and Regulatory Policy, Office of Compliance and Enforcement, CTP

FDA ADMINISTRATIVE STAFF PRESENT

SERINA A. HUNTER-THOMAS, MSA, R.N., CAPT, U.S. Public Health Service; Research Operations and Advisory Resources, Office of Science, CTP, Designated Federal Officer

JANICE O'CONNOR, Research Operations and Advisory Resources, Office of Science, CTP, Advisory Committee Coordinator

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9:25 a.m.

CHAIR DELNEVO: Good morning, everyone. I'm Cristine Delnevo, Chair of the Tobacco Products Scientific Advisory Committee. I want to thank you all for joining us today. I want to make a few statements, and then we will introduce the Committee.

For topics such as those being discussed at today's meeting, there are often a variety of opinions, some of which are held quite strongly. Our goal is that today's meeting will be a fair and open forum for discussion of these issues and individuals can express their views without interruption. Thus, as a gentle reminder, individuals will be allowed to speak into the record only if recognized by the Chair. We look forward to a productive meeting.

In the spirit of the Federal Advisory Committee Act and the Government in the Sunshine Act, we ask that the Advisory Committee members take care that their conversations about the topics at hand take place in the open forum of the meeting. We are aware that members of the media are anxious to speak with the FDA about these proceedings. However, FDA will refrain from discussing the details of this meeting with the media until its conclusion. Also, the Committee is reminded to please refrain from discussing the meeting topics during breaks. Thank you.

I would now like to invite the members of the Committee to introduce themselves, their institutional affiliation, and expertise. We will start on this side with Dr. Bailey.

DR. BAILEY: Thank you. Andy Bailey, University of Kentucky, Tobacco Extension Specialist at the University. I'm a grower representative on this committee, and I represent over 3,000 tobacco growers here in the U.S. I've been with the University of Kentucky for about 21 years in this capacity as a Tobacco Extension Specialist. Thank you.

DR. JOHNSON: I am David Johnson. I am with Tobacco Technology. I have been working in tobacco for approximately 30 years, and I've worked for small tobacco companies and medium-sized tobacco companies. I am representing the small tobacco manufacturers here today.

DR. GOGOVA: Good morning. My name is Maria Gogova. I'm from Altria. I'm Vice President and Chief Scientific Officer at Altria, but today I'm here as a non-voting member representing large tobacco manufacturers.

MS. BECENTI: Good morning. My name is Alberta Becenti, and I work with the Indian Health Service.

DR. KITTNER: Good morning. I'm Deirdre Lawrence Kittner. I'm a Director for the Office of Smoking and Health at the Centers for Disease Control.

DR. POSTOW: Hi. I'm Lisa Postow. I'm at the National Heart, Lung, and Blood Institute at NIH.

DR. LEVENTHAL: Adam Leventhal with the University of Southern California.

DR. POPOVA: Good morning. I'm Lucy Popova at the School of Public Health, Georgia State University. My expertise is in communication, marketing, and behavior related to the products.

DR. GUY: Good morning. I'm Mignonne Guy from Virginia Commonwealth University, Center for the Study of Tobacco Products, and my expertise is in tobacco-related health disparities.

CHAIR DELNEVO: We're going to go to Dr. Robinson.

DR. ROBINSON: Good morning. I'm Dr. Risa Robinson. I'm professor and

department head of Mechanical Engineering at Rochester Institute of Technology. I'm Director of the Respiratory Technologies Lab also at RIT. My training and expertise is in aerosol mechanics, lung deposition, product characteristics, and reverse engineering, and monitoring topography in the natural environment.

DR. SCOUT: Good morning. My name is Scout. I'm the Executive Director of the National LGBT Cancer Network, and my expertise is in applied mathematics, sociology, sociomedical sciences, but I would definitely say, related to tobacco, it's health disparities.

DR. UPSON: Thank you. Technologically impaired. I'm Dona Upson. I'm a pulmonary physician, professor of medicine at the University of New Mexico, and staff physician at the VA in New Mexico. I've been working in prevention and treatment of tobacco dependence for about 25 or 30 years, especially with the American Thoracic Society. Thank you.

CHAIR DELNEVO: I believe we also have Dr. Jordt joining us remotely, if Dr. Jordt could introduce himself.

DR. JORDT: Good morning. My name is Sven Jordt. I'm faculty at Duke University School of Medicine in the Department of Anesthesiology and Toxicology and Environmental Health Program. My expertise is in flavor additives of tobacco products, including their behavioral and toxicological effects. Thank you.

CHAIR DELNEVO: I would like now to ask Serina to introduce herself and read the conflict of interest statement and housekeeping. Before we have Serina read the housekeeping, I'd like to just proceed down the line with Dr. King.

DR. KING: Yes. Brian King, Director of the Center for Tobacco Products.

ADMIRAL WANG: Emil Wang, Senior Regulatory Counsel and Senior

Advisor for Manufacturing and Regulatory Policy at CTP's Office of Compliance and Enforcement.

MS. NELSON: May Nelson, Director, Office of Regulations at CTP.

CAPT HUNTER-THOMAS: Good morning, everyone. Before I begin, some keys were lost. We want to check and make sure that it's no one's keys in this room. And hearing none, thank you.

Okay. Good morning, everyone. My name is Captain Serina Hunter-Thomas, and it is my pleasure to serve as the Designated Federal Officer for this Tobacco Products Scientific Advisory Committee meeting. First, I would like to thank the many hands that were involved in the planning, support, and preparation of this meeting leading up to today. It truly took a village, and I thank you all, including Dana van Bemmel, Janice O'Connor, Emil Wang, Matthew Brenner, Robert Schwartz, Keyur Patel, Necola Staples and her team, Andrea Takash and her team, Monique Hill, and the collective FDA DFO community.

Today's session will cover one topic that is open to the public in its entirety. The meeting topic is described in the Federal Register Notice that was published on Friday, March 10th, 2023. The FDA press media representative for today's meeting is Ms. Abigail Capobianco. Ms. Capobianco, if you are present, if you could please raise your hand. Okay.

The transcriptionist for the meeting today is Mr. Toby Walter. I would like to remind everyone to please check your pagers and cell phones and make sure that they are either turned off or in silent mode. When making your comment, please first state your name and speak loudly and clearly. Please keep in mind that one Committee member, Dr. Sven Jordt, is joining us remotely. We would like everyone to be heard for the benefit of all Committee members, FDA staff, and public attendees here in the room, as well as those listening via webcast. In addition, speaking loudly and

clearly will ensure that your comments are accurately recorded for transcription.

I will now proceed to read the conflict of interest statement for this meeting. The Center for Tobacco Products of Food and Drug Administration is convening today, May 18, 2023, for a meeting of the Tobacco Products Scientific Advisory Committee under the authority of the Federal Advisory Committee Act of 1972 and the Family Smoking Prevention and Tobacco Control Act of 2009. The Committee is composed of scientists, healthcare professionals, a representative of a state government, a representative of the general public, ex officio participants from other agencies, and three industry representatives.

The following information on the status of this Advisory Committee's compliance with applicable federal conflict of interest laws and regulations is being provided to participants in today's meeting, as well as to the public, and is available for viewing at the registration table.

The purpose of today's meeting, which is being held in open session in its entirety, is to discuss the proposed requirements for Tobacco Products Manufacturing Practice (TPMP) rule. Accordingly, this meeting is categorized as involving a particular matter of general applicability, or PMGA.

With the exception of the industry representatives, all Committee members are either special government employees or regular government employees from other agencies and are subject to federal conflict of interest laws and regulations.

Based on the categorization of this meeting and the matters to be considered by the Committee, all meeting participants, with the exception of the three industry representatives, have been screened for potential conflicts of interest. FDA has determined that the screened participants are

in compliance with applicable federal conflict of interest laws and regulations.

With respect to the Committee's industry representatives, we would like to disclose that Drs. Maria Gogova, William Andy Bailey, and David Johnson are participating in this meeting as non-voting representatives. Dr. Gogova is representing the tobacco manufacturing industry, Dr. Bailey is representing the tobacco grower's industry, and Dr. Johnson is representing the tobacco small business pool industry. Their role at this meeting is to represent these industries in general and not any particular company.

Dr. Gogova is employed with Altria Client Services. Dr. Bailey is employed with the University of Kentucky Research and Education Center. And Dr. Johnson is employed with Tobacco Technology.

This concludes my reading of the conflict of interest statement for the public record, and, at this time, I would like to hand the meeting back over to the Chair, Dr. Delnevo. Thank you.

CHAIR DELNEVO: Thank you, Serina. We're going to now move into our presentation. I'd like to introduce Rear Admiral Emil Wang from the FDA.

ADMIRAL WANG: Thank you, Dr. Delnevo, and welcome, members of the Tobacco Products Scientific Advisory Committee and guests. I am here to provide an overview of the Tobacco Product Manufacturing Practice (TPMP) proposed rule to assist the Committee's discussion and support your recommendations to FDA.

Before I get started with the presentation, I'd like to cover some disclaimers. The presentation and the attached briefing documents contain information prepared by the FDA for the panel members of TPSAC on the proposed TPMP regulation. This presentation and the briefing

package may not include all issues relevant to TPSAC's consideration of the proposed regulation. It is intended to focus on issues identified for FDA for discussion by TPSAC. The information in these materials is not a formal dissemination of information by FDA and does not represent agency position or policy. The information is provided to TPSAC to aid the Committee in its evaluation of the proposed regulation.

The agenda for today is a quick overview of the proposed TPMP regulation, its objectives, namely to protect the public health and assure that tobacco products are in compliance with the Food, Drug, and Cosmetic Act, the scope of the proposed regulation, the framework, and an overview of the provisions of the proposed rule, as well as the topics that FDA has identified for TPSAC discussion.

The proposed TPMP rule is a foundational rule of CTP that will help protect the public health and assist in implementing CTP's statutory and regulatory authorities. TPMP's activities and records will help ensure that commercially-marketed tobacco products comply with the requirements of the statute, such as pre-market review and tobacco product standards.

It's important to underscore that compliance with the final TPMP regulation does not mean that a tobacco product is safe. CTP recognizes that tobacco products are inherently dangerous with significant risk. While all tobacco products have inherent risks to the public health, the proposed TPMP regulation is focused on minimizing and preventing product problems and health issues not normally associated with the use of a tobacco product that is additional risks associated with these products.

As set forth in Section 902(e) of the Food, Drug, and Cosmetic Act, the statutory objectives are to protect the public health and to assure that tobacco products are in

compliance with Chapter 9 of the Food, Drug, and Cosmetic Act. For example, the proposed TPMP regulation is intended to protect public health, to address, minimize, and prevent design and manufacturing issues and product contamination. Also, as an example, to assure that tobacco products are in compliance with the statute, TPMP's proposed requirements can enable FDA to identify modifications to a tobacco product and determine if tobacco products are adulterated and misbranded.

Some more detail on how the proposed TPMP regulation is intended to protect the public health, TPMP's proposed requirements are all interrelated and necessary to assure that the public health is protected. The proposed requirements will assist tobacco product manufacturers and enable FDA to protect the public health by, among other things, minimizing or preventing product problems and health issues not normally associated with the use of tobacco products; for example, exploding ENDS batteries and physical, chemical, and biological hazards. These issues have been experienced by FDA and have also been reported to FDA.

The proposed requirements will aid in investigations of potential problems related to tobacco products from design and manufacturing issues that can cause illness, injury, or death. For example, TPMP can assist with investigations of adverse experiences, such as e-cigarette or vaping product-use associated lung injures, EVALI, so FDA can take appropriate action if it is determined that such problems are attributable to tobacco products.

The proposed requirements would require manufacturers to take measures to prevent product contamination that can result in injuries and adverse experiences, such as metal, plastic, or chemical contaminants. Again, these have been reported to FDA's Safety Reporting Portal and have resulted in manufacturer voluntary recalls.

The proposed requirements would require that manufacturer and distributed

tobacco products consistently conform to the specifications described in pre-market applications and notices submitted to and authorized by FDA or comply with a tobacco product standard in effect. A key proposed requirement is for manufacturers to establish and maintain a master manufacturing record (MMR) and a production record. The MMR is, in essence, the recipe for a tobacco product that includes specifications established by the manufacturer and any requirements of applicable tobacco product standards. Specifications also include those for the identity and amount of components and parts, ingredients, additives, and materials, and the product design. The MMR will also include all manufacturing methods and procedures and all packaging and labels approved for use with the finished or bulk tobacco product. A production record will then be prepared for each batch of finished or bulk tobacco product to demonstrate conformity with the requirements established under the MMR.

The proposed requirements would also require manufacturers to identify and investigate the scope and cause of complaints and non-conforming products to take appropriate corrective actions, such as recalls.

The proposed TPMP regulation would also help assure that tobacco products are in compliance with Chapter 9 of the Food, Drug, and Cosmetic Act. TPMP is a primary regulatory tool that enables CTP to verify what is reported and filed to and authorized by FDA. For example, the proposed requirements would enable CTP to determine if commercially-marketed tobacco products, including preexisting tobacco products, are modified, rendering them new and requiring a new pre-market application or notice.

Other provisions of the act that TPMP can help assure compliance include helping FDA verify that the ingredients and additives used in tobacco products are consistent with what is listed, tested, and reported to FDA. The proposed TPMP requirements for labels, labeling, and

packaging would enable CTP to determine if they are in compliance with the requirements of the act and regulations.

TPMP's proposed procedures and records would provide for tracing of all components or parts, ingredients, additives, and materials, as well as each batch of manufactured and distributed finished or bulk tobacco products, so manufacturers and FDA can take corrective actions for non-conforming products, such as recalls.

The proposed TPMP regulation would also help to determine if tobacco products are adulterated or misbranded. Failure to comply with any final TPMP requirements would render the tobacco product adulterated. TPMP would enable CTP to determine if commercially-marketed tobacco products are adulterated or misbranded. For example, if a manufacturer manufactures a tobacco product that is inconsistent with the specifications identified in the pre-market application under which it has received marketing authorization or required by a tobacco product standard. These products would be adulterated or misbranded and subject to CTP enforcement action.

