Reform No. 6 of the Louisville Charter for Safer Chemicals reads:

TAKE IMMEDIATE ACTION TO PROTECT COMMUNITIES AND WORKERS

Take Immediate Action to Protect Communities and Workers—When communities and workers are exposed to chemicals known to pose a health hazard, immediate action is necessary to eliminate these exposures.

ABSTRACT

In many areas throughout America, thousands of industrial and military facilities and agricultural operations put large numbers of people at risk of serious injury or death due to grossly inadequate occupational exposure standards, accidental chemical releases, explosions, and fires. These factors combine to create ongoing health hazards through emissions of toxic chemicals that cause air, water and/or soil pollution. Workers at such facilities and residents of the surrounding communities cannot wait for the eventual implementation and enforcement of federal environmental laws or adequate testing of the effect chemicals may have on the human population. Our goal must be to protect all at risk communities and all at risk workers now from chemical exposures that can compromise their health.

While some companies are moving toward “greener” production, many others do the minimum required by government agencies. As evidenced by the thousands of permit violations and accidental releases, this can mean the facilities consistently fail to meet regulations, incorporating the cost of fines and penalties into the cost of doing business and passing that cost on to product consumers. Combined with the “revolving door” of employment between government agencies and the companies they regulate, this can result in very poor oversight.

Our goal must be to protect all communities and workers—whether they are organized in their own defense or not—from chemical exposures that can compromise their health. Implementation of the workplace Hierarchy of Health and Safety Controls and improved and coordinated by the Environmental Protection Agency, the Federal Emergency Management Association, the Occupational Safety and Health Administration, Centers for Disease Control and State government agencies and legislatures are needed.

By requiring all companies to protect workers and the community fully, companies will feel increased pressure to phase out hazardous chemicals and be motivated to find safe substitutes. When workers and the community must be adequately protected, facilities will either have to fully incorporate the high costs of engineering controls or find safer—and less expensive—ways to manufacture their products. Despite industry rhetoric to the contrary, pollution prevention and clean production can actually be tremendous cost-savers, thereby helping the local and national economy.
Terms Used in this Paper

Community: refers to those who live along the fenceline of polluting industries.

Fenceline: This term refers to a community’s physical proximity to the property line of a chemical manufacturing facility, chemical-using facility, military chemical disposal/storage facility, or agricultural operations. The property lines of these facilities are usually delineated by a fence. Used more broadly, “fenceline” communities are those that are within a distance of polluting facilities such that they are impacted by pollution from the facilities, for example, through chemical spills, plant failures, accidents, routine (permitted and fugitive) air pollutant releases, groundwater contamination or pesticide drift. This term refers to a community’s physical proximity to an area of industrial, military or agricultural production, storage, use or disposal.

Exposed: means having come into contact with a harmful material in air, water, soil or through the manufacturing process. Exposures can be assessed through biomonitoring, personal and area sampling, computer modeling, sampling of contaminated media.

Health hazard: refers to a possible negative health impact, based on at least one study conducted in accordance with established scientific principles. Chemicals that pose “health hazards” include those that are carcinogens, radioactive, toxic or highly toxic agents, developmental toxins, reproductive toxins, irritants, corrosives, sensitizers, those that harm the liver, kidneys or blood, neurotoxins, endocrine-disrupting chemicals, and agents which damage the lungs, skin, eyes, or mucous membranes.

Immediate action: directly addresses the source of exposure and provides a remedy that ends that exposure. When possible, such action must be done under existing laws and regulations, while simultaneous efforts are made to press for meaningful changes to chemicals policy at the state and federal level that support broader protections.

Eliminate: means to remove or prevent the exposure. There are a wide range of mechanisms for eliminating worker and community exposures to chemicals that pose health hazards. For example:

The “Hierarchy of Health and Safety Controls”: tells us that elimination or substitution of hazardous materials is the first and best step to preventing toxic exposure. Within the hierarchy, elimination and substitution are the “most effective” protections. Engineering controls are second (e.g. ventilation systems). Warnings are third (e.g. computer warnings). Training and procedures or administrative controls are fourth (e.g. Hazard Communication Training) and utilization of personal protective equipment is the least effective or last option for protection (e.g. respirators or clothing).

