

CONCURRENT SESSION 7 – COVID-19 TRANSPORTATION RESEARCH EFFORTS

Questions and Answers

- **Anonymous:** Question for Blakeley: In considering implementing different technologies, how do you decide what benchmarks are necessary to meet in terms of safety and efficacy?
 - **Blakeley Williams, LA Metro Rail Fleet Services:** In terms of identifying what the benchmarks would be and how to pick these technologies, it depends on which technology it is. We do collaborate with the EPA and follow their guidelines and general practices. We also need to ensure it is organized for our service in transit.
 - **Bob Spadafora, LA Metro Rail Fleet Services:** Maintenance guys examine the durability, the application, how hard is it going to be to apply, are we going to be able to use every day, or that kind of thing. It is a collaboration effort between engineering and maintenance, so the criteria are geared towards implementing it quickly, the ability to repeat it consistently, and the safety in terms of people being able to do it. Those are the things we look at when we are evaluating.
- **Halomine:** Question for Worth: Nice presentation! 1. Have you performed any tests on MS2 since that seems to be more resistant to disinfectants? 2. Did you control the environmental RH when performing experiments with phi6?
 - **Worth Calfee, U.S. EPA:** Thank you for the questions. Most of our tests for the microbiostats for the antimicrobial coatings were conducted on Phi-6, which as most people know is an enveloped bacteriophage. MS2, which we have done some testing for aerosol studies is a non-enveloped, much more 'hardy' bacteriophage. We have done some limited studies for microbiostats using MS2 as the organism. It was, as you would expect, a little harder to kill but we did a round of testing on some of our high performer microbiostats and saw 1-2 law reduction efforts to our contact time. In addition, Blakeley mentioned us doing some copper film testing in collaboration with LA Metro and we used MS2 and Phi-6 for those and the copper film was quite effective against MS2 in those studies.
 - **Shawn Ryan, U.S. EPA:** And the second part of the question, did you control the environmental RH when performing experiments with Phi-6?
 - **Worth Calfee, U.S. EPA:** We did. Our screening studies were done under laboratory-controlled conditions, so normal temperature and humidity, an indoor environment. However, we also did a longevity study where we compared how the microbiostats maintained efficacy after being stored at a low temperature condition, aired condition, and a humid condition. We just had a paper published in The Journal of Applied Microbiology, this week or last week, that explains the results. Check out the latest issue. We showed that there is some difference when the coatings were stored at different environmental conditions.
- **U.S. EPA:** Question for Blakeley: Are MERV-13 filters also electrostatically charged?
 - **Blakeley Williams, LA Metro Rail Fleet Services:** No, not the ones that we are using in our gateway building or on our buses but the ones that we are using in our rail vehicles, they are MERV-8 filters that are electrostatically charged to perform like MERV-13 filters.

- **Anonymous:** Question for Bob: What do you see moving forward for transit agencies – will agencies be able to continue with these measures and increase ridership?
 - **Bob Spadafora, LA Metro Rail Fleet Services:** I think we are going to have to continue the protocols that we have been doing but obviously it is going to change over time a little bit. However, I think from the grassroots, everyone is doing the same thing in terms of cleaning and in terms of what technologies they are looking at. We are all talking to each other, which is a good thing, and we are doing that on monthly basis. COVID-19 is not going away anytime soon so we are talking on routine basis, and as things come up, we will experiment and work with EPA and try to come up with things to get to the root cause and eradicate it.
- **Anonymous:** Question for Kristen: Are there any plans to change how EPA defines or regulates pesticide devices?
 - **Kristen Willis, U.S. EPA:** Thanks so much for that question. It is something that we are certainly giving a lot of thought to. It would require rulemaking for us to change the way we regulate devices, which is not a quick process. However, it is certainly a conversation that has happened within EPA over the last several years.
- **Anonymous:** –Question for Kristen: How will newer variants of SARS-CoV-2 lead to changes in the procedures to reduce environmental spread? Will there be any changes?
 - **Kristen Willis, U.S. EPA:** Also, a really great question. Throughout the pandemic, we have worked closely with federal partners, mainly the CDC, and followed the science. Early on in the pandemic, when the route of transmission was largely unknown or thought to be potentially via surfaces, there were a lot of focus on products that would treat surfaces and then as it became clearer that aerosol transmission was the primary route, we pivoted and made it clear. Regarding any future variants, and any potential changes regarding transmission, I would say we will follow the science and work closely with CDC to either update our recommendations, making sure EPA listens and reflects any changes that would need to be made with regard to those variants.
- **Anonymous:** —Question for Worth: Good presentation! Can you envision a use case for antimicrobial coatings where the recommendation would be to not apply disinfectants and abrasion only testing would be considered? Or at a minimum, coatings will need to withstand soap and water?
 - **Worth Calfee, U.S. EPA:** Good question. This might actually be a question for Kristen, but the antimicrobial coatings, as they are currently being registered as a supplemental. The reason for that is disinfectants work quickly, they work in a wet manner, and they kill organisms with a predicted efficacy. These antimicrobial coatings are meant to supplement that so there is some long-term protection, but they do not give that initial kill in 10-15 minutes. So, when we are talking about human health pathogens, EPA is hesitant to allow that product, those antimicrobial coatings, with that slower activity to be registered alone. Kristen, please correct me if I said anything wrong there.
 - **Kristen Willis, U.S. EPA:** Thanks, Worth. No, I thought that was really good. I would just add one thing: it really is a toolbox approach. Many of these products for ideal efficacy are designed or should be used together. It is important to understand how the product is going to be used. These products work if you follow the label directions. For those products like the coatings, the

way we see them being used in real life, is a supplement to standard disinfection. Again, it is a toolbox approach. We often must use multiple products to achieve ideal disinfection.

- **U.S. EPA:** Question for Kristen: Given that the coatings do not seem to hold up to abrasions, is there any concern for the chemicals on the person's hands and hurting the normal bacterial flora on hands (which could in turn let pathogenic microorganisms 'colonize' the hand easier)?
 - **Kristen Willis, U.S. EPA:** That is a good question. I am going to be honest and say it is not something that I have personally been involved in conversations about, but when we evaluate and register products, we are not just looking at one facet. While my area of expertise is efficacy, we have our human health risk assessors who are going to be examining things like the impact on human health. I think that is a great suggestion and I will bring that back to my team.
 - **Anonymous:** Question for the conference organizers: Are these slides available to download? (all slides)
 - **Viktoriya Plotkin, U.S. EPA:** Yes, all of these recordings will be available on the EPA website after the conference, and anyone who has registered will have access to the recordings on the CVENT website for up to 90 days.
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