Fenceline and Disease Cluster Communities: Living in the Shadow of Heavily-Polluting Facilities

By Steve Lerner

Hundreds of thousands of Americans, perhaps more, live in communities where their health is damaged by pollution from high-emission industrial facilities and military bases. These compatriots are on the frontlines of toxic chemical exposure in this country. Others live in disease cluster communities with an abnormally high incidence of a specific disease. Residents in these afflicted communities often suspect they have been made ill by the irresponsible use or handling of highly toxic chemicals, radioactive pollutants, or bio-chemical hazards.

Residents of “fenceline” communities, who live immediately adjacent to large industrial or military complexes, can point to the source of the pollution they believe is making them sick. Common sense suggests that if there are elevated numbers of cancers in a community across the street from a plant releasing thousands of pounds of cancer-causing agents, that there may well be a connection between the chemical exposure and the disease. However, proving that a chemical release caused a specific cancer is virtually impossible and circumstantial evidence does not always stand up in court.

Residents in disease cluster communities, where there is no obvious cause for the illness to which one can point, have an even harder task tracking down the source of the problem and making a case for regulatory or judicial relief. Their task is made more difficult because the burden of proof is often on them to find the source of the pollution and then provide evidence of this to regulators and the courts.

Spotty Regulatory Enforcement and Minimal Fines

Federal and state regulatory agencies, designed to prevent environmental contamination and protect public health, have, by-and-large, done a poor job of enforcing regulations to protect public health in fenceline communities. Legislators have also failed to enact strict enough pollution control standards to protect this geographically vulnerable population. As a result, industries that dump large quantities of toxic chemicals on nearby residential communities are frequently given meaningless citations or minimal fines that they are willing to pay as a cost of doing business.

Even enforcement of existing industrial air and water emissions permits is spotty at best. Typically, environmental regulations are not geared to deal with “hot-spot” problems where emissions are elevated adjacent refineries, chemicals plants, cement kilns, asphalt plants, tire manufacturers, steel and plastic plants, military bases, and other industries that produce products made from highly toxic substances. Given the scope of the problem, relatively little air, water, soil, and body-burden monitoring is done in these fenceline and disease cluster communities to see what kind of exposure residents are experiencing. Furthermore, there is an appalling absence of good medical data about disease rates in these communities because very few health studies are done in them.

To compound the problem, all populations are not created equal when it comes to their ability to withstand environmental insults without serious health consequences. It is well documented that exposure to toxic chemicals can have a devastating impact on the fetus or on infants during developmental “windows of vulnerability” when cells are dividing rapidly. With lower body weights than adults, infants and children can also be adversely affected by doses of toxic chemicals that adults can withstand without noticeable damage. Infants and children also breathe faster than adults, put their hands in their mouths more frequently, crawl and play in the grass and the dirt,

and are closer to the ground where some contaminants collect. All of these factors can contribute to higher exposures to chemical contamination for children than adults. Yet many of the regulations about chemical exposures are geared to adults and do not take into account the special vulnerabilities of infants, young children, and pregnant women. Other subsets of the population, such as the elderly, the chemically sensitive, and the sick, can also be disproportionately affected by exposure to certain pollutants.

Most Americans assume that government regulators have uniform and nationally enforced standards for safe exposure levels for toxic chemicals. Sadly, this is not the case. In many states there is a woeful absence of safe chemical exposure standards and instead out-dated occupational standards are used. This leaves industry in the position to argue that even their releases of large quantities of known carcinogens do not endanger public health.

Finally, we have very little health data about many of the new complex chemical compounds that are being rapidly introduced in industry and agriculture. We have even less information about the synergistic impact that combinations of chemicals have on human health. One would think that the precautionary principle would keep chemicals that had not been tested for their potential health impacts from being used prior to testing but this is not always true. As a result, fenceline residents are frequently unwitting and/or unwilling participants in uncontrolled experiments in which they are exposed to chemicals that have the potential to compromise health.

Problem Concentrated in Low-Income and/or Heavily-Minority Communities

Why have we heard so little from fenceline communities about the pollution burden under which they live? Part of the answer is that many of the communities located across the street from toxic hotspots are populated by low-income and/or heavily-minority, residential populations. These residents often lack the time, the expertise, or the network of connections that might allow them to successfully confront multi-million/billion dollar companies, which can afford lawyers and public relations officers to make their case. Furthermore, in some fenceline communities residents are reluctant to speak out about pollution problems because they hope to land a job at the local plant or they have family or friends who work there.

This situation -- in which heavily polluting facilities and waste dumps are disproportionately sited in low-income communities of color – has come about because some industries that emit large volumes of toxic chemicals deliberately locate heavily-polluting facilities in communities where the local citizenry has little political power and lacks the resources to effectively keep them out. Others locate in relatively sparsely populated areas and begin operations that create such degraded environmental conditions that it lowers property values. This, in turn, attracts low-income residents who cannot afford to live in areas where the air and water are clean.

