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NATIONAL ADVISORY COMMITTEE
ON MICROBIOLOGICAL CRITERIA FOR FOODS

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**Speaker 1:** Hello, and thank you for joining today's National Advisory Committee on Microbiological Criteria for Foods plenary session. Before we begin, please ensure you have opened the WebEx chat panel by using the associated icon located at the bottom of your screen. If you require technical assistance, please send the chat messages to the event producer, all audio lines will remain muted until the public comments sessions today, we will give you instructions about how to provide public comments on the audio lines at both times. With that, I'll turn it over to John Jarosh with the United States Department of Agriculture. John, please go ahead.

**Mr. John Jarosh:** Thank you. Good morning. Welcome to today's plenary meeting of the National Advisory Committee on Microbiological Criteria for Foods, or NACMCF. I'm Mr. John Jarosh, the Director of the NACMCF secretariat and the designated federal officer. I also serve with the United States Department of Agriculture Food Safety and Inspection Service, Office of Public Health Science, as the Deputy Director of Science Staff. We're going to start our meeting by hearing from the Deputy Undersecretary for Food Safety, Ms. Sandra Eskin, our NACMCF chair. Ms. Eskin.

**Ms. Sandra Eskin:** Thank you John. Thank you. Good morning. I'm Sandra Eskin, the Deputy Under Secretary for Food Safety at USDA. I'm Very pleased to welcome the NACMCF committee and members of the public to our 2021 plenary meeting. This is my first meeting as an NACMCF chair, since my appointment to the position last month. And I see some familiar names in this group. People I've worked with over the years. But for those of you who don't know me, I'd like to start with a brief introduction. I spent over 30 years, excuse me, of my career as a consumer advocate. I'm a lawyer by training, I've worked with a range of nonprofit organizations, most recently serving as the Project Director for Food Safety at the Pew Charitable Trusts. Like you, I am passionate about food safety and focus on finding science-based and data-driven solutions. I've learned that listening, asking questions, and challenging assumptions are crucial to effective problem solving, which is why the work of NACMCF is so important. This committee and meetings offer the space to do this.

To the NACMCF committee members, thank you for bringing your perspectives and expertise to this committee. I'd especially like to recognize the committee members who reached the end of their NACMCF term and will be rotating off following this meeting. In advance, I apologize for any mispronunciations of your name. Dr. Gary Acuff. Ms. Vanessa Coffman. Ms. Carolyn Hovde. Dr. Mohammad Koohmaraie. Dr. Bala Kottapalli. Dr. Evelyne Mbandi. Dr. Laurie Post. Dr. John Ruby. Ms. Jenny Scott. Colonel Alisa Wilma. Dr. Lee-Ann Jaykus. Dr. Margie Lee.

Thank you again for your service and your contributions to this committee. Today, we'll have a discussion and public comment on two food safety questions. First we'll discuss quote, "Appropriate product testing procedures and criteria, to verify process control for microbial pathogens in ready to eat foods from FDA," close quote. The discussion will be followed by one on the use
of water in animal slaughter and processing. Two NACMCF subcommittees have worked intensely on these projects over the last three years to provide answers to FSIS and FDA. I'd again like to thank all the members and assisting experts for your hard work and commitment to these projects. Our goal is for NACMCF to adopt final recommendations to both agencies by the close of today's meeting.

The recommendations from these charges and the scientific advice that this committee provides is essential to FSIS, and our federal partners at the Food and Drug Administration, the Centers for Disease Control and Prevention, the National Marine Fisheries Service of the U.S. Department of Commerce, and the Department of Defense’s Veterinary services. We strive to ensure that our policies are based on the best available data and science, and NACMCF recommendations help to guide our decisions and strategies to improve food safety. USDA looks forward to reviewing the NACMCF report and recommendations on the use of water in the slaughter and processing of meat and poultry products. USDA is committed to putting food and agriculture at the center of climate smart practices, including water use. We know that climate and weather increasingly threaten the food industry's access to clean and affordable water.

Regulatory requirements pertaining to water use may present an opportunity for FSIS to be a better partner in promoting stewardship of water resources. For example, can our regulatory structure allow for industry use of innovative technologies that provide equivalent quality and safety, but also support sustainable use of water resources? It's important that we evaluate FSIS regulations in light of these challenges and opportunities. And we look forward to the subcommittee's presentation. Again, we appreciate all of your contributions as we work together to build a better food safety system. Now I'll turn the floor over to Dr. Susan Mayne, Director of the Food and Drug Administration's Center for Food Safety and Applied Nutrition and our NACMCF Vice Chair. Susan.

Dr. Susan Mayne: Right. Thank you, Sandra. I really appreciate your remarks and welcome in your new role as chair. So good morning to everybody. And again, I welcome our members and our guests to our plenary session today. I know NACMCF is a very dedicated group, and again, on behalf of the partner agencies, I want to express my most sincere appreciation and thanks for your time and your willingness to share your food safety expertise. I would like to acknowledge not just FDA and FSIS, but also CDC and DOD and NOAA for their strong support of NACMCF in the past, and continuing strong support of NACMCF in the future. It is also important to acknowledge the NACMCF's Executive Secretariat, Lesley Good, Laarina Mullings, John Jarosh, and others who have made this possible. It takes a lot of work and effort to pull together administratively, especially during the COVID-19 pandemic, in order to make sure that we have this invaluable opportunity to meet together as a group of experts.

We have two reports to adopt, both of them quite important. Obviously the use of water or recycled water in meat processing is a critical concern as we
consider that water is a diminishing resource. For FDA, I also want to point out the importance of product testing as a verification tool for preventive controls, for ready to eat foods under the FSMA mandated regulations. Because of the flexibility FDA provided in the 2015 Preventive Controls for Human Food Rule, greater clarity is helpful for industry as well as for FDA investigators as to when verification testing of food is appropriate. And what testing a facility might need to undertake.

Who better than NACMCF to advise us on this subject? FDA looks forward to reviewing the information provided and considering how it may inform any potential opportunity to enhance our guidance to industry. This would represent a significant accomplishment for FSMA and the new era of smarter food safety. We look forward to adoption of these two reports. I would like to recognize Doctors Kathy Glass, Laurie Post, Peggy Cook, and Omar Oyarzabal for their work on leading the subcommittees, addressing these charges. And offer special thanks to our technical advisors and subject matter experts for all you’ve done in shepherding these documents to completion.

I was an academician before joining the FDA and I served on federal advisory committees myself, so I understand what a significant time commitment it is. Thank you all so much for your public service. Further, the diversity of the committee membership including academia, industry, federal, state, and consumer representation, as well as gender, race and ethnic diversity, is a tremendous value to the committee now, and as we develop the FY21 to FY23 membership. This committee continues to be a source of science-based advice that has been extremely useful for the sponsoring agencies for many years. So thank you again for your efforts and your efforts in the past, as well as the efforts you’re going to put into the future charges. We look forward, as Ms. Sandra Eskin said, to your report to the agencies. So with that, I’ll turn it back over to Mr. John Jarosh, for continuing with the agenda.

John: Thank you, Dr. Mayne. I’ll go through roll call now and beginning with the NACMCF executive committee members. I understand there are some challenges to this as we’re doing this virtually, so I can see your here, so if you can’t respond, I’ll mark you present. Of course we’ve heard from Ms. Eskin and Dr. Mayne. Dr. Denise Eblen?