Environmental Justice: A vast majority of hazardous facilities (including landfills, chemical plants, chemical-using facilities, incinerators and other facilities where dangerous weapons or chemicals exist) are located in communities of color and low-resource communities. Environmental Justice is the fair treatment and meaningful involvement regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. The definition was expanded to a set of principles developed in 1991 at the People of Color Environmental Leadership Summit. The principles of Environmental Justice provide an alternative to institutional environmental racism by declaring, among other things: the right of all peoples to live free from the threat of toxic chemicals and other harmful pollutants, that public policy must be based on mutual respect and justice for all peoples, free from any form of discrimination or bias; the fundamental right to political, economic, cultural and environmental self-determination of all peoples; and the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.

Just Transition: Just Transition is a means to achieving sustainability. Just Transition is concerned with preserving and expanding the community assets of jobs, income, and tax base presently being provided by those toxic-related facilities undergoing transformation toward elimination of toxic exposures. Unionization, job security, worker benefits, seniority, safety, living wage, affir-
Problem Statement

In many areas throughout America, thousands of industrial and military facilities and agricultural operations put large numbers of people at risk of serious injury or death due to grossly inadequate occupational exposure standards, accidental chemical releases, explosions, and fires. These factors combine to create ongoing health hazards through emissions of toxic chemicals which cause air, water and/or soil pollution. Workers at such facilities and residents of the surrounding communities cannot wait for the eventual implementation and enforcement of federal environmental laws or adequate testing of the effect chemicals may have on the human population. Our goal must be to protect all at-risk communities and all at-risk workers now—whether they are organized in their own defense or not—from chemical exposures that can compromise their health.

Environmental Injustice

One of the many factors contributing to the environmental inequities is the proximity of many low-income and communities of color to the industrial facilities that produce these environmental hazards, as documented in numerous reports and studies. Respiratory diseases such as asthma, cardiovascular disease, neurological damage, developmental and reproductive disorders, numerous cancers, diabetes, and other health conditions affect the mortality of residents of these communities—working within and living near the fencelines of industrial and military facilities—who absorb the cost of industrial production and disposal with their lives on a daily basis.

For example, in Louisville, Kentucky, residents of an area known as “Rubbertown” live near 11 different industrial facilities, all of which release toxic chemicals that produce the highest cancer risk ever reported to the EPA. Neighbors and employees of these facilities complain of high rates of asthma, cancer, diabetes, and other diseases. Rubbertown is a mix of low-income white and African American neighborhoods. This is not an isolated incident, but one of many tragedies unfolding daily.

Notably, Kentucky is one of 25 states and territories with a state OSHA plan. In all states with state plans, an opportunity exists to press immediately and forcefully for reductions in workplace exposure limits so that they are on parity with existing and more nearly health-protective environmental standards. That Rubbertown residents and plant workers both suffer from chronic disease offers an opportunity to join together to fight for better protections for Rubbertown workers and their families and remove some of local industry’s disincentives to control chemical emissions.

Workers in Harm’s Way

Unless and until non-protective workplace PELS are brought into parity with health-protective environmental standards, the best-intentioned efforts to bolster enforcement of existing standards, improve hazard communication, combat industry disinformation, develop incentives to use safe alternatives, and hold wrongdoers accountable will not protect workers and their offspring from toxic harm.
There are over 26 million chemicals and chemical compounds registered with the Chemical Abstract Service and assigned a CAS number, with approximately 100,000 commonly used in commerce. Yet, only about 500 chemicals have legally enforceable worker exposure limits, (Permissible Exposure Limits—PELs), regulated by the Occupational Safety and Health Administration. (OSHA) Still, a PEL is by no means, a measure of safety. In fact, for many chemicals, the PEL is well above a level documented to cause harm.

In the workplace, existing exposure standards for carcinogens and developmental toxins are not health-protective at all. Unless and until the gap between workplace and environmental exposure standards is closed and parity achieved, the challenge of eliminating exposures will remain that much harder, costly, and frustrating for all. For example, there are 68 chemicals known to the State of California to cause cancer or reproductive harm that are either totally unregulated by Cal-OSHA or regulated only for non-cancer effects such as irritation.

The same huge disparity between workplace and environmental protections against known carcinogens and developmental toxicants exists everywhere. The same rationales for closing the gap apply everywhere as well. MSDSs and other hazard communications wrongly imply that compliance with PELs and TLVs protects against cancer and reproductive harm. Chemical manufacturers invest heavily in challenging sound science, and seek to obscure the body of evidence that chemically exposed workers suffer disproportionately from cancer and chronic disease. Chemical manufacturers are well aware not only of the irrelevance of PELS when workers are exposed to mixtures but also of the vast disparity between occupational and environmental PELS.

