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#643 - Studying A Town To Death
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Lompoc, California is a small city of 42,000 people that lies within a valley along California's central coast, about 100 miles above Los Angeles. A 10-minute drive from the Pacific Ocean by 7 miles of rich, flat farmland. Here, farming is a year-round activity, so pesticides waft up the valley into the city most of the year, carried by the ocean breeze.

According to California's state Environmental Protection Agency (Cal EPA), the people of Lompoc have been lodging formal complaints about pesticide drift and health problems for at least six years, since 1993. George Rauh, a teacher who moved to Lompoc in 1989, says, "For the first two years, I thought it was great. Then I got chronic bronchitis. I had never had anything like it, and I knew something was wrong. I started asking around and I found many, many people had problems -- bronchitis, asthma, headaches, the flu when it wasn't flu season, even reproductive problems, and a host of other ailments. It was obvious that there was something really wrong." In 1992 Rauh and his neighbors formed Volunteers for a Healthy Valley and began asking local and state health officials to pay attention.

Now, if you have ever complained to your health department about an environmental problem, you know that the response is rarely swift or decisive. Of course this is not always true, but as a general rule public health officials are reluctant to admit that there is a problem, or even to look for a problem diligently. There seem to be two main reasons for this: If health officials admit there is a problem today, they are admitting that someone failed to do their job in the past. Secondly, if a problem is identified today, health officials are obligated to do something about it, and this often puts them into conflict with one or more polluters -- many of whom have considerable political clout. Therefore, despite what a civics textbook may say, public health officials often do not respond positively when the public asks for help. Indeed, officials often begin to define the victims of pollution as "the problem" and spend their time trying to discredit the victims instead of looking into the underlying public health questions.

Lompoc is no exception to this general rule. After getting no satisfactory answers from state officials for more than a year, Volunteers for a Healthy Valley conducted a letter-writing campaign to Region 9 of U.S. Environmental Protection Agency (U.S. EPA). U.S. EPA responded by asking Cal EPA's Department of Pesticide Regulation (DPR) to conduct a study. Reluctantly, DPR then asked Cal EPA's Office of Environmental Health Hazard Assessment (OEHHA) to study health conditions in Lompoc.


Meantime, Cal EPA's Department of Pesticide Regulation (DPR) decided to study pesticide use in the Lompoc Valley. They initially proposed to study two pesticides "but we laughed them off the stage," says Rauh. Then DPR agreed to study all pesticides used in the valley. Since 1991, California has maintained detailed records of pesticide use -- the only state in the nation to do so. Six months later, DPR reported that about 50 different pesticides are used regularly in the Lompoc Valley, many of them carcinogens and many of them nerve poisons. [1]

In June, 1998, Cal EPA announced the results of its three-year health study:[2]

** The people of Lompoc have 37% more lung cancer than people in the surrounding three counties (San Luis Obispo, Santa Barbara, and Ventura). This finding was statistically significant at the 0.01 level -- an unusually strict statistical standard. (It means that there was only 1 chance in 100 that the results of the study occurred by chance.) Another part of the study found that the incidence of chronic obstructive pulmonary disease (COPD) was low among Lompoc residents, "suggesting a lower prevalence of smoking among adults." High lung cancer and a low smoking rate. Curious.

The study also found elevated rates of breast cancer, kidney cancer, liver cancer, cancers of the female reproductive organs, non-Hodgkins lymphomas, multiple myelomas, all cancers combined, and all cancers combined excluding lung cancer. However, none of these elevated rates passed the test of significance at the 0.01 level, so Cal EPA disregarded the pattern as meaningless statistical flukes.

** The incidence of 7 kinds of birth defects was investigated; nothing unusual turned up.

** Cal EPA studied what proportion of hospital discharges in Lompoc was attributable to particular illnesses. (Hospital discharge records are assumed to represent serious illnesses, after subtracting out normal births.) The study divided hospital discharges into 18 groups of illnesses. Of the 18 groups, two were elevated in Lompoc -- a "respiratory" group and a "reproductive" group. For the respiratory group, bronchitis and asthma were consistently elevated the most. Compared to the surrounding area, people leaving the hospital in Lompoc had 69% more bronchitis and 58% more asthma. By a different measure, Cal EPA found asthma and bronchitis 85% more common in Lompoc than in the three surrounding counties. Bronchitis occurred in the young and the old; asthma was elevated only among adults.

The "reproductive" group of illnesses included abnormal birth outcomes and female reproductive cancers. Four other groups of diseases were considered "suggestive" -- female breast cancer, pleurisy-pneumonia, headaches and seizures, and all respiratory malignancies.

