

Minutes
Fog & Smoke Working Group
12 April 2021
via WebEx

Presiding chairperson: Mike Wood; Mike Wood Consulting LLC; P; G

Recording secretaries: Karl Ruling and Richard Nix, ESTA

Members attending:

Brad Dittmer; Stage Labor of the Ozarks; P; U
Clark James; Alliance of Special Effects and Pyrotechnic Operators (ASEPO); P; U
Nathan Kahn; Look Solutions USA Ltd.; O; MP
Don Phillips; Ultratec Special Effects Inc.; P; MP
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
Mike Wood; Mike Wood Consulting LLC; P; G

Visitor:

JD Streett; ASEPO

1 Opening Remarks

Mike Wood called the meeting to order at 11:04. He said he is willing to serve as a co-chair, but he has not been actively involved in the atmospheric effects business for many years.

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 copy of the easy-to-read pamphlet in front of his camera.

No restraint of trade concerns 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.

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

Mike Wood asked the people on the screen introduced themselves.

3.3 Determination of a quorum

The voting body at the start of the meeting was 10 votes. Four voters are the minimum for a quorum; six is the minimum to pass a motion needing a supermajority. These minimums do not change if the voting body becomes 11.

Karl Ruling declared that the requirements for a quorum and a supermajority were both met.

3.4 Changes to observer status for inactivity

None in danger.

3.5 Processing of new membership and status change requests

One new application:

Clark James; Alliance of Special Effects and Pyrotechnic Operators; Principal; User
Larry Schoeneman had requested to become an observer.

Brad Dittmer moved to accept the applications and changes. The motion was seconded and carried without objection or abstention.

3.5 Consensus body during the meeting

Name	Representing	Status	Int Cat
Keith Sklar	Actors' Equity Association	P	G
Clark James	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
Michael Skinner	Contract Services Administration Trust Fund	A	U
Edwin S. Kramer	I.A.T.S.E. Local 1	P	DE
Stephen Vanciel	IATSE Local 631	P	U
Mike Wood	Mike Wood Consulting LLC	P	G
Cedric Jackson	SAG - AFTRA	P	U
Brad Dittmer	Stage Labor of the Ozarks	P	U

Name	Representing	Status	Int Cat
Don Phillips	Ultratec Special Effects Inc.	P	MP
Marnie Styles	Ultratec Special Effects Inc.	A	MP
Karl G. Ruling	Unit 12 Productions	I	CP
	Total votes possible	11	
Custom market producer	Votes by interest category	1	CP
Designer		1	DE
Dealer/Rental company		0	DR
General interest		2	G
Mass marker producer		1	MP
User		6	U

4 Approval of the minutes from the last meeting

See *FSmin07-2020_DRAFT.pdf*

Brad Dittmer moved to approve the minutes as written. The motion was seconded and carried without objection or abstention.

5 Approval of agenda

Brad Dittmer moved to approve the agenda. The motion was seconded and carried without objection or abstentions.

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, Recommendations For the Planning of Theatrical Dust Effects (Reaffirmation, revision, or withdrawal by 16 September 2021)

Keith Sklar reported that the pandemic has all but eliminated the use of dust effects. However, he said he thought the standard was useful, and should be reaffirmed, and he so moved. The motion was seconded, which triggers an automatic public review.

The new Policies and Procedures permit the letter ballot to commence after the public review ends and any public review comments have been received and considered. A concurrent vote and public review is possible, but the consensus was that it would be better to do them sequentially.

A BSR8 form requesting the announcement of the public review will be filed with ANSI by ESTA staff.

6.6 Introduction to Modern Atmospheric Effects, 6th edition

Any news or action?

6.7 Fog exposure and minors—follow up

At the March 2020 meeting Cedric Jackson provided four documents about minors working in the entertainment industry:

- *2020.01.30 GA Minors and atmospheric smoke acceptable standards.pdf*
- *2020.01.30 GA Minors Hours of Performance.pdf*
- *2020.01.30 GA Minors in Entertainment.pdf*
- *Movie Fog and Related Substances Jan-24-2020.pdf*

Larry Schoeneman asked if the body of medical community had studies to back up their opinions, and would they be willing to share this information. Cedric Jackson said that he thought that the answer was yes to both questions.

Larry Schoeneman said that he did not wish to move forward on a standards action until the science is made available. The consensus agreed. Cedric Jackson said that he would ask for the information. There was more discussion, at the end of which, everyone agreed they will be anxious to see the research data. Larry asked Karl to distribute the information when it was received. Karl Ruling said he would do so.

Karl Ruling has received no documents. Any news or action at this April 2021 meeting?