Dr. Denise Eblen: Here.

John: As a reminder, if you’re not speaking, please mute your phone. Dr. Vincent Bunning?

Dr. Vincent Bunning: Here.

John: Dr. Arthur Lang will be joining us later from the CDC. Dr. John Bell will not be joining us today. In his stead, Dr. Patricia Rabideau from the National Marine Fisheries Service. I know she's here. And from the Department of Defense, Dr.
Marjorie? And for the committee members, Dr. Gary Acuff, from Acuff Consulting?

Dr. Gary Acuff: Yeah. It’s Acuff. Yes here.

John: Mr. Aaron Asmus from Hormel Foods? Ms. Vanessa Coffman from Keep Antibiotics Working Coalition?

Dr. Vanessa Coffman: Hi, this is Vanessa Coffman. And I’m actually a doctor as well.

John: Oh, I apologize. Dr. Peggy Cook from Neogen?

Dr. Peggy Cook: Here.

John: Ms. De Ann Davis from Church Brothers? Dr. James Dickson from Iowa State University? (present response inaudible) Dr. Francisco Diez-Gonzalez from the University of Georgia?

Dr. Francisco Diez-Gonzalez: Here. Present.

John: Dr. Joseph Eifert from Virginia Tech?

Dr. Joseph Eifert: Present.

John: Dr. Philip Elliott from Kellogg?

Dr. Philip Elliott: Here.

John: Dr. Kathy Glass and University of Wisconsin, Madison?

Dr. Kathy Glass: Present.

John: Ms. Carolyn Hovde from the University of Iowa?

Ms. Carolyn Hovde: Present, hi.

John: Dr. Mohammad Koohmaraie from IEH consulting group?

Dr. Mohammad Koohmaraie: Good morning. Present.

John: Dr. Bala Kottapalli from Walmart? I know Bala’s here.

Dr. Bala Kottapalli: Nope. I’m here.

John: Okay.

Dr. Bala Kottapalli: Sorry.
John: Ms. Patty Lewandowski Florida’s Department of Health?

Ms. Patty Lewandowski: Present.

John: Dr. Evelyne Mbandi from United States Department of Agriculture Food Safety and Inspection Service?

Dr. Evelyne Mbandi: Hi John.

John: Dr. Wendy McMahon from Silliker?

Dr. Wendy McMahon: Present.

John: Dr. Angela Melton-Celsa from Uniformed Services University of Health Sciences?

Dr. Angela Melton-Celsa: Present.

John: Dr. Haley Oliver, Purdue University?

Dr. Haley Oliver: Here.

John: Dr. Omar Oyarzabal from safe food team?

Dr. Omar Oyarzabal: Here.

John: Dr. Laurie Post from Deibel Laboratories?

Dr. Laurie Post: Present.

John: Dr. John Ruby from Passport Food Safety Solutions? Thought I saw Dr. Ruby. Dr. Ruby responded [Inaudible]? Ms. Jenny Scott from Food and Drug Administration?

Ms. Jenny Scott: Here.

John: Dr. Scott Stillwell from Stillwell consultative services?

Dr. Scott Stillwell: Present.

John: Dr. Rob Tauxe from Center for Disease Control and Prevention? I see Rob here as well. Dr. Valentina Trinetta at Kansas State University?

Dr. Valentina Trinetta: Here.

John: And Colonel Alisa Wilma from Department of Defense?

Colonel Alisa Wilma: Present.
John: And Dr. Francisco Zagmutt?

Dr. Francisco Zagmutt: Here.

John: Is there anyone at any other committee members I haven't called? Or hasn't identified themselves yet?

Vincent Hill: Yeah. This is Vincent Hill at the Centers for Disease Control and Prevention.

John: Alright. Yeah. I was going to go to some additional contributors and Vincent Hill, you're one of our contributors-

Vincent Hill: Sorry, I jumped in too quick.

John: No that's okay. Gordon Davidson from FDA? Margaret Hanfelt from DOD?

Colonel Alisa Wilma: Colonel Hanfelt is retired.

John: Oh. All right. Bailey Hart Mississippi State University?

Baily Hart: [inaudible 00:16:12].

John: And I think that was the... Lauren Berkowitz from FDA?

Lauren Berkowitz: Present.

John: I think that was the last of the additional people who requested to speak. However there are some other people from FDA, that if you need to speak later on, we'll identify you. That completes our roll call. At that point in time, before we continue the program, I have a few business announcements. Most importantly, I want to alert each of you that the documents that we're going through to discuss today are available on the advertised website. Please go to www.fsis.usda.gov and under NACMCF, and this meeting, you can access the documents there, or you should be able to click on the link that was provided for this meeting to take you to take you to those documents.

Next on our meeting today, it has a public comment period listed on the program. Please note that we are soliciting comments only related to the Ready-to-eat and use of water reports that we're discussing today. We are not asking for comments beyond the scope of the NACMCF's draft reports being discussed today. For guests wishing to make public comments, the moderator will unmute your line. Please state your name and affiliation for the record before making your comment. Please limit your comments to three minutes so that we can get as many comments as possible.

Lastly, the subcommittee chairs members and assisting experts have worked extremely hard on these projects. Everyone really stepped up to the plate to
make this happen. I just wanted to say many thanks for your efforts on these reports and especially to the assisting experts. Next on our agenda, I’ll hand it over to Dr. Kathy Glass, our subcommittee co-chair for our ready-to-eat charge who will present the draft document on appropriate product testing procedures and criteria to verify process control for microbial pathogens and ready-to-eat food for adoption. She will go through the report and we’ll take your comments from the committee as we go along. As a reminder, please, when you speak, please identify yourself for the record. And I will now pass control over to you.

Dr. Kathy Glass: Great. Thank you, John. While we’re doing the transition, I will just make a quick introduction. My name is Kathy Glass from the University of Wisconsin, Madison. Laurie Post of Deibel laboratories, and I are co-chairs of the subcommittee responsible to address the charge from FDA and developing guidelines on the use of microbiological testing to verify that preventive controls used for ready to eat foods are effective. We also want to have thank all the committee members and advisers who have worked on this charge. Due to the length of this document in the one hour time limit, we will review the document by sections rather than individual pages. We will start with each charge question in the main document and then proceed to responses for the groups of foods in each of the six appendices. Please follow along in the PDF of the document or on your computer screen. Comments from NACMCF members and subject matter experts should be restricted to substantive changes to be considered, formatting, typographical errors and grammatical errors and references will be corrected before the final document is posted and submitted for publication.

Please submit editorial comments to NACMCF for our records. For the committee members, you will have a feature to raise your hand when we ask for comments. When you are recognized to speak, please state your full name and affiliation for the record, and then provide your comment, specifying the page and line numbers where possible. Please keep your comments concise and constructive. We ask that you provide in writing, references to be used for citation. The subcommittee will address all comments in the revised document. For the background on the charge, FDA’s final rule, current good manufacturing practices, hazard analysis, and risk-based preventive controls for human foods, require that preventive controls be verified to ensure they are consistently implemented and are effectively and significantly minimizing or preventing the hazard. Verification activities of preventative controls from microbial hazards need to consider the facility, the food, and the nature of a preventative control, and its role within the facility’s food safety system.