Very quickly, the scope of the proposed TPMP regulation covers finished tobacco product manufacturers and bulk tobacco product manufacturers. CTP considered a broader scope to include manufacturers of components and parts but determined that the proposed regulation should cover these entities that have the most direct impact on public health.

Finished tobacco products are those tobacco products sealed in final packaging. Finished tobacco product manufacturers have the burden of ensuring that suppliers of components and parts meet their established specifications.

The proposed regulation also covers bulk tobacco product manufacturers, that is those tobacco products that are not sealed in final packaging but otherwise suitable for consumer use as

a tobacco product without requiring further processing, other than packaging or labeling. Bulk tobacco products can be simply packaged, labeled, and sold to consumers, and these include, for example, bulk tobacco that is bagged for sale, such as roll-your-own tobacco or cigarette tobacco; bulk e-liquids or batteries that are then packaged and labeled by a manufacturer or vape shop for sale to consumers.

CTP determined that it is necessary to cover bulk tobacco products because they are suitable for use by consumers and a person who merely packages and labels the bulk products may not be able to determine if these products are contaminated or non-conforming or may not be able to conduct adequate investigations for issues related to product design or product production process issues.

The proposed regulation also will cover specification developers, that is those entities that initiate or create the design specifications of a tobacco product. CTP is aware that some manufacturers, including small tobacco product manufacturers, may contract out the design and development activities to a specification developer. For example, many ENDS products are designed by specification developers in foreign countries, such as China. The design of an ENDS product can be critical to its performance. Poor design can result in fires and explosions.

A contract or physical manufacturer of a tobacco product may not know the complete design and specifications of the tobacco product they are manufacturing and would not be in the best position to take appropriate corrective actions or investigate non-conforming products that contain design defects. Also, CTP is aware that some members of the tobacco industry have organized their corporate structures to separate the design specification functions for manufacturing, making it difficult for FDA to access the design and specification records.

The proposed regulation would also cover re-packagers and re-labelers of

finished and bulk tobacco products.

CTP wrote the proposed TPMP regulation based on a framework utilizing an umbrella approach. That is, it contains flexible requirements that can accommodate different types of tobacco products. Because this regulation would apply to all regulated tobacco products and the many different types of tobacco products, the proposed regulation does not dictate in detail how manufacturers must produce a specific tobacco product. The proposed requirements are written in general terms to allow manufacturers to establish procedures appropriate for their specific products and operations.

The proposed approach allows finished and bulk tobacco product manufacturers the flexibility to establish procedures that are appropriate to the manufacturers' facilities and operations and appropriate for a given tobacco product. Tobacco product manufacturers who have large and complex manufacturing processes would likely need to establish more detailed procedures to comply with the proposed regulation, while tobacco product manufacturers who have less complex manufacturing processes may need less extensive procedures.

Also of important note is that the proposed rule provides that manufacturers would need to comply only with the requirements applicable to its manufacturing operations. This means that if a tobacco product engages in some operations subject to the proposed requirements but not others, the manufacturer need only comply with those requirements applicable to the operations in which it is engaged. Therefore, smaller tobacco product manufacturers would be able to tailor their procedures to suit their operations while still complying with the proposed TPMP requirements.

TPMP proposes a two-year effective date for non-small tobacco product manufacturers. The statute requires that small tobacco product manufacturers have at least four years

following the effective date to comply. This means that the proposed regulation establishes a compliance date of a total of six years for small tobacco product manufacturers to comply.

The statute also provides a requirement for petitions for exemptions and variances. Manufacturers, including small tobacco product manufacturers, may submit a petition for exemptions or variances if they are not able to comply with all or some of the proposed TPMP requirements or if they elect to take an alternative approach. A petition would need to include a detailed explanation of how the manufacturer's methods, facilities, and controls meet the statutory objectives.

This slide provides a summary of the proposed provisions by subpart and sections. As mentioned, the proposed regulation utilizes an umbrella approach with flexible requirements that would apply to the wide variety of tobacco products offered for sale and distribution. As mentioned, manufacturers would only need to comply with the requirements applicable to their operations. For example, a manufacturer of finished e-liquids would not need to comply with the proposed warning plan requirements because e-liquids are only required to bear a single warning. Also, a finished cigarette manufacturer who does not engage in re-packaging or re-labeling operations would not need to comply with the proposed re-packaging and re-labeling requirements.

Also, a specification developer who only designs and creates the MMR for another manufacturer's tobacco product and does not engage in any physical manufacturing would not be subject to, for example, the proposed requirements in Subpart C, Buildings, Facilities, and Equipment; Subpart E, Production Processes and Controls; and Subpart G, Handling, Storage, and Distribution.

In summary, manufacturers should establish procedures for their operations, follow their plans, and maintain records of their activities.

As covered in the background materials, FDA has identified the following topics for TPSAC discussion and recommendation. The proposed scope of the TPMP regulation covers finished and bulk tobacco product manufacturers, including specification developers. Does the Committee have any recommendations on the scope, including potentially expanding the scope? Does the Committee have any recommendations or comments on the umbrella approach that proposes requirements in flexible terms to enable manufacturers who are subject to the rule to establish procedures that are appropriate for their specific products and operations? Does the Committee have any recommendations on the product specifications that FDA proposes to be required and documented in the MMR? Does the Committee have any recommendations on the proposed design and development activities and risk management processes to control risks associated with the finished and bulk tobacco product and its production processes, packing, and storage? And, finally, FDA welcomes any additional recommendations on the requirements of the proposed regulation.

CTP looks forward to TPSAC's discussions and recommendations to help the agency strengthen the proposed TPMP regulation. We look forward to supporting your discussion. Thank you.

CHAIR DELNEVO: Thank you, Emil. We're going to now enter into the open public hearing phase.

First, I will read the open public hearing statement. Welcome to the open public hearing session. Please note that both the FDA and public believe in a transparent process for information gathering and decision-making. To ensure such transparency at the open public hearing session of the Advisory Committee meeting, FDA believes that it is important to understand the context of an individual's presentation. For this reason, FDA encourages you, the open public hearing speaker,

at the beginning of your written or oral statement, to advise the Committee of any financial relationships that you may have with the sponsor, its products, and, if known, its direct competitors. For example, this financial information may include the sponsor's payment of your travel, lodging, or other expenses in connection with your attendance at this meeting. Likewise, FDA encourages you, at the beginning of your statement, to advise the Committee if you do not have any such financial relationships. If you choose not to address the issue of financial relationships at the beginning of your statement, it will not preclude you from speaking.

With that, I would like to ask our first speaker, Lauren Lempert from UCSF Center for Tobacco Control Research and Education.

MS. LEMPERT: Are my slides available? There we go. Can you hear me? So good morning. I'm Lauren Lempert, a researcher at UCSF TCORS. TCORS submitted public comment on April 13th that includes many citations to the published literature that support recommendations which I'll briefly discuss today. In general, we support FDA's proposed requirements to the extent that they will help minimize some of the risks inherent in tobacco products.

That said, these requirements should be seen as a floor, not a ceiling, and manufacturers should be explicitly prohibited from using their compliance with these minimum requirements to promote, either implicitly or explicitly, that their products are safer, higher quality, or endorsed by FDA.

Because of TCORS' particular expertise in protecting the health of priority populations and youth, I'd like to focus on two of the recommendations detailed in our written comment. First, we strongly support the section requiring manufacturers to establish and maintain procedures to control packaging and labeling to ensure that they comply with FDA regulations, as well

as with the manufacturers' established specifications. This is especially important to ensure that the nicotine concentration labels on e-liquids and e-cigs accurately describe the nicotine concentration labels that are actually contained in those products. We cite substantial evidence that the actual nicotine concentrations in e-liquids frequently vary considerably from the labeled concentrations. For example, in one study, nicotine was detected in 91 percent of the samples analyzed, despite their labels which indicated they contained zero nicotine. And many products whose labels indicated zero nicotine actually contained nicotine concentrations ranging upwards of 23.9 milligrams per milliliter.

Also, many studies show that young e-cigarette users frequently misunderstand the strength of nicotine in e-cigarettes, and many don't realize that e-liquids even contain nicotine. There's considerable evidence which we cite that adolescents and young adults have difficulty understanding what is meant by the nicotine concentrations on labeling described in the confusing but common metrics of milligrams per milliliter or percent nicotine, as you can see on these packs. Young users often rate concentrations presented as milligrams per milliliter as stronger, more addictive, and more harmful than equivalent concentrations presented as percent nicotine. But even worse, adolescents and young adults often underestimate nicotine strength, which could lead to inadvertent exposure to high nicotine levels.

Adults who use e-cigarettes also have difficulty understanding nicotine concentrations presented as either milligrams per milliliter or percent nicotine, and these difficulties are expected to be worse among people with minimal education, language barriers, or among other priority populations.

Our written comment sites several studies finding that e-liquids with inaccurate and ineffective labels lead to misunderstanding, confusion, and possibly disregard about the amount of

nicotine in cigarette products. This, in turn, may lead to inadvertent exposure to high nicotine levels, continued use, addiction. For these reasons, we strongly support FDA's proposed requirements to help ensure that e-liquid and e-cig labels accurately reflect the nicotine concentrations actually contained in the products. Along these lines, FDA should mandate an easy-to-understand labeling metric that clearly, consistently, and accurately conveys nicotine strength.

Next, we urge FDA to strengthen requirements about product storage and shelf life. There's significant evidence that e-cigarettes have finite shelf lives and can become contaminated with bacteria and fungus that grow while the e-cigarettes sit on the shelf, and they become more toxic over time. Therefore, we recommend that this section be strengthened to require manufacturers to set explicit specifications addressing shelf life to clearly state the expiration date on product labels and to require expired or adulterated products to be removed from store shelves.

In summary -- well, I can't find the summary. FDA's final rule should protect the health of youth and other priority populations by requiring that nicotine concentrations on labels accurately reflect the actual contents, nicotine strengths on labels are presented in clear and consistent metrics that youth and adults understand, and expiration dates are clearly stated on labels and expired products are removed from store shelves.

In addition to these points, thank you for considering all of UCSF TCORS' recommendations found in our written public comment that was submitted in time for your consideration. Thank you.

CHAIR DELNEVO: I'd like to ask our next speaker, Connor Fuchs.

MR. FUCHS: Good morning. I'm Connor Fuchs from the Campaign for

Tobacco Free Kids, and I have no financial relationships to disclose.

Thank you for the opportunity to speak today. Before turning to specifics of the proposed rule, I want to begin by recognizing the proposal's importance but also some of its limitations. As FDA recognizes in the proposed rule, tobacco products manufacturing requirements have the potential to help mitigate the risk of health issues that are not normally associated with the use of a tobacco product. That includes, for example, requirements aimed at preventing the manufacture and distribution of adulterated tobacco products, products contaminated with foreign substances such as metal, glass, nails, dirt, and hair, all of which FDA says have been found in finished tobacco products.

However, it's also necessary to recognize the limits of the proposed rule. Compliance with these manufacturing practices will certainly not make a tobacco product safe, nor will it mean that the product benefits the public health in any way. As FDA and all of us know, these manufacturing practice requirements, once finalized, will not address the many serious and grave health issues that are normally associated with the use of a tobacco product, such as the fact that smoking causes 90 percent of all lung cancer deaths, 80 percent of all deaths from COPD, and leads to stroke and coronary heart diseases. All tobacco products present inherent risk to the public health, and no tobacco product, even if manufacturing is in full compliance with this proposed rule, is safe for the individual, nor will compliance with this rule establish that a product is beneficial to public health in any way. Therefore, it's important for FDA and TPSAC to be careful about how it describes the impact of this rule. The agency must avoid any implication that products manufactured in compliance with this rule are thereby safe or benefit the public health.

Turning to some of the specifics, FDA proposes to require all tobacco products

to have a unique identifier code that would establish traceability for that product's components, parts, ingredients, and additives, which would aid in investigations related to complaints and non-conforming products. I want to take this opportunity to remind FDA that Section 920(b) of the Federal Food, Drug, and Cosmetic Act creates a statutory obligation for the agency to implement a track-and-trace system to help prevent and enforce the law against the illegal market in tobacco products.

As detailed in a 2013 citizen petition submitted by various public health officials and organizations urging FDA to adopt such a system, track and trace would help the agency to identify contraband products, including those not in compliance with tobacco product standards, and would also help establish at what point in the distribution chain legal tobacco products are unlawfully diverted into illegal markets.

If the proposed rule FDA will require products to have these unique identifier codes, the agency should consider designing and implementing the codes in a manner that could also accommodate a track-and-trace system that gives the government meaningful and ready access to information needed to detect and investigate illegal diversion.

Next, I want to touch on the implementation period. Under the proposed rule, manufacturers would not have to comply with the rule for the first two years after it's finalized, and small manufacturers would receive four additional years for a total of six years to comply with the rule. Proposing two full years until the final rule becomes effective is too long. At the very most, FDA should give most manufacturers one year from when the rule is finalized to comply and five years for small manufacturers. That would reasonably align with the one-year default implementation period the Tobacco Control Act establishes for product standards. And, indeed, compliance with the proposed manufacturing requirements should be less burdensome than compliance with the product standards,

particularly, as the FDA knows, inspections have demonstrated that a number of manufacturers have already implemented many of the measures proposed here.

Additionally, many of the requirements FDA proposes here are based on industry recommendations. Thus, manufacturers should not need two and, in some cases, six years to comply with the requirements proposed here.

Finally, enforcement will be critical to ensure that the public benefits from the standards set out in the proposed rule. In certain critical ways, FDA has failed to vigorously enforce the Tobacco Control Act, and that lack of enforcement has undermined the public health benefits of the statute and of FDA's tobacco regulations. For example, a plethora of products, including youth-appealing flavored e-cigarettes, remain readily available at stores across the country, even though they lack the pre-market authorization orders that are required under the Tobacco Control Act. FDA must avoid making the same mistakes here and actively enforce these manufacturing practice requirements from day one.

And before I conclude my remarks, I will mention that the Campaign for Tobacco Free Kids also submitted written comments on May 11th to the docket for your consideration.

So, with that, I will stop and thank you to TPSAC and FDA for the opportunity to speak today.

CHAIR DELNEVO: Thank you. Our next speaker is Andrew Perraut.

