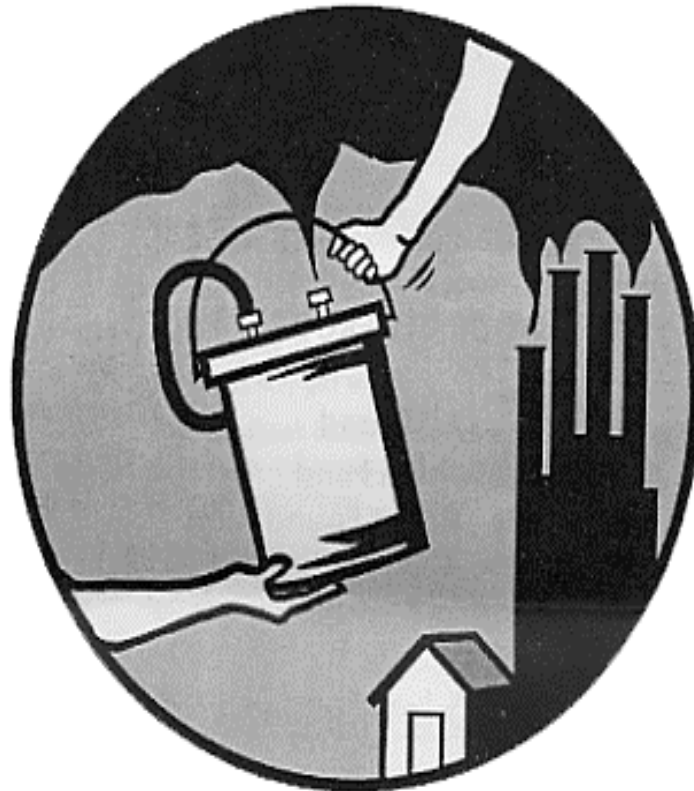


Moving Forward: Monitoring Our Air & Taking Action

Bucket Brigades: put out the fire!



Organization, Cooperation and Teamwork to measure the community impacts of global trade



Peer Reviewed Study: it works!

Bucket brigades have promoted community awareness and empowerment, provided:

- new sources of information on air emissions,
- pointed out gaps in existing monitoring and enforcement systems, and
- helped to increase regulatory and industry accountability.

Through a process of NGO-intermediated participation, communities are advancing new forms of participation and strategies of environmental protection.

Community Environmental Policing: Assessing New Strategies of Public Participation in Environmental Regulation by Dara O'Rourke & Gregg P. Macey, *Journal of Policy Analysis and Management* November 30th, 2002

Impacted communities turn to do it yourself testing to demand answers and accountability



Simple methods of evidence gathering: Record what you see, smell and feel: **Pollution Logs**



Because people live, work and play too close to pollution: governments and industry are in denial



