

**Minutes**  
**Fog & Smoke Working Group**  
Thursday 19 January 2023  
11:00 – 13:00 EST  
via WebEx

**Chairpersons:**

Steve Vanciel; Steve Vanciel; P; DE (presiding)  
Karl Ruling; Unit 12 Productions; I; CP

**Recording secretaries:**

Karl Ruling and Richard Nix; ESTA

**Attendees:**

Keith Sklar; Actors' Equity Association; P; G  
Nathan Wilkinson; Actors' Equity Association; A; G  
Mona Shum; Aura Health and Safety Corporation; I; U  
Mike Skinner; Contract Services Administration Trust Fund; A; U  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; DE  
Marco Robles; I.A.T.S.E. Local 80; P; U  
Nathan Kahn; Look Solutions USA Ltd.; O; MP  
Robert Haycock; Robert Haycock; O; U  
Daniel Ayers; StageRight Services LLC; P; DE  
Stephen Vanciel; Stephen Vanciel; I; G  
Karl G. Ruling; Unit 12 Productions; I; CP  
Margaret Burke, MPH; Warner Brothers Discovery; P; U  
Joseph Kapp; WSP USA Corp.; I; G

**Visitor:**

Dean Wilson; Look Solutions

**1 Opening Remarks**

Steve Vanciel called the meeting to order at 11:05, and welcomed everyone to the meeting.

**2 Patent and anti-trust statements**

**2.1 Reading of the anti-trust statement**

Steve Vanciel 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 the pamphlet to his camera for all to see.  
No antitrust concerns were raised.

## **2.2 Reading of the call for patents**

Steve Vanciel 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**

Steve Vanciel 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**

All attendees introduced themselves.

### **3.3 Determination of a quorum**

As of 14 December, the consensus body is 10. A quorum would be four. Six would be needed to pass a motion needing a supermajority. Richard Nix confirmed that eight voting members were present at this point in the meeting, more than a quorum and enough to pass a motion needing a supermajority.

### 3.4 Changes to observer status for inactivity

The following voting members are at risk of losing voting status due to inattendance. The missed the last two meetings and will become observers if this meeting is missed as well.

- Eddie Kramer; IATSE Local 1; DE
- Daniel Ayers; StageRight Services LLC; DE

Both were present, so no status changes.

### 3.5 Processing of new membership and status change requests

New applications:

- Margaret Burke; Warner Brothers Discovery; Principal; User
- Marco Robles; IATSE Local 80; Principal; User

Eddie Kramer moved to approve the applications as submitted. The motion was seconded, and carried without objection or abstention.

### 3.6 Consensus body

| 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      |
| Marco Robles           | I.A.T.S.E. Local 80   | P         | U       |
| 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       |
| Margaret Burke         | Warner Brothers Discovery Park                                | P         | U       |
|                        | <b>Total votes possible</b>                                   | <b>12</b> |         |
| 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                  |  | 6 | U  |

#### 4 Approval of the minutes from the last meeting

[See FSmin09-2022\_DRAFT.pdf]

Mike Skinner moved to approve the draft minutes. The motion was seconded and carried without objection or abstentions.

#### 5 Approval of agenda

Eddie Kramer 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 action at this time.

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

*It's due for action now. See ANSI\_E1-14\_2018.pdf, the current edition.*

Joe Kapp mentioned that there are a few typos in the document that need fixing. None are substantive, he believes. There was discussion.

Mona Shum moved to reaffirm the document. The motion was seconded. There was more discussion. Steve Vanciel called the question, asking if reaffirmation was desired, Everyone present agreed, yes. A BSR8 will be filed, the public review will begin, with the letter ballot following at the close of public review.

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

*See a revised E1.23 to require a summary safety statement. BSR\_E1-23\_202x.pdf*

Karl Ruling reported. This is not a project yet. Its genesis was a problem Keith Sklar had identified, which was a fog effect with custom equipment, for which the stage manager had no documentation that the effect was safe for the performers. Karl had subsequently drafted an appendix to the current standard, which would require an executive summary of the fog effect's safety.