Environmental containment is harder and more costly when workplace emissions are out-of-control: Requiring real controls on workplace toxics creates incentives for industrial chemical substitution that do not exist with the current weak PELs; the employer who does not have to invest in engineering controls to comply with a chemical’s PEL lacks a clear economic incentive to stop using the chemical; legal remedies for industrial disease too often provide too little too late. Legal systems impose only modest fines and penalties for the kinds of employer negligence and failures to warn that lead to serious worker illness and death; “No fault” workers compensation systems provide no real incentives to prompt employers to improve working conditions.

Take the case of ethylene dibromide, used as an anti-knock agent, a solvent for resins, gums and waxes, making dyes and drugs, for waterproofing, and as a pesticide for grains and fruit. “The current Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs) for ethylene dibromide are 20 parts per million (ppm) parts of air as an 8-hour time-weighted average (TWA) concentration, 30 ppm as an acceptable ceiling concentration with a maximum duration of 5 minutes, and 50 ppm as an acceptable maximum peak.”

By contrast, “The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL) for ethylene dibromide of 0.045 ppm as a TWA for up to a 10-hour workday and a 40-hour workweek and 0.13 ppm as a 15-minute ceiling limit. NIOSH considers ethylene dibromide a potential occupational carcinogen.” The American Conference of Governmental Industrial Hygienists (ACGIH) “Recommends that exposure by all routes be controlled to levels as low as possible.” However, neither ACGIH’s nor NIOSH’s recommended exposure limits carry the force of law and thus there are no legal consequences when employers exceed NIOSH or ACGIH recommended exposure limits.

The U.S. Environmental Protection Agency, on the other hand, “has found [ethylene dibromide] EDB to potentially cause the following health effects when people are exposed to it at levels above the Maximum Contaminant Level (MCL) for relatively short periods of time: damage to the liver, stomach, and adrenal glands, along with significant reproductive system toxicity, particularly the testes. EDB has the potential to cause the following effects from a lifetime exposure at levels above the MCL: damage to the respiratory system, nervous system, liver, heart, and kidneys; and cancer.” EPA has set the enforceable MCL for drinking water at 0.5 parts per billion, but has set the laudable goal based solely on possible health risks and exposure, called Maximum Contaminant Level Goal at zero. Again, this goal is not the same as a standard for which a violation will result in a citation. Still it is critical to understand that for many hazardous chemicals there is no known safe level, period. As The American Petroleum Institute stated
back in 1947: “The only safe level of exposure to benzene is zero.”

This dramatic difference is just one example of the ways in which different agencies allow different levels of exposure—and that’s only in the case of the 500 chemicals for which OSHA has set an enforceable standard. Weak as these standards are, for the vast majority of chemicals on the market today—approximately 99.5%—there is no enforceable worker protection level.

Currently, to keep employee exposures below the PEL, employers rely on the simplest and least expensive approach: personal protective equipment such as gloves and respirators, which is often woefully inadequate. This leaves chemical levels in the plant—and escaping into the community—dangerously high. Obviously, eliminating the possibility of exposure through product substitution is the most desirable approach.

One fundamental tension that must be addressed is that while some companies are moving toward “greener” production, many others do the minimum required by government agencies. As evidenced by the thousands of permit violations and accidental releases, this can mean the facilities consistently fail to meet regulations, incorporating the cost of fines and penalties into the cost of doing business and passing that cost on to product consumers. Combined with the “revolving door” of employment between government agencies and the companies they regulate, this can result in very poor oversight. Our goal must be to protect all communities and workers—whether they are organized in their own defense or not—from chemical exposures that can compromise their health.

How to Take Immediate Action

The challenge of calling for “immediate action” is that the laws and regulations needed to require such action are missing—either because they have not been enacted, they are currently inadequate to the task, or they are poorly enforced. While efforts are made to reform overarching policy in ways that reduce or, ideally, eliminate the need for after-the-fact protections, the following reforms are needed now to protect those who already suffer at the hands of our failed chemical policy: workers and those who live along the fenceline.