The document developed by the subcommittee is intended to provide advice and examples for manufacturers and processors to establish their own microbial targets and limits to meet the preventative control requirements. In some cases, pathogen testing may be needed. Where as in other situations, verification testing for an indicator organism may be more appropriate means to verify process control. The main document provides an overview response to the eight questions in the charge with recommendations tailored to specific commodities
found in each of the six appendices of the document. The subcommittee wishes to clarify that this document is intended as guidance. Final decisions on microbial testing are made by each firm based on the facility, ingredients used, processing, packaging, level of anticipated control, shelf life of the product, intended use, or potential storage and handling at retail or by the consumer.

For the specific eight questions that are going to be there, there are going to be a number of commodities that are going to be of concern. These include dairy products, such as, cheeses, butter, cultured, dry, and frozen and dairy food products, milk products, grain-based products, ready to eat meals and entrees, including heat and eat, salads and sandwiches, nuts, and nut and seed products, fresh and dried cut fruits and vegetables, including bag leafy greens and spices and herbs. So to begin with, we would like to know if anybody has any comments to the introductory material on pages one through six. If so, please raise your hand to be recognized. And I will ask for Laurie's assistance in seeing where things are, because I can't see the chat function right now.

Dr. Laurie Post: Okay.

Kathy: Anybody?

Laurie: Yes. Vanessa Coffman.

Ms. Vanessa Coffman: Yeah, thank you so much. This document is so wonderful. This is Vanessa Coffman, as the consumer representative, I did just want to say that I was hoping that the executive summary could be filled out a little bit more and be a little bit more forward facing for the public. I recognize that this document isn't exactly meant for the average person to be reading, but it would be nice to have a little bit more detail in the executive summary. Thank you.

Kathy: Thank you very much for your comment. We will address that in our revisions. Other comments?

Laurie: Don't see anybody else at this point.

Speaker 1: If you are unable to, if you'd like to raise your hand, the raise hand option is right under the participant panel to the bottom right of the participant panel. There's a raise head option there in WebEx. Otherwise, you may also press pound two on your telephone keypad. Thank you.

Dr. Kathy Glass: Are there any other?

Laurie: Don't see anyone else. I think we should proceed.

Dr. Kathy Glass: All right. Okay. Thank you very much. So what we will do now is move forward to the first of the charge questions. So please refer to the response for question number one, starting on line 160 on page six. Also there is a table one starting
on page 32. The question one as for principles and criteria that should be considered to design an effective microbial testing program. Table one is a comparison of the responses for each of the various commodities that is going to be a summary of what is occurring in each of these dependencies. Are there any comments to question one?

Speaker 1: Once again please-

Kathy: Jenny Scott... Oh go ahead.

Speaker 1: Once again, please press pound two on your telephone keypad if you would like to provide public comments. Otherwise you may also hit the raise hand option in WebEx to the bottom right of the participant panel. Thank you.

Laurie: Okay, so Kathy, we have Jenny. Jenny Scott, do you want to identify yourself?

Ms. Jenny Scott: Thanks Laurie. This is Jenny Scott from FDA Center for Food Safety and Applied Nutrition. I have a couple of comments on the table, specifically on row 1.3 in the fruits and vegetables column. If you tab over just a little bit. Yes where it talks about the produce washes. I think we should make this a little bit more consistent with the text in the fruit and vegetables annex. I have provided this in writing, but let me read the sentence.

Jenny: I have provided this in writing, but let me read the sentence. I would say antimicrobials in produce washes are typically used to prevent cross-contamination in the wash water, and not as a microbial reduction step on the product surface. Suppliers of fruits and vegetables for fresh cut or drying should comply with the Produce Safety Rule (21 CFR Part 112), or applicable, or gaps. Some drying processes may have sufficient heat to inactivate pathogens.

Kathy: All right, thank you. We'll include that in the revisions.

Jenny: And I do have another comment on row 1.5 in the daily column.

Kathy: Okay.

Jenny: In that text, there are example PHs, and example water activities. I don't think that these values are all that consistent with the values in the dairy appendix, which vary quite a bit, depending upon the product. So I would suggest that you simply remove the EG, if greater than 4.6, and the EG, if greater than 0.90 and let people go to the appendix to get specific water activities and PHs.

Kathy: All right, thank you, other?

Laurie: Okay, so I don't see any hands raised other than Jenny, so we should proceed.
Kathy: All right, thank you very much. Now, let us proceed to Charge Question Two, which is found on page 13. Are there any situations in which testing, other than for pathogens or indicator organisms, such as use of enzymes, would be inappropriate verification activity? Are there any comments about this section?

Laurie: At this point, no one is raising their hand.

Kathy: All right, excellent.

Speaker 1: Please press #2. Once again, as a reminder, please press #2, or you may utilize the Raise Hand option in WebEx, which is located to the bottom right of the Participant Panel. Please click on the Raise Hand option there. Or you may utilize the #2 to raise your hand on the audio line. Thank you.

Laurie: Okay, there's no other hands raised. So ...

Speaker 1: None on the audio line at this time either, thank you.

Kathy: Okay, so next, we will proceed to Charge Question Three. Are there situations where verification testing would not be necessary if there is evidence that the appropriate treatment was in fact applied? Any comments or questions about this section?

Laurie: So, Kathy, I don't see any right now. We can give it another little bit of time. But ...

Speaker 1: None on the audio line either.

Laurie: Okay. So, you can proceed.

Kathy: We'll proceed to Charge Question Four. What considerations should a company apply in selecting the test organisms, such as whether it's a pathogen, or indicator organism, or it's a type of test, such as presence or absence of enumeration? What are appropriate indicator organisms to verify processes that adequately control pathogens? Any comments on Charge Question Four?

Laurie: Kathy, I don't see anybody with ... No raised hands at this time. Give it another few seconds, and we can proceed.

Speaker 1: None on the audio line either.

Laurie: Okay, so I would say proceed.

Kathy: Thank you. Proceed to Charge Question Five, starting on page 17. What principles and criteria should a company apply in determining the frequency of testing finished products to determine if the company's food safety system for that product is effective? Any comments in this section?
Laurie: Nothing yet. There's nothing coming through. Anything on the audio line?

Speaker 1: No, not at this time.

Laurie: Okay, so we can proceed.

Kathy: Thank you. Next is Charge Questions Six, which can be starting on page 19 of the primary document, as well as Table Two on page 36. Charge Question Six, are there situations in which testing at sites other than at the end of the process can achieve the goal of verifying the adequacy of controls on microbial hazards? And as we mentioned, we also have a comparison of these responses that are from the individual tendencies, taking a look at things other than finished product testing. Are there any comments about Section Six?

Laurie: There's no raised hands at this time. Give it another minute or another few seconds. And then, is there anything on the audio line?

Speaker 1: None at this time.

Laurie: Okay. So we can proceed.

Kathy: Thank you. Charge Question Seven, starting on page 20, and also Table Three, starting on page 39. Charge Question Seven says the current Good Manufacturing Practice and Preventive Control Rule requires environmental monitoring for environmental pathogens, such as listeria, or salmonella, or for an appropriate indicator organism as a verification if the contamination of a red tape food with an environmental pathogen is a hazard that requires a preventive control. What impact does environmental monitoring have on the extent and frequency of product testing verification activities by companies? Once again, we have on Table Three, a summary of how environment monitoring has an impact on frequency and extent of testing. Are there any comments on Charge Question Seven?