Daniel Ayers moved to open the standard for revision. The motion was seconded. There was discussion. The motion carried without objection or abstention. A PINS will be filed with ANSI announcing the revision as a new project. Karl Ruling asked F&S WG members to send him any comments or notes they have, to a revised document can be considered for public review at the next F&S Working Group meeting.

**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 action at this time.

**6.5 ANSI E1.40 – 2016 (R2021), Recommendations For the Planning of Theatrical Dust Effects** (*Reaffirmation, revision, or withdrawal by 9 September 2026*)

No news or action at this time.

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

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

Nathan Wilkinson reported on behalf of Keith Sklar. The task group has had difficulty scheduling meetings, so no progress yet. Mona Shum said she had sent some survey documents to Keith, and suggested they could discuss further when the task group meets. Marco Robles asked if the document would address how quickly effects could be cleared in the event of an emergency. Mona replied that it currently did not, but that it certainly could include that information. He asked to be appointed to the task group. Steve Vanciel made it so. Daniel Ayers asked to be appointed, too. Steve Vanciel made it so.

Keith Sklar said they have recently interacted with mechanical engineers who have been adding and reviewing air quality sensors in their rehearsal and audition spaces. They have seen a significant jump in CO<sub>2</sub> levels during singing auditions. He said that it's clear that much more ventilation is needed when there is singing going on. The CO<sub>2</sub> levels spike.

Joe Kapp reported that ASHRAE has a position paper on using measurements of CO<sub>2</sub> as a proxy for measuring other potential hazards. Carbon dioxide measurements are useful, but they have limitations.

**6.7 Introduction to Modern Atmospheric Effects, 6th edition**

No news or action.

## **7 New business**

### **8 Other business and announcements**

Mona Shum announced she is working on an IATSE 91 study on morbidity in film workers in BC. She's designing the study now. She will keep the working group posted on progress.

#### **8.1 Above & Beyond Awards**

Attendees were reminded that information on the Above & Beyond Awards may be found at [http://tsp.esta.org/tsp/news/award\\_recipients.html](http://tsp.esta.org/tsp/news/award_recipients.html).

#### **8.2 Other announcements**

Karl Ruling said that Monona Rossol had asked that a report on e-cig toxicity be shared with the working group. See Rossol\_new study we should look at on propylene glycol and glycerin \_ Fastmail.pdf and e-cig-heart-effects-s41467-022-33203-1.pdf.

Rossol and her husband have not hit the lottery to fund a study (as she had suggested they would if they did), and e-cigs are outside the working group's scope. No further action was taken on this.

### **9 Schedule for future meetings**

Richard Nix reported that the full meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>.

The April 2023 meetings will be via WebEx and in person around the NAMM Show, which is scheduled for April 13-15 in Anaheim. The Fog & Smoke's working group meeting is scheduled for 9:00 AM Pacific Time on Wednesday 12 April at the Wyndham Anaheim.

The summer meetings will be the week of 24 July in Westlake, Texas. The fall meeting will again return to Westlake, the week of 02 October.

### **10 Adjournment**

The agenda being complete, Steve Vanciel adjourned the meeting at 12:13.

### Membership as of 30 January 2023

| 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                                     | O             | U         |
| Jeff Egan           | NBC Universal   | P             | U         |
| Mike Garl           | Mike Garl Consulting LLC                                      | exf           |           |
| Jerry Gorrell       | Theatre Safety Programs                                       | O             | G         |
| Erin Grabe          | ESTA  | exf           | 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         |
| Margaret Burke, MPH | Warner Brothers Discovery                                     | P             | U         |
| Richard J. Nix      | ESTA  | exf           | G         |
| Marco Robles        | I.A.T.S.E. Local 80   | P             | U         |
| 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        |

| Delegate         | Representing                                | Voting status | Int. cat. |
|------------------|---|---------------|-----------|
| 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                             | I             | G         |
| Colin Waters     | TMB   | O             | G         |
| Nathan Wilkinson | Actors' Equity Association                  | A             | G         |

**Key to codes**

CP = Custom market producer

DE = Designer

DR = Dealer/Rental company

G = General interest

MP = Mass marker producer

U = User

P = Principal voting member

A = Alternate voting member

I = Individual voting member

O = Observer non-voting member