



Surgeon General's Ventilation Finding: The Story and Science Behind ASHRAE

*National Conference on Tobacco or Health
Thursday, October 25, 2007
Minneapolis, MN*

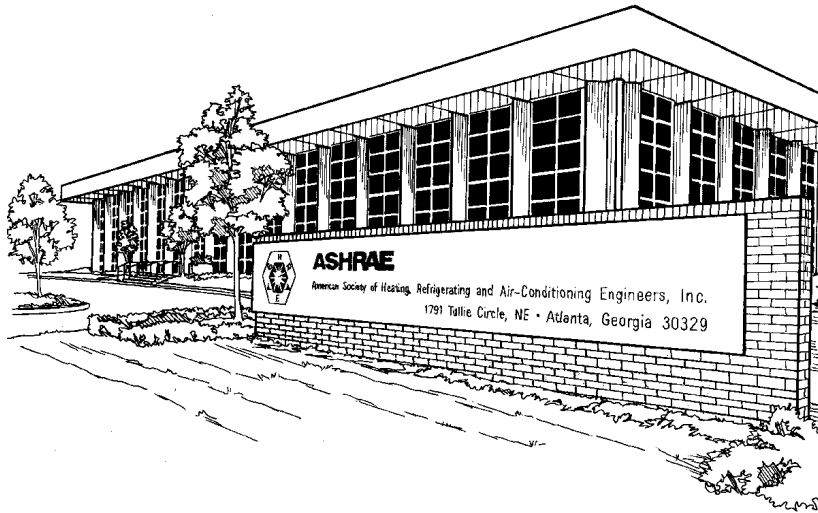
Frieda Glantz, BA
Americans for Nonsmokers' Rights
ASHRAE Member
Tom Houston, MD
ASHRAE SSPC 62.1 (voting member)



What is ASHRAE?

- American Society of Heating, Refrigerating, and Air Conditioning Engineers
- Established in 1959
- International organization with over 50,000 members worldwide
- 80 committees
- Writes industry standards for:
 - Heating
 - Ventilation
 - Air Conditioning
 - Refrigerating
- Standards usually adopted into state and municipal building codes, which give it the force of law