Laurie: Nothing yet. Nothing at this point?

Speaker 1: None on the audio line.

Laurie: Okay, I would say let's proceed. There'll be another opportunity at the very end, if somebody does think of a question, and does want to raise their hand.

Kathy: All right, thank you. For the last of the main document, Charge Question Eight. What criteria should a company apply in determining that microbial testing results indicate a loss of process control? What action should the company take, if the test results indicate the loss of process control? And when verification testing indicates a loss of process control, to what extent should verification testing be increased, how far upstream and downstream should it go, and when
and how should it be scaled back? Comments for Charge Question Eight in the main document?

Laurie: Nothing yet.

Francisco Zagmutt: Hi, this is Francisco Zagmutt.

Kathy: Yes. Go ahead please.

Francisco Zagmutt: I have a comment for line 840 and 842.

Kathy: Okay, give me a minute. Yes?

Francisco Zagmutt: It's mostly about semantics. There's a statement there that in general, taking more samples is better. I will contest that it increases the probability of detection, but it's not necessarily better as this part of them plan were cost-effective. Again, it's nothing very important, just, I wanted to qualify what better means. And also on line 842 and 843, there is a statement about the minimum of 25 grams. I think it would be good to provide a reference backing up what is the source of that statement. Thank you.

Kathy: Thank you. Any other comments?

Laurie: There's no other raised hands, anything on audio?

Speaker 1: I do not see anyone.

Laurie: Okay. So, you can proceed.

Kathy: All right, thank you. Now we will proceed to the appendices. In this portion of the document, each charge question is answered for the specific commodity group. The appendices also include tables that outline appropriate microbial testing of products and limits that would be considered to be out of specifications that will warrant further investigative testing, or in some cases when pathogens may indicate the need to reject the lot. These limits and actions assume that there will be a use of environmental monitoring and supplier controls where appropriate. First, we will go to Appendix A for the dairy, which starts on page 47. This includes butter. And we will ask for any comments on the butter section.

Laurie: Jenny Scott is raising her hand. So, Jenny, do you want to identify yourself?

Jenny: This is Jenny Scott from FDA CFSAN. Kathy, I'd like you to go back to the introductory part of the appendix for dairy. On line eight, I'd like to suggest after that reference to the Department of Health and Human Services, we add a sentence that says, "Pasteurization of milk and milk products is required under 21 CFR 1240.61." We use the term pasteurized throughout this document. We
do not define it. And so, there's two things this would accomplish. First of all, it would make it clear that pasteurization is required. And if you go to that citation, you will find the definition for pasteurized. Thank you.

Kathy: Thank you very much.

Laurie: Okay. Let me see if there's any other comments?

Kathy: Other comments either on the introduction or on butter?

Laurie: There's no other hands. Anything on the audio?

Speaker 1: I see none on the audio.

Laurie: Okay, so proceed.

Kathy: All right. Next would be cheese, specifically hard and extra hard in grated cheese, which starts on page 53, line 203. Any comments on the section?

Laurie: All right, Jenny has a comment as well.

Jenny: Thank you. Hopefully I'll be able to follow this. I've got my comments based on page numbers. And so, I'm not sure what section some of them are in. And I have trouble reading the screen. But this is on page 57, lines 251 and 252. So, I think it's in the section.

Kathy: Yes, go ahead.

Jenny: Let's see. Going down to get that paragraph on alkaline phosphatase, yes. The last sentence in the paragraph repeats the first sentence in the paragraph.

Kathy: Oh.

Jenny: So, a couple of options there. The easy one is just to delete that sentence. But we have also provided an alternative, if you think it would be helpful. And that would say that, "Although alkaline phosphatase can serve as an indicator of pasteurization, residual heat in very large wheels of raw milk, hard cheese, and lead to an activation of ALP." And then we have provided a reference in writing for that statement.

Laurie: Jenny, just to clarify, these are also in your written comments as well, right?

Jenny: Yes, yes. So you don't have to write all of this down. You just could maybe flag the point. But hopefully, I've given you the page numbers, the line numbers, and the specific change. I just wanted to make sure the changes are acceptable to the committee.
Kathy: Yes, thank you very much.

Laurie: Okay.

Kathy: Any other comments on the hard cheeses?

Laurie: There’s no other hands raised, and anything on the audio? I’m assuming not, I would proceed.

Speaker 1: None on the audio.

Kathy: Thank you. Next would be soft, semi soft, and surface ripened cheeses. Any comments on this section, starting on page 62?

Laurie: Okay. Nothing right now.

Speaker 1: None here either.

Laurie: Anything on audio? Nothing?

Speaker 1: Nope.

Laurie: Okay, so proceed.

Kathy: Thank you. Next, cultured dairy, which would be a pH. We should identify that this is being less than or equal to pH of 4.8, starting on page 69. Any comments on this section?


Jenny: Sorry. I’m going to have a lot of comments. This is Jenny Scott from FDA CFSAN, just a minor clarification. On page 69, where we talk about the time to achieve a pH 4.8 can range between four and 12 hours, we think that we ought to say in parentheses after that, (Greater than 12 hours for kefir), because we’re not sure whether kefir reaches a pH of 4.8 within 12 hours.

Kathy: Okay, thank you.

Laurie: Okay, let’s see if there’s anyone else. There’s no additional comments, anything on audio?

Speaker 1: None at this time.

Laurie: Okay. So, proceed.
Kathy: Next, cultured dairy with pH of greater than a 4.8 and less than a 5.4, with the examples of the acidophilus milk, hot filled and cold filled cream cheese or cottage cheese. Any comments to this section?

Laurie: No, there's no comments, and anything on audio?

Speaker 1: Nobody has identified themselves here either. Thank you.

Laurie: Okay, so nope, proceed.

Kathy: Thank you very much. Next, dried dairy products, which is on page 81 of this document. Any comments in this section?

Laurie: Jenny, go ahead.

Jenny: Thank you. It's on row 828, where references made to conavector sucazuckei.

Kathy: Yes.

Jenny: When they changed the nomenclature for enterobacteriaceae, not all of the strains ended up being conavector sucazuckei. And so there are concerns for more species of conavector than just sucazuckei. So we suggest you change the sucazuckei to SPP.

Kathy: Okay, thank you. Okay, cool.

Laurie: So let me just check to see if there's any additional comments. And there's no additional comments. Anything on audio?

Speaker 1: Nobody has identified themselves on the audio.

Laurie: Okay, so proceed.

Kathy: Thank you. Next, frozen dairy, which includes ice cream, frozen yogurt, etcetera, starting at page 88.

Laurie: Okay, Jenny, go ahead.

Jenny: Yes, sorry to take you back. I missed one in the table on page 81, in Row A. Because you mentioned staph and B. cereus in the text above, we think it needs to be added into the table. And I think that you could add a sentence that says, "Bacillus and B. cereus, can be present in dairy powders and can present an issue if the product is reconstituted and abused." And we've provided the specific location and the reference for that statement.

Kathy: All right, thank you.
Jenny: And I'm not sure, is page 84 in this section, or is that in the next section?

Kathy: I'm sorry, which one?

Jenny: On page 84.

Kathy: Okay.

Jenny: In Question Five.

Kathy: All right.

