

Minutes
Fog & Smoke Working Group
Thursday 2 June 2022
09:00 – 13:00 PDT (UTC -7 hours)
Wyndham Anaheim and WebEx

Chairperson:

Mike Wood; Mike Wood Consulting LLC

Recording secretaries:

Karl Ruling and Richard Nix (ESTA)

Attendees:

Jeff Egan; NBC Universal; P; U
Joseph Kapp; WSP USA Corp.; I; G
Mike Skinner; Contract Services Administration Trust Fund; A; U
Keith Sklar; Actors' Equity Association; P; G
Stephen Vanciel; Stephen Vanciel; P; G
Nathan Wilkinson; Actors' Equity Association; A; G

1 Opening Remarks

Mike Wood called the meeting to order at 9:03 AM, welcoming everyone to the meeting.

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 held the pamphlet up for everyone to see.

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.

Nothing 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

Everyone introduced themselves.

3.3 Determination of a quorum

As of 4 May the consensus body is 11. A quorum would be four.

Mike Wood announced that we have a quorum present.

3.4 Changes to observer status for inactivity

No voting members are in danger of loss of status due to lack of attendance.

3.5 Processing of new membership and status change requests

*M. Nathan Wilkinson; Actors' Equity Association; Alternate; G
Jeff Egan; NBC Universal; Alternate*

Mike Skinner moved to approve the applications. The motion was seconded and carried without objection or abstention.

Mike Wood took this time to announce that he was retiring, hasn't been in the F&S area of the industry for many years, and that the Working Group needs a new Chairperson. Mike Skinner asked if a call could be put out to the working group at-large.

3.6 Draft consensus body (as of 4 May 2022)

Name	Representing	Status	Int Cat
Keith Sklar	Actors' Equity Association	P	G
M. Nathan Wilkinson	Actors' Equity Association	A	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
Jeff Egan	NBC Universal	P	U
Daniel Ayers	StageRight Services LLC	P	DE
Stephen Vanciel	Stephen Vanciel	P	DE
Karl G. Ruling	Unit 12 Productions	I	CP
Joseph Kapp	WSP USA Corp.	I	G

	Total votes possible	10	
Custom market producer	Votes by interest category	1	CP
Designer		3	DE
Dealer/Rental company		0	DR
General interest		2	G
Mass marker producer		0	MP
User		4	U

4 Approval of the minutes from the last meeting

[See *FSmin01-2022_DRAFT.pdf*]

Steve Vanciel moved to approve the minutes. The motion was seconded and carried without objection or abstention.

5 Approval of agenda

Mike Skinner moved to approve the agenda. The motion was seconded and carried without objection or abstention.

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)

Any news or action?

No news or action now.

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

Any news or action?

Keith Sklar mentioned that the LORT informed them that they were using distilled water in haze machines. The manuals are silent on this, so a concern was raised about health hazards. Keith said he had consulted with industrial hygienists, who concluded that there was probably no hazard. Mike Wood said that many manufacturers recommend using distilled water to clean their machines, but wasn't sure how this would apply to oil-based machines. Keith suggested that this should be addressed somehow. He can address it in their practices documentation, or we could also address it in the context of the standard.

There was more discussion about how to address it, and in which document. It could be added as a footnote in E1.5, or as more information in the *Introduction to Modern Atmospheric Effects* guide. Karl Ruling said he would review E1.5 to see if it might be a good place, and report back at the next meeting.

6.3 ANSI E1.23 - 2020, Entertainment Technology - Design and Execution of Theatrical Fog Effects (Revise, reaffirm, or withdraw by 2025)

Any news or action?

No news or action now.

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)

Any news or action?

No news or action now.

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

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

Any news or action?

No news or action now, but Keith Sklar mentioned that there have been two incidents where theatres have failed to follow this standard by deciding to use sand as part of their sets, thus exposing the performers to hazardous airborne silica. He clarified that air samples taken at one site revealed respirable dust in the air. In the last week there was another theatre using sand, but the show closed before the air could be sampled to see if there was a problem.

Jeff Egan asked how the sand was delivered to the theatres, because prepackaged sand – e.g., bagged sand from a home supply store – is always labeled for the hazards. If it was a large enough quantity to have been delivered by dump truck, there may have been no warnings (labels or otherwise) provided. Keith also mentioned a product called “Sandtastik” that claims to be silica free, and comes in multicolors.

