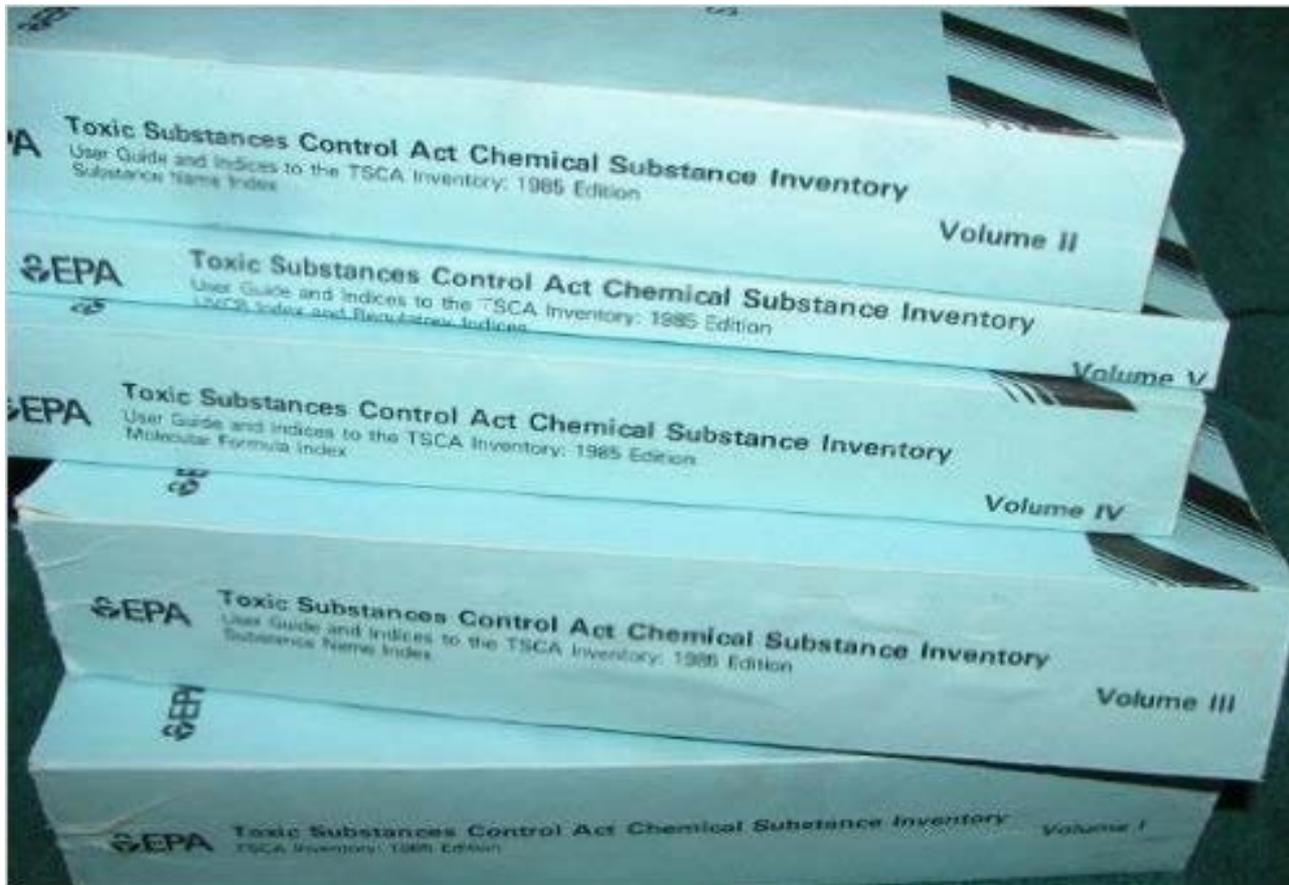


# Scrap Tire Pyrolysis Meets State and Federal “Chemical Substance” Regulation

Phillip M. Bender  
Ring Bender LLLP  
Pittsburgh, PA

# The TSCA Inventory



# Key Points About TSCA

- \* Regulates “New Chemical Substances”
- \* Prohibits sale of chemical substances not on the TSCA Inventory
- \* New technologies or manufacturing processes yield new chemical substances

# TSCA Review Process

1. Bona Fide Intent to Manufacture or Import Notice
  - \* On the TSCA Inventory or not? If not...
2. Pre-Manufacture Notice (PMN)
  - \* If EPA authorizes substance's placement on Inventory...
3. Notice of Commencement of Manufacture or Import
  - \* EPA places on Inventory
  - \* Can you piggyback on prior listings?