Jenny: Yeah, you mentioned in the table above, Listeria monocytogenes as a hazard for [inaudible 00:47:14] applications, but it's not mentioned again. So we think that you should add a statement about Listeria monocytogenes in the response to Question Five.

Kathy: Okay. Other comments?

Laurie: So, you've gotten your comments, Jenny? You're done with this section.

Jenny: I think so. I'm just not sure what the pages change for the next section.

Laurie: Yeah, yeah. So, we'll proceed to the next section, and then you'll be able to catch up. So go ahead, Kathy. There's there's no other questions.

Kathy: Okay. So that was finished up, hopefully, with the frozen dairy. Okay, so frozen dairy were accept. Any comments?

Laurie: Yeah, there were no comments.

Kathy: Okay. So that was finished up, hopefully, with the frozen dairy. Okay, so frozen dairy were accept. Any comments?

Laurie: Yeah, there were no comments.

Kathy: All right. Then let's proceed to milk and milk products that are fluid, starting on page 92.

Laurie: And go ahead, Jenny.

Jenny: This is Jenny Scott from FDA. On page 92, let's see, line 1088, 1089, it says that milk products should be properly pasteurized. Can we change that to, "Are required to be properly pasteurized?" Because it is a legal requirement.

Kathy: Okay, thank you.

Laurie: Okay, and let me just quickly see if there's anybody else. Next section, there's no additional comments. Anything from audio?

Speaker 1: None at this time.
Laurie: Okay, so proceed.

Kathy: Thank you. Any other comments in general, on the Appendix A for dairy? Hearing none, we will go to Appendix B for grain-based products starting on page 102. The first section will be ready to eat baked products that are refrigerated or time temperature Controlled for Safety. Are there any comments for this section?

Laurie: So go ahead, Jenny.

Jenny: Thank you. Just, I want to point out, back the fluid milk ... so you don't need to go back, but there was a statement about some requirements in the PMO that we think was not quite accurate, and we've provided a revision to that for accuracy.

Kathy: Thank you very much. We will make sure those are addressed.

Jenny: Okay. So on grain products in the table on page 104.

Kathy: Okay.

Jenny: So there is a statement in that, on the column on the custard filled, that says that it’s assumed that certain specified measures are not adequate to prevent the growth of Staph. So, I think one could infer from the statement that the measures are adequate to prevent the growth of other pathogens, including pathogenic spore formers. I'm wondering if that statement should not be revised slightly to consider other pathogens as well. I think it's trying to make a statement as to why these products are considered TCS, but I don't think it's just Staph that makes them a TCS food.

And similarly on the waffles side, there's a statement about Listeria monocytogenes surviving on frozen waffles, but won't grow. And I think we probably need to add something about some other pathogens that could be present and also would not grow, because the water activity and the frozen storage.

Kathy: Great, thank you.

Jenny: And could I go on?

Kathy: Yes.

Jenny: On page 106, on lines, I think it's 84 to 88. It's not clear why there's a recommendation to test custard for APC instead of Staph and B. cereus, but for raw waffle better, the recommendation is to enumerate these pathogens. So if we could ask the group to clarify that before we finalize the document?
Kathy: Thank you.

Jenny: Okay, and I think that page 103, Table B3 it's still the section?

Kathy: 103, you said?

Jenny: That was 108, Table B3.

Kathy: Oh, 108, I'm sorry.

Jenny: I'm trying to go forward.

Kathy: Yeah, that's fine. Yes.

Jenny: I think that what we need in this is to clarify when to test for Staph and B. cereus. There are comments that talk about testing for them as part of an investigative action, if there's a loss of process control. But there also is text that seems to suggest routine tests, such as enumeration of Staph aureus or B. cereus. And the raw waffle batter is a verification activity. And so, it may be that the intent is to refer only to extended runs, but I think some clarification is needed.

Kathy: Okay, thank you.

Laurie: And in this particular section, there's no other comments at this time. So, you could proceed.

Kathy: Okay. The next would be the ready to eat baked items that are shelf stable or non-time temperature controlled for safety.

Laurie: Okay.

Laurie: Okay. I see no comments. Anybody have any comments for this section? I think we can proceed. Thank you.


Jenny: Sorry, I couldn't get it off mute. On mentions page 114. I think it's around 257 and 259. The text mentions in-process testing for Salmonella and infant cereal here. When we get down to question six about testing that site, other than the end of the process, that is not mentioned. So, if there is an intent for some in-process testing, that should be mentioned later on.

Kathy: So in that section, it should be mentioned here. And where else?

Jenny: It's question six. Question six sites other than in products. So if she can do in-process stuff, then that should be mentioned.
Kathy: All right. Thank you.

Jenny: Then on page 114, under question eight, I think we need to include some discussion about finding Salmonella in infant cereal. It's an indication of loss of control. We do talk about testing infant cereal for Salmonella. So clearly if you found it, it would be a loss of control.

Kathy: Okay.

Jenny: And I have more on page 116. See, there's the final recommendation. I think it says, there's a robust Salmonella environmental monitoring program. In addition to finished product testing for Salmonella is recommended. That's a little bit confusing because I think the intention is for environmental monitoring program to apply to all cereals. But based on other statements, I think the finished product testing is presumably limited to infant cereal. So some change needs to be made here to make the recommendation consistent with the text.

Kathy: Okay. Thank you.

Laurie: Okay. So in this section, any other comments? Oh, Jenny. I'm sorry. No You didn't do anything there. That's it then we can proceed. Thank you.

Kathy: Next would be grain-based products that are ready to eat such as cold pressed bars. Starting on page 117. Yeah.

So Jenny, go ahead.

Jenny: Thank you, Laurie. On page 117, where I think it's in that first paragraph, but the recommendations for finished product and environmental testing by suppliers are the same as those for ready to eat dry cereals. I think that really needs to be clarified. Because the recommendation for dry cereals is you don't need testing. And yet the suppliers we're talking about here are providing you with dried fruits, nuts, chocolate, et cetera. And you specifically mentioned there about receiving a COA. So clearly some tested by suppliers is intended. I've provided some suggested language. Basically though, it's saying that last sentence, that the recommendation, the finished product and environmental testing by suppliers depends on the specific ingredient being supplied. I think that that fixes that last sentence, right?

Kathy: Thank you.

Jenny: I do have more in this one on page 118, if you want to go to that.

On page 118 in lines 364 through 384, I think we need to clarify the comments regarding finished product testing. On line 364, question four it says when finished product testing for pathogens is done, eg quarterly and then on 384 to 385 and question seven, it says if an appropriate environmental monitoring
plans implemented no routine testing, a finished product is needed. And then the recommendations also refer to testing product to a limited extent.

So it’s a little confusing, I think, as to whether the intent is to do some routine finished product testing, for example, for salmonella. But on a limited basis versus no testing at all. So it doesn’t get that clarified. And the way that is clarified will have consequential changes for other responses. For example, in questions five, six. So I won’t go through those. I’ve provided some written comments that really depend on the change that is made to this issue of whether to do any routine, but limited finished bug testing.

Kathy: Thank you.

Jenny: Thank you.

Kathy: And once again, Jenny, this is in the document that you had written as well?

Jenny: Correct?

Kathy: Okay. So right now I don’t see other comments. Anything on the audio side?

Speaker 1: No one identifying themselves. No, thank you.

Kathy: Okay, so we can proceed.