MR. PERRAUT: Hi. Can you hear me?

CHAIR DELNEVO: Yes.

MR. PERRAUT: Great. Hi. My name is Andrew Perraut. I'm representing Cigar Rights of America. We appreciate the opportunity to make these comments to TPSAC as you

review FDA's proposed tobacco product manufacturing rule.

CRA is a national advocacy organization dedicated to protecting the interest of consumers, retail tobacco suppliers, distributors, importers, and manufacturers of premium cigars. The proposed rule would establish requirements that the FDA asserts are necessary to protect the public health. While the rule claims not to prescribe specific mitigations, the text of the preamble makes clear that FDA expects all manufacturers to adopt water, soil, pest, temperature, and humidity controls and mitigations. These implied requirements are simply not supported by the scientific literature cited by the agency.

FDA's scientific analysis suffers from numerous flaws that fatally compromise the rule. The agency fails to adequately analyze the potential hazards and risks that manufacturers should consider. It completes product categories strong inappropriate inferences about fundamentally different products, and it fails to demonstrate that there are population-level risks from premium cigar manufacturing to public health. Further, FDA bases its standards on pharmaceutical regulations and fails to provide a scientific rationale for why this is more appropriate than agricultural mitigations that it has adopted in the recent past.

CRA believes the proposed rule fails to demonstrate that the majority of the described risks are applicable to premium cigars, nor that the proposed mitigations will meaningfully protect the public health. As such, we ask that premium cigars be specifically exempted from the requirements of the rule unless the agency can demonstrate that they would result in improvements to human health.

TPSAC should determine whether FDA has provided adequate hazard and risk identification for issues that the agency would require premium cigar manufacturers to address. In its

experience with produce safety, FDA clearly identified links to human illness caused by microbial contamination both numerically and through extensive qualitative risk analysis. These analyses identified the specific pathogens that result in illness, routes of contamination, and methods of control. All these were supported by scientific analysis.

FDA has made no comparable effort to support or justify its proposed requirements for premium cigar manufacturers. It cites no cases of illnesses linked to the category; and any suggested links are tenuous, at best. For instance, the proposal extensively discusses aflatoxin as a potential hazard that cigar manufacturers are expected to mitigate through water temperature and humidity controls. The supporting scientific documentations of the agency's assertion is a single study conducted on chewing tobacco in India that does not link to actual illness and ignores significant differences in patterns of use and risk exposure between tobacco chewers and premium cigar smokers.

Similarly, although FDA's proposal would nominally allow manufacturers to assess their own risks, the preamble makes clear that some provisions, such as potable water quality standards, would apply to all manufacturing practices generally. In the case of potable water requirement, FDA cites potential contamination with E. coli bacteria as the hazard that's being controlled but provides no evidence of illness resulting from this contaminant on premium cigars or otherwise.

Even the foundational documents on tobacco regulation that FDA cites, such as WHO's white paper on the scientific basis of tobacco regulation, provide little support for the agency's proposal. It does not specifically examine premium cigars as a category, nor does it identify manufacturing hazards that premium cigar manufacturers could usefully mitigate.

We also note that premium cigars have fundamental characteristics of

manufacturing that may mitigate many of the hazards potentially identified by FDA. By definition, premium cigars don't contain additives and are composed solely of whole leaves. Fundamentally, this is unlike other tobacco products that ensure consistency by pulverizing and mixing multiple batches of leaves together, which might spread potential contaminants in a way that would not be possible with premium cigars.

Premium cigars also rely on extensive aging and drying of the leaves, as well as an extended fermentation process. Typically, these processes last from 6 to 18 months and, while we're currently seeking more data, both of these processes likely significantly reduce potential impacts on human health.

Because of these unique characteristics, we believe that any requirements imposed by FDA on the category should be scientifically demonstrated with available evidence.

Recently, the Reagan-Udall Center was asked by FDA Commissioner Robert Califf to review CTP's operations. The center's independent review found that CTP's transparency on supporting science was insufficient and, in response, FDA has recommitted to transparency on scientific matters. This proposed rule, however, does not demonstrate that commitment to putting science first, and we ask TPSAC to review our full comments and to make appropriate recommendations on supporting FDA's requirements with sound science.

CHAIR DELNEVO: Thank you. Are there any unscheduled speakers for the open public hearing session? Hearing none, we're going to move into a 15-minute break. Thank you.

(Whereupon, the above-entitled matter went off the record at 10:17 a.m. and resumed at 10:35 a.m.)

CHAIR DELNEVO: Okay, everyone. If we can return to our seats. We're

going to resume the meeting at this time. Thank you.

So, we're going to move into discussion amongst the Committee, and we're actually going to start by allowing the Committee to ask any clarifying questions of FDA. And so if you have a question, please raise your hand. Dona.

DR. UPSON: Thank you. Dona Upson. So my understanding is that this rule, proposed rule applies to manufacturers and not to retailers, and so my question is on some of the storage provisions. Do those end at the time when the product goes to the retail market?

ADMIRAL WANG: Yes. Thank you for that question, Dr. Upson. Yes, correct. The storage requirements would only apply to manufacturers and any distribution of the products under the manufacturer's control. So once it leaves the manufacturer's control, then it the proposed TPMP requirements for storage would then not apply to other entities, such as retailers.

CHAIR DELNEVO: Adam.

DR. LEVENTHAL: Adam Leventhal. I have a question. The 350-employee threshold to determine small business, what was the rationale for that particular number and why focus on employees instead of other potential metrics, like number of units sold?

ADMIRAL WANG: Thank you for that question, Dr. Leventhal. The Food, Drug, and Cosmetic Act defines what is considered a small tobacco product manufacturer, so the statute defines that criteria as being 350 employees or less. The FDA notes that that number includes all entities under the control of a manufacturer, so, if there are kind of multiple facilities or subsidiaries under a manufacturer, those employees would be counted to determine what that manufacturer is considered a small tobacco product manufacturer.

DR. LEVENTHAL: Thank you. So Adam Leventhal with a follow-up question.

Is there any requirements with this rule to use that particular definition of small manufacturers?

ADMIRAL WANG: That criteria for small tobacco product manufacturers, as defined by the statute, would determine the other statutory requirement for the additional four years for a small tobacco product manufacturer to comply with a regulation, with a proposed TPMP regulation that takes into effect. Does that answer your question?

DR. LEVENTHAL: It doesn't. So my question wasn't about the rule, but you mentioned that the definition of small manufacturer came from, I think you're saying the Tobacco Control Act, and so my question is there flexibility in terms of maybe using alternate definitions for this particular rule or not necessarily even using, I guess, small versus large business when thinking about implications for the timing requirement for compliance.

ADMIRAL WANG: FDA welcomes TPSAC's recommendations about the size of manufacturers, and we can take that into account to determine if there is a way for us to consider that.

CHAIR DELNEVO: In that line, you know, the question, I think, is tied to the extra four years, and so I have a question in that can all manufacturers fall under the same rollout period with small businesses applying for an extension through a variance instead of universally allowing all small businesses automatically to get the extra four years?

ADMIRAL WANG: Dr. Delnevo, if I understand, your question is whether all manufacturers can, whether they can be taken into account for the extra four years that the statute provides for small tobacco product manufacturers; is that correct?

CHAIR DELNEVO: I guess I'm trying to figure out is the carve-out for small business required to have a different timeline? And if it's not required, can there be the flexibility that the proposed rule has in so many ways be offered to small businesses to apply for extensions through

variance.

ADMIRAL WANG: Yes. The statute does require that small tobacco product manufacturers be afforded an additional four years to comply beyond the effective date of the final regulation.

With respect to your second question, the statutory requirement for petitions for exemptions and variances is afforded to all manufacturers subject to the proposed regulation when it becomes final, so that would apply to both small tobacco product manufacturers and non-small tobacco product manufacturers.

CHAIR DELNEVO: Lucy.

DR. POPOVA: Lucy Popova. A few questions but let me start with this easy one. Described in the risk assessment, there's three determinations where you talk about acceptable, tolerable, and unacceptable, but then in a text there's also not tolerable. Is not tolerable and unacceptable essentially the same thing, or those are different?

ADMIRAL WANG: Thank you for that question, ma'am. So the proposed design and development controls would require a risk assessment to address risks that either the manufacturer determines to be unacceptable or that rises to the level where it would be a reasonable probability -- I'll have to review the specific language, but it's tied to the mandatory recall provisions of 908(c). And so if the proposed terminology of not tolerable or unacceptable is not clear, then we would welcome any recommendations that the Committee has on that term.

DR. POPOVA: Yes. I was just thinking it wasn't clear if those are the synonyms. If they aren't, just use unacceptable consistency in the rule.

ADMIRAL WANG: Okay. Thank you.

DR. POPOVA: Since we're on the design verification and validation, could you clarify whether it would apply to the products on the market that have been on the market prior to February 2007, or it exempts those products?

ADMIRAL WANG: Yes, the proposed requirement for the design and development activities for verification and validation, if I recall, FDA proposes that that not apply to tobacco products currently marketed. So it would only be a forward-looking requirement once the TPMP regulation becomes final and effective.

CHAIR DELNEVO: Matthew Brenner, are you online?

MR. BRENNER: I am. Can you hear me?

CHAIR DELNEVO: Yes, we can.

MR. BRENNER: Okay. I'll just chime in then if I'm going to answer a question moving forward.

CHAIR DELNEVO: Okay. Mignonne.

DR. GUY: I just want to go back to the previous question about the date and the products that would be applicable to this rule. So can you provide the justification for exempting the products prior to the February date? 2007. Sorry.

ADMIRAL WANG: Are you referring to the last question relating to design and development and the verification and validation?

DR. GUY: Yes, I am. I'm sorry.

ADMIRAL WANG: Okay. Thank you. So that requirement would, the proposed requirement would apply to tobacco products that undergo design and development activities after the effective date of the final rule, and so FDA is not proposing to tie that to the February 15th,

2007 date.

DR. GUY: Mignonne Guy. Just to make sure that I'm clear, so what I think I hear you're saying is it's products moving forward, correct? But my question becomes what is the justification or the rationale? Because these products are still being manufactured, the ones that were prior to this date, right? So what is the justification or the rationale for exempting the products before the date?

ADMIRAL WANG: Among the considerations was to not require manufacturers to retrospectively recreate or create their verification/validation activity that may not be in existence, and so the thinking was that, once the TPMP rule becomes effective, then any design and development activities that occur would have to comply with those requirements, including verification and validation.

DR. GUY: Thank you. Mignonne Guy. So should this proposed rule occur, right, how does FDA intend to communicate to the public the differences between the products -- you see what I'm saying -- the differences between the products -- I'm sorry, I'm horrible with dates -- post February 2017, 2007 -- see, I'm bad with dates, my husband will tell you that -- and pre? Can you please tell me how they would actually communicate the differences, what products are falling under this umbrella and not, or has there been any kind of consideration about how we communicate that to the public?

ADMIRAL WANG: So the February 15th, 2007 date, any products before that would be considered preexisting tobacco products, and the Tobacco Control Act's pre-market authorities would apply to those products that are commercially marketed after those dates. However, all tobacco products that are commercially marketed, including preexisting tobacco products, would be

subject to the TPMP regulation once it becomes final.

CHAIR DELNEVO: So if I can make a clarifying point, so the questions regarding this have to do with the design and development, and that is not applied here to the preexisting products because they have not gone through a pathway to market with FDA; is that correct?

ADMIRAL WANG: So to clarify, these preexisting tobacco products that were on the market prior to February 15th, 2007, they would not be required to document their verification/validation activities under the design and development proposed requirements. However, after the effective date of the final TPMP rule, if they undergo, for example, modifications to their product, then, moving forward, they would have to comply with the design and development activities, including verification and validation.

CHAIR DELNEVO: Dr. Johnson. Thank you. Scout.

DR. SCOUT: This is Scout. So I'm trying to understand what labeling would look like under this. And since there's so many references to other rules within it, I think it gets a little confusing, but I'm very interested in trying to make sure that there's some level of uniform and well understood by people with low levels of education indication of nicotine levels.

So can you, first of all, also tell me has FDA done research on what is easily understandable as far as the nicotine level, considering some of the comments that we've gotten about the confusion related to some of the ways that it's currently displayed and then describe what we would be seeing if this goes into effect related to nicotine strength labeling on the different types of products? And is it up to each of the different manufacturers how they display that, or would it all be uniform?

ADMIRAL WANG: The proposed TPMP regulation does require that all approved labels and packaging that can be used on a tobacco product be maintained in the master

manufacturing record, and the other records, such as the packaging and labeling controls and the production record, will help FDA to verify that the labels actually used on the commercially-marketed tobacco product is, in fact, what has been approved by the manufacturer for use.

But with respect to your specific question about how these, for example, nicotine levels are displayed and how labels are understandable, the proposed TPMP regulation does not require any specific format or display of those materials. And as mentioned, TPMP is intended to implement other CTP authorities. And so those labels, for example, may be reviewed in a pre-market application or notice, and so that could be a consideration taken into account under CTP's pre-market review.

DR. SCOUT: So just to clarify then, that means that, for example, the types of labeling that has already been brought up that has been proven to be confusing to consumers could be perpetuated, if anything, even potentially, you know, maximized if it's mislabeled or if it's confusing, and that would be up to the specific product manufacturer in all those cases which type of labeling they use?

ADMIRAL WANG: Yes. The propose TPMP regulation does not propose to define or require a specific format or display of labels, but we certainly welcome TPSAC's recommendations on that particular issue. So if that is a public health concern, we welcome your input.

CHAIR DELNEVO: We have a question or a comment from Dr. Jordt online.

DR. JORDT: Thank you. I would like to return to Dr. Upson's question about the applicability of these rules to manufacturers or retailers. It's still not very clear to me, especially since the rule in several sections states expiration dates for components of tobacco products used during manufacturing but also for finished products, like an ENDS, that need to be specified and determined by

the manufacturers. I would assume that these expiration dates actually apply to the retailers. Otherwise, it would be possible, if these are just internal for manufacturers, that a manufacturer could wait until the end of their internal expiration date and send their soon to be expired products to the retailer because the expiration date does not apply. I would appreciate clarification there.