To be responsible to their workers and host communities, companies should voluntarily do the following: Implement the Hierarchy of Health and Safety Controls. When health hazards are identified, companies should be required to implement a hierarchy of health and safety measures—done through engineering controls, administrative actions, and the use of personal protective equipment—that would control exposure limits. Within the hierarchy, elimination and substitution is the “most effective” protection against toxic exposure (see Substitution Paper #1), engineering controls is second (e.g. ventilation systems), warnings are third (e.g. computer warnings), training and procedures or administrative controls is fourth (e.g. Hazard Communication Training) and utilization of personal protective equipment (PPE) is the least effective or last option for protection (e.g. respirators and safety glasses).

If there is an urgent potential health threat on workers or the neighboring community from facility operations, prompt action must be taken to control chemical exposures and to reduce or eliminate any risk of short or long-term injury. Such action could include shutdown, replacement of failing transport pipelines, repair of faulty valves, providing houding equipment to eliminate release of toxics into work space and the general environment, providing closed loop ventilation systems and releasing exposure monitoring data that identify the potentially harmful toxin.

Prior to allowing PPE to be used as a solution the company should be required to prove that they attempted to address the exposure in ways other than using PPE. Industry often employs PPE as the first line of defense against toxic exposure but in fact it is the cheapest and least effective protection. PPE regulations are often not enforced, and/or can make the job harder for workers. Furthermore, PPE regulations within the workplace do nothing to protect neighboring communities, or the ecosystem. Instead, the company should examine process re-design, or use of a safer process altogether.
The Environmental Protection Agency, in concert with appropriate state and local authorities, must:

Require Large-Quantity Toxics Releasors to Conduct Real-Time Air Monitoring
—At facilities reporting significant toxic releases to the air, real-time, open path air monitoring using devices like the Cerex ultraviolet monitors should be installed to provide continuous information about chemicals released into the environment. The community and workers have a right to know and should have easy access to the collected data (see Right-To-Know Paper #3), without waiting for analysis by government agencies or corporations. These data should also be used to ensure compliance with all regulatory requirements.

Conduct Cumulative Impact Analysis and adjust local permissible exposure levels accordingly—Often, people are harmed by the cumulative effects of chemicals released from more than one source. This is certainly true for many communities of color and low-resource communities, where many facilities are sited in the same area. Pollution exposure limits should be set for total exposure to community residents rather than facility-specific release. This would reduce the incidence of pollution in communities that currently have disproportionate amounts of air & water pollutants, toxic emissions, and wastewater.

If chemicals are found in the community above that set threshold, the regulatory authority should develop policies that address cumulative environmental impacts and require stricter permit limits on all facilities in that community to reduce overall exposure to the lowest achievable limit. This is based on proposed environmental justice legislation in Connecticut. The “Act Concerning the Incidence of Pollution in Overburdened Communities” establishes a process for a municipality to register with the Department of Environmental Protection as an overburdened community and to require the Department of Environmental protection, the Public Utilities Control Commission, and the Siting Council to adopt regulations regarding a municipalities status as an overburdened community when considering permit applications and actions to reduce pollution in overburdened communities.

Establish Triggers for Facility Shutdowns.
—If a facility is violating any law, standard, or permit, the permitting agency oftentimes has the power to fine or shut down a facility, but is often reluctant to use their enforcement authority. Laws should be passed at the state level that allow a community to petition to have facility shut down until the facility comes under compliance. This would put additional pressure and visibility on the frequently business-friendly regulatory agencies. In the case of any temporary shutdown, workers should be paid for the time they are unable to work. In the case of a permanent shutdown, Just Transitions must be made for workers. In the case of communities impacted by pesticide or other contamination from agricultural operations, communities should have the right to demand spraying be halted until applicators can demonstrate that pesticides will not drift.

Support community following violations of permit—In the case of documented releases of chemicals in excess of the permissible exposure limits, companies should take immediate action to protect workers and communities from harm. The federal government, through
FEMA (Federal Emergency Management Authority), should provide disaster relief services for the affected community and implement procedures to temporarily remove residents from harm’s way. Also, there should be an immediate shut-down of a facility until it comes into compliance by implementing the appropriate exposure controls and workers should be fully compensated by the company when this occurs. If a facility cannot reopen due to continuing failure to comply, Just Transition of impacted workers by the company must be required. The North American Free Trade Agreement (NAFTA) required that companies shifting jobs to Mexico offer free continuing education to impacted workers. Just Transition must be required in any newly enacted chemical policy.