Abnormal birth outcomes showed "a strong pattern for infant respiratory conditions." Cal EPA reported. Compared to infants in surrounding counties, Lompoc infants had a two-fold or greater chance of being hospitalized for respiratory disorders.

In sum, Cal EPA now knew that 50 pesticides were being used in a geographic setting that channeled drifting poisons into a residential community on a continuing basis. By this time, people had been complaining for 5 years of bronchitis, difficulty breathing, headaches, and flu-like symptoms, among other medical complaints. Using rigorous statistical criteria, Cal EPA's three-year health study had documented 37% more lung cancer, 69% more bronchitis and 58% more asthma in Lompoc, compared to surrounding communities, plus a two-fold increase in respiratory problems requiring hospitalization of infants.

Given this information, ordinary citizens in Lompoc saw a pretty clear pattern. They came to believe that they are being poisoned by year-round exposure to a thin soup of mixed pesticides. But Cal EPA scientists concluded only that "without information on potential exposures, we can only speculate as to why respiratory illnesses appear to be elevated in Lompoc."

So another study is begun. The plan is to monitor the air in Lompoc for all 50 pesticides for a year. This will provide the exposure data that the scientists say they need to reach a conclusion. However, such a study requires $142,000 in funds and Cal EPA drags its feet and the state legislature drags its feet. So instead of a year-long study of 50 pesticides, Cal EPA can only conduct a one-month study of 12 pesticides late in the growing season of 1998.

The results of this study are released in February, 1999. According to the Department of Pesticide Regulation (DPR), which conducted the study, 179 air samples were taken during a 28-day period. Of these 179 samples, 140 (78%) showed no detectable levels of pesticides, DPR said. Furthermore, the study looked for two metals,
manganese and aluminum, because these are found in three common pesticides, maneb, mancozeb, and fosetyl-aluminum. Manganese and aluminum were not elevated in the air in Lompoc "suggesting no appreciable exposure" to these 3 pesticides, DPR said.[3] This is now known as the "Phase I" study.

According to the WALL STREET JOURNAL, Lompoc farmers "seized upon the Phase I numbers as proof that pesticides pose no health threat to valley residents."[4] In sum, it looked as if Volunteers for a Healthy Valley had been proven wrong.

However, when DPR's data were subjected to close scrutiny by a former chemistry professor from the University of California at Berkeley, the picture changed. Dr. Susan Kegley, now staff scientist for the Pesticide Action Network in San Francisco, found that "DPR made numerous mistakes -- and led the public to believe that fewer than one quarter of air samples taken in Lompoc contained pesticides. An independent and scientific analysis shows that pesticides were detected in 97% of the air samples..."[5] Kegley also pointed out that DPR had waited six weeks before analyzing samples of pesticides that would degrade within a week's time. In sum, "DPR drew erroneous conclusions from data that were not collected in a scientifically valid way," Kegley wrote.

Kegley was particularly scornful of DPR's study of manganese and aluminum. She wrote, "Because aluminum and manganese are very abundant in soils, looking for the 'extra' aluminum and manganese as an indicator of exposure to these pesticides is like adding a bucket of water to the ocean and looking for the 'extra' water. This method is not a valid one for analysis of metal-containing pesticides, and it is impossible to conclude that the data show there is 'no appreciable exposure.'" No one has refuted Kegley's criticism of Cal EPA's study.

In sum, Cal EPA -- the health officials responsible for determining what is killing people in Lompoc (few people survive lung cancer) and making others sick -- were shown to be incompetent, or liars, or both.

As far as the people of Lompoc are concerned, they now have sufficient data: excess illnesses and deaths have been rigorously documented; the use of 50 pesticides has been documented; and 97% of air samples taken in their town contain one or more pesticides.

What is the response of California health officials? Are they ready to advocate pollution prevention and the precautionary principle? Are they ready to help Lompoc farmers phase out expensive, toxic pesticides and shift to organic farming methods that produce higher yields and higher financial returns[6] than chemical methods? No. Cal EPA now wants to conduct a new, longer study of air quality in Lompoc before reaching any conclusions.

Why are health officials studying this town to death and refusing to act? Perhaps it is because 4 million people in California live adjacent to fields that are sprayed year round with dangerous pesticides.[7] If health officials confront the truth in Lompoc, they will be opening a Pandora's box of trouble for chemical agriculture and for the chemical corporations that invented it. If they really open that box, no telling where it might end.

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)