The second thing I would like to second Scout's comment about the labeling. I would urge FDA to implement more stringent standards, specifically also since nicotine levels in products often are not reflected on the labels or they are very strongly divergent. And the question of labeling for synthetic nicotine is not being mentioned here at all. Thank you.

ADMIRAL WANG: So let me first address the second question about the labeling. If the Committee has any recommendations on any specific requirements for labeling, then CTP would certainly welcome those recommendations.

With respect to the first question about expiration date, my understanding of the question being whether an expiration date is required or should be required.

DR. JORDT: I mean, throughout the rulemaking document, the term expiration date is mentioned, that these should be considered for components during manufacturing. But in other sections, they are mentioned in the context of finished products, for example here additional requirements for stability tests to determine appropriate storage conditions and expiration dates for finished ENDS products, right? So this then refers to a finished product in contrast to expiration dates let's say for a flavor chemical or tobacco being used.

So I assume for the finished product really applies also to an expiration date for the retailer, not just for the manufacturer; am I correct?

MR. BRENNER: This is Matt Brenner, if you can hear me, online. To answer

your question on scope, the proposed requirements apply to tobacco product manufacturers, not retailers. And that includes your comment on expiration dates.

ADMIRAL WANG: I would also like to add that, for your question about expiration date for components for manufacturing, TPMP's proposed requirements for purchasing controls and for acceptance activities, that that would be something that manufacturers would have to assess and establish any requirements that may include expiration dates for the components that they receive for further manufacturing. So that's how TPMP would address that aspect of the question.

The proposed TPMP requirements does not specifically require an expiration date, but, certainly, for example, if that is a specification that is what CTP authorizes in a pre-market application or notice, then that should also be established as a specification under the master manufacturing record requirement, as well.

Also, if a manufacturer establishes their own specification for an expiration date or shelf life, then that also should be taken into account in the TPMP proposed MMR requirement.

CHAIR DELNEVO: Going to Adam and then to Dona.

DR. LEVENTHAL: Adam Leventhal. So going back to the question about the products that were on the market prior to February 15th, 2007 and that the draft of the rule that we're discussing today would exempt those products from the proposed requirements for design, verification, validation, design approval, and design transfer, does the FDA already have information on each of those products that are consistent with the type of information that would be required for new products in terms of PMTAs, MRTPs? And the rationale behind that question is because if the FDA doesn't have important information about these preexisting products in relation to design verification, validation, design approval, design transfer, and other aspects related to the manufacturing process, how will the

FDA confirm that they meet these standards that are outlined here for the protection of public health, and also how will the FDA confirm whether a product may be varying from those specifications and be considered a non-compliant product? And in relation to that question, if not, should that part of the rule be removed to remove that exemption? Thank you.

ADMIRAL WANG: So you presented quite a few aspects to your question. FDA does currently inspect manufacturers, particularly domestic tobacco product manufacturers. And as part of FDA's inspections, the agency does collect records of manufacturing, any available manufacturing procedures and documentation that manufacturers currently maintain. However, the agency has observed that there may not be consistency and certain manufacturers may not maintain all of the procedures and records that the proposed TPMP regulation covers.

And so to the extent that those records are available, FDA does evaluate those to determine, for example, whether there have been any modifications to those products. But to the extent that TPSAC has any concerns and recommendations about the proposed requirements and any potential public health concerns about whether certain records that the proposed TPMP requirements don't cover, for example, your point about preexisting tobacco products and their verification and validation activities as an example, then CTP welcomes your recommendations as to whether the agency should reconsider not having those verification and the design verification and validation records to not apply to those products before the effective date of the final regulation.

DR. LEVENTHAL: Thank you for the clarification. Adam Leventhal. It appears, based on the information I have, that I would recommend that that exemption be dropped for the preexisting products prior to 2007, February 15th.

CHAIR DELNEVO: Dona.

DR. UPSON: Thank you. Dona Upson. I have a question regarding Dr. Jordt's question about expiration dates. In the registry, it mentions that, actually, the industry recommended stability testing to determine storage conditions and expiration dates for finished ENDS products, and we've heard testimony that there's increased contamination over time of e-liquids and that the nicotine levels vary over time. And so I'm wondering what the FDA's rationale is for not including expiration dates.

ADMIRAL WANG: One consideration was the umbrella approach that FDA took with this regulation to propose requirements that would apply to all tobacco products and all different types and categories of tobacco products. And so that was once consideration for not including the industry's proposed GMP requirements that included expiration dates and stability testing. However, if the Committee feels that this requirement is important and is relevant to all tobacco products, then we welcome your input and recommendation on that.

DR. ROBINSON: Thank you. Risa Robinson. So the proposed rule defines a component as software or as an assembly of materials, and my question is, referring to the software, are you talking about computer code, are you talking about source code, simple algorithm, or what is that referring to, software?

ADMIRAL WANG: That's the definition that CTP defined in the deeming regulation, and I don't believe that the definition specifically addresses your question about whether it goes down to the source code of the software. But if the Committee feels that that is relevant and important for the proposed TPMP regulation to cover with respect to components and parts, we welcome your input on that.

CHAIR DELNEVO: I want to come back again to the preexisting tobacco

products. Understanding that the way it's currently written, it's the design and development component that is being exempted; is that right? I actually had a question about the labels themselves for the preexisting products because these are products that manufacturers use as their predicate, presumably, for substantial equivalence applications.

And so with respect to the labeling, what, if anything -- would that be included in the MMR? And if there were changes made to the label, would that result in a preexisting product being adulterated or misbranded?

ADMIRAL WANG: So I would say that the proposed TPMP regulation and the requirements, for example, for the MMR to contain all copies of approved label, labels, and packaging to be maintained, that that is a forward-looking requirement once the TPMP regulation becomes final. And so the situation that you describe would not necessarily be addressed by TPMP and the labels, labeling, and packaging that a preexisting tobacco product has used and whether that changes over time.

CTP's other authorities may be able to address that. For example, registration and listing specimens of label, labeling, and packaging are required to be submitted to FDA. And so the agency may have information or copies of the labels for preexisting tobacco products. But the proposed TPMP requirement would not require that manufacturers, would not necessarily require documentation of the preexisting tobacco products labels that have been historically used.

CHAIR DELNEVO: So for products that were introduced after 2007, right, those that are not preexisting that have received marketing authorizations, if those labels change, are those products then considered misbranded or adulterated?

ADMIRAL WANG: That is something that the proposed TPMP requirements itself doesn't address. But if CTP becomes aware of any labels that a preexisting tobacco product uses

either through registration and listing or through what's collected on inspections, if those are adulterated or misbranded, then CTP can take enforcement action, as appropriate.

MS. BECENTI: Alberta Becenti. I have a question and then followed by two comments. One question is will the manufacturers be required to have a tracker and tracing system so, in case there's a recall, it will be easily identifiable for a recall?

And then the second I'm in favor of having labels with expiration date and then a standardized language for consumers who don't understand because it's really hard for, you know, it's just the labeling is very confusing, especially the concentration of nicotine products. So it will be important to include that, as well.

ADMIRAL WANG: So with respect to your question, the proposed TPMP does propose to require that manufacturers establish a unique identifier for all components and parts that they receive and that are used to manufacturer a finished and bulk tobacco product, and that unique identifier would also be maintained in the production record. And so the intention is to be able to trace all incoming components and parts, as well as the distribution of the finished and bulk tobacco product from the manufacturer.

However, the proposed TPMP requirements does not establish a specific system for track and trace. So it's really something that is maintained through the proposed records under TPMP.

CHAIR DELNEVO: Dr. Johnson.

DR. JOHNSON: Yes. I'd like to go back for one second to the issue of labeling and specifically the concentration of nicotine in e-liquids. What is the FDA's proposed process for reviewing and authorizing variances and tolerances for those? Because, obviously, no manufacturing

process produces exactly the same material at any given time, so there has to be a process by which you define what is an acceptable level. Has that been considered at this time?

MR. BRENNER: This is Matt Brenner from the FDA. I appreciate your question. At this time, I believe that that question is outside the scope of the proposed TPMP rule. We don't discuss concentration of nicotine on labels when we talk about the packaging and labeling section of this proposed rule. While we appreciate the question and understand the concerns around nicotine levels, we believe that it's outside of the scope for this discussion.

ADMIRAL WANG: I'll add that, while I concur with Matthew's response, that the proposed TPMP requirement does require that the manufacturer establish specifications for their tobacco product in the MMR and the specifications would also include any acceptance criteria for that. And, in turn, through the other records, such as acceptance activities in the production record, that if the product does not meet the established specifications and acceptance criteria, that would be considered a non-conforming tobacco product.

DR. JOHNSON: Just as a follow-up to that, so, basically, what you're saying is is that, during the production of the master manufacturer record, the process will be evaluated by the manufacturer. They will establish the specifications, the tolerances, and the variances associated with their process, and that is what the agency will use to base their decision upon?

ADMIRAL WANG: Yes. And let me also clarify that, as TPMP is intended to implement CTP's other authorities, such as pre-market review, that it's expected that the product specifications that is documented in the MMR and reflected in the other manufacturing records are consistent with what is submitted and authorized by FDA in its pre-market review, yes.

DR. POPOVA: If I may go back to the records, could you clarify for us how can

public, if ever, will be able to access this information? So throughout the rule, it says manufacturers will be required to keep records of all activities related for each provision, so the records will be there. Could you explain will FDA have to proactively request those records and will the public then have to go the FDA for the records or, just in general, like, how can the public be informed?

ADMIRAL WANG: Yes, TPMP's proposed records, those records must be readily accessible for FDA to evaluate. And FDA will evaluate those records during inspections, but the proposed TPMP regulation does not propose that those records be otherwise reported to FDA or otherwise disclosed.

MR. BRENNER: This is Matthew Brenner. I would also add that if the Committee has any recommendations on the maintenance of records around this proposed rule, we certainly would encourage any information that you want to provide around that, as well.

DR. JOHNSON: Is it fair to say that the agency would apply the same rules for protection of trade secret and confidential information around this rule that it does around everything else?

ADMIRAL WANG: Yes, the FDA does have requirements and obligations to protect commercial confidential information, and that would also apply to the TPMP proposed requirements and records.

DR. UPSON: Dona Upson. Does the proposed regulation cover all products with synthetic nicotine? When I was reading it, it said tobacco products containing synthetic nicotine or non-tobacco nicotine would be included, but I want to clarify that all products containing synthetic nicotine would be covered, unless, of course, there are some FDA-approved pharmacotherapeutic agents that contain synthetic nicotine.

ADMIRAL WANG: Yes, the proposed TPMP regulation would apply to all FDA-regulated tobacco products, including non-tobacco nicotine, synthetic nicotine, that are currently under CTP's jurisdiction.

DR. UPSON: So just to be clear, I know that FDA has the authority to regulate synthetic nicotine. But when you say tobacco products containing synthetic nicotine, is that everything containing synthetic nicotine or does it have to have some tobacco component to it?

ADMIRAL WANG: Yes, the recent legislation did provide CTP the authority to regulate all tobacco products that contain tobacco derived from any source, so that would include non-tobacco nicotine, synthetic nicotine. And so the synthetic nicotine does not necessarily have to contain tobacco-derived nicotine.

DR. LEVENTHAL: Adam Leventhal. So a couple of comments to get some reaction to the FDA and the other TPSAC members. So first off, it's worth reconsidering the staged rollout with that four-year additional allowance and the cutoff of the small business being 350 as a definition. And the reason why is that it's understandable that, you know, smaller businesses may need more time to establish the practices to comply with this regulation. At the same time, the idea of having a deadline for compliance is to protect the public health, and so it may be that companies that meet this definition of a small business may, in fact, have the capacity to widely distribute products. In that case, those companies may be manufacturing products that would be non-compliant and potentially have many of the different types of health risks that are described here.

So it's recommended to reconsider that and to consider maybe even a different process. There may not need to be a binary between small businesses and non-small businesses. There could be multiple-stage dates that would be dependent on the protection of public health and the likely

number of different types, the number of tobacco product units sold and the potential population health impact.

I know it was a long comment, but I wanted to explain the rationale.

And then one additional comment is there was some discussion about the specific parameters about nicotine. It's understood that the umbrella process was utilized, the framework, right, because every different type of tobacco product may not fit the same type of manufacturing production criteria and needs. It may be worthwhile to consider putting a guidance for manufacturers afterwards to provide recommendations about certain components of the manufacturing process.

So just for example, I think nicotine concentration is mentioned, pH is mentioned as examples, I think. And it places, like, quite a bit of burden on the manufacturers to have the scientific knowledge and people on staff to be able to determine what scientifically valid, not only tests but also, I guess, metrics, you know, would be needed for the manufacturers to even look at quality control and whether there is a deviation from their intended product.

So in addition to the types of information that would be needed, which would differ across different products, I think another related component of this issue is the idea of the statistics required to identify what is a trend where there may be an unacceptable number of products that are being manufactured and that are not compliant with the intended characteristics of the products. And it's understood that, you know, clear numbers could not be provided here in this umbrella rule, but, to follow up, in terms of a guidance, it may be helpful, again, especially for manufacturers that may not have scientists available on staff who can review the scientific literature and apply those types of principles.

Thank you.

ADMIRAL WANG: Thank you for that comment. An important aspect of CTP's regulation is education and outreach, and CTP is committed to providing the resources for manufacturers to understand how to comply with the final regulation. And so the center is considering and will plan to have education and outreach materials, including, for example, a small entity compliance guide to provide guidance to manufacturers on how to comply with the final regulation. If there are specific issues and topics that the Committee feels that guidance or other education and outreach materials, which may include webinars for the agency to address, we welcome those recommendations.

MR. BRENNER: This is Matt Brenner again. And following up, Dr. Leventhal, thank you for your two comments. If there are specific recommendations that you have around the small manufacturers and the additional compliance time, I recommend that you submit them.

I also would add that Section 906(e)(1)(b)(v) requires an additional four years for small manufacturers following the effective date of the final rule. So around any of those recommendations, I would just also keep in mind that requirement that FDA has.