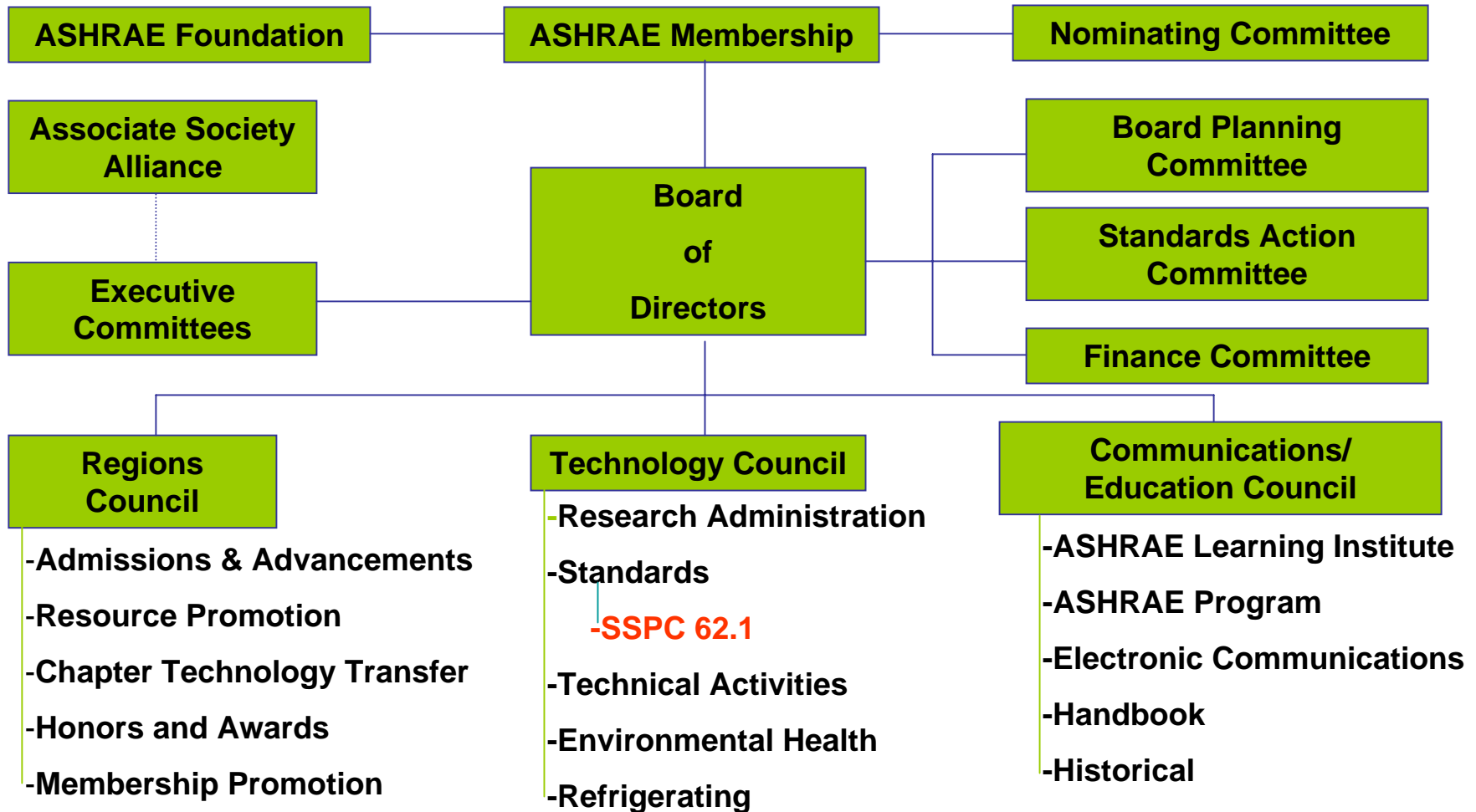
ASHRAE's Mission



ASHRAE will advance the arts and sciences of heating, ventilation, air conditioning and refrigeration and **related human factors** to serve the evolving needs of the public and ASHRAE.