# Carbon Black



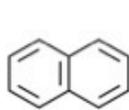
# EPA's Concerns

- \* History of problems with tire pyrolysis startups
- \* Worker exposure risks
- \* New concern with nanoparticles

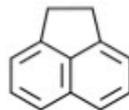
# PAHs

## US EPA 16 Priority Pollutants PAH Compounds

\*Established in 1976

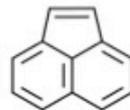


**naphthalene**

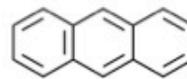


**acenaphthene**

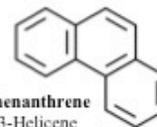
1,2-dihydroacenaphthylene  
1,8-ethylnaphthalene  
Naphthyleneethylene  
peri-ethylenenaphthalene



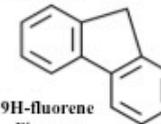
**acenaphthylene**



**anthracene**  
paranaphthalene

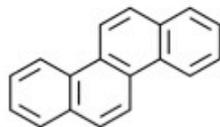


**phenanthrene**  
3-Helicene  
ravatite



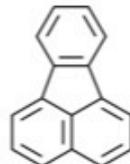
**9H-fluorene**

Fluorene  
2,2'-methylenebiphenyl  
o-biphenylenemethane  
diphenylenemethane



**chrysene**

1,2-benzophenanthrene  
benzo(a)phenanthrene

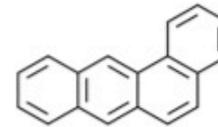


**fluoranthene**

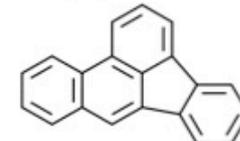


**Pyrene**

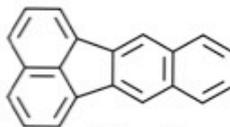
benzo(def)phenanthrene



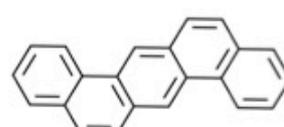
tetraphene  
benz(a)anthracene  
**benzo(a)anthracene**  
1,2-benzanthracene  
2,3-benzophenanthrene  
benzo(b)phenanthrene



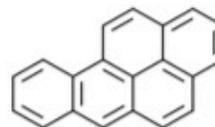
benzo(c)acephenanthrylene  
**benzo(b)fluoranthene**  
2,3-benzfluoranthene  
3,4-benz(e)acephenanthrylene



**benzo[k]fluoranthene**  
11,12-benzofluoranthene  
2,3,1',8'-binaphthylene  
dibenzo(b,j,k)fluorene  
8,9-benzofluoranthene



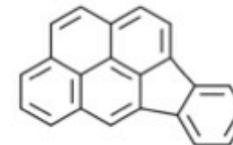
benzo(k)tetraphene  
1,2:5,6-dibenzanthracene  
**dibenzo(a,h)anthracene**



benzo(pqr)tetraphene  
**benzo(a)pyrene**  
3,4-benzpyrene  
1,2-benzpyrene  
benzo(def)chrysene