Thank you. So, any other final comments for appendix B on grain-based products? Hearing none We will go to the appendix C, which starts on one 23. Ready to eat meals. This section will also eventually look at deli salads, sandwiches and heat-and-eat entrees. Any questions on the first sections on deli salads or the introduction part?

Laurie: At this time I don’t see any comments. Anyone interested in making any comment. Nothing. And we can proceed.

Kathy: Thank you. The next section would be on sandwiches that are going to have combination of ingredients that some of which are going to be ready or all of them will be ready to eat. But someone will have some kind of quality step versus potentially some that are going to be raw, like a tomato and lettuce. Are there any questions or comments in this section?

Laurie: I don’t see any raised hands. I would say we can proceed.

Kathy: Thank you.

The next would be heat-and-eat meals and entrees. Any comments on this, which starts on page 140 of the document?
Laurie: No, no comments. We can proceed.

Kathy: Thank you.

Laurie: Any other last comments for the ready-to-eat meals in and sandwiches section appendix.

Kathy: Nope.

Hearing none. We will go to appendix D, which starts on page 149. This includes nuts, including tree nuts and peanuts and other nuts and seed products. There’s the initial discussion. And then category one are going to be the ready-to-eat nuts that are not processed for lethality. Any comments on this section?

Laurie: No worries Jan, but at this point. Just give it another few seconds. And there’s no comments here. So go ahead and proceed.

Kathy: Next will be nuts and ready-to-eat nuts and seeds that are processed for lethality. Any comments in this category?

Starts to page 158.

Laurie: No, no nothing. No comments we could proceed.

And once again, there’ll be another opportunity at the end if anybody does think of a comment they’d like to make so you can proceed, Kathy.

Kathy: Thank you.

Next would be nuts and ready-to-eat nuts and seeds that are processed for lethality. Excuse me. Maybe you have to go to the next one. Nut products and seed products that are processed for lethality. So these will include the nut beverages or any other types of products that might be developed out of this milk product.

Laurie: There’s no comments. No raised hands. So we can proceed.

Kathy: Thank you. Next would be ready-to-eat nut or seed butters that are not processed for lethality beyond the initial nut and seed processing. This starts on page 172.

Any comments?

Laurie: Nope. No raised hands and no comments. So go ahead. Go ahead to the next.

Kathy: Thank you. Any last minute for appendix D.
Laurie: No worries.

Kathy: We will proceed to appendix E, which are fruits and vegetables. And these are specifically going to be the fresh cut fruits and vegetables, including packaged leafy greens, as well as dried and dehydrated fruits and vegetables. Any comments or questions starting on page 181 or 182?

Laurie: No comments. There's no raised hands. Anybody else? So just proceed. Okay. You can proceed.

Next. Oh, wait, Jenny's got her hand raised.

Jenny: This is Jenny Scott from FDA. You're getting to the point where I want to make a comment and that's on page 188 in the table.

Kathy: Okay.

Jenny: So we're into the dry, I think.

Kathy: Okay. Forward. Yes, 188. Okay

Jenny: Okay. On row C of that table, I think some revisions are needed here. This is a question about a robust process control steps, which is a lethality step. And that first sentence talks about controls, pathogen growth. Which it does. But the reference that is given there is on technology for drying. And it specifically says that certain blind processes do not result in effective pathogen reduction. I think that we need to address this somewhat in this table, possibly even in the text. And I have a sentence that I've proposed and you have this in writing. But I want to read it here. It says information on the effect of drying on microbial inactivation is limited drying slash dehydration can result in microbial inactivation. But this is dependent on time, temperature, pathogen, drawing technology and the type of fruit or vegetable and more information is needed to validate these processes. And then that would follow with the references given in that table. And then following it with drawing slash dehydration is adequate to control by microbial growth. But pathogens may survive.

Kathy: Thank you. We will make sure that this is incorporated.

Jenny: Okay.

Laurie: So are there any other comments on this section? There's no other hands. So I would proceed.

Kathy: Thank you.

And the last of the appendices is appendix F. Which starts on page 193, which is spices and herbs. The two categories are going to be those that are not
processed for lethality versus those that are processed for lethality. First of all, any comments about the introductory material or that section on spices and spice blends, not processed for lethality, but are ready to eat.

Laurie: At this point, there's there's no comments. So Jenny, go ahead.

Jenny: I'm not sure which section is in, but page 195. Yes. If we go to that line 68 to 69. Yes. I think we need to clarify why the interventions may not be sufficient. Especially when spices are imported. That's a big red flag. So it's not clear why we would make that statement. And then I think we ought to put a little bit of discussion about that. Or change it. That's all I would ask. That the group that worked on spices to address that. I know some people interpreted this to mean that there was an additional list that was posed by the transport and bringing it [inaudible 01:10:24]. So it would be to the United States. Going to have a comment on the table on page 196. It talks about re-contamination from the environment. And there's a parenthetical that talks about the pathogen and hazard originating with the grower. I don't think that that is always true. I suggest we just delete the parenthetical part of the statement.

Then on page 200, lines 212 to 214, I think, there's a sentence that says, while blending treated spices, they received from a supplier, maybe most common, this type of context is important in determining the testing that could apply at each stage of the process. And I think it's a little unclear as to what each stage of the process refers to. So I would ask the group to clarify that.

Kathy: Thank you. Okay. Anything, else for this section? I don't see any other hands raised. So you could go to the next section.

Jenny: Then lastly, on page 199 are going to be the ready-to-eat spices and blends that are processed for lethality. Comments in this section.

Laurie: There are no raised hands present. Give it another few seconds. And I think that's it. You can proceed to the summary. Right.

Kathy: Thank you. So are there any other comments from the committee members or subject matter experts at this point? Hearing none. I will try to find my opportunity to get this back to John and just have to find the right thing. So thank you very much for your comments. These will all be addressed in the revisions to the document. At this point, I would like to turn this back over to John and Ms. Eskin. Thank you.

John: Thank you, Kathy. Ms. Eskin, would you like to move to.

Sandra Eskin: Sorry, Excuse me. I have construction outside my house. I was there. I was trying to avoid you having to hear it. But at this point. Again, we would like to move to adopt this document, as it will be amended. We need a motion from the
committee members to adopt this document as final. With the changes as agreed upon with someone like to so move?

Jim Dixon: Jim Dixon. So moved.

Alisa Wilma: Alisa Wilma seconded. Thank you.

Sandra: John. How do you record the votes?

John: I can call a roll and take a voice vote for each person

Sandra: Or I guess the other option is unanimous affirmation?

John: Yeah.

Sandra: Okay. I defer to you being new to the process. If you want to first see if we can get unanimous affirmation. And if not, then we can obviously take individual votes.

John: We can certainly do that.

Sandra: Are there any objections to accepting the document as it will be amended? And again, we'd like to see if we can get unanimous acclimation. Anyone, anyone at all have any questions or concerns about that? Please speak up now. Hearing no objections we will adopt the report by unanimous affirmation. And I want to thank Kathy and the work of the subcommittee. Very much appreciated.

Obviously there's a lot of details in here. But details that are absolutely essential to the FDA staff. So congratulations on the adoption of the final document. And John, what are the next steps?