**Develop elements of disaster protocol for natural, terrorist and malfuncion events.**—Events in Fall 2005 have made vividly clear the need for protective emergency responses: the ongoing toxic exposures to returning refugees following hurricane Katrina’s devastation of New Orleans and explosions at the Formosa vinyl manufacturing plant in Texas reveal the inadequacy of existing programs. FEMA must acknowledge the variety of types of emergencies that may involve toxic chemical exposures and develop protocols that protect those harmed by the emergency, first responders, relief and reconstruction workers and the general public when harmful chemicals are involved. These protocols should include mapping sources of harmful chemicals, sufficient air, water and soil testing for contamination levels to determine which areas are contaminated, and to what extent, and a method for communicating this information to the public.

The United States Occupational Safety and Health Administration must:

- **Set Permissible Exposure Limits at levels below those known to cause health effects**, and bring them in line with other agencies’ thresholds for community exposure.
- **Establish Permissible Exposure Limits for all chemicals that workers are exposed to**, rather than only having enforceable limits for 0.5% (500 out of 100,000).
- **Require companies to implement the Hierarchy of Health and Safety Controls as described above.**

**State Departments of Health or Federal Centers for Disease Control and Prevention must:**

- **Establish Community-Based Environmental Health and Safety Clinics**—Local physicians—trained to identify, document, and report environmentally related diseases—should lead community-based environmental health and safety clinics and diagnose and treat people suffering from the ill effects of environmental toxins. The goal is to identify and track environmental diseases, reduce the mortality rate from these conditions and help affected communities understand how environmental contaminants cause health problems. New York is looking at Children’s environmental health clinics. Mt. Sinai School of Medicine’s Department of Community and Preventive Care is working to develop clinics across the state that can more accurately identify cases of environmental health

impacts on children. This could be used as a model for other states as well.

**State-level/regional legislation:**

*Protect workers with legislation like AB 815 in California*—This bill would close the gap between workplace and environmental Permissible Exposure Levels by directing the California Occupational Safety and Heath (Cal/OSHA) Standards Board to make use of the state health department’s risk assessments for chemicals known to cause cancer and birth defects to adopt revised or new workplace standards for any hazardous substances for which there is a quantitative risk assessment prepared or published by the Office of Environmental Health Hazard Assessment. It requires the Board to adopt revised standards by January 1, 2008 and new standards for those chemicals listed on Proposition 65 by January 1, 2009. HESIS must also meet deadlines in the preparation of revised or new permissible exposure limits.

*States and territories in which initiatives to close the gap can be launched are:* Alaska, Arizona, California, Connecticut (public employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Jersey, New Hampshire, New York, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming. The 11 states listed in bold are also among sixteen states with laws or regulations supporting environmental justice; these states may be the first tier for building powerful occupational/environmental justice coalitions.

**Create State Occupational Safety and Health Administrations**,** similar to Cali-
California's program. The Cal/OSHA Program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. The Cal/OSHA Enforcement Unit conducts inspections of California workplaces based on worker complaints, accident reports and high hazard industries. There are 22 Cal/OSHA Enforcement Unit district offices located throughout the state of California. Specialized enforcement units such as the Mining and Tunneling Unit and the High Hazard Enforcement Unit augment the efforts of district offices in protecting California workers from workplace hazards in high hazard industries. The Cal/OSHA Consultation Service provides assistance to employers and workers about workplace safety and health issues through on-site assistance, high hazard consultation and special emphasis programs, and develops educational materials on workplace safety and health topics.

Replicate the Strategic Toxic Air Reduction (STAR) program in Jefferson County (Louisville), KY. This program applies to about 170 businesses in the Louisville area, and focuses on 37 chemicals. STAR establishes a goal that no chemical from a single process would be allowed to produce a risk greater than one additional cancer case among 1 million people. It requires companies to show they have used the best technology available or have taken other steps to cut emissions before exceeding goals, and calls for the air district to work with toxic emissions from non-industrial sources, such as automobiles, trucks and the city's two airports. Companies that exceed the program's risk limit—causing one additional case of cancer among 1 million people—will have about two to four years to develop a plan to reduce emissions. Companies will have to meet those goals within about three to six years of the effective date.

