

# REGULATING EMERGING TECHNOLOGIES IN SILICON VALLEY AND BEYOND

Silicon Valley Toxics Coalition  
[www.SVTC.org](http://www.SVTC.org)

Sheila Davis  
Executive Director

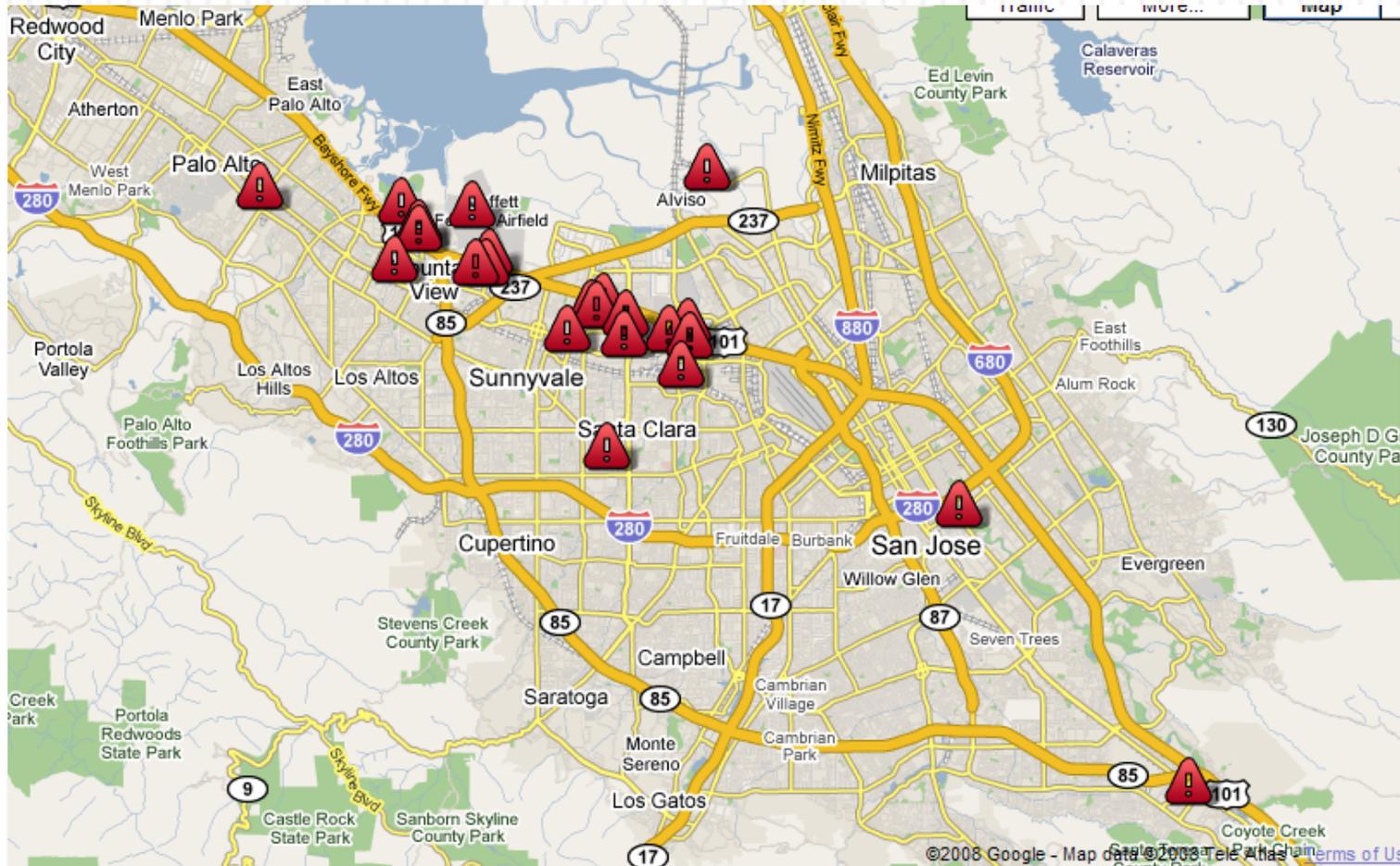
Nanotechnology III Symposium  
March 19, 2009

# Topics

- Silicon Valley's toxic history
- Global environmental impacts of high tech industry
- SVTC report on nanotechnology
- Gaps in information
- Bay Area Nano Survey
- Recommendations