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

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

Progress report.

Keith apologized for making slow progress, due to other workloads relating to COVID and restart. He said they are, however, having discussions with employers about this. He said he thinks there will be an opportunity soon for them to be able to start making progress. He noted that Michael Skinner has been working on ventilation in studios. The theatre season has been run, but COVID has continued to be a problem, sickening performers and forcing the cancellation of shows. He also said a lot of venues are adding supplemental HEPA filtration and ventilation systems as part of their normal restart procedures, using the National Energy Management Institute (NEMI) HVAC standard as a guide for better systems. He also said a lot of their contracts are soon to renew, so part of the new contract negotiations might include requirements for air quality monitoring, which would produce usable data to eventually plug into a standard. Mike Wood said that collecting data is useful.

Mike Skinner said that there are companies who now specialize in retro-commissioning - the checking of a system to see if a system installed is performing as designed - and suggested that this might be a useful procedure when analyzing reopened facilities. He said there might even be a retro-commissioning standard.

Joe Kapp said there is an ASHRAE FAQ addressing how to reopen facilities.

6.7 Introduction to Modern Atmospheric Effects, 6th edition

Any news or action?

No news or action now, but it might be revised to include notes about using distilled water for steam effects.

6.8 New York City code changes – follow up

From the January 2022 meeting minutes:

Eddie reported that the NYC Fire Code is being rewritten for better correlation with the International Fire Code. The current NYC code references the 2003 IFC. The revision will reference the 2021 IFC, and will result in the NYC code sections more closely relating to the IFC section numbering and requirements. He gave a few examples of the changes being made. None seemed onerous for our industry. He said he would send the 100-page PDF report to Karl and Richard via email.

Was it sent?

Karl Ruling reported, Eddie had sent the report. Mike Skinner said that there is also NY State legislation requiring an approved safety manager to be on-set at all times, for location shoots outside of studios: NYC Fire Code, 1849-A, section 325, Production Locations.

7 New business

7.1 A new working group chairperson

Mike Wood is retiring. Brad Dittmer does not have time. We need a new leader or two.

Steve Vanciel volunteered. His name will be presented to the TSC for consideration. There was discussion about having a co-chairperson. Karl Ruling also volunteered.

7.2 Other new business

Steve Vanciel said that his church's school held an end-of-year concert. He noticed two fog machines intended for use during the concert, investigated the machines and the fluids, discovered they were not matched, and further found that the SDS listed the fluid composition as "proprietary". He asked that the machines not be used for the show. Further subsequent research indicated that several manufacturers seemed to be skirting reporting requirements, suggesting a back-slide in the industry in following the standards. Mike Wood also mentioned a new, compact machine – called "Smoke Genie" – which he'd found on a kickstarter. He said it also had questionable documentation. "Food-grade" seems to be a buzz word when describing fog fluid composition. Steve Vanciel noted it was interesting to see the wide variations in interpretation of SDS reporting requirements.

Joe Kapps also said it's possible people might source SDS information from several different places, so the information might easily be inconsistent.

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

9 Schedule for future meetings

The full meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>.

The autumn TSP meetings will be held in Westlake, Texas at the Marriott Dallas/Fort Worth Westlake (what we used to call the Marriott Solana). The F&S WG will meet from 14:00 to 18:00 CDT on 15 September, 2022.

10 Adjournment

The agenda business being complete, there being no further business brought forth, Mike Wood declared the meeting adjourned at 10:17.

Fog & Smoke Working Group members as of 02 June 2022

Name	Representing	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	O	U
Jeff Egan	NBC Universal	P	U
Jerry Gorrell	Theatre Safety Programs	O	G
Robert Haycock	Robert Haycock	O	U
Clark James	Alliance of Special Effects and Pyrotechnic Operators (ASEPO)	P	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
Karl G. Ruling	Unit 12 Productions	I	CP
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
Keith Sklar	Actors' Equity Association	P	G
Marnie Styles	Ultratec Special Effects Inc.	O	MP
Stephen Vanciel	Stephen Vanciel	P	G
Colin Waters	TMB	O	G
Nathan Wilkinson	Actors' Equity Association	A	G