DR. ROBINSON: Risa Robinson. This question is related to the workflow process when different companies are involved in the life cycle of the product. And the proposed rule refers to specification developers, and my question is does the responsibility lie with the contractor or with the small ENDS company? You had referred to that in your presentation that, in some cases, you had small companies who were developing ENDS and they would contract out, so I'm wondering does the responsibility lie with the small company or does it rely with the contractor?

ADMIRAL WANG: It would depend on the contractual relationship and what

the, in your example, the small manufacturer is tasking the specification developer to do.

So, for example, that would be covered under TPMP's proposed requirements for purchasing controls and how a manufacturer deals with their suppliers. And so to the extent that a manufacturer establishes certain requirements or parameters for the specification developer to meet, then that would be something that would be the responsibility of that manufacturer.

CHAIR DELNEVO: Dr. Jordt.

DR. JORDT: Thank you. I would like to refer to the issue of pesticides that are being mentioned here as potential contaminants of tobacco products due to exposure from the manufacturing side where these are used to combat pests and also sanitizing agents are included. I'm strongly supportive of this because this can lead to significant exposures, and there's not much known about what happens when these are actually combusted.

I would like to add a few other components that might be introduced accidentally into tobacco during manufacturing, and these just include lubricants that are used in the equipment. Some of them are quite toxic. And then there are adhesives, plastics that are used in packaging or for the raw product and pesticides are contained within plastic and also metal that can be introduced during manufacturing.

That's my recommendation. Thank you.

ADMIRAL WANG: Thank you for that recommendation. I do note that the proposed TPMP requirements do cover manufacturing materials, and so the manufacturer does have to consider and make sure that manufacturing materials, which may include, for example, lubricants, don't otherwise contaminant the tobacco product as being manufactured. And also, under packaging and labeling controls, that the manufacturer does have to consider packaging materials, that those packaging

materials don't contaminate or otherwise adulterate the tobacco product.

DR. GOGOVA: I would like to go back to the master manufacturing record. So is it true to say that, you know, at some point, FDA's input into the master manufacturing records (INAUDIBLE SOUND). So my question is about manufacturing records. Is it true to say that FDA's input into manufacturing records through pre-market tobacco applications because, basically, all the information which is contained in the master manufacturing process is something which is using applications. It shows, you know, how the product is manufactured, whether they have processes and controls in place. And, therefore, you know, there are some kind of question from the reviewers, and they might be having input into master manufacturing records and, only after the product is authorized, the manufacturer can concentrate on the master manufacturing record to be finalized.

ADMIRAL WANG: So as mentioned, the product specifications that a manufacturer needs to document in the master manufacturing record, FDA expects that those specifications are consistent with what is submitted to FDA and reviewed and ultimately authorized in a pre-market application or notice. Also, as you know, manufacturing information, for example, is required to be submitted in a pre-market tobacco product application, PMTA, and certain manufacturing information may otherwise be a part of CTP's pre-market review. And so there is that interrelationship between what FDA reviews and what needs to be documented under TPMP's proposed records.

DR. GOGOVA: So in case the FDA sees some kind of issues with, for example, process verification or validation verifications, they would be asking manufacturer during the pre-market review process to address those kind of inconsistencies before the product is authorized?

ADMIRAL WANG: Yes. But if the Committee has any other thoughts or

recommendations to make sure that what is reviewed and authorized, that that information is accurately and comprehensively addressed and documented under TPMP's proposed requirements, we would welcome your thoughts on that.

DR. UPSON: Dona Upson. To the point of suppliers, the proposed regulation mentions under process controls that manufacturers, you know, would be responsible for the suppliers, and it mentions that the tobacco products are from qualified suppliers. Who determines those qualifications, and how do they determine if they're met, especially, as you mentioned, that some contractors are, you know, for example, for ENDS coming in China?

ADMIRAL WANG: Yes. So TPMP does require through purchasing controls a process for the manufacturer to evaluate and qualify the suppliers, and part of that is to, ultimately that's to make sure that suppliers provide the components and parts that meet the requirements and specifications established by manufacturers. And so that is really the ultimate responsibility of manufacturers because, if suppliers provide components and parts that don't meet specifications, that may result in a non-conforming tobacco product under the proposed TPMP regulation.

And the other proposed requirements, for example, acceptance activities, also provide additional processes for manufacturers to ensure that what they actually receive and use in the manufacturing of their tobacco products meet their established specifications.

DR. KITTNER: Hi. Dee Kittner from CDC. I wanted to ask a question about the effective date. I heard that you all said that there's a four-year requirement for the small manufacturers. But for the two-year effective date, is there any legal or legislative reason why you can't diminish the two years to one year? I would recommend that it be one year in the interest of public health.

ADMIRAL WANG: Thank you for your comment, Dr. Kittner. Yes, the compliance date is set in statute that small tobacco manufacturers have an additional four years after the effective date to comply with the final TPMP regulation. CTP proposes a two-year effective date, but that is not required by statute.

DR. LEVENTHAL: Adam Leventhal. So I have a comment and set of questions about consumer complaints. So one comment is the FDA may consider making, either as a guidance or maybe amending this rule, when a complaint is provided to a manufacturer, that the manufacturer receiving the complaint provides the consumer with information to either the safety hotline at FDA or some other mechanism to ensure that the consumers are educated and that, if they wish, they can take the information directly to the FDA.

The second comment and point is when a complaint is provided by either a consumer or by a health professional or some other individual, information and guidance to the manufacturers about whether a complaint indicates an adverse event or some sort of public health concern that meets a threshold that would require the manufacturer to automatically notify FDA. And I don't know exactly what that would be, and I know that we'll have time for the Committee to discuss what those might be. But, certainly, if there is some sort of an unexpected health risk associated with a product being used and that if it does not get transmitted to the FDA immediately, then, of course, that puts the population health at risk. And so allowing whatever standard types of the timing of reporting and accessing those types of records, they may not be soon enough for certain types of complaints of potential public health crises.

ADMIRAL WANG: Thank you for your comment. I'd like to point out that the proposed TPMP tobacco product complaints does require that manufacturers evaluate complaints.

And for those complaints that deal with a non-conforming tobacco product, a product design issue, or an adverse experience that is required to be reported to FDA under a regulation that FDA has to promulgate under Section 909(a), those complaints need to be investigated.

And so FDA has not yet promulgated a regulation to define which adverse experiences are required to be reported to FDA. However, the proposed TPMP requirement would require that any adverse experiences that relate to a non-conforming tobacco product or any complaints that relate to any product design issues, those do need to be investigated.

I'll also point out, and we certainly kind of welcome your comment and recommendation on this, that FDA does have a safety reporting portal where any member, whether it's industry, the public, or public health professionals can submit any adverse experiences to FDA through the Safety Reporting Portal. Also, CTP has a potential tobacco violation reporting mechanism, as well. And so any adverse experiences that a user, a member of the public, or public health professionals that they become aware of can also be reported to FDA through those mechanisms. And we can certainly consider addressing that in guidance that the agency expects to develop and publish after the final rule to help industry and the public understand the requirements of the final TPMP regulation.

CHAIR DELNEVO: So, we're going to have a few more questions, first Lucy, then Risa, and Andy Bailey.

And then, we're going to move into formal discussion. I think a lot of topics have already been brought up in the Q&A. And if there are questions that remain during the formal discussion, those can still happen.

But we do need to kind of go through what we've been charged for today to get through.

So, Lucy?

DR. POPOVA: Mine is more of a recommendation regarding the language.

Through the TPMP, there's language saying not -- risks not normally associated with the use of tobacco products.

And it's defined as those not inherent to risk.

My recommendation is, rather than using normally everywhere, that implies to people who read that this is, oh, it's normal to have those negative outcomes.

So, rather than doing this, I would recommend using language that doesn't have the word normal. So, something that -- risks that are not inherent to tobacco use.

Because you don't want to normalize those risks.

And throughout addressing the concern that has been raised about that this regulation doesn't mean that the products are safe. Every time the risks are mentioned that are, as Adam referred to, that may be unexpected health risks, always bring up that those that are not -- and not just risks, but repeating illness, deaths, and disease that are not inherently associated with tobacco use.

So, just using the word normally, potentially, replace with inherent or some other wording.

Thank you.

DR. ROBINSON: Thank you.

So, given the limited resources for enforcement and the need to get a handle on the electronic cigarettes, I'm curious about the reasoning for including premium cigars in the proposed ruling given the several comments that we've heard?

ADMIRAL WANG: So, the proposed TPMP regulation would cover all tobacco

products that are regulated by CTP.

But if the committee has any recommendations around the scope, we would welcome your input on that.

CHAIR DELNEVO: Andy Bailey?

DR. BAILEY: Yes, I just had one comment.

In the documentation, it mentions exemptions. And if you can provide some clarity about the process for exemptions and the time frame allowed for applying for exemptions?

ADMIRAL WANG: Yes. So, exemptions and variances is a statutory provision that the TPMP regulation, once it becomes final, needs to incorporate.

Those proposed requirements are covered in Subpart J of the proposed regulation. And that does establish the proposed process criteria and timelines.

So, for example, it does provide TPSAC an opportunity to report its recommendations on any petitions for exemptions and variances.

There is a time frame that is included the proposed requirements, namely that TPSAC has 60 days after the petition's referral to TPSAC to provide its recommendations.

And there are also proposed time frames for FDA to make a decision to grant or deny the petitions, which is proposed to be 60 days.

And there are also proposed criteria that the petition must include for TPSAC and FDA to consider in making its decision on the petition for exemption or variance.

But if the committee has any recommendations or additional thoughts on the process, the criteria, and the timeline, we would welcome that input.

CHAIR DELNEVO: Great.

Now, we're going to move to discussion. We're actually going to do this out of order based on the questions and comments we've had so far.

So, we are going to start with number four regarding the committee having any recommendations on the proposed design and development activities and risk management process to control risks associated with finished in both tobacco products and its production processes, packaging, and storage.

And I think some of your questions, I think, Adam, your questions about the pre-existing products might fall under this.

DR. LEVENTHAL: Sure.

So, just as I mentioned earlier -- so, Adam Leventhal.

Yes, as I mentioned previously, for the protection on public health, it does not appear that allowing an exemption for the products that were on the market prior to 2007 February 15 is beneficial.

And so, is recommended that that exemption for that component of the rule be dropped and that be applied widely across all tobacco products being marketed under the purview of the FDA and NCTP.

CHAIR DELNEVO: Scout?

DR. SCOUT: I would support that as well.

And it sounds like this might be the section where we would also talk about a suggestion to have an expiration date on the products as well.

And another piece that we haven't brought up yet, but was brought up in the comments, is the idea of the potential degradation of the products.

It's a little bit, obviously, more complicated to control refrigeration or temperature or things like that, but it seems like it wouldn't be as complicated to control the idea that they should not be made in transparent models for ENDS so that exposure to sunlight, at least, minimizes the risk of things like benzene precursors.

So, I would certainly suggest we add the expiration date, sunlight exposure as well, and I think maybe under one, we would talk about the scope where maybe we could think about expanding it to some of the actual retailers.

CHAIR DELNEVO: I just want to add briefly, too, with expiration date, we're talking — we've been talking primarily about ENDS, but there are also other products, smokeless tobacco, as it sits on the shelf. My understanding is, tobacco specific nitrosamines increase over time.

And so, I think expiration date is relevant there as well.

And there are some manufacturers that already put an expiration date on their product.

DR. GUY: This just follows up on the expiration dates gap. Mignonne Guy.

So, I think that the question of expiration dates is important. Right?

But I think that equally important is providing guidelines or some parameters about the labeling and packaging, specifically for these products. Right?

So, my recommendation would be that FDA continue to work in sort of the direction of providing very clear guidelines and parameters for the manufacturers that will include the expiration dates.

But in terms of packaging, labeling, and packaging and the information that needs to be provided to consumers.

Because that seems to be a part that's, unless I'm missing it, is missing from this discussion. But we're getting down to the level of detail when we're talking about specific expiration dates.

MR. BRENNER: This is Matthew Brenner.

I just want to ask a clarifying question to the committee members.

For those of you that are proposing a required expiration date, do you have recommendations around products, excuse me, around the umbrella approach that FDA's taken in the proposed rule?

And how the proposal would mesh with those products that -- or those manufacturers that feel that their products do not need an expiration date? And how they would mesh together?

And then, who would also determine the expiration date and, you know, the criteria around it?

And any sort of extra information would be helpful for FDA in addition to your comments that you provided.

Thank you.

CHAIR DELNEVO: I mean, there's been a lot of discussion about ENDS specifically. And so, that certainly would be one product that would be -- that could fall with an expiration date and I would say smokeless tobacco as well, but not my are for the other products and what happens over time with those products.

But welcome.

DR. POPOVA: Yes, I was actually going to make the same point -- this is Lucy

Popova -- make the same point Dr. Brenner did, that, if we do use the umbrella approach and allow, at this stage, all the manufacturers to do their own risk assessment and put those things in versus FDA coming up with the specifics for expiration date or for clear plastic versus not clear plastic bottles, that gets us to the point like, which way do we want to go?

And the question would be, is there enough evidence currently to establish all those rules? And I don't know.

But in terms of the -- what is in currently in the policy would be -- in the proposed policy, is to let the manufacturers figure it out. And then, they were supposed to keep assessing that.

And if there's -- but I don't know if we need to.

So, this is more of a question to everybody how we would think about it.

CHAIR DELNEVO: Maria?

DR. GOGOVA: Yes, I think I would agree with, you know, here trying to apply the umbrella approach for regulating through the TPMP all tobacco products, we cannot try to be very specific for certain tobacco products.

We know that the differences between increased tobacco products versus traditional tobacco products which are more agricultural have higher viability compared to products which are more engineered and all using nicotine in tobacco products or devices.

You know, so, saying that we can establish what is the shelf life across all products may not be necessary because, for example, the device might not need to have a shelf life, but at the time, you know, how manufacturers determines whether that it is necessary having a shelf life or a sell-by date on the packages will be through assessment.

If we are going to be seeing, you know, the product is aging and changing over time beyond the specification of the product, then potentially, could triggering if, again, indeed, is going to be increasing the health risk of the product beyond the inherent risk of the product, maybe there is requirements for establishing shelf life for the products.