# Sites on National Priorities List – Santa Clara County



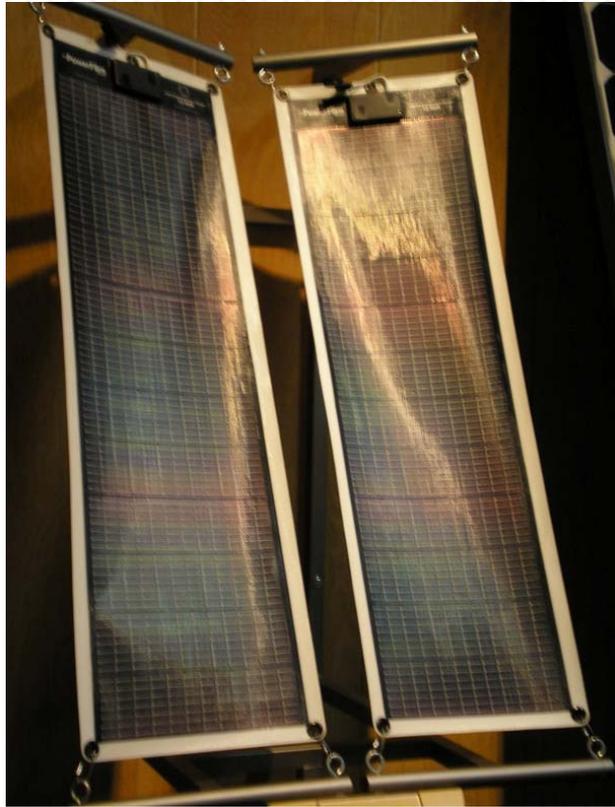
# Taiwan - Erren River



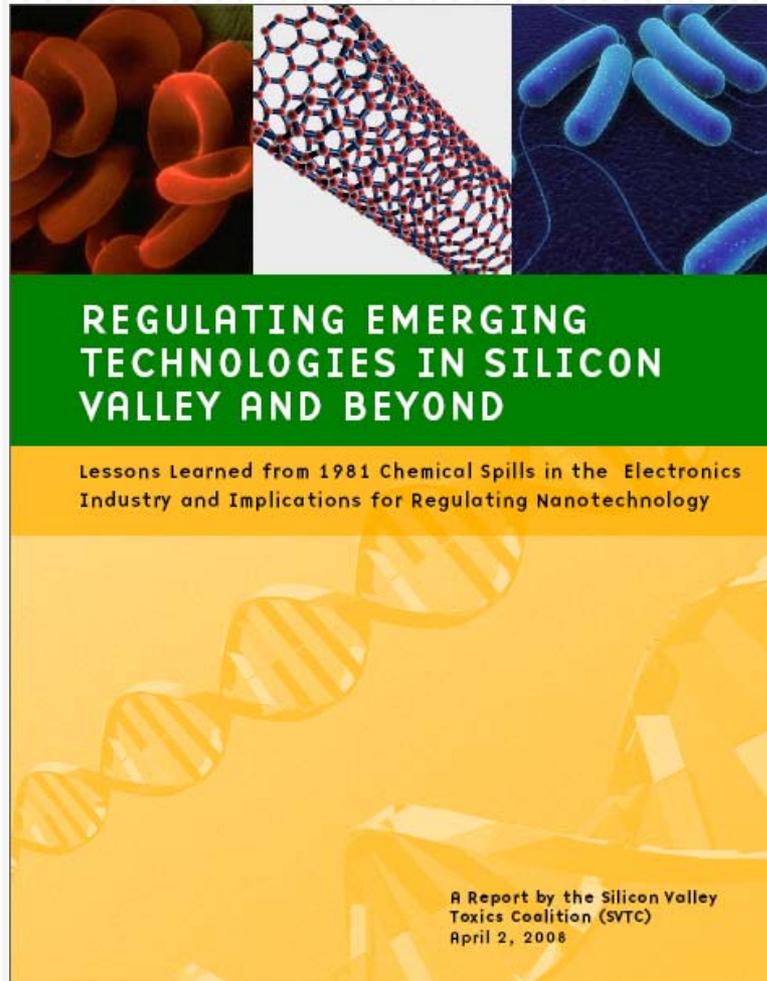
# India - Danish smashing CRT monitors



# Items containing nanomaterials



# Released April 2, 2008



# Closing the Gaps

- **Technology:** Support research and development of technology that can monitor, detect, track, recover (clean up) nanomaterials in the environment and the body
- **Safety:** Strengthen Government tools for identifying, prioritizing and mitigating chemicals hazards, and providing information to the public
- **Data:** Ensure that chemicals producer generate, distribute and communicate information on chemical toxicity and eco-toxicity.

# Bay Area Nano Survey

- SVTC surveyed 129 Bay Area companies believed to import, manufacture, or deal with nanomaterial.
- List of companies surveyed compiled using The Project on Emerging Nanotechnologies' US NanoMetro Map and from the Nanowerk database

# Bay Area Nano Survey, cont.

- Questions included simple questions such as:
  - What forms/shapes do the nanomaterials used by your company take?
  
- Information that SVTC was looking for on health and safety practices included:
  - Yes/No we have conducted water testing to establish a baseline for exposure to nanomaterials.
  - Yes/No we have conducted studies to determine the toxicological risks of our activities.

# Results of Bay Area Nano Survey

- Total of 12 responses.
  - 7 complete responses
  - 5 partial responses
  
- 3 of the 6 companies that confirmed to use nanomaterials had some type of environmental, health and safety practices.