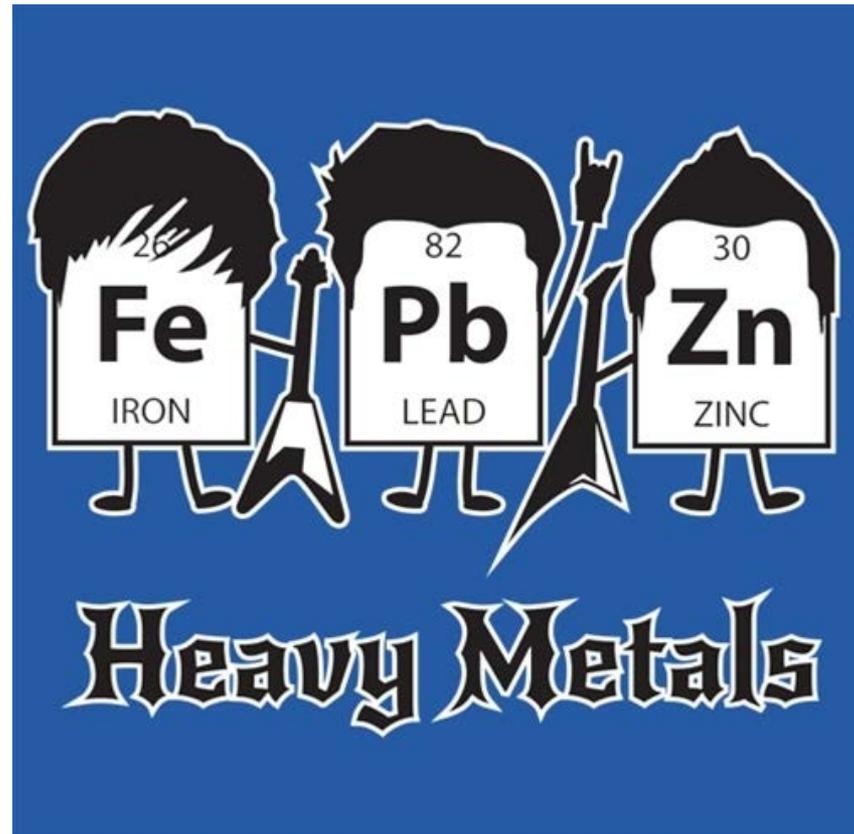


**benzo(ghi)perylene**  
1,12-benzoperylene

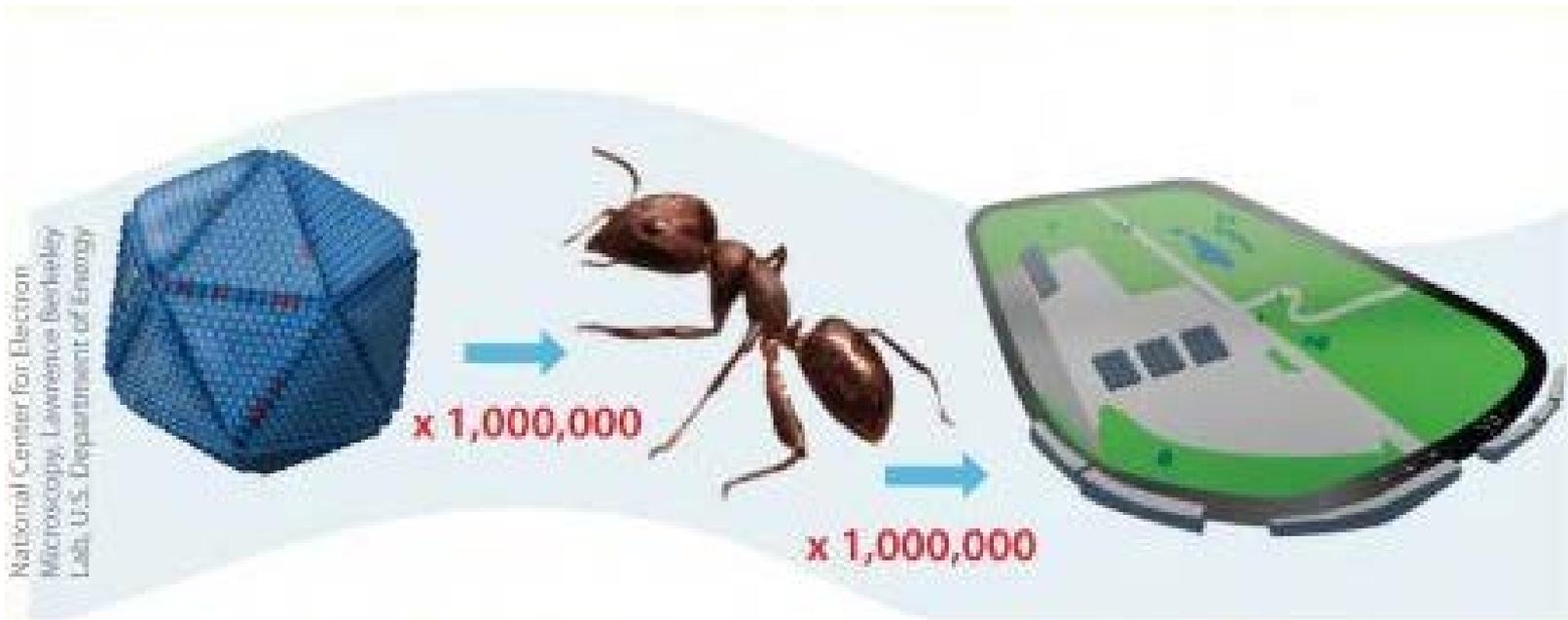


**indeno[1,2,3-cd]pyrene**  
1,1-(1,2-phenylene)pyrene  
1,10-(o-phenylene)pyrene  
2,3-o-phenylenepyrene

# Other Residuals



# Particle Size

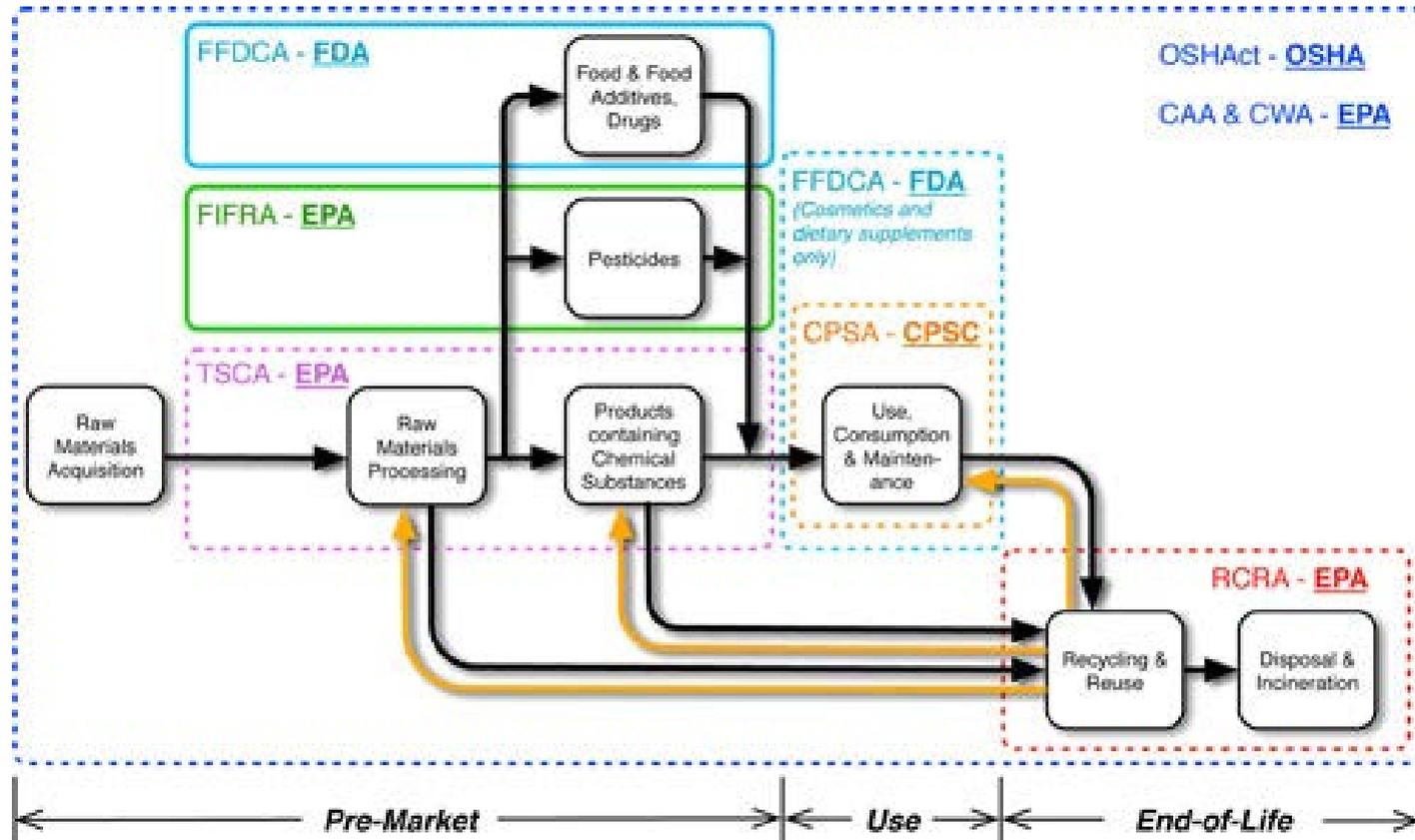


**Nanoparticle**  
4 nanometers  
diameter

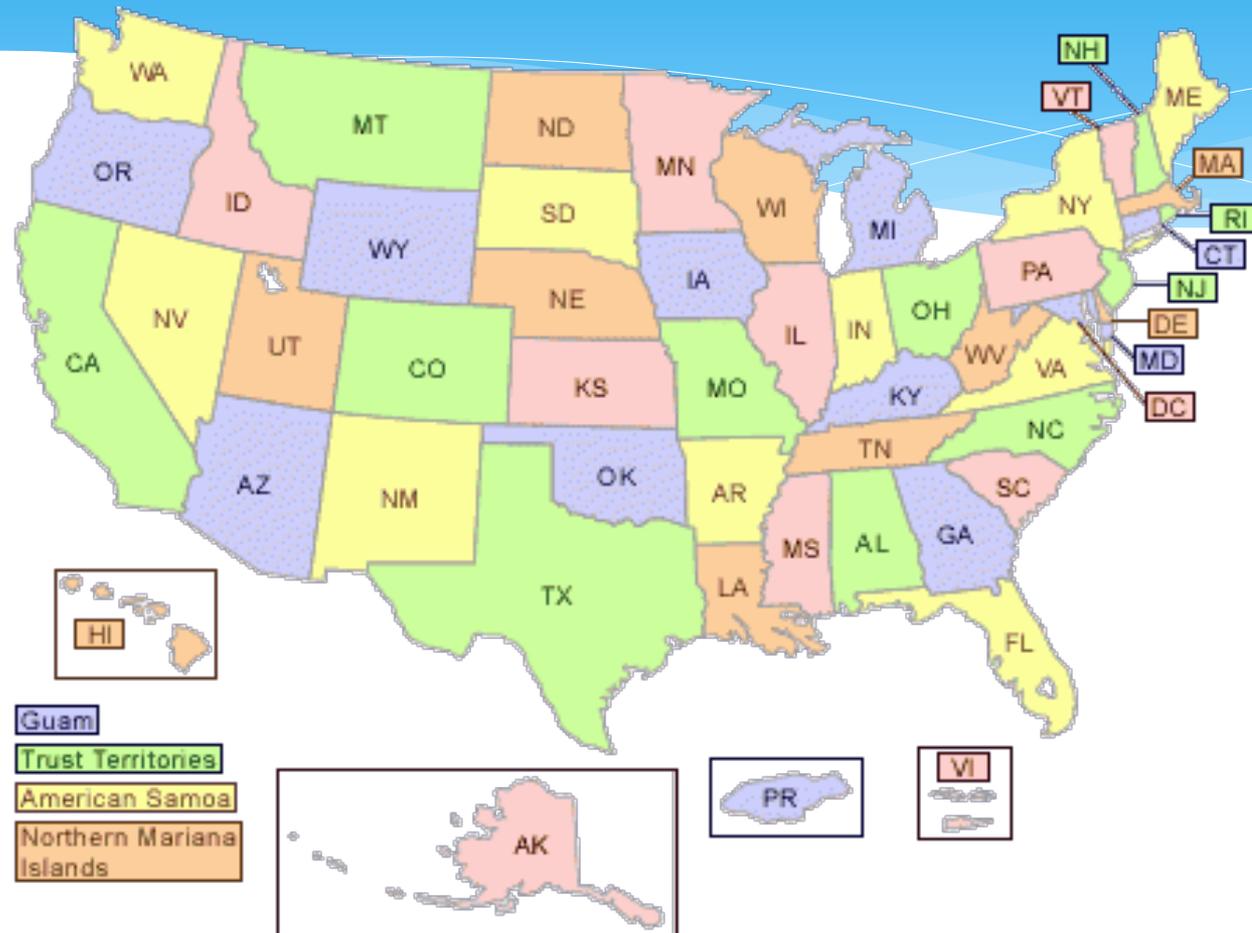
**Ant**  
4 millimeters  
long

**Indianapolis Motor  
Speedway**  
4 kilometers per lap

# Other Federal Programs



# State Regulatory Programs



<https://www.epa.gov/hwgenerators/links-hazardous-waste-programs-and-us-state-environmental-agencies>