But I think it should be a fit for purpose, a fit for the product which we are trying to manufacture and sell and also deauthorize.

CHAIR DELNEVO: I'd like to also to open it up to comments and discussion about question three regarding recommendations on the product specification that FDA proposed to require in the MMR.

Scout?

DR. SCOUT: Well, it kind of, I guess, overlaps three and four, but I also would strongly concur with Mignonne around the idea that we need to have more consistent labeling across products.

What I'd really love to see is that, A, that there's some research done on what kind of labeling is easily understood by low literacy and, you know, priority populations and things like that.

But as well that we just see the same equivalency, whether it's a cigar or an ENDS product or a carton of cigarettes that we get one visual clear label as far as how much of this addictive substance this product contains.

Another point related to that, too, is we haven't brought it up yet, and I think it would be falling under these areas, but, you know, there's not a lot of danger of a child accidentally ingesting 12 cigars, but there certainly is a danger of a child accidentally ingesting one amount of liquid

that has the equivalent amount of nicotine and then going to poison control.

It was certainly one of the things brought up in the hearing as well.

So, that being the case, I would also strongly encourage the idea of child-proof packaging on products that have high nicotine -- on engineered products that have a potentially toxic level of nicotine.

CHAIR DELNEVO: Risa?

DR. ROBINSON: So, that's almost exactly what I was going to say. So, thank you.

So, right, regarding the units of nicotine, I agree, some kind of standardized units across all products which is like the -- including a typical unit per typical use. And I'm not sure like where that's going to land yet.

But as well as total amount of nicotine contained in either in the bottle or in the package of cigarettes or whatever in case of accidental poisoning, including child-proof packaging, as Scout mentioned, warning -- and warning labels that are shown demonstrated not to wear off over time.

CHAIR DELNEVO: Would you, along with that, I'm hearing a lot of comments about the -- how much nicotine are in the products and a call for that to be clearly included in the labeling which may or may not be within the purview of this product standard.

But along those lines, do folks have comments about whether or not those nicotine levels should be reported and required in the MMR?

DR. ROBINSON: Yes, if I could just comment.

I don't know if it's within the purview or not, but it seems like we should be able to regulate how much nicotine can be sold in one container or manufactured and put in one container.

MR. BRENNER: This is Matt Brenner from FDA.

I'll just note that if the agency establishes a tobacco product standard under 907 of the FD&C Act, then that would be required under the manufacturer's established MMR.

So, I think some of the comments are on point and I think some of it would depend if a tobacco product standard is in effect.

DR. SCOUT: Chris, you just said something that just -- I thought that the MMR included the nicotine levels right now. Did I get that incorrect?

CHAIR DELNEVO: You probably did, it's in the documents. But with the comments about labeling.

DR. SCOUT: Oh yes, exactly, okay great.

CHAIR DELNEVO: Is it varying into product standard language which is not what this is getting at.

Maria first and then, Lucy.

DR. GOGOVA: Again, I just would like to make sure, you know, we take into account the variability, especially with the naturally tobacco-curing product like the content typical leads.

Trying to establish labeling, right now there is no label of nicotine content in a pack of conventional cigarettes. And it would be very difficult to establish it.

And with the agricultural variability, you will see wide variety.

And then, the question will be, what is the -- how does this information help the consumer when you basically cannot put one number and you will have quite a wide range compared to a product such as, you know, highly engineered tobacco nicotine content in product where you have full

control of what you are putting into it.

And therefore, the specifications can be monitored over. And those do usually show nicotine content on a pack.

So, I just would like to make sure that, you know, we take into account variability of the product and what is the intent of the label to communicate?

DR. LEVENTHAL: So, I understand that there's like some question about like the scope of this rule and the intention of the rule.

And regardless of the idea of putting in the rule recommendations or requirements about these different parameters we're discussing, including, you know, like the bottle and whatnot, I just want to reiterate that, and I understand that new products that go through PMTAs or MRTPs, the FDA can establish those requirements at a product by product basis.

However, for the products that were on the market prior to 2007 February 15, the FDA may not have that level of detailed information.

And I recommend that the FDA require the design verification and validation, design approval, design transfer, and to those products so, that way, the FDA can have a benchmark to understand whether a product is deviating from the intended manufacturer product, and therefore, may be a noncompliant product and maybe a compliant that, therefore, I mean, a product that, therefore, adds additional risk to the consumer above and beyond what is authorized by the FDA to be sold.

DR. POPOVA: Going back to the labeling for nicotine, actually, we should be careful because we don't want to go back to labeling of harmful constituents where people then go shopping for essentially, you know, all cigarettes are equally harmful, but one might have less nicotine and people would go for this thinking or even comparing cigarettes to e-cigarettes. And they're like, oh,

e-cigarettes has more nicotine.

So, I would be cautious about uniformly labeling just the nicotine content.

And as past research shows like you don't want this comparative harm information in terms of grams and milligrams when it doesn't actually reflect the relative risks of the product.

But for -- I agree that, for e-cig, for e-liquids, and ENDS products, that the numbers of nicotine should be very clearly communicated in a consistent manner so people can make those judgments. And I feel like milligram per milliliter might be the better way because it kind of allows for bigger scale for them to look at.

DR. POSTOW: Yes, in terms of -- sorry, this is Lisa Postow from NHLBI -- in terms of labeling the nicotine concentration, especially for e-liquids, I think it's important to keep in mind whether the goal of that is to know the risks of accidentally swallowing the nicotine for a child or et cetera, et cetera, or if the goal is to communicate to the user what kind of nicotine they are exposing themselves to.

Because, as we know, the heat of the -- that the liquid is heated to and the chemical, you know, whether it's nicotine salt or base, these all factor into what you're actually exposing yourself to.

So, I think they're both important things to keep in mind. But we need to keep in mind what the goal is.

DR. UPSON: Dona Upson.

Thank you for that comment.

And I would recommend that research be supported to find out more about the

nicotine delivery of different devices.

We know that with -- when nicotine levels were altered with cigarettes that smokers -- topography of smoking, you know, how frequently they inhaled, how deeply they inhaled, how long they held their breath all affected the amount of nicotine they were getting. And it's much more complicated with ENDS.

So, I would ask that there be more research supported to determine how that's affected.

Thank you.

DR. GOGOVA: I would like to go back to the design validation, verification for the package in the market before February 15, 2007.

So, I just want to make it very clear that the current TPMP, although they don't require to recreate a design validation, verification, they still hold tobacco manufacturers to the assurance that, you know, manufacturers are developing product within specifications.

You know, so, they need to be still establishing all quality control and quality measurement systems to make sure that all the incoming materials is appropriately processed, that they have control -- or manufacturing process.

And then, the back release criteria can demonstrate the products are manufactured to the specifications.

So, I think it's only the first piece where, for manufacturers, when some of those products were designed decades, even hundred years ago, would be very difficult to recreate retrospectively.

But actual process and manufacturing process of those products is fully -- would

be definitely fully controlled and the products are developed to those specifications.

CHAIR DELNEVO: All Right, we're going to move to question two regarding the umbrella approach that proposes requirements and flexible terms, opening that up for discussion.

Are people getting hungry?

You know, I'll start. I mean, I think that this was a hard document to put together and recognizing that there is a wide variety of tobacco products on the market and that a one-size-fits-all approach doesn't work.

And so, the flexibility in this document, I think, will enable both the manufacturers and FDA to monitor good business practices, good manufacturing practices down the line.

But I think to Lucy or Adam before who made a comment about guidance to the industry, and so, with regards to that, like if they're in line with that, if there are any ways to also provide maybe best practices or kind of model examples of specific manufacturers that have put their practices together within the required timeline.

And along those lines, also -- I lost it, it's gone, it just went.

DR. GUY: Mignonne.

So, I also made a comment about guidelines, Cris.

But the question that I have related to the scope, I didn't quite understand the person who was on the call that asked something about the umbrella approach and how it meshed with what we're doing. I wasn't clear on what they were asking.

Matthew Brenner, yes.

CAPT HUNTER-THOMAS: Matthew, are you on the line?

MR. BRENNER: Yes, I'm here.

CAPT HUNTER-THOMAS: Okay.

MR. BRENNER: Yes, I'm here.

I'm not sure in what we were talking about in reference to the umbrella approach.

DR. GUY: Okay, I don't know, either.

MR. BRENNER: Oh, I think it was just if you have more direct recommendations, it was in -- sorry, I have it in my notes here.

It's on regarding expiration dates. If there are particular recommendations that the committee has in regard to, keeping in mind that we are using an umbrella, we've proposed an umbrella approach to this -- in this proposed rule and we're covering all tobacco, you know, finished and bulk tobacco products under the scope.

If the committee has recommendations on how to incorporate both the umbrella approach and any recommendations they have around requiring an expiration date, we would certainly welcome that.

You know, just keeping in mind that we do have -- we are proposing an umbrella approach around the rule. So, I think that's what I was, you know, my request was.

DR. GUY: Okay. Mignonne.

So, Matt, just to make sure that I am clear, because I don't -- I don't see how an umbrella approach or the scope precludes requesting or providing additional guidance for specific products or categories of products or families of products.

So, unless I'm missing something, I don't see how that would -- how they would

-- I think at one point you said how they mesh. I'm not sure how they -- how asking for these additional -- this additional guidance or providing the additional guidance would not mesh with this umbrella approach.

MR. BRENNER: Sure.

Well, guidance I guess would be separate, right, from requirements. So, if we are requiring something to all tobacco product manufacturers, right, if there is, you know, additional information that you, you know, that we have, I think it would be helpful when making our requirements around a particular, you know, set of information like expiration date. Right?

I know some people on the committee have brought up different products that, you know, warrant an expiration date. And I think it would be helpful for us to have more information around what products you recommend to have one.

DR. GUY: Got it.

MR. BRENNER: I'm not saying it's, yes, I'm not — it's more like any information that you all can provide would be really helpful. That's all.

CHAIR DELNEVO: Thank you.

ADMIRAL WANG: Yes, I'll also confirm that while CTP took this umbrella approach, there is nothing to preclude CTP from considering requirements that may differ, depending upon the type of tobacco product.

MR. BRENNER: Yes, that's exactly what I was trying to get at. Thank you, Emil.

CHAIR DELNEVO: Dr. Jordt? Sven?

DR. JORDT: Oh, sorry, I didn't hear.

Yes, I'm glad to hear that that flexibility within this umbrella approach, that's good to know.

I was in the queue for quite some time, but I actually wanted to respond to some of the earlier questions, especially for the labeling.

So, I have certain recommendations for labeling synthetic nicotine products. There is a concern since some of these products contain racemic nicotine such as SNR in equal amounts that consumers become confused about what the actual nicotine content is and what effects this might have.

So, this should be really -- there should be a standard developed to label these types of products.

They might be very confusing to the consumer.

I also want to refer now to the risk assessment and product design.

What I really appreciated was that FDA mentioned that the extent to the design or the shape of the products or varieties such as lozenges that might be considered candy by young children and they could poison themselves using -- ingesting them by accident if they are just lying around.

So, I would like to -- that these criteria are being extended to product design, for example, also of ENDS or many of these new, especially the colorful products, they resemble brightly colored toys or biting and chewing aids for babies and toddlers or computer parts or any other household product.

And there is, in my opinion, a much higher risk associated with these for being used by young children and resulting in poisoning.

So, I think these type of risk assessments should also be done for ENDS.

Thank you.

CHAIR DELNEVO: Dr. Johnson?

DR. JOHNSON: Yes, with regard to the synthetic nicotine, I think it's important to realize that a racemic product is very different than a bioequivalent product which would be an S nicotine.

And there are synthetic S nicotines that do exist that are chemically, physically, and biologically equivalent to tobacco derived nicotine and should be treated as such.

Racemic, there is some question because the high levels of R does not have the substantial database to be able to make an assessment.

And so, additional studies probably would be required for those types of products, I would think.

CHAIR DELNEVO: Dr. Leventhal?

DR. LEVENTHAL: Sure.

So, with regards to the overall umbrella approach, one concern is that if the rule were to be amended so that it were product specific, the amount of time that would take in order to make the rule final, that could potentially put, you know, the population at risk.

So, I know it may not be able to be, I guess, I don't know, like a date probably could not come out for expected or required for an amended rule.

And so, therefore, given that, you know, the umbrella approach may work, and then, accompanied with specific guidances that could be product specific.

And so, I know there were some questions about what would the guidances say?

What types of chemicals or tests would the guidance say that manufacturers should test for in order to ensure that the products being manufactured were meeting their intended?

And I think it's too difficult for us in one meeting to provide a comprehensive list. And so, I think that a follow up to this meeting that includes, you know, the scientists from the FDA and other potential scientists to provide more information.

But it seems that, as already stated in the rule, we have considerable data on pH, nicotine concentration, Cris had mentioned TSNAs, right?

And so, there are some that I would assume that the FDA scientific staff would be able to, you know, immediately put out in a guidance.

And the other issue I wanted to raise is that, you know, we get new scientific information all the time about risks that we otherwise wouldn't know.

And so, that a general procedure of the FDA to look at that guidance and update it on a regular basis based on how the science accumulates and we identify new constituents that could be hazardous that are being seen in these products would be important.

So, therefore, of course, the manufacturers can test the products for those types of constituents.

CHAIR DELNEVO: So, we're going to move into now the first question. Some of this we might have already captured in earlier discussion in the Q&A.

But I want to reopen it up about any recommendations on scope including expanding the scope.

The one kind of consistent comment that I've heard thus far is that the pre-existing tobacco products should not be excluded.

So, folks have any comments beyond that particular one, let's hear it.

DR. POPOVA: Just going back to the retailers are currently not included. But I think something should be set if there is expiration date that is put either by the FDA or the manufacturers.

And that might cover under somewhere else, but if not, there might be just a piece about how that applies to retailers.

DR. SCOUT: So, I was going to say the same thing. Yes, we need to make sure that if there is an expiration date, that there is a full cycle of compliance with making sure that expired products are not offered for public consumption which would pretty much mean that we have to have the retailers engaged.

And then, you know, purview, and checking on the retailers.

CHAIR DELNEVO: I also want -- did someone have a question?

