

Minutes
Fog & Smoke Working Group
Monday 27 September 2021
via WebEx

Chairperson: Mike Wood; Mike Wood Consulting LLC

Recording secretaries: Karl Ruling and Richard Nix; ESTA

Members attending:

Daniel Ayers; StageRight Services LLC; P; DE
Clark James; Alliance of Special Effects and Pyrotechnic Operators (ASEPO); P; U
Paul Jordan; NBC Universal; O; U
Joseph Kapp; WSP USA Corp.; I; G
Edwin S. Kramer; I.A.T.S.E. Local 1; P; DE
Karl G. Ruling; Unit 12 Productions; I; CP
Mona Shum; Aura Health and Safety Corporation; I; U
Mike Skinner; Contract Services Administration Trust Fund; A; U
Keith Sklar; Actors' Equity Association; P; G
Stephen Vanciel; IATSE Local 631; P; U
Mike Wood; Mike Wood Consulting LLC; P; G

1 Opening Remarks

The meeting was called to order at 11:02 by Mike Wood.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

Mike Wood read the following statement aloud to the assembly:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at an ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

Karl Ruling displayed a pamphlet. No anti-trust issues were raised.

2.2 Reading of the call for patents

Mike Wood read the following statement aloud to the assembly:

ESTA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. ESTA uses a process of open patent and copyright disclosures to implement its intent. ESTA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

No protected intellectual property was revealed.

3 Attendance and Membership

3.1 Requirements for membership

Mike Wood read the following statement aloud to the assembly:

Membership is open to all parties who are affected by the work of the group; membership in ESTA is not a requirement, but there is a \$100/person/year participation fee to help fund the costs of running the Technical Standards Program. Voting members are required to attend meetings and vote on letter ballots. Any principal member and alternate that both miss three consecutive meetings or that miss three consecutive letter ballots will have their membership status changed to observer. This action will be taken at the beginning of the first meeting after such inaction and will be recorded in the minutes of that meeting.

3.2 Introduction of attendees

3.3 Determination of a quorum

Mike Wood announced that we have more than 50% of the voting body present, enough for a quorum and to pass a motion needing a supermajority.

3.4 Changes to observer status for inactivity

None.

3.5 Processing of new membership and status change requests

Dan Ayers and Joe Kapp asked to become voting members. Stave Vanceil moved to accept them. The motion was seconded. The motion was approved with no opposition or abstentions.

3.6 Consensus body

Name	Representing	Status	Int Cat
Keith Sklar	Actors' Equity Association	P	G
Clark James	Alliance of Special Effects and Pyrotechnic Operators (ASEPO)	P	U
Mona Shum	Aura Health and Safety Corporation	I	U
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Chris Moulton	Contract Services Administration Trust Fund	A	U
Mike Skinner	Contract Services Administration Trust Fund	A	U
Edwin S. Kramer	I.A.T.S.E. Local 1	P	DE
Stephen Vanceil	IATSE Local 631	P	U
Mike Wood	Mike Wood Consulting LLC	P	G
Brad Dittmer	Stage Labor of the Ozarks	P	U
Daniel Ayers	StageRight Services LLC	P	DE
Marnie Styles	Ultratec Special Effects Inc.	P	MP
Karl G. Ruling	Unit 12 Productions	I	CP
Joseph Kapp	WSP USA Corp.	I	G
	Total votes possible	12	
Custom market producer	Votes by interest category	1	CP
Designer		2	DE
Dealer/Rental company		0	DR
General interest		3	G

Mass marker producer		1	MP
User		5	U

4 Approval of the minutes from the last meeting

[See *FSmin07-2021_DRAFT.pdf*]

Eddie Kramer moved that the draft minutes be accepted. The motion was seconded and then approved.

5 Approval of agenda

Eddie Kramer moved that the draft agenda be accepted. The motion was seconded and then approved.

6 Old Business

6.1 ANSI E1.5 – 2009 (R2018), Entertainment Technology - Theatrical Fog Made with Aqueous Solutions of Di- and Trihydric Alcohols (Reaffirmation, revision, or withdrawal by 29 November 2023)

No news or action.

6.2 ANSI E1.14 - 2018, Entertainment Technology—Recommendations for Inclusions in Fog Equipment Manuals (Revise, reaffirm, or withdraw by 27 February, 2023).

No news or action.

6.3 ANSI E1.23 - 2020, Entertainment Technology - Design and Execution of Theatrical Fog Effects

(Revise, reaffirm, or withdraw by 2025)

No news or action.

6.4 ANSI E1.29 – 2009 (R2018), Product Safety Standard for Theatrical Fog Generators that Create Aerosols of Water, Aqueous Solutions of Glycol or Glycerin, or Aerosols of Highly Refined Alkane Mineral Oil (Reaffirmation, revision, or withdrawal by 06 November 2023)

No news or action.