Moving Toward Environmental Justice

Around the country groups of residents in fenceline communities are awakening to the threat to their health posed by large, neighboring industries. Grassroots, fenceline groups are organizing themselves and protesting the dumping of toxics in their neighborhood. Ordinary people in these vulnerable locations are schooling themselves in data from the Toxic Release Inventory and learning about what exposures to chemicals in the parts per million and parts per billion can do to their health. Some of these grassroots organizations arise spontaneously with little funding or outside help. Others are organized by environmental justice, social justice, and environmental activists who come into the community and help residents understand and articulate what they are being exposed to and what they can do about it.

Residents in some of these communities have been successful in a variety of ways. A few resident groups have forced companies that caused environmental problems to relocate them at

the corporation's expense. [1] Some have kept heavy industry from moving into their neighborhood. A number have succeeded in requiring industry to invest in the installation of additional or improved pollution control technologies to reduce their emissions. Other techniques that have proved effective include: political organizing, lawsuits, public awareness campaigns, citizen audits of companies, good neighbor campaigns, media work designed to attract coverage about pollution problems and environmental illnesses, and citizen air, water, and bio-monitoring projects.

More remains to be done to keep America from being divided into livable communities, where the environment is relatively clean; and "sacrifice zones," where residents are exposed to the toxic by-products of a production process that keep goods artificially cheap and corporate profits rising. Many Americans do not realize that part of the reason they are able to buy goods so cheaply is that they are made by companies that use toxic chemicals where more benign feedstocks could be substituted; and that fail to invest in the best available pollution control technologies. As a result, these companies are able to "externalize" their costs by polluting and fenceline residents suffer the health consequences.

One possible solution to this dilemma would be to provide fiscal incentives for businesses to use fewer toxic chemicals in their production process. Our tax system could be used as an efficient tool to provide these incentives by substituting some of the taxes currently levied on income with a toxics tax on goods made with toxic chemicals. ("Tax Bads Not Goods.") This would make it relatively cheaper to produce goods in a more ecologically sensitive way and it would give consumers a price feedback mechanism by which they could distinguish the untaxed (cheaper) goods made in a way that protects public health.

Despite these promising initiatives and ideas for reform, there remains a pressing need to educate Americans about the problems experienced by residents in fenceline and disease cluster communities. This is a issue that is often invisible to the vast majority of Americans who do not live next to plants that release substances that cause cancer, nervous system disorders, developmental delays, respiratory problems, skin disease, allergies, headaches, and nose bleeds among other ill effects. If average Americans were to visit fenceline and disease cluster communities and see for themselves the damage done to the health of those who live in these neighborhoods, many of them would be shocked and demand to know why so little is being done to protect these people.

More media coverage and public education about the peril faced by residents in fenceline communities has the potential to increase pressure on government regulatory officials to do their jobs properly and protect the health of residents in all parts of the country including in low-income, fenceline neighborhoods. Residents who organize and make a fuss about pollution – by staging protests and bringing in the media -- can improve regulatory enforcement and require corporations to clean up their operations. Most corporations care deeply about their image and understand that, in a competitive market, their profits may be reduced substantially if they earn a reputation for not caring about how their toxic emissions cause disease among neighboring residents. These give local citizens leverage even with large corporations.

Commonweal Fenceline and Disease Cluster Series

With this in mind, over the next two years Commonweal will publish 24 stories about fenceline and disease cluster communities on this website. We will go into these neighborhoods and talk with the residents to see what they experience, interview activists who are involved in organizing protests, and talk with corporate and regulatory officials to see what is being done about the problem. In this fashion we hope to shine a light on Americans who live in the shadow of highly-polluting facilities and demand that measure be taken to protect their health.

This series of reports will start with the story of Addyston, Ohio, a small, working-class, company town outside Cincinnati, located immediately adjacent to the Lanxess Plastics plant. After residents suffered for years with unexplained illnesses, organizers from Ohio Citizen Action came to town and started knocking on doors and talking to residents about their health and about the odors coming from their neighborhood industry. Before long, a grassroots group was organized to protest pollution coming from the plant, the media began to pay attention to accidental releases from Lanxess, air monitoring was done in an elementary school across the road from the plant, the school was shut down, and a state study found cancer rates were abnormally high in town. Since then Lanxess has embarked on a multi-million dollar upgrade of its pollution control technologies.

Addyston's story and others like it will be posted on the Collaborative on Health and the Environment website at: www.EealthandEnvironment.org.

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ENDNOTES

[1] See Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor by Steve Lerner, MIT Press, 2005.