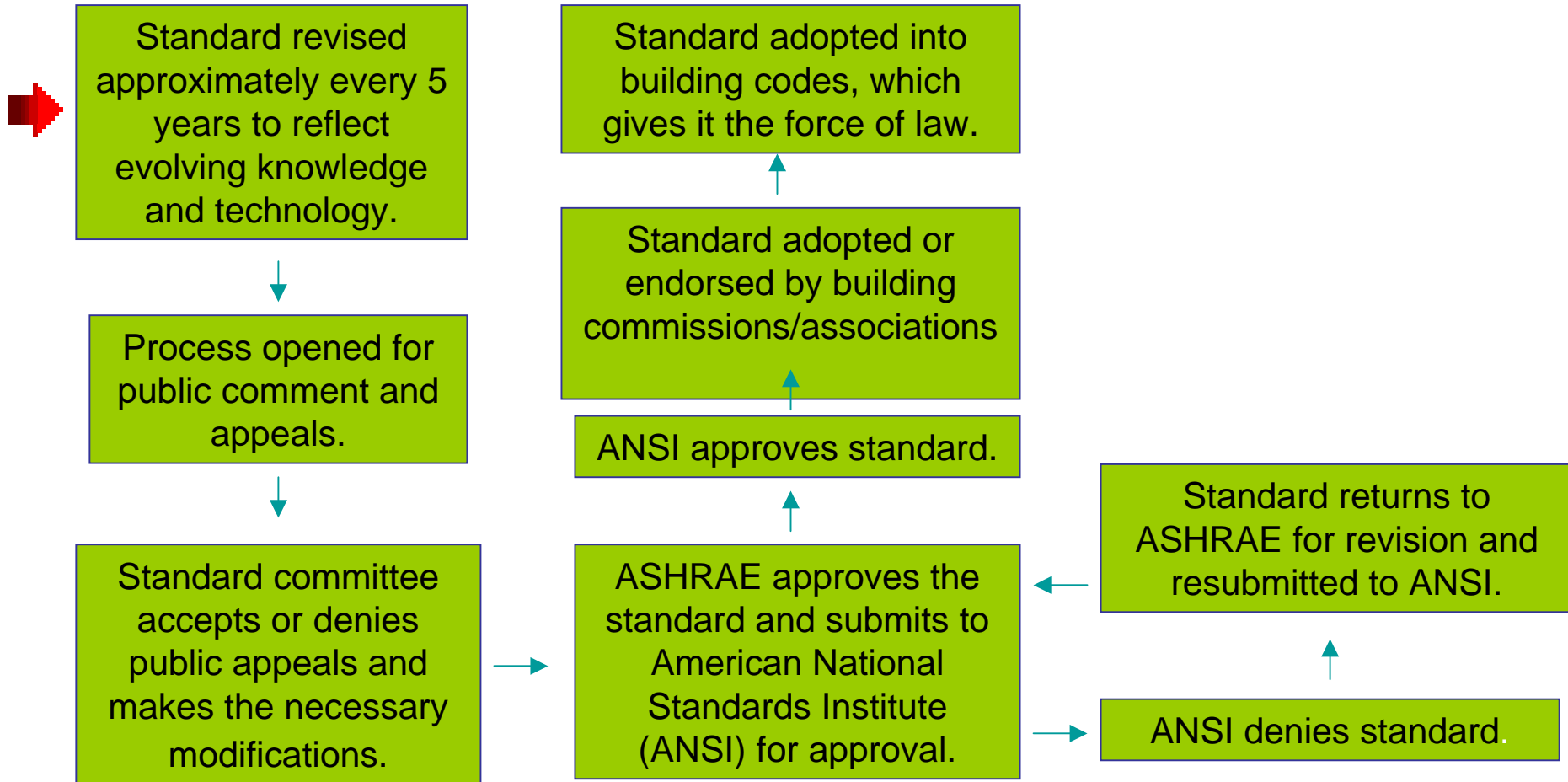


ASHRAE Organization





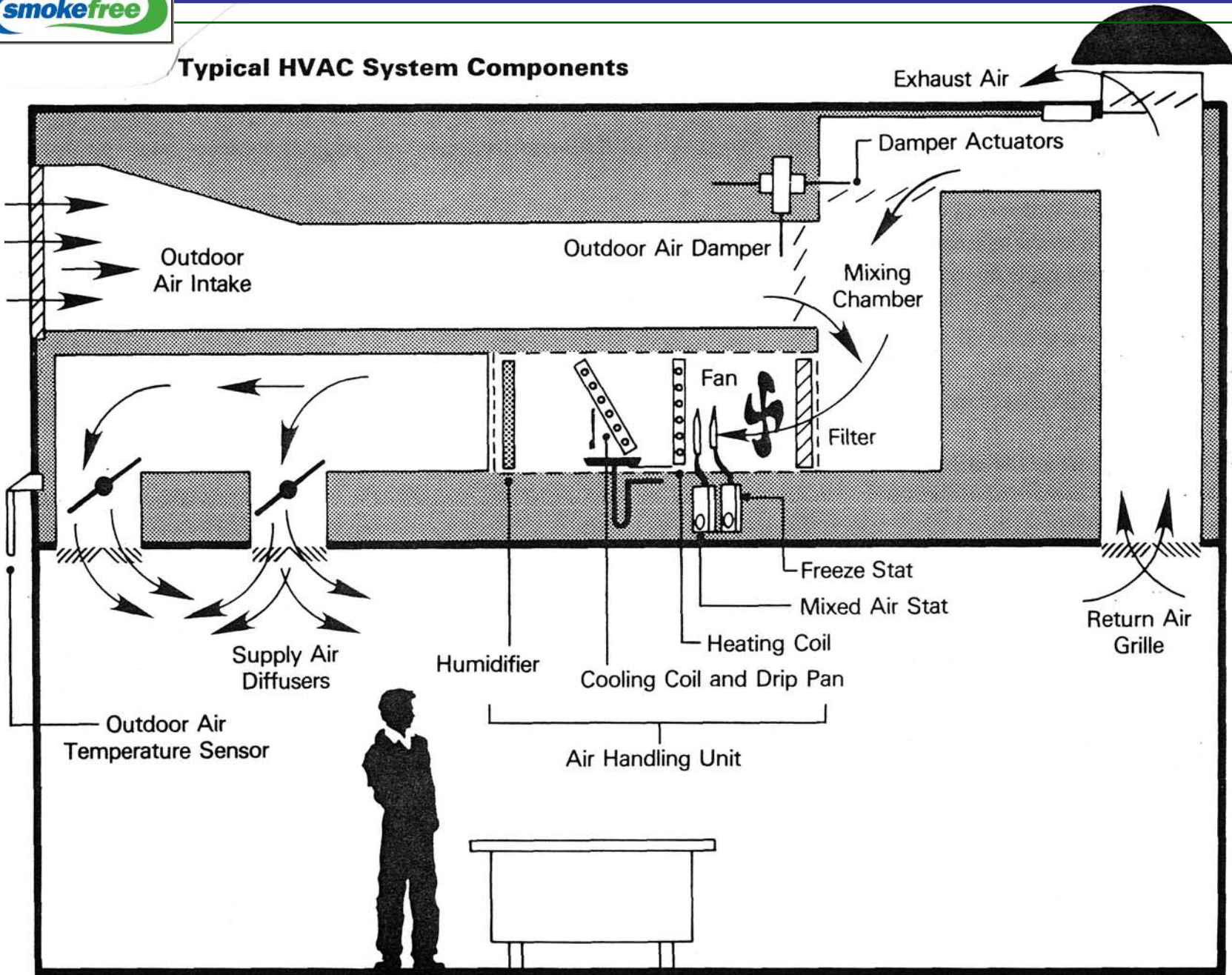
ASHRAE Standard Setting Process



What is **Acceptable IAQ**?

- **Standard 62-2001:** “Air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction.”

Typical HVAC System Components



What can ventilation do?

- Proper enclosure, ventilation and exhaust of areas where smoking may take place can keep other areas of a building relatively free of SHS (but still measurable).
- Good ventilation in SHS area + separation + over-ventilation of SHS free area may improve comfort *not health*
- Directional air flow and displacement ventilation (usually from floor to ceiling of room) can improve comfort *not health*



What can Ventilation NOT do?

HEALTH ISSUES

- Cannot specifically address HEALTH in smoke-filled areas
 - No target concentration for acceptable risk
 - Using linear model of risk-exposure over a working lifetime suggests that ventilation rates are enormous (Repace: 1,800 TO 18,000 times more ventilation to achieve de minimus risk –*indoor hurricane*).
 - Filtration equipment vendors don't fully address the health issue

Indoor Air Quality Programs

Summary

The programs call for extensive briefings of

Strategy

Promote ventilation as the best solution to all indoor air quality problems, including smoking.

Expansion of Existing Programs

- o Continue and expand current programs to brief media, labor/liberal organizations, and the corporate community on the true nature of indoor air quality.
- o Provide additional visibility to indoor air quality expert briefing teams and experts via print and broadcast advertising, direct mail, newsletters, seminars, op-ed mailings.