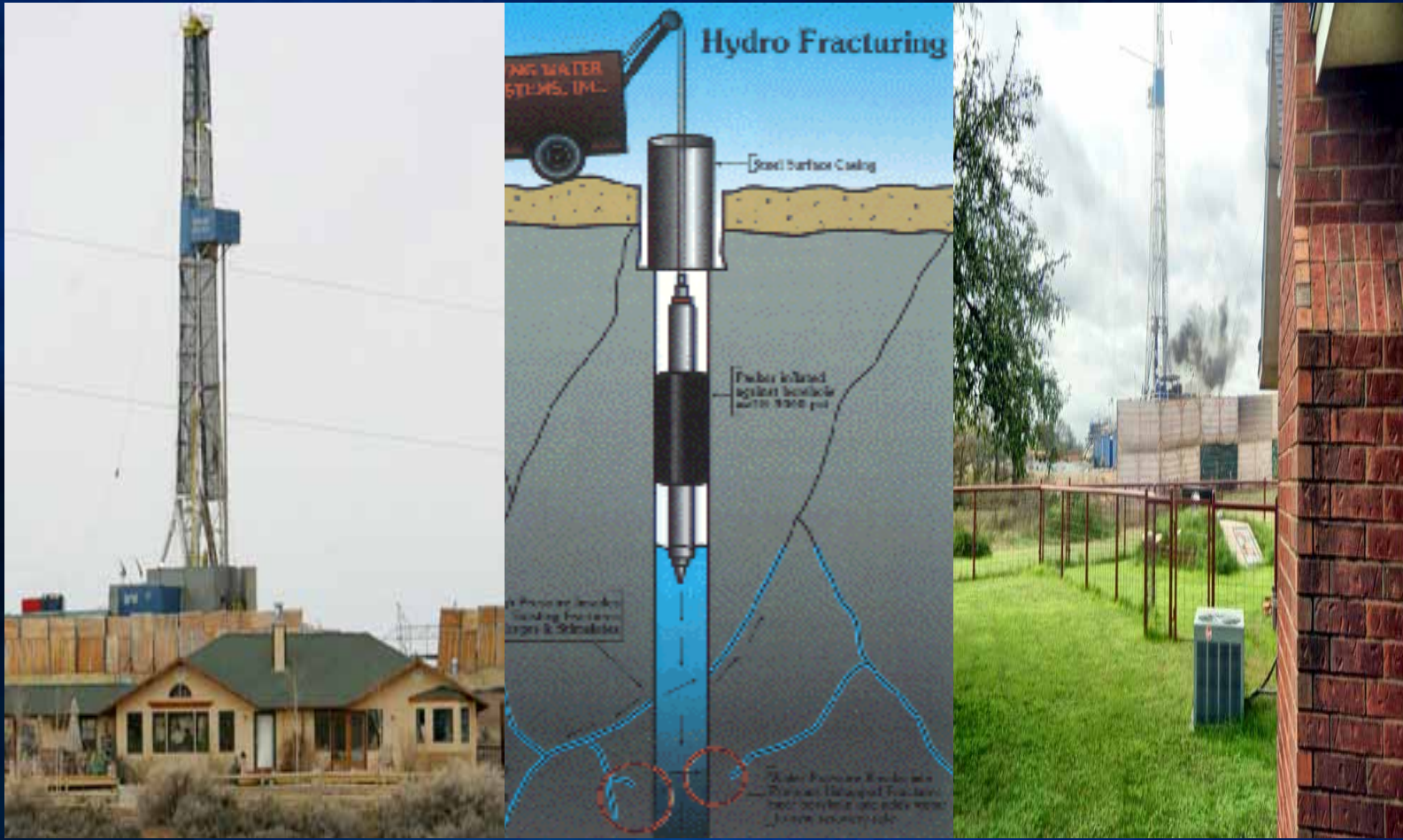
Principles of Air Monitoring in Impacted Communities: Equality

- Monitoring programs should be transparent, verifiable and participatory for all stakeholders, including the impacted community.
- Impacted communities and their experts have the right to fully and equally participate in the monitoring of their communities, including hands on community monitoring, design of monitoring plans, choice of equipment and data interpretation.
- The purpose of monitoring programs should be to investigate and verify the experience of the community being impacted and should assist in identifying opportunities for pollution reductions and prevention. This is consistent with the mission of the EPA and all environmental agencies.
- Monitoring programs should incorporate the experience of the community in the design and implementation of such programs.

Empowerment trainings: Hands on tools and building capacity to prove the harm and take action!



Background testing: Before the project begins and after to track models and theories of pollution levels in approvals.



GCM Partnership: Community monitoring to expose injustice: Houston Ship Channel/Galena Park



Environmental Crime Scene Investigation (CSI): Impacted people must be in control:
Own your equipment, data and project



Mechanical Lung to 'breathe' in toxic air for testing where there are no other 'monitors' - except you!