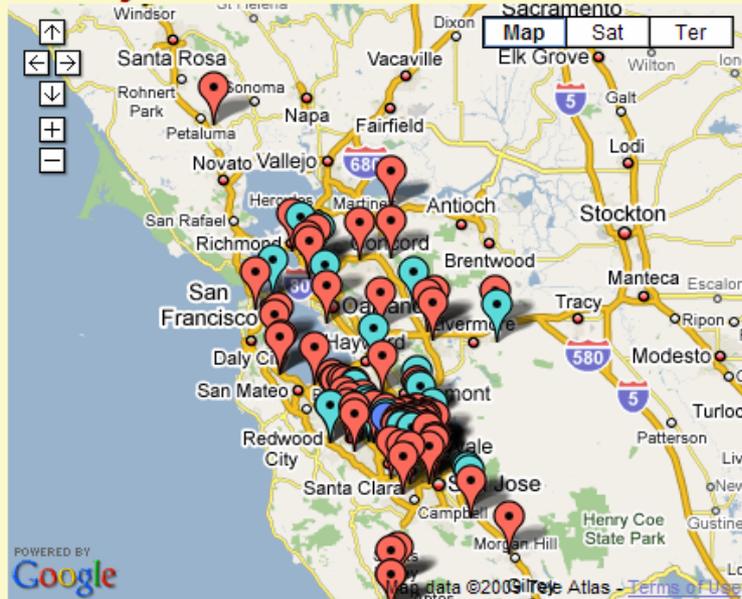
# Results of Bay Area Nano Survey

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- Only 1 respondent is willing to share EHS information with the public.

# Nano Maps

## Bay Area Nanomaterials Users



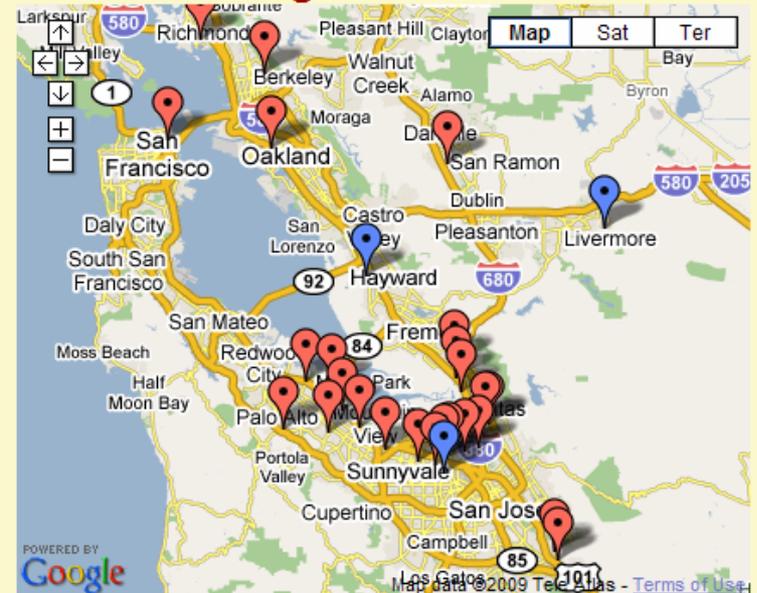
[View Larger Map](#)

This map identifies companies and universities in the Bay Area that are "likely users" of nanomaterials based on website research and survey responses.

**Red markers** - Company is a possible (but unconfirmed) manufacturer or importer of nanomaterials, per information provided by website research or survey responses.

**Teal markers** - Company is "very likely" to use nanomaterials based on information provided by website research or survey responses.

## Monitoring of Nanomaterials



[View Larger Map](#)

This map identifies companies and universities in the Bay Area that are "likely users" of nanomaterials and that conduct at least some monitoring of their activities.

**Red markers** - Company is a "likely user" of nanomaterials, but did not confirm via the SVTC survey that it monitors the use and disposal of nanomaterials.

**Blue marker** - Company is a user of nanomaterials and responded to survey stating that it monitors the use and disposal of nanomaterials.

# Current regulation

- Federal
  - Nanoscale Materials Stewardship Program
    - 22 participants
    - Much of the information is CBI.
- California
  - Health and Safety Code 57018-57020 (AB 289)
- Local
  - Berkeley, California (2006)

# SVTC Recommendations

- I. Nanomaterials should be treated as new materials (rather than “grandfathered in”), and they should be subject to EPA’s new chemical program.
- II. Environmental monitoring and remediation technologies should be developed in conjunction with new facility installation.
- III. California chemical policy reform should make special provisions for emerging technologies.

# SVTC Recommendations , cont.

- iv. Include nanomaterials in emergency planning and community right-to-know reporting requirements.
- v. EPA rule-making authority should be used to ensure the regional water and air quality control agencies have the authority to implement monitoring controls on nanofacilities.

# NGO Recommendations

- I. A Precautionary Foundation
- II. Mandatory Nano-specific Regulations
- III. Health and Safety of the Public and Workers
- IV. Environmental Protection

# NGO Recommendations, cont.

- IV. Transparency
- V. Public Participation
- VI. Inclusion of Broader Impacts
- VII. Manufacturer Liability

# Thank You

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