- o Promote positive case studies -- such as the rescission of the Beverly Hills, Cal., restaurant smoking ban -- where indoor air quality can be improved without resorting to smoking bans. Promote productivity/cost savings as an added incentive for the corporate community to improve indoor air quality.

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Tobacco Solution = Ventilation

- Seeks to downplay secondhand smoke's (SHS) unique dangers by treating it as a minor factor in general indoor air quality
- Protects cigarette sales from declining; safeguarding Big Tobacco's "bottom-line"
- Redirects legal liability away from the tobacco industry to hospitality
- Groom tobacco industry sympathizers to promote industry line for ventilation in ASHRAE, ISO, ANSI

Why is the Tobacco Industry involved with ASHRAE? It can...

- Promote ventilation as a “solution” to secondhand smoke instead of eliminating exposure
- Legitimize its “ventilation solution” by having national and international standards for ventilation and indoor air
- Maintain the social acceptability of smoking
- Protect its bottom line

PHILIP MORRIS U. S. A.
INTER-OFFICE CORRESPONDENCE
RICHMOND, VIRGINIA

RECEIVED
L. P. MEYER
JUL 1 1983

(2) ASHRAE recently approved a standard on "ventilation for acceptable indoor air quality" which, if adopted, would raise the cost of a new building by about 25%. In addition, if the code were enacted into law, it would take big bucks to bring existing buildings up to standard. The hooker is that, by designating an entire building as a "no smoking building", no added expense at all would be involved.

(3) Fred Newman was the gentleman in our company whose responsibility it was to head this proposal off at the pass at the BOCA meeting which is being held in Lexington, Kentucky this week.

(4) In typical buttoned up Philip Morris fashion, Fred Newman marshaled his forces, and I am pleased to report to you that the proposal was overwhelmingly defeated at the BOCA meeting today.