John: So at this point in time, the committee now invites public comments on the ready-to-eat report. Please be reminded that we are taking comments only related to the project and document that Dr. Kathy Glass just covered. Once called upon. Please state your name and affiliation for the record. Before making your comments, please limit your comments for three minutes. So Sakha if you want to open it up for public comment.

Speaker 1: So please press pound two on your telephone keypad. If you'd like to provide a public comment, as John mentioned, you will have three minutes, when your line is unmuted to provide your comment. Please provide your name and the affiliation when your line is needed. Once again, that command is pound two on your telephone keypad. Just a reminder, we are not taking any time as in WebEx chat today. Only on the telephone line, please press pound two for that at this time. Once again, that command is pound two on your telephone keypad. There are none at this time, John.
John: Okay. That being the case, we can move on with the agenda and I can turn it over to Dr. Peggy Cook, who is the co-chair of the water subcommittee who will present for adoption, the draft document on use of water and animal slaughter and processing. She will go through the report and we'll take your comments as we go along. As a reminder, please identify yourself for the record when speaking.

I can turn it over to you, Dr. Cook.

Dr. Peggy Cook: Okay. Thank you, John.

John: You should now have control.

Peggy: Okay. I see the ability to share. Give me just one second to pull up the document. It's taking just a second on my end. I apologize. The share. Okay. You should see the document just any second now. Okay. Hopefully you now are able to see the document. Is that correct?

John: Yeah, we can see it.

Peggy: Okay. Thank you. Okay. Thank you. As mentioned, I am Peggy Cook and Omar will be joining me in this session as a co-chair to this document of the use of water and animal production, slaughter and processing. We would like to thank everyone on the subcommittee for all of their hard work and time during this last year with so many different things demanding parts of their time. So sincerely thank you for all the input and the subject matter experts that have worked with us.

Omar will be watching in the chat area. And we ask that you raise your hand for any comments. Omar, we'll call on you for your comment. Please state your name, the page number and the line number for your comments. We asked that the comments focus on the content of the manuscript. We will correct any spelling or spacing errors as we finalize the document. We have received written comments from Jenny Scott at FDA. So, at this time I'd like to outline the general structure of the document. On page one and two, there was a table of contents. On pages three to eight, it includes a background and executive summary, as well as each charge with a summary and recommendation. The remaining document contains the charges, tables, figures appendices, and references. We will go ahead and start reviewing the charges on page nine and come back to pages three to eight, or four to eight, excuse me, at the end of the review. So as a matter of background for this document, the current FSIS regulations on the use of water during the processing of meat and poultry products were last updated in the 1990s and may not account for some of the most recent technologies or alternatives to water use. Water requirements for establishment slaughtering and processing meat and poultry products are...
covered in the sanitation regulation and 9 CFR 416.2. The water used in food processing must comply with 40 CFR 141, the National Primary Drinking Water regulation, if a municipal water supply is used. If a private well is used, food processors must make documentation certifying the water’s potability available to FSIS.

Regulation 9 CFR 416.2 limits the use of reconditioned water and may not reflect current technologies capable of water treatment. Climate change is challenging the food industry’s accessibility to clean and inexpensive water. The frequency, severity, duration, and location of weather and climate phenomenon, such as raising temperature, flooding, rain and droughts are changing, which will continue to impact the food industry’s ability to produce safe food. It is essential that regulatory agencies assess these changes and evaluate current regulation requirements associated with water use. They must also be able to provide alternatives to current water consumption practices that allow industry to use less and recycle more water through developing criteria on the appropriate usage of water sources and the processing of food.

Okay, now we will go down and start with the first charge, which is located on page nine. Charge One, what are the current water usage practices for slaughterhouses to-

Dr. Omar Oyarzabal: Peggy? Peggy?

Peggy: Yes?

Omar: Yes, the screen is not changing.

Peggy: There you go. I’m very sorry.

Omar: Thank you.

Peggy: Thank you, Omar. Okay, Charge One. What are the current water usage practices for slaughterhouses and processors, at which step might water conservation or alternative water sources be feasible? Charge One goes through pages nine through 12. Are there any comments?

Omar: Jenny Scott has some comments. Jenny?

Jenny: Thanks, Omar. I just want to take you back to the executive summary. And it’s very appropriate we’re dealing with this on the first day. So hopefully we’ll get this completed. Similar to what Vanessa Coffman said with respect to the Ready To Eat document, I think it would be appropriate for you to look at whether or not you could flesh out the recommendations here a little bit more, so that those people that only read the executive summaries will understand some of the information here. I’ve given you some written comments, but for example, in the some way to charge number two, you could enhance that by providing a
couple of examples of the types of contaminants that would be addressed. Thank you.

Peggy: Thank you, Jenny. Okay, are there any additional comments to Charge One?

Omar: I don't see any raised hands.

Peggy: Okay, we'll move on then, down to page 13 through 21. Charge Two, what are the available technological strategies for water reuse, recycling, reconditioning and reclamation? And how might FSIS regulate facilities, employ them? Is a fully closed water system reasonable as a goal?

Omar: Jenny, go ahead.

Jenny: Thanks, Omar. On page 15, there's a section titled Existing or Current and Potential New Technologies. But as I read this section, it seems to be limited to multiple technologies for water recovery from wastewater. So I'm wondering if the title of the section should be revised to say Existing or Current and Potential New Technologies For Wastewater. Thank you.

Peggy: Okay, are there any additional comments?

Omar: I don't see any other raised hand.

Peggy: Thank you, Omar. Okay, Charge Three, pages 22 through 27. Water contaminants can be microbiological, chemical, toxicological, physical and nutrient in nature. Identify the contaminants and how their presence in concentrations in potable water, municipal and well-sourced, compared to those found in water treated using the reuse, recycling, reconditioning, recombination technologies identified in number two above. Identify the risks posed by these contaminants for various death in food production and processing.

Omar: Jenny, do you have some comments?

Jenny: Yes, Omar, just, I'm sorry. I missed one on page 18. You don't need to go back there though. But there's a section that's titled Explore If Fully Closed System Is Feasible. And I did not understand what was meant by a fully closed system. And I seem to just be reading in that section about the benefits of obstacles to recycling, which is good information to have. But I wonder if you don't need a different title for that section as well.

Omar: Jenny, can you just repeat again the line Is that-

Jenny: I don't know the line number. It's on page 18, and there's a bolded header that says Explore If a Fully Closed System Is Feasible. Yes.
Omar: Got it, got it. Thank you.

Jenny: Got it. So, just look at the title to make sure that it reflects the content there. And then, is page 24 in the section now, that we're dealing with?

Peggy: Yes.

Jenny: Okay. So on page 24, lines 621 to 633, there's a discussion of the National Residue Program. And there's information on ... some example data for cattle and swine. And I'm just wondering why there's no mention of poultry in this section, and whether we don't need some sort of statement about the information related to poultry.

Omar: I think we were highlighting some of the violations, and we just highlighted the main ones.

Jenny: Well, it might be helpful if there were no violations in poultry to note that, or a very few, or something along those lines. It just seems like a very obvious missing piece of information.

Omar: I see.

Peggy: Okay. Thank you. Okay, moving on to Charge Four, page 28 through 35. How do residual contaminants in water used for animal production, slaughter, and processing affects product quality and safety? What are the quality implications, and public health risks associated with contaminants at levels anticipated for reconditioned water. How might FSIS and industries best assess those implications and risks? How does residual contaminants in water affect the functions of various materials added to water used in all stages of food production and processing, such as feeds, medicines, and anti-microbials? For example, consider the effects of trace pharmaceuticals on animal husbandry, and effects on iron and hard water on phosphate based interventions.