Support the Right-to-Act—This goes a step beyond the right-to-know provision that provides information about what a company releases, and empowers community members to impact pollution controls and reductions directly. For example:

- Passaic County, NJ enacted a right to act law in 1998. The legislation required the County Health Department, upon petition of 25 adult residents, to set up a Neighborhood Hazard Prevention Committee of community members for a particular facility. The committee, which could also include management, union, and municipal representatives, would meet to advise management on how to correct hazards. Most important, it could conduct on-site inspections accompanied by technical experts of the committee's own choosing.
- Many unions have won safety and health committees in local contract agreements with the power to meet regularly (on employer time), inspect the workplace, investigate accidents, and direct temporary cessation of hazardous jobs.
- Western European countries and Canadian provinces enacted legislation codifying these rights in their occupational health and safety laws.
- Communities have negotiated Good Neighbor Agreements that include community inspections (with accompanying independent experts), third party audits, and other advances.
- Under the Occupational Safety and Health Act, union representatives have the right to accompany agency inspectors. Under the Surface Mining Reclamation Act, community members have the right to accompany reclamation inspectors.

Pass and Enforce Environmental Justice Policies. Acknowledge the disproportionate impact and adverse health affects of polluting facilities on low-income and communities of color and pass Environmental Justice legislation, modeled after President Clinton's Executive Order 12898 and the Environmental Justice Act of 2005. The Executive Order says, “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...” This approach, rather than being a specialty item which stands alone, would guarantee that fairness, justice, and environmental equity would be woven into all national environmental regulatory agency programs (permitting, pollution prevention, hazardous waste management, air resources, water resources, etc).

Sixteen states already have laws or regulations that strongly support environmental justice principles: Arizona, California, Connecticut, Florida, Georgia, Illinois, Louisiana, Maryland, Massachusetts, New Jersey, New York, North
Carolina, Oregon, Pennsylvania, Rhode Island, and Washington. Eight other states (Alabama, Delaware, Indiana, Kentucky, Mississippi, Montana, New Hampshire, and Wisconsin) have regulations or advisory councils that address some environmental justice issues.

Pass “Bad actor” Laws (those that authorize the State to take increasingly stringent steps where voluntary measures fail) at the state level that allow regulatory agencies to restrict, or rescind a violated permit, or to require a new permit process. New York State has such a law, which could be used as a model for other states. In any case, workers should receive regular workday compensation during any shut down scenarios. If a facility cannot reopen due to repeated poor performance, Just Transition of impacted workers by the company must be required. The North American Free Trade Agreement required that companies shifting jobs to Mexico offer free continuing education to impacted workers. This precedent must be required in any new chemical policy.

Setting Priorities
The actions above represent approaches to improve the quality of life for workers and community residents. Different approaches may work for different states or localities. Given the lack of support for fenceline and worker protections at the federal level, state or regional action is most likely to result in faster results with more publicly accountable enforcement. Also, given the frightening levels of health hazard-causing chemicals that are allowed in the workplace, tightening regulations for workers can have profound impacts for all, and thus should be given higher priority.

How Taking Immediate Action Goes Beyond Specific Localities

By adopting the approach that requires all companies to protect workers and the community fully, companies will have increased pressure to phase out the noxious chemicals and be motivated to find safe substitutes. When workers and the community are required to be adequately protected, facilities will either have to fully incorporate the high costs of engineering controls or find safer—and less expensive—ways to manufacture their products. Despite industry rhetoric to the contrary, pollution prevention and clean production can actually be tremendous cost-savers.

Therefore, taking immediate action to protect workers and those along the fenceline can serve as important mechanism for achieving broader chemicals policy reform by:

- protecting an underprotected group in the interim
- ensuring truly Just Transition, and
- providing tactics and strategies that help us get us to the final, desired result even faster.
2. Proposed by the UAW. www.cosihierarchy.org/Hierarchy%20of%20Controls%20Chart.PDF
3. For the full set of Environmental Justice Principles, see sapej.igc.org/Principles.html
4. This definition was taken from the Just Transition Alliance, www.jtalliance.org/docs/policies.html
6. States and territories with their own OSHA plans are: Alaska, Arizona, California, Connecticut (public employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Jersey, New Hampshire, New York, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming.
7. Taken from OSHA’s website, www.osha.gov/SLTC/healthguidelines/ethylenedibromide/recognition.html
8. ibid.
9. New Jersey Department of Health and Senior Services Hazardous Substance Fact Sheet on Ethylene Dibromide, Aug. 2001
12. www.epa.gov/fedsite/eo12898.htm
13. groups.msn.com/environmentaljustice-coalition/ejactof20034.msnw
14. www.dec.state.ny.us/website/ogc/egm/roc.html