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It is mind boggling to attempt to calculate the harm that this code would have done to our company and our industry had it been adopted. I feel that everyone at Philip Morris owes a large vote of thanks to Fred Newman and his team. In Richmond, we gave Fred a small assist and Randy Johnson, Frank Daylor and Ray Fagan were the individuals who contributed.

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Role of TI vs. Public Health in ASHRAE ('80s)

1981: Ventilation rates based on whether or not smoking allowed. More ventilation 5x higher in smoking areas. Beginning of TI involvement.

1985: Richard Daynard requests the **health effects** be considered in the standard. Daynard questions TI role in the process. Tucker (EPA) chair.

1988-1991: Back and forth on the role of tobacco smoke and health. TI denies any involvement.

1983: ANSI does not approve the standard because it considers it “controversial” – **Tobacco Institute opposes the standard.**

1983: Philip Morris convinced BOCA to reject 62 Standard. **Industry asserts that “to single out” tobacco smoke as a source of pollution is unfair and not scientific.**

Ref: S Bialous, S Glantz, ASHRAE Standard 62: tobacco industry's influence over national ventilation standards, *Tobacco Control* 2002;11:315–328

ASHRAE's process

Procedure to
accommodate
“affected
industries”



Role of TI vs. Public Health in ASHRAE ('90s)

1991: Gene Tucker, EPA, becomes new chair of 62 and indicated that it will focus on source control and secondhand smoke.

1996: Committee, which includes industry representatives, drafts new standard – ventilation rates assume non-smoking.

1998: Addenda created that **remove references to “a moderate amount of smoking”** = returning to smokefree framework. (62e)

1995: Congressional investigation of EPA and its relationship to ASHRAE.

PM orchestrates letter writing campaign to ASHRAE – 9,000 letters accrued.

1997: Standard is NOT approved, put under continuous maintenance. Philip Morris lobbied BoD. It considered it a victory to push through continuous maintenance.

1998-1999: PM allies with NRA and unions, claiming that removal of 62e will hurt hospitality.

1999: Editorial oversight, created exemption for bars, smoking lounges, casinos = TI “Accommodation.”

HCIAQ created. Petition ASHRAE for separate standard.

Ref: S Bialous, S Glantz, ASHRAE Standard 62: tobacco industry's influence over national ventilation standards, *Tobacco Control* 2002;11:315–328





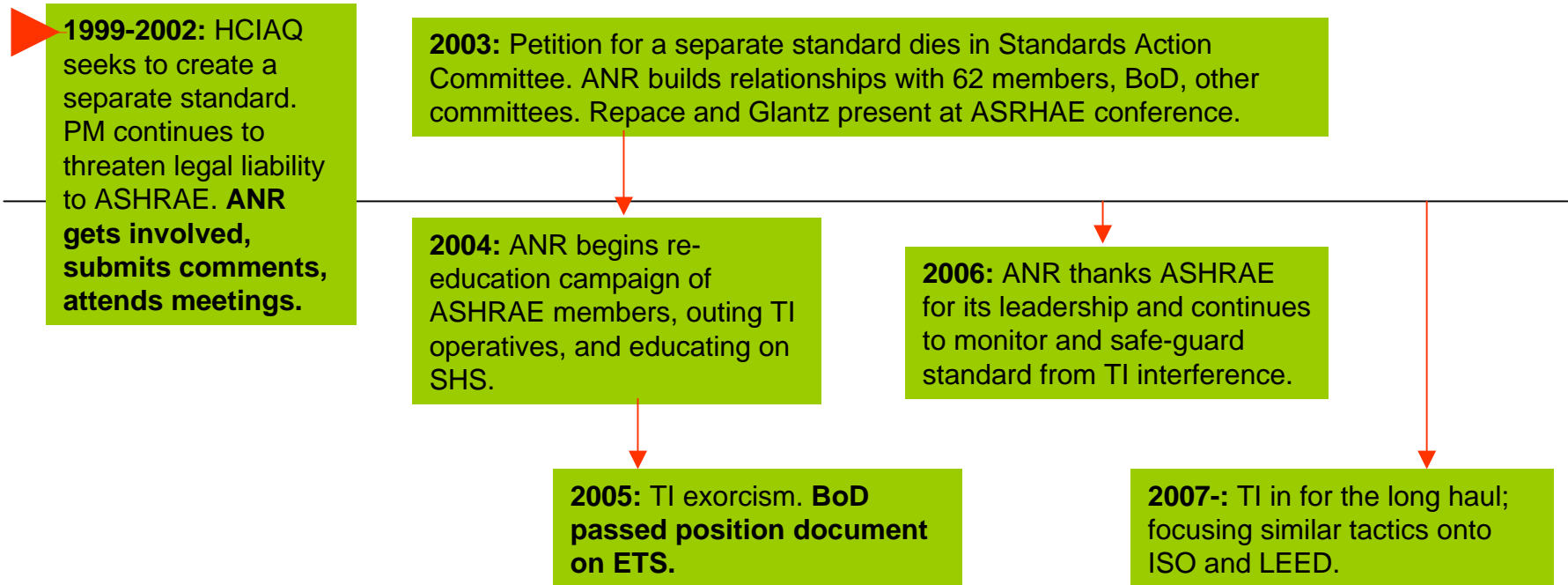
Tobacco Industry Representatives Active in ASHRAE & Standard 62