6.5 ANSI E1.40 – 2016 (R2021), Recommendations For the Planning of Theatrical Dust Effects

(Reaffirmation, revision, or withdrawal by 9 September 2026)

ANSI approved it on 9 September 2021. Karl Ruling reported that it's been published twice: once when he did it, and then again after Richard Nix fixed the errors. It's free on our website, or people can buy it for \$40 from ANSI of IHS.

6.6 BSR E1.74 – 202x, Indoor Stage Ventilation

Task group: Keith Sklar (leader), Mona Shum, Mike Skinner, and Clark James.

Keith Sklar reported that there has been little work done. Work has been going in to getting Broadway reopened. Mike Wood noted that the Tony Awards show was successfully held..

There was discussion of that steps being taken to sterilize or clear the air, update HVAC systems, studies being done on virus inactivation or removal. One of the challenges is that in many theatres the HVAC systems are not well documented.

There was a discussion of the use of HEPA filters. They are using lots of them in various places in theatres, Sklar reported. Mona Shum asked who is helping to size the machines for the space. AIHA says five or six air exchanges per hour with outdoor fresh air, reported Mona. Highly filtered air is a substitute; fresh air is the "gold standard."

Mona Shum shared some useful URLs via chat:

- Here are some good COVID resources from AIHA: https://www.aiha.org/public-resources/consumer-resources/coronavirus_outbreak_resources/aiha-covid-19-pandemic-efforts/free-covid-19-public-resources
- And here is the reference to air changes per hour:

<https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Guidance-Documents/Reducing-the-Risk-of-COVID-19-using-Engineering-Controls-Guidance-Document.pdf>

6.7 Introduction to Modern Atmospheric Effects, 6th edition

No news or action.

6.8 New York City code changes – follow up

From the July 2021 meeting minutes:

Eddie Kramer reported that New York City has passed a code change that directs the fire department to draft requirements for filing plans for staging, special effects, and fire control for motion picture productions. It also empowers the fire department to stop a production if it is deemed unsafe. The new code requirements do not include theatres, but Kramer said that the fire code officials tend to take an expansive view of the scope of their authority. Eddie Kramer was asked to follow up on this.

Eddie Kramer reported that for follow-up he'd gone his local council person, who had voted for it, but his council person didn't have any further information. There was discussion of how film location safety is vetted by AHJs.

7 New business

None.

8 Other business and announcements

8.1 Above & Beyond Awards

Information on the Above & Beyond Awards may be found at http://tsp.esta.org/tsp/news/award_recipients.html.

8.2 Other announcements

The passing of Günther Schaidt was noted by Karl Ruling. People remarked on his contributions to the motion picture industry.

9 Schedule for future meetings

The full meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>. The Winter meeting schedule has not been finalized, but will be via WebEx probably in the week of January 17, 2022. The NAMM Show has been rescheduled for June 2022.

10 Adjournment

Having reached the end of the agenda, and there being no further business to conduct, Mike Wood declared the meeting adjourned at 11:40.

Fog & Smoke Working Group members as of 1 October 2021

Delegate	Representing	Voting status	Int. cat.
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Daniel Ayers	StageRight Services LLC	P	DE
Robert Barbagallo	Solotech Inc.	O	U
Paul Beasley	Walt Disney Company	O	U
Justin Bennett	University of the Incarnate Word	O	U
Brad Dittmer	Stage Labor of the Ozarks	P	U
Mike Garl	Mike Garl Consulting LLC	exf	
Jerry Gorrell	Theatre Safety Programs	O	G
Erin Grabe	ESTA	exf	G
Robert Haycock	UC Berkeley	O	U
Clark James	Alliance of Special Effects and Pyrotechnic Operators (ASEPO)	P	U
Paul Jordan	NBC Universal	O	U
Nathan Kahn	Look Solutions USA Ltd.	O	MP
Joseph Kapp	WSP USA Corp.	I	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	DE
Tyler Mickley	Look Solutions, LLC.	O	CP
Chris Moulton	Contract Services Administration Trust Fund	A	U
Richard J. Nix	ESTA	exf	G
Karl G. Ruling	Unit 12 Productions	I	CP
Karl G. Ruling	ESTA	exf	G
Larry Schoeneman	Larry Schoeneman	O	G
Ford Sellers	Chauvet Lighting	O	MP
Mona Shum	Aura Health and Safety Corporation	I	U
Mike Skinner	Contract Services Administration Trust Fund	A	U

Fog & Smoke Working Group members as of 1 October 2021

Delegate	Representing	Voting status	Int. cat.
Keith Sklar	Actors' Equity Association	P	G
Marnie Styles	Ultratec Special Effects Inc.	P	MP
Stephen Vanciel	IATSE Local 631	P	U
Colin Waters	TMB	O	G
Mike Wood	Mike Wood Consulting LLC	P	G

Membership table key:

P	Principal voter	CP	Custom-market producer
A	Alternate voter	DE	Designer
I	Individual voter	DR	Dealer/Rental company
O	Observer, non-voter	G	General interest
exf	Ex officio, staff	MP	Mass-market producer
		U	User