Omar: Go ahead, Jenny.

Jenny: Thanks Omar. I think this is on page 32, lines, 848 to 859. We're in Charge Four, which is asking about how residual contaminants in water used for animal production, slaughter processing affect product quality and safety and what public health risks are associated with the contaminants at the levels that you would find in reconditioned water? I think that the paragraph in this section addresses worker safety for water reuse systems. And I'm wondering if this isn't information that would fit better under Charge Number Two on the section about factors that determine the choice of technology. Because certainly, in choosing any technology, you would want to consider worker safety.

Omar: Thank you for the comment.
Peggy: Okay, if no additional comments, we'll move on to Charge Five, pages 36 through 40. What are the best ways to assure and/or monitor the quality and safety of alternatively sourced water used in FSIS regulated operations?

Omar: I don't see any raised hands yet.

Peggy: Okay. Okay, we will move on to Charge Six, pages 41 through 43. Are there special considerations for foods that are produced entirely within water, for example, fish? And if so, what are they?

Omar: Go ahead, Jenny.

Jenny: Thanks, Omar. On page 43, I think that's lines 1163 to 69. There is a paragraph that talks about the beef and poultry processing industries. And this is a section on fish. And so, it doesn't seem to belong there, unless you're trying to say something about how that information could be applied to the fish industry. So, I suggest that you take a look at that information and either move it somewhere else, or try and extrapolate that information to the fish industry. Thank you.

Omar: Thank you for the comment, Jenny. I don't see any other raised hands.

Peggy: Thank you, Omar. So responses to Charge Seven, page 44 through 48. Charge Seven, flooding can contaminate animals and water sources with human sewage and farm waste. What precautions should establishments take when flood or runoff effects of food, or water source or a processing area? Okay, Omar, no comments. We'll move on to the responses to Charge Eight.

Omar: Yeah, I'm sorry. I was giving a little bit of time. No, I don't see any raised hands. You can move to responses to Charge Number Eight. Thank you.

Peggy: Okay. Thank you, Omar. Pages 49 through 52, what technologies are appropriate for the replacement of liquid water, and food production, and food processing areas, for example, foam, mist, or dry chemicals? What advanced emerging technologies may reduce the need or volume for water and processing?

Omar: I don't see any raised hands, Peggy.

Peggy: Okay, if no raised hands we will move on to page 53 through page 60, which are the tables.

Omar: Go ahead, Jenny.

Jenny: Thank you, Omar. In the table on page 54, there are a couple of statements that relate to, I think, reclaimed water. And you'll have a nice glossary of terms where reclaimed water is water that was originally a constituent of food, that's been removed from the food by process step, and subsequently been
reconditioned. And here, there's some reference to reclaiming water from the inside/outside bird washers, for example. So that really is more appropriately recycled, or reuse water. So I suggest that you look at the terms in this table, and change them to match the definitions in the glossary. Thank you.

Omar: Thank you for the comment, Jenny.

Peggy: Yes. Thank you for that, Jenny. Any more comments in this section?

Omar: I don't see any other raised hands.

Peggy: Okay, thank you, Omar. If not, we'll move on to the figures, which are on page 61 and 62.

Omar: I don't see any raised hands, Peggy.

Peggy: Okay. So next onto the appendices, pages 63 through 64.

Omar: No raise hands.

Peggy: Okay, onto the glossary, page 65 and 68. And Jenny, we've noticed your edit on that particular section. So, thank you.

Omar: I don't see any other comments.

Peggy: Okay. And then the remaining part of the document are the references, which go through page 69 onto 78. So I want to go back to the top of the document, and look at pages ... starting with page four. And I already know of one edit on this, which I will go ahead and mention, Omar. On Charge Eight, in the summary, we need to add the second part of the question for Charge Eight in the executive ... in the summary of the charges, okay?

Omar: Okay, thank you. I don't see any raised hands.

Peggy: I'm sorry. Say that again, Omar.

Omar: I'm sorry. Yeah, I don't see any raised hands for Charge Number One.

Peggy: Okay, so if we move on to Charge Number Two, you see the summary and recommendation.

Omar: No raised hand.

Peggy: Okay, Charge Three?

Omar: No raised hand.
Peggy: Charge Four?
Omar: No comments.
Peggy: Charge Five?
Omar: No Comments.
Peggy: Charge Six?
Omar: No Comments.
Peggy: Charge Seven and Charge Eight?
Omar: No further comments.
Peggy: Okay. So John, if no additional comments or hands are raised from Omar, this concludes our review of the document.

Sandra: Thank you, Peggy. And thank you everyone who worked on this document. We would like now to move to adopt it. Do we have a motion from the committee members to adopt this document as final, subject to changes that were identified, and then someone to second the motion?

Dr. Mohammed Koohmaraie: This is Mohammed Koohmaraie. I motion to accept the report as edited with revisions.

Sandra: Thank you, Mohammed. Do I hear a second?

Ms. Carolyn Hovde: This is Carolyn Balhatch, I moved to second, Carolyn Hovde.

Sandra: Thank you. So I think we’ll see first, if we can adopt it by unanimous acclamation. Do any of the members have any concerns about adopting this report by unanimous acclamation? Okay, hearing no objections. I think we can decide and determine together that the report has been unanimously adopted. Again, Peggy, thank you, and thanks to the subcommittee for all your hard work. And congratulations on the adoption of the document, John, what are our next steps now?

John: So the committee now invites public comments on the water report. Please be reminded that we are posting comments only related to the project and document that Dr. Cook has presented. Once called upon, state your name and affiliation for the record before making your comment. Please limit your comments to three minutes. So, Sakha I’ll turn it over to you.

Speaker 1: Sure. Once again, please press #2 on your telephone keypad at this time to provide your comments. Once again, that command is #2 to provide your public
comments at this time. When your line is unmuted, please identify yourself by your name and affiliation. You will have three minutes to provide your comment. There are no comments on the public line at this time.

Sandra: Okay. That being the case, I think we've completed what we wanted to complete in today's plenary meeting. Again, we've adopted both draft reports that were presented. I'm going to turn it back over to John to see what happens now.

John: So, thank you all again to the committee members, the subject matter experts, and our valued advisors, and of course the executive committee, and those in the public who've joined us today. I want to remind everyone that once all comments are received and are addressed, the final reports will be posted on the FSIS website. As notified in the public ... in the federal register notice announcing this meeting, we are accepting comments on the documents through June 7th, 2021. So if you are reviewing your documents and have some comments, please follow the instructions in the federal register notice for making those comments. Eventually, the documents will be published in a peer review journal, preferably the Journal of Food Protection and will be filed with the Library of Congress. We've concluded our business. Do you have anything else you want to say Ms. Eskin before I move to adjourn?

Sandra: No, except to say that I look forward to working with those of you who will continue on NACMCF and addressing other issues of importance to food safety. So thank you for your time and your efforts on the committee.

Jenny: Thanks, everybody.

John: Thank you. Then at this point, as a designated federal officer, I adjourn the meeting.

Omar: Thank you.

Speaker 1: That concludes today's plenary session. Thanks for AT& Event Services. You may now disconnect.