I was just going to also just open it up to Question 5 which is just additional recommendations.

So, any comments that individuals have about either expanding the scope or additional recommendations.

DR. LEVENTHAL: I just -- I want to reiterate Dee's comment about changing the length of duration for compliance to a minimum of one year for all businesses.

And then, I'm a little confused about the requirements for this four-year. But assuming that there is no law that would prevent the rule from being amended, perhaps a lower threshold like 50 employees might be considered and giving them a three-year timeline or something like that.

Whereas, all other companies and manufacturers would have to meet the one year deadline for being complaint with the rule.

CHAIR DELNEVO: Just a clarifying question, I think, for Emil.

And that is the small business requirement, that is in the Tobacco Control Act, not this proposed rule and you're bound by the Tobacco Control Act's definition of small businesses and the four years, is that correct?

ADMIRAL WANG: Yes, Dr. Delnevo.

The Tobacco Control Act has a definition for small tobacco product manufacturers which is the 350 employees including all entities under its control.

And Section 906(e) which provides CPT the authority to promulgate this TPMP regulation also contains a statutory requirement to afford small tobacco product manufacturers an additional four years beyond the effective date.

But certainly, your comment about the proposed two-year effective date, we welcome that recommendation.

MR. BRENNER: For clarification, this is Matt Brenner on the phone, again.

For clarification, there's just the difference between the effective date of a final rule and the compliance time frame to comply with those requirements.

So, right now, we are proposing a two-year effective date on manufacturers with an additional two years for tobacco product manufacturers to comply with the rule, and four years from the effective date for small tobacco product manufacturers.

CHAIR DELNEVO: Can you restate that, Matt, please?

MR. BRENNER: Sure.

And Emil, you can jump in on the phone, excuse me, any time.

So, there is a two-year effective date for all manufacturers. The effective date is the same for all manufacturers.

And then, there is a two-year time frame where manufacturers, non-small manufacturers would have to be in compliance.

And a four-year from the end of the effective date for small tobacco product manufacturers. So, anybody under that 350 --

DR. SCOUT: So, are the first sequential or overlapping?

So, it's four years before anybody would have to comply with this from today? I mean, not from whenever.

ADMIRAL WANG: Yes. So, to clarify any confusion, so, the effective date would apply to all manufacturers.

However, for any manufacturers that meet the definition of a small tobacco product manufacturer, the statute requires that they have an addition four years beyond the effective date.

And so, how that applies in practice is that non-small tobacco product manufacturers would have to comply with the final rule after the effective date, which is current proposed to be two years. But we do hear TPSAC's recommendation to potentially shorten that two-year effective date.

But after that effective date, small tobacco product manufacturers have an additional four years to comply.

CHAIR DELNEVO: So, there's two pieces, right? There's the effective date

and how long this will take to become effective?

And then, manufacturers, not small businesses, will then have two years from there to comply.

So, can the committee make recommendations on both the effective date and the compliance timeline?

MR. BRENNER: Yes.

ADMIRAL WANG: Yes, and so, the compliance date that we're referring to is the compliance date for small tobacco product manufacturers that takes into account the additional four years that the statute affords them.

And so, that is a statutory requirement. But the effective date that FDA is proposing two years, that is not set in statute.

DR. SCOUT: I think where there's confusion is not about the small exception, there's confusion about whether that two-year effective date is also the compliance date for large manufacturers or if there is an additional two years past the effective date that the large manufacturers have still to comply.

ADMIRAL WANG: So, no, large manufactures or non-small tobacco product manufacturers have to comply after the effective date of the final regulation.

So, if that -- if the final regulation has the two-year effective date that's currently being proposed, then it's two years after publication of the final rule that large manufacturers have to comply.

But that -- but we welcome TPSAC's recommendation on whether that two-year effective date is appropriate for -- to achieve the statutory objectives.

DR. UPSON: Thank you.

Dona Upson.

I'd like to echo Dr. Leventhal's comment that we're all very concerned when this is going to take effect.

And so, I would recommend that, you know better than we do how long things could be delayed, so I would recommend that as few delays as possible, you know, beyond what's necessary be done that would postpone this and enable more youth to get addicted to nicotine.

And then, just a couple comments, more minor ones.

I would recommend deleting regarding synthetic nicotine. You talk about tobacco products containing non-tobacco nicotine. I would recommend getting rid of that first word, tobacco and just say, all products containing non-tobacco nicotine, you know, except those FDA approved for therapeutic reasons.

Just because there's -- it seems like there's some room hedging there. Not that I'm a lawyer.

And then, one last recommendation is that you mentioned that record keeping ingredients and process are important to go back and see where there might have been risks such as EVALI.

EVALI is no longer a reportable disease to CDC. So, I would recommend that EVALI and other health problems that come up be looked at immediately and that the public and the health and medical professions be informed right away.

That's what worked with EVALI. People got the word out pretty quickly. We don't know how much EVALI -- there still is EVALI, we don't know how much. So, I would

recommend making EVALI a reportable disease again in addition to anything else that comes up, you know, going forward.

Thank you.

DR. POPOVA: I want to recommend -- make recommendations regarding the records and availability of the risk to the public.

And I understand the desire to keep the trade secrets and those could be redacted how they normally are.

But I think it would be particularly useful to have that risk assessment results and to be available to the public so the public is aware of what the manufacturers have considered and what they deemed acceptable or tolerable versus unacceptable.

And so, I would recommend making those record public and either by -- again, this is something where, right now in the rule, the companies just have to have the records.

And then, either implementing something where the records should be made available on the company's own website or somewhere or available by request.

Or if we could then just tell the public to request them from the FDA when the FDA gets them.

So, but something should be made available where the public needs to be aware of those -- the risk assessments in particular.

DR. GUY: Mignonne Guy.

So, this may go back to number four, I think that you moved us on to number five, but I just want to go back to number four really quickly.

Which is back to the idea of initially you stated that some manufacturers would

have unique identifiers or some manufacturers would be required to have unique identifiers on some products. Is that correct? Am I understanding that correctly?

ADMIRAL WANG: Yes, the proposed TPMP requirements would require that all manufacturers establish a unique identifier for all of the components and parts that they receive such that that can be ultimately traced for the products that they manufacture.

DR. GUY: Beautiful, okay.

And just in a quick follow up, so, what I would recommend is the establishment and -- establishment of and compliance with a track and tracing system either on behalf of the manufacturers or the FDA or both, particularly, probably on behalf of FDA simply because that would put an additional burden on those smaller manufacturers or smaller employers to be able to comply with this, so if FDA would pick up on that.

Specifically, because it would help to quickly identify and assess products that cause adverse events as opposed to, I believe you heard -- I heard you say, if we find them.

So, as opposed to the agency happening upon them, and it'll also able to — it'll help facilitate communication to the public when necessary in order to circumvent, you know, sort of widespread adverse events with any particular product.

DR. BAILEY: Yes, just a general comment really about, number one, the scope of the rule.

And, you know, my expertise is from the raw tobacco side, not so much manufacturing, but the raw tobacco that is being delivered to the manufacturers.

And based on what I see manufacturers impose require from growers, I think you'll find a lot of these TPMP requirements that are already in place by major manufacturers, things

like foreign material, there's some major things -- major requirements for growers to reduce non-tobacco related material as it comes in to the manufacturer.

A lot of things about conformity, there's, I guess, an incredible level of detail devoted to how these manufacturers source products of a consistency, conformity, you know, how they deliver, how they get those products delivered in and the timing of that and the scheduling.

There's been a lot of time in that to make these products conform.

Also, I think some of what I saw in the documentation, pesticide residues as it relates to pesticides applied in the field, which we do a lot of work with that in my area.

There's a lot of emphasis from manufacturers on maximum residue levels in raw leaf, MRLs, and also guidance residue levels, GRLs, that we hear about very, very frequently from manufacturers about what those levels are.

If they're high and we're doing a lot of work trying to limit those in the field before the product ever gets to the manufacturer.

So, there's a lot of emphasis placed on a lot of points with TPMP right now that I think we'll find that are already in place by manufacturers.

CHAIR DELNEVO: Maria?

DR. GOGOVA: Yes, I just wanted to comment on the risk assessment procedures, you know, and the transparency with the FDA, you know.

We, as an industry, are regulated by FDA. And as a part of the new tobacco product application, we do need to share with FDA everything about a product, including the risk assessment and how we basically potentially identified and mitigating any kind of risks.

So, FDA exactly knows what went into the development of the product and have

the information for us to demonstrate the product potentially is appropriate for production for public health.

You know, so, they will have -- they will know everything, including adverse events.

Even right now, for any kind of serious adverse event, we need to be reporting to FDA those serious adverse events within a certain period of time.

And then, when the product is in postmarket -- in the marketplace, we have postmarket surveillance reporting requirements where we, again, need to be basically sharing with FDA, you know, the risk of any kind of adverse events.

It's also part of the manufacturing inspections where FDA can be asking, again, information about our risk assessment, potential noncompliance of the product, or even adverse events which we experienced throughout the time.

So, I think there is a lot of information exchanged between the manufacturers and the FDA to fully be transparent about what's pending in the manufacturing but also in the marketplace.

CHAIR DELNEVO: Dr. Jordt?

DR. JORDT: Thank you.

I would like to address the issue of ENDS batteries that mentioned in several sections of the rule proposal.

I think it's a great idea to implement standard or, yes, restrictive manufacturing practices that can avoid explosions and fires.

However, without involvement of retailers and consumers, this problem cannot

be solved.

Because most of the fires, they originate when these are discarded by the consumer. So, I think manufacturing rules should also include recycling programs where the produced used by the consumers are taken back by the manufacturers and disassembled and discarded accordingly so they cannot cause any explosions and all the metals and other toxic components can be reprocessed or, yes, discarded in an environmentally friendly manner.

Thank you.

DR. GUY: I'm sorry, I'm trying to identify the person that was speaking prior to Sven.

Dr. Gogova, thank you for all the -- Mignonne Guy, sorry -- thank you for all the information about the exchange of communications and information between the FDA and the industry. It's very useful to have that information.

And I think that it actually -- it bolsters my point in which it should be easy to facilitate this tracing -- this track and trace system as a result of that because you have this communication.

And we can actually have the FDA sort of compile that information that's usable and accessible to the consumers which are, in the end, the ones that we're trying to focus on in particular.

So, thank you for supporting that.

DR. LEVENTHAL: Yes, Adam Leventhal.

In relation to that, too, it's kind of understood that there are some practices that are already established by the industry. But those are not uniformly practiced, especially amongst newer

companies and maybe potentially smaller manufacturers.

So, it makes sense to provide a little bit more clear information that would be applied across the board to the entire industry.

And one particular issue would be some sort of a clear information about when a complaint comes in, what is considered an adverse event that would require immediate notification to the FDA?

And number two, what immediate means? And so, providing a specific timeline that protects the public health, but also kind of understands that the company would need to do some investigation.

But there needs to be a timeline Because the internal investigation by the manufacturer, if that drags on and on and on and on, the public continues to be at risk. So, it's important for the FDA to be notified immediately when an adverse event comes up.

And then, the company can follow up as they do their own investigation. And that will allow the FDA to determine whether it needs to also immediately do an investigation.

Thank you.

CHAIR DELNEVO: We're going to break for lunch now for 30 minutes.

(Whereupon, the above-entitled matter went off the record at 12:37 p.m. and resumed at 1:23 p.m.)

CHAIR DELNEVO: We're going to get started.

So now, we're going to move into the final comment portion of the meeting where we're going to go around the table and have each member of the committee provide their final comments to be entered into the record for this meeting.

ADMIRAL WANG: Excuse me, Dr. Delnevo.

CHAIR DELNEVO: Yes?

ADMIRAL WANG: Can I make a clarify point to the committee, please?

Hello, good afternoon, all. I wanted to clarify our discussion about pre-existing tobacco products and what is exempted.

And so, the proposed TPMP regulation would only not apply the design and development activities to pre-existing tobacco products.

The thought being that we did not want pre-existing tobacco manufacturers to recreate or create design and development activities and records that they don't have and may not have the historical knowledge to create.

But all other proposed requirements of TPMP would apply to pre-existing tobacco products.

Thank you.

CHAIR DELNEVO: Thank you.

Can we start -- are we comfortable starting with you -- your end, Andy, with your final comment?

DR. BAILEY: Right, I didn't really have any further comments.

I just wanted to reiterate what we were talking about regarding discussion point one with the scope.

I do feel like a lot of these TPMP points are already in place, I think, at least for the large manufacturers. You'll find that a lot of these have been going on for a long time.

Thank you.

DR. JOHNSON: I think this is a step in the right direction where we're looking at trying to make sure that we have the quality, consistency, lack of contamination, and no adulteration of these products. And I think this will get us there.

I think it needs to be applied consistent with the statutes and consistent with the scope that allows for individual categories to have varying company sizes that can fit within the guidelines and meet the requirements.

DR. GOGOVA: Maria Gogova.

So, we do appreciate the efforts in proposing TPMP for manufacturers.

We believe, you know, it's in the best -- also in the interest of the manufacturers to make sure that they have procedures and quality controls in place to manufacture a product to a specification and really avoid or minimize the likelihood of a customer being exposed to a nonconforming product with the product mislabeled.

Because, you know, I think we also want to protect public health and making sure that, you know, the customers are not exposed to the higher increase of the risks which is beyond the inherent tobacco product.

We also appreciate the approach with the umbrella approach for TPMP regulations because we believe it's critical to assure flexibility in complying with the proposed TPMP requirements to take into account both the different kind of manufacturing processes, but also thinking of the tobacco products which are currently out there, but the traditional tobacco products or new, innovative products, and potentially, even the future products so that we don't stifle the innovation.

So, overall, you know, I think we are in support of TPMP.

MS. BECENTI: Alberta Becenti.

Thank you for the invitation to attend this meeting.

And I just wanted to reiterate that to include the -- when it comes to label, to include the expiration date and then also a standardize labeling for the consumer to be able to understand the information.

Thank you.

DR. KITTNER: Hi, Deirdre Kittner.

And I'd like to recommend reducing the effective date to one year as opposed to two years.

