Excessive Ambient Air Temperatures in the Garment Industry

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Global Occupational Health Course

- Graduate level course at UC Berkeley taught by Garrett Brown and Dr. Kathie Hammond in Fall 2018

- Gained insight into the work conditions/labor underpinning major industries globally and their respective OHS challenges

- Major Project: Collaborate with an NGO to complete a project useful/meaningful for that organization

Worker Rights Consortium (WRC)

- Independent Labor Rights monitoring organization focused on protecting the rights of garment workers in the developing world (particularly those contracted with colleges or universities)

- Conduct factory investigations, publish major reports highlighting factory conditions, assist workers directly

Excessive Heat & Fainting

WRC knows workers in garment factories frequently face brutal temperature and humidity levels, which can lead to fainting and other health issues

Background Information

Although many countries have either quantitative or qualitative standards concerning temperature, brands and retailers routinely ignore the issue

WRC wants to put more pressure on brands and retailers over this issue by exposing violations at factories around the world

WRC’s Requests of Me

- Review existing regulations for workplace temperature and humidity in countries they requested
  - Bangladesh, Cambodia, China, Dominican Republic, El Salvador, Haiti, India, Indonesia, Lesotho, Pakistan, Vietnam, USA

- Perform a literature review on heat stress in the workplace and on techniques to reduce workplace temperature/humidity

Labor Law Abroad

- Used ILO website, World Bank *Better Work* Program
- Relatively Diverse Laws:
  - El Salvador: very thorough (work/rest regimens)
  - Lesotho: no law
  - China: mandatory extra pay at certain temperatures
- Most very vague

Labor Law: Federal & California

- No federal regulation that OSHA enforces, can only take action against employers under “General Duty” clause, only recommends temperature between 68-76 ^{o}F and humidity between 20%-60%

- California in process of creating indoor heat regulation
  - Explicit temperature thresholds at which mandatory controls by employer required, “cool-down”/acclimatization areas with mandatory water access
  - Provided WRC with CalOSHA draft regulation

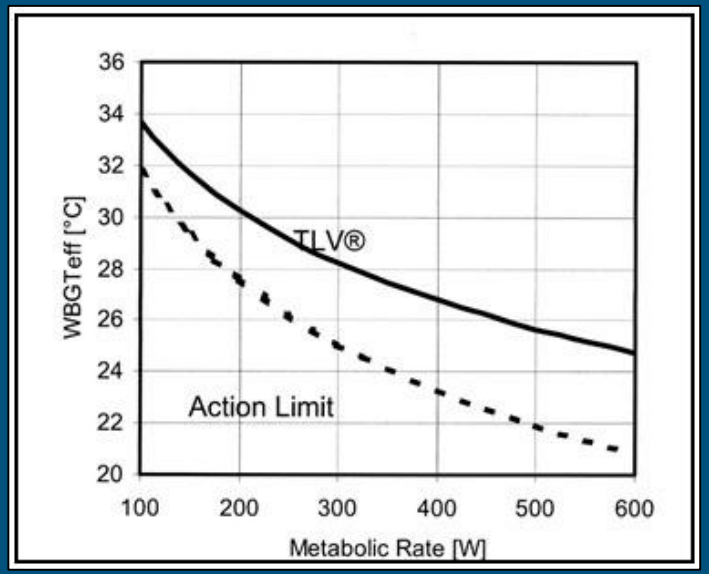
Heat Stress & Technical Resources

NIOSH 2016 “Criteria for a Recommended Standard”

2018 AIHA Conference Heat Stress Courses

ACGIH 2018 TLVs

OSHA Technical Manual Case Study



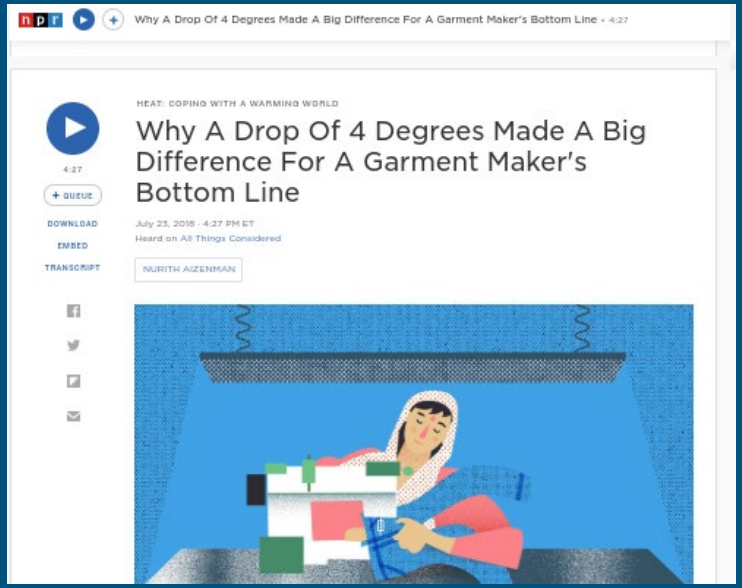
ACGIH Heath Stress TLVs and Action Limits, 2018

Techniques for Controlling Heat

- Provided WRC with conventional engineering, administrative, and PPE controls outlined by OSHA
  - Engineering: Air conditioning, improved ventilation, fans, etc.
  - Administrative: Work/Rest regimen, etc.
  - PPE: cooled vests, clothing, etc.

Literature Review for Low -Cost Controls

- Evaporative cooling systems, industrial mist cooling systems cheaper in some contexts
- MIT/World Bank study on benefits of switching to LED lights which emit less heat
- Papers documenting productivity losses due to temperature, looking forward with exacerbated climate change



Conclusions

- Enjoyed learning about heat stress and reading technical resources from OSHA & NIOSH, beneficial for my future career
- Sobering to research this problem and lack of any meaningful enforcement/regulation
- Think it will be useful to WRC in that it will save them time & effort in preparing/carrying out work related to workplace temperature
- Especially relevant given climate change

Thank you for your attention!

-Questions?

Thank you to Garrett and Kathie for creating and putting on the class. Thank you to CIHC for the invitation to speak this afternoon.