Clark James asked if there was intent to address this information in an ANSI standard. Karl Ruling explained that there was discussion about it, but the working group agreed to take no action until the research study data could be vetted. Cedric Jackson had previously said he would try to get the data, but has not yet provided it.

Clark James said there were studies available from the EPA for certain specific glycols. Mike Wood said that the movie industry has adopted a precautionary (but arbitrary) practice of halving the exposure levels when minors are on-set. He also said that there is a valid concern for haunted houses and similar amusement environments.

Nathan Kahn asked if Clark would be interested in trying to assemble useful data. Clark said he would be interested, and will see what information he can gather. He said he knew of a Marvel Production going into Georgia, where the star is 16 years old, and production is having difficulty managing this issue.

Mona Shum asked if we could consider doing an observational study, something involving children filling out questionnaires about exposure and symptoms. Keith Sklar described how some of their early studies of atmospheric effects on Broadway began this way, but there were too few children performing on Broadway when the Equity/League study was done in the late 1990s. Only six children responded, too few, so the study specifically omitted them from the later stages of the medical examination and the published recommendations.

There was consensus that the exposure conditions in the movie industry are different than in the theatre environment.

Mike Wood said we do need more data, and he will keep the agenda item open.

7 New business

7.1 Consideration of a new project: indoor stage ventilation

See TSP_ProjectRequestUse of Ventilation on an Indoor Stage.pdf

Karl Ruling gave a brief overview of the project. The project form was submitted by Keith Sklar. Mike Skinner suggested that ASHRAE might already have standards for this. Karl Ruling then asked Keith Sklar to explain the need. Keith Sklar said the issue is a lack of standards that might clearly be applied across the gamut of spaces

found in the theatrical environment, particularly as spaces are re-purposed for particular uses on particular productions.

There was a lot of discussion about what ASHRAE might or might not cover. Mike Skinner said he'd been involved in design and construction of six sound stages at CBS, and confirmed that the designers used ASHRAE criteria for air turnover and sound levels, etc.

The sense of the group was that it would be helpful to have data specific to our industry, and to our audience, and that it should include both theatres and movie sets.

Keith Sklar moved to accept the project. The motion was seconded and carried without objection or abstentions.

Keith Sklar was appointed as the TG leader. Mona Shum, Mike Skinner, and Clark James were appointed to the TG. Mike Wood issued a call for data to the group.

7.2 Other new business

Mona Shum reported on a study they had done recently on glycol and glycerin fog and haze, and their effects on the hang-times for respiratory aerosols. The study is in peer review, and has also been made available to the working group. The glycol and glycerin fogs and hazes did not increase the hang-time and in some cases reduced it, causing the respiratory aerosols to fall out of the air faster.

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

Don Phillips said he was retiring, so this would be his last meeting. He reported that Marnie Styles is no longer on the fog side of the business, and should probably not be on the roster. He also said that he has encouraged his replacement at Ultratec Special Effects to participate in the working group.

There was larger discussion about the number of possible manufacturing candidates in the industry who are not currently members of the working group. Mike Wood and Karl Ruling agreed to do a small canvas of targeted outreach. They thanked Don Phillips for his participation, and for stimulating this conversation.

9 Schedule for future meetings

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

Richard Nix confirmed that the next F&S meeting is scheduled for 11:00 Friday 23 July 2021.

10 Adjournment

The agenda being complete and there being no further business, Mike Wood declared the meeting adjourned at 12:19 Eastern Daylight Time.

Fog & Smoke Working Group members as of 21 April 2021

Delegate	Representation	Voting status	Int. cat.
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Daniel Ayers	StageRight Services LLC	O	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
Cedric Jackson	Screen Actors Guild - American Federation of Television & Radio Artists	P	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.	O	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	DE
Franco Magliozzi	Chubb Group of Insurance Companies	O	G
Tyler Mickley	Look Solutions, LLC.	O	CP
Chris Moulton	Contract Services Administration Trust Fund	A	U
Richard J. Nix	ESTA	exf	G
Don Phillips	Ultratec Special Effects Inc.	P	MP
Karl G. Ruling	Unit 12 Productions	I	CP
Karl G. Ruling	ESTA	exf	G
Larry Schoeneman	Larry Schoeneman	O	G

Fog & Smoke Working Group members as of 21 April 2021

Delegate	Representation	Voting status	Int. cat.
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.	A	MP
Stephen Vanciel	IATSE Local 631	P	U
Colin Waters	TMB	O	G
Mike Wood	Mike Wood Consulting LLC	P	G

Membership Table Rosetta Stone:

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|-----|---------------------|----|------------------------|
| 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 |