And do as much as possible to diminish the confusion and maximize comprehension of the nicotine content on the labeling and make it as standardized as possible.

Thank you.

DR. POSTOW: Lisa Postow.

So, I really appreciate the opportunity to be here.

I think this is incredibly important, especially in light of what we just experienced with EVALI.

And I think it's going to require some thought to decide whose burden it is and on what kind of schedule compliance of the design components are going to be followed. So, how frequently are products going to be looked at to make sure that no modifications have been made?

In terms of the umbrella flexibility, I think it's going to be really critical to have clear guidance on who is required to offer what documentation.

Because anytime there's flexibility in the government that engenders some panic and uncertainty in the population.

So, I think clear guidance that doesn't require every organization to have its own separate conversation with the FDA I think would be really important.

Thank you.

DR. LEVENTHAL: Adam Leventhal.

I'd like to commend the FDA for putting together this rule. They've put a lot of thought and energy into it.

And I think that the umbrella approach is a good start on moving with the additional guidance provided that may be product specific and may be updated as new science comes out that would help the manufacturers optimize their manufacturing process to protect the public health.

I did hear Mr. Brenner's mention about the exemption for the products on the market before 2007 February 15. And it's the rationale as to why the requirements for the design verification, validation, and approval, and design transfer would not apply.

However, I think the reason those parts of the rule are in place in the proposed rule is to protect the public health.

And so, it seems to me that whether it's via, you know, reverse engineering or whatever process is required, all tobacco products are dangerous, including those on the market prior to 2007 February 15. So, they should all be put forth the same standard to protect the public health.

In addition, I concur with Dee's recommendation of reducing the timeline for compliance. Perhaps one year would be a date to consider.

And I also believe that additional guidance on what would be a good track and trace system would be useful in addition to guidance on statistics and the types of testing that would be needed in order to maintain quality assurance and prevent deviations from the products being

manufactured from their intended specifications to protect the public health.

Thanks.

DR. POPOVA: Lucy Popova.

Going back to the design and development requirements, I feel they include a lot more than just coming back up with the design plan.

It also includes all the risk assessments and it does, at least according to the FDA presentation, the Master Manufacturing Record is also underneath that.

I feel that including them rather than exempting them is the right way of doing it. And if there's given the umbrella approach and the flexibility the companies have, they can just say, we don't have the design -- that the products have been like this for a long time, here's what they are.

But they still would need to go through the risk assessment, all of those specified.

And I feel that the way it's written right now, they might -- it might be interpreted as they're also exempt from all the other things.

So, I would concur with others saying that we should apply the same standard to everybody. But given them the flexibility already inherently in the proposed rule, it could be. Companies have that ability to deal with that without much burden.

And this also will reassure the small manufacturers that they are not -- that FDA is not being preferentially treating the big companies by exempting all their product.

Reiterating, I concur with labeling requirements. It would be good to just reiterate the clarity, in particularly for e-liquids, which my preference would be for milligrams for milliliters.

Including the retailers at least for the expiration date, as we were talking about. We need to have the full -- the tobacco products need to be covered by this manufacturing requirement kind of from the start.

And this is where we have it, like at the beginning. They already have all the -- whoever is producing the original elements, they're covered. But then, also going through -- all the way through the retailers.

As I mentioned earlier, the language, substituting not natural -- the risks not naturally associated with tobacco use to not normally or naturally -- I mean, well, all of those implied kind of normalization of those risks. So, using something like inherent would be better.

Including records, given that there's already so much communication between the FDA and the manufacturers, making those records public or at least providing the public an easy way to assess and access that information would be good.

I also concur with shortening the time between the rule and the effective date to one year, especially given that a lot of companies already have all those procedures in place. It should be easy to do for them and for the small manufacturers, the four years will still be in place.

And finally, I think umbrella approach is a good way and I feel like it gives enough flexibility and for us all to continue working on that and potentially come back with some better recommendations or guidance but keeping it flexible at this point seems appropriate.

DR. GUY: Mignonne Guy.

So, first, I want to applaud the FDA for taking this very rigorous and comprehensive approach and using this umbrella approach to implementing this -- or drafting this proposed rule.

I'm heartened to learn that some of these products that were on the market prior to February 15, 2007 would adhere to some elements of the proposed rule.

However, I do agree that we need to ensure that we have a standard approach across all. So, perhaps one means could -- all manufacturers, so perhaps one way to do this could be to allow some room for smaller manufacturers or those individuals that don't have the appropriate information to apply for exemptions with some sections as opposed to, you know, exempting complete groups of this rule.

I want to reiterate the importance of requiring the effective date to begin in one year.

And in addition, I want to reiterate the importance of FDA providing guidance and specifications to adhere to the sections of the proposed rule that we've identified as need and that FDA institute a track and tracing system that not only captures adverse events, but it could also help us establish a record of best practices for manufacturers that we can use in the future as we endeavor to minimize the risks associated with tobacco use and to protect the health of the public.

Thank you.

DR. ROBINSON: Risa Robinson.

I would like to thank the FDA for drafting the proposed rule which, in my mind, takes a giant step forward to protecting public health.

I have a few recommendations here for the record.

I recommend eliminating the exemption for products prior to the exemption date as stated by my colleagues previously and reduce the effective date to one year.

Second, implement consistent labeling for nicotine content per standard unit of

measure and by total nicotine contained in the container or package and to consider both the need to inform users of the contents as well as to protect nonusers from poison.

I recommend the MMR requirements should include guidance on preferred units of measure which are specific for the component and be stated in such a way as to be able to compare components across products.

Four, the software controller is a key aspect of nicotine delivery in e-cigs and should be a key component in product regulation and transparency.

Software controls, heating element feedback, such as maximum coil temperature and power on/off criteria, so I'd to recommend that this be considered in the proposed rule.

Five, MMR documentation should be made available to the public and for the purposes of independent researchers.

Six, MMR should consider the reality that constituents in the unpuffed and unheated product can be quite different than the constituents in the emissions.

And finally, I recommend that the FDA reconsider an exemption for premium cigars in the spirit of allocating resources to maximize the impact on public health.

Thank you.

DR. SCOUT: And I'm Scout.

I, as a public health expert, would much rather be here trying to talk about how to get rid of these products.

But that said, I understand that a lot of work has gone into this. It is certainly past due that we get some of this regulation in place. And so, I am substantively very pleased to see the proposed rule as it's put forward.

My suggestions to continue to enhance it would be as follows.

First of all, absolutely go with the minimum time which is allowed. It sounds like it's probably one year for the effective date and maybe we're stuck at four for the smaller producers. But if we have any variability there, I would also encourage that four to be shorter.

That there is uniform labeling across all products and that labeling takes very much into account audience, comprehension, and probably introduces a graphic component to more easily be able to compare the apples to the oranges.

That particularly for products that have high concentration of nicotine that are in a position where they can be accidentally ingested, that child-proof containers be considered for those products.

And also, as well, for the products which are engineered and have problems with exposure to sunlight according to available research so far, that it's an opaque product packaging.

And then, also that FDA strongly considers the concept of how enticing packaging is to youth. For example, by mimicking things like gum packages, things like that, as a way to minimize the exposure, unintended exposure to people who could be poisoned by it.

I also think that, it was brought up a few different times that we do not want the tobacco industry to be saying that their adherence to this rule in any way constitutes a healthier necessarily product.

So, I would encourage FDA to create some language around that just saying something along the lines of, you know, this product conforms to FDA's manufacturing specifications or something like or regulations, something that does not allow it to come across as being healthy.

I think with the pre-2000 exemption that we're talking about, I think there's a

way to skin the cat between what you're talking about. You don't want them to post hoc create documents that weren't really a part of their, you know, development plan.

But we do want to make sure that we have the specs so that you understand what current products should be kept to and tested to.

So, in that way, I suspect it can be just a small modification that if it's pre-2007 that you submit the final product specifications to make sure that you're not creating documents that didn't exist, but we still have a baseline by which to figure out if a document is in or out of compliance.

I think, for some of the things we're talking about related to new nicotine products that might be of different potency, different efficacy, different, you know, that we should also presume that they're at least as hazardous as the ones on the market. Because there's a lot of science out there until new science proves that they diverge from that in some way.

So, I just want to be careful that if there's a new nicotine product, that we do not presume it's safe as a starting point, but we at least presume it's at the baseline that we see for existing products.

I definitely support having expiration dates. And as a result, expanding it to retailers so that that can be fully complied with.

I also think that FDA should really consider how to make sure compliance costs are not dependent upon congressional allocations of budget to the FDA. Because that means that they could really vary and also means the tobacco industry could have a strong say in them.

So, you might want to figure out ways the compliance costs related to this whole thing can actually be directly connected to the manufacturers.

I do think that when we're talking about unintended exposure, there's several

different categories of it. Like, for example, it could be with poison control reporting that people are getting access to something or that the batteries are, you know, causing problems for people.

So, I do think that as FDA considers compliance related to this, they should consider the different areas where reporting might exist that need to be monitored in order to understand the full public impact.

I support the records being public with, you know, trade secrets being redacted.

I support there being the development of a track and trace program.

I also support recycling as being a piece of this equation to make sure we minimize the risks related to batteries.

One thing we didn't talk about here, but that was brought up in the public comment was also that there are, right now, higher criteria for warning labels on things like nicotine gum when it's therapeutic, pharmacological than there is on nicotine gum when it is being sold for continued consumption.

We should definitely make those even to minimize the chance that people can get access to, you know, chewing nicotine gum and poison themselves in that way.

I do think that this idea of small companies, we brought up an interesting point that the number of units they sell may be more relevant to their impact on the market than the number of employees they have. So, that should be considered as to whether that's a better measure of a small company.

And then, the last thing is really that, we understand that if there's one thing that this world has taught is that, there will be new products and new ways to consume nicotine that the tobacco industry will create in the very near future.

And so, that said, I think that FDA should strongly consider what level of potential rapid response they have to those new products, particularly if they fall outside the specific regulations here.

If there's any way that they might somehow exempt or jump around some of the categories here, so that that response can be much faster than this proposed rule has come in response to all the ENDS which have flooded the market thus far.

Thank you.

DR. UPSON: Dona Upson.

And I also want to thank FDA for addressing this topic.

And I agree with the -- most of the comments here that it's the benefit of going near the end.

I agree that there should be standardization of nicotine, both by manufacturers so that it doesn't -- levels don't vary even within products.

And that there are easily understood labels of the nicotine content.

I agree with the decreasing the time to one year.

And I would also recommend that the premium cigars not be exempted. I think that this proposed rule should apply to all tobacco products and including the synthetic nicotine products.

And there are lots of reasons for that. Premium cigars have health risks and they are the entry point for many youth to become dependent on nicotine, especially African American youth.

And in the past, premium cigars or cigars have been modified to meet whatever

the criteria are to make them premium cigars and that included adding things to make them heavier and different things.

The rules are more strict now, but I would not exempt any tobacco products.

And I would ask that FDA be able to enforce the rules.

Again, mention that I think getting the final rule out as soon as possible, a good rule, is important Because every day that we lose and this may not affect how many People become addicted to nicotine, but I think we need to keep moving.

Thank you.

CHAIR DELNEVO: I'd like to ask Dr. Jordt for his final comment.

DR. JORDT: I congratulate FDA for proposing these generally reasonable requirements for tobacco product manufacturers which establish controls for the manufacturer's specifications, packaging, storage, and labeling tobacco products.

While these rules will not prevent tobacco products from continuing kill almost half a million Americans per year, they will help to protect public health from outside harm due to poor manufacturing practices and error.

I advise the FDA to expand risk assessment criteria for manufacturers to protect children from accidentally ingesting tobacco products such as the ENDS designed like cutouts or toys or candy and also at risk for youth that are enticement products which are making at a young age.

FDA should implement labeling standards for nicotine in the ENDS and modern nicotine pouch products with special consideration given to forms of synthetic nicotine.

Products containing mixtures of synthetic and tobacco derived nicotine together should not be permitted since they may confuse the consumers even more.

Recycling of the ENDS needs to be an integrated part of the manufacturing rules since the ENDS cause pollution and are a fire hazard.

FDA should consider requiring expiration dates on certain tobacco products to protect consumers.

It is understood that the umbrella approach does not exclude the implementation of rules specific to tobacco product categories.

The rule should become effective in one year, keeping the exception for small manufacturers.

Thank you.

CHAIR DELNEVO: I want to thank the FDA for their efforts on this proposed rule as well as the committee members for this robust discussion.

If we had had the TPMP in place at the time of EVALI, we might have had a more effective and efficient epidemiological investigation which got at the root cause of EVALI in a more expedient fashion.

Today, there are still misperceptions that persist about what was the root cause of the epidemic.

To that affect, I recommend that track and trace be included in the proposed rule.

With regards to scope, to include pre-existing products where appropriate and allowable under the Tobacco Control Act, importantly, because many of the pre-existing products serve as predicates for substantial equivalents applications.

And it would also facilitate the identification of misbranded or unauthorized

products on the market.

The TPMP reflects sound business and manufacturing practices that we have heard from our industry representatives are compatible with their existing business practices.

To that affect, I recommend that the timeline be compressed along with the majority of our members here today, effective within one year.

With regards to the umbrella approach, it provides needed flexibility for the diversity of tobacco products on the market.

And the proposed TPMP will serve as a living document that will grow and will apply to future product standards.

Lastly, with regard to the request for premium cigars to be exempted, there is a process in the TPMP for that. And so, if the cigar associations and cigar industry wishes to seek an exemption, there is a process laid out in the proposed rule where they can come forward and make more clearly their arguments and articulations for that particular exemption.

And with that, I would like to invite the FDA, if they have any final comments.

ADMIRAL WANG: Dr. Delnevo and TPSAC committee members, the agency greatly appreciates your engagement and thoughtful recommendations.

We hear your thoughts and will take that into consideration.

We believe that your recommendations will help to make TPMP stronger in order to advance our mutual mission to protect Americans from tobacco related death and disease.

So, thank you very much for your contributions today.

CHAIR DELNEVO: I would like to thank everyone for attending today, including those that participated in the open public presentation.

And with that, the meeting is adjourned.

(Whereupon, the above-entitled matter went off the record at 1:52 p.m.)