# Confirming TSCA Compliance



# State Programs & TSCA

- \* State Programs
  - \* Facility siting and development
    1. Environmental Permits
    2. Land Use Approvals
    3. OSHA and related programs
  - \* Facility Operation
    1. Monitoring and Reporting
    2. Inspections
  - \* Enforcement and Compliance

# TSCA Compliance: How do you know?

- \* CAS #
- \* Inventory No. from EPA
- \* TSCA “Approval” documents from EPA
- \* Confirmation that piggybacking on existing Inventory No. obtained by other companies is legitimate

# TSCA “Reform” – the Lautenberg Bill

- \* Congress developed a bill “reforming” TSCA
  - \* Addresses historically grandfathered “old” chemicals
  - \* Set deadlines for USEPA review processes
  - \* Does not really effect waste tire pyrolysis-based products
  - \* Status: passed the House on May 24; Sen. Rand Paul placed a block due to concerns with preemption and criminal enforcement provisions

# Thank You

- \* Please call me if you would like to talk about any of the issues we have discussed today.
- \* 412-770-7721, [pbender@ringbenderlaw.com](mailto:pbender@ringbenderlaw.com)
- \* Many thanks to Mary Sikora (Recycling Research Institute), Terry Gray (TAG Resource Recovery), Tom Redd (Reclaim) and Jim Alwood (USEPA) for their input and insights.