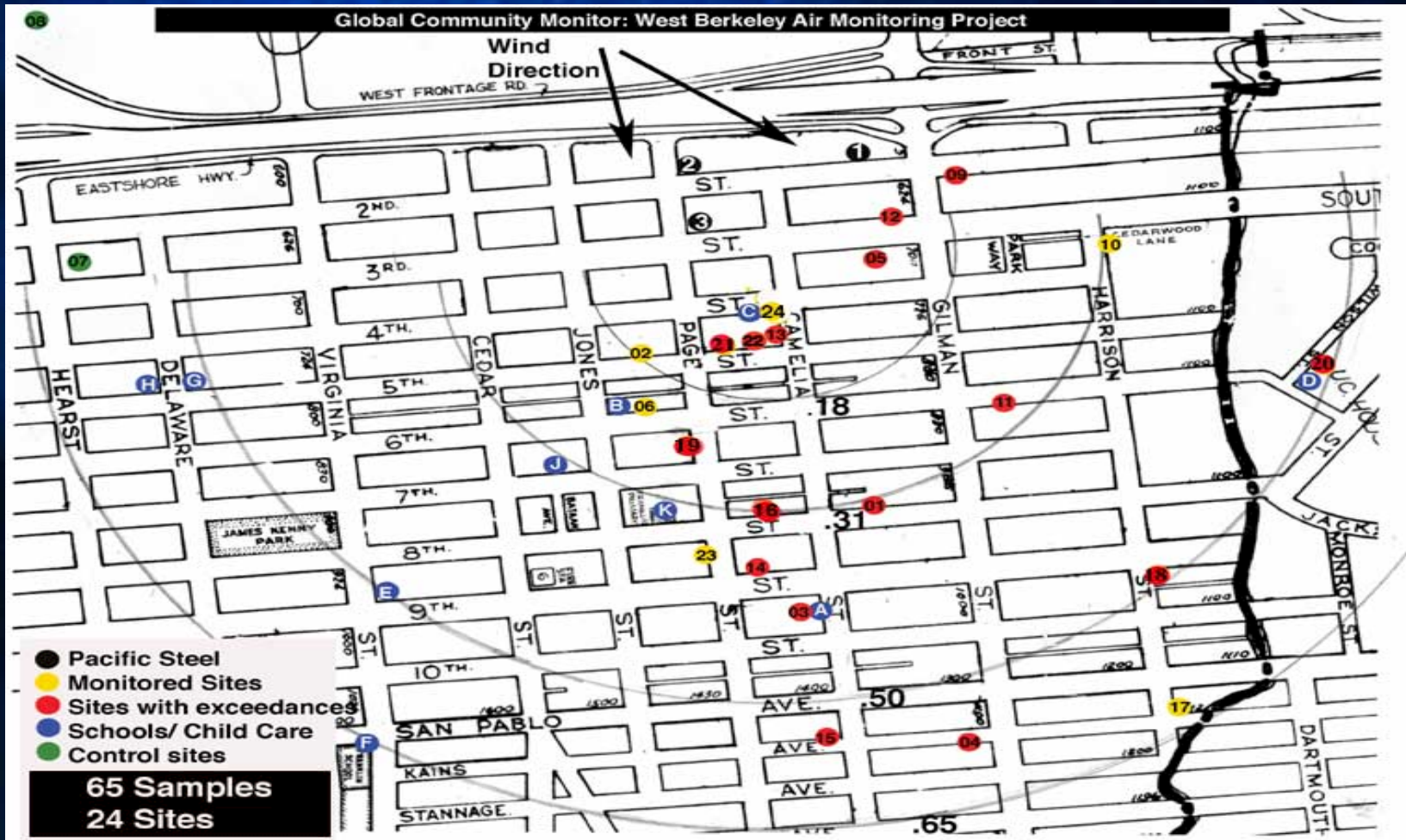
Portable Particle 'Bucket' for Community Monitoring:
Portable 'lung' breathes in and traps particles for tests



Gaps in Conventional Agency Monitoring

- Standard particulate (PM) monitoring records 24 hr concentrations of PM 10 and 2.5 microns, but does NOT:
 - Measure what the particles contain: heavy metals, PAH's, diesel, etc
 - Measure ultra-fine particles (less than 2.5) which are more hazardous
 - Recognize short duration/high dose exposures can be hazardous
 - Test at multiple sites in the affected community

Real Particle Monitoring: PM concentrations plus fingerprint the dust & Multiple locations vs. one



Community Monitoring Success Stories

- Catalyzing Model Partnerships to Monitor and Clean Up Toxic Metals Since 2008, GCM has been involved in a partnership with residents of Claymont, Delaware, GCM and the state to conduct a citizen monitoring project that has resulted in a court order for the steel facility to clean up its operations.
- The project is cited by the Delaware Department of Natural Resources as a model for a series of cancer clusters in industrial areas.
- In 2010, the innovative dust study by Claymont, Delaware residents resulted in a state order for Evraz Claymont Steel to bring emissions under control through \$35 million in pollution control upgrades within three years or face serious financial penalties.

EXHAUST_{-ed!}



Community Exposure to Diesel Air Pollution in California's Transportation Corridor



GCMonitor.org



TCWDogs.org

Identifying Gaps in Conventional Agency Monitoring: Case Study

- In 2012, our report *Exhausted* documented extremely unhealthy levels of diesel particles near California's major goods transportation corridor, the Grapevine highway (Interstate 5) that links Southern California to the rest of the state.
- The report revealed that NO state or federal agencies routinely monitor for the carcinogenic particulate in areas heavily impacted by the global trade industry.
- In addition, the report documented that conventional monitoring for PM 2.5 does NOT accurately measure ultra fine particulate matter.

From Patrol to Policy Change

- In 2011, following up on GCM's air tests and our report *Green Industry? Under the Radar, Air Pollution from Metal Recyclers*, the SF Bay Area Air District has become the first agency in the nation to draft a rule to regulate air emissions from scrap metal recycling facilities.



Building Long Term Partnerships & Moving Forward