- Tobacco manufacturer employees become members of committee
- Consultants specifically paid to represent the former Tobacco Institute serve on committees
- Consultants with contracts from Tobacco take part, serve as liaisons, publish newsletters
- Members of ASHRAE's board during past years have taken substantial grant money from tobacco interests.

Vs. Public Health Taking a Seat at the Table

- Public Health creates a presence: committees, boards, meetings
- Relationship building
- **Accountability:** monitoring and participating in standard making process: public review, code of ethics, scope of standard
- Education, education, education!
- Legal liabilities

Role of TI vs. Public Health in ASHRAE (2000's)



Ref: S Bialous, S Glantz, ASHRAE Standard 62: tobacco industry's influence over national ventilation standards, *Tobacco Control* 2002;11:315-328

ETS Position Document – What Is a Position Document?

- Written materials, approved by the Society's Board of Directors
- Officially represent the Society's position on a technical subject
- These are timely position documents, which have been developed by technical experts on major industry issues.

Unanimously
adopted by the
ASHRAE
Board of Directors

Environmental Tobacco Smoke

Position Document
Approved by ASHRAE Board of Directors
June 30, 2005



ASHRAE concludes that:

- It is the consensus of the medical community and its cognizant authorities that ETS is a health risk, causing lung cancer and heart disease in adults, and exacerbation of asthma, lower respiratory illnesses and other adverse effects on the respiratory health of children.
- At present, the only means of effectively eliminating health risk associated with indoor exposure is to ban smoking activity.
- Although complete separation and isolation of smoking rooms can control ETS exposure in non-smoking spaces in the same building, adverse health effects for the occupants of the smoking room cannot be controlled by ventilation.
- No other engineering approaches, including current and advanced dilution ventilation or air cleaning technologies, have been demonstrated or should be relied upon to control health risks from ETS exposure in spaces where smoking occurs. Some engineering measures may reduce that exposure and the corresponding risk to some degree while also addressing to some extent the comfort issues of odor and some forms of irritation.
- An increasing number of local and national governments, as well as many private building owners, are adopting and implementing bans on indoor smoking.
- At a minimum, ASHRAE members must abide by local regulations and building codes and stay aware of changes in areas where they practice, and should educate and inform their clients of the substantial limitations and the available benefits of engineering controls.
- Because of ASHRAE's mission to act for the benefit of the public, it encourages elimination of smoking in the indoor environment as the optimal way to minimize ETS exposure.



Shift in Position

“While not shown to address the health effects of secondhand smoke, ventilation can help improve the air quality of an establishment by reducing the sight and smell and by controlling smoke drift.”

“Policies, Practices & Positions: Public Place Smoking, Reasonable Ways to minimize Secondhand Smoke,”
www.pmusa.com. Downloaded: October 3, 2003.



Linear Dose Response

Education + Relationship Building +
Accountability =

- = Position document
- = Strong public stance on smokefree issues
- = Incorporated into smokefree ordinances and laws across the nation



Conclusions

- ASHRAE offers an example of building relationships as a means to an end with nontraditional partners.
- ASHRAE campaign no different than a smokefree legislative campaign.
- Victory takes time, patience, translating the message appropriately, building relationships, and perseverance.



How to participate in Standard 62

- Comment on addenda in public review
 - **Alternative wording most helpful**
- Propose a change
- Apply for membership
- www.ashrae.org
- Call 404-636-8400 or email the Chair, Dennis Stanke, at dstanke@trane.com