



Dear EPA Administrator

The new Administrator of the Environmental Protection Agency, Carol Browner, recently distanced herself from the extreme position taken by the Natural Resources Defense Council (NRDC) and others who have petitioned the courts to require EPA to follow a strict application of the Delaney Clause in regard to the use of pesticides, no matter how minimal the residues may be in processed foods. In response to this act of courage and conviction, Larry Gordon, Visiting Professor of Public Administration, University of New Mexico, wrote the following letter of support and encouragement:

Right on! I commend you for having the fortitude to speak the scientific truth regarding the Delaney clause as it is presently worded and construed. And I commend you for crossing swords with the NRDC which brought us the unfounded alar scare, along with numerous other false predictions of catastrophe which have created public hysteria, inappropriate public policy and unnecessary expenditures of public and private funds.

The Delaney requirement was more appropriate before scientists could measure chemicals in the parts per billion range. It has now outlived its usefulness and should be changed. Given the nature of animal tests, it is not surprising that half of all pesticides tested turn out to be carcinogenic. The same type of tests show nearly half of all natural plant pesticides tested are rodent carcinogens. Noted University of California scientist Bruce Ames has stated: "99.99% of all pesticide carcinogens now ingested by humans are natural, that is generated as defense mechanisms within the plants themselves .... When I realized that we were already ingesting 10,000 times as many natural carcinogenic pesticides as synthetic, and human health keeps getting better, I began to put risk into perspective."

It is probable that almost every plant product in the supermarket contains natural carcinogens. Among foods which contain natural pesticides that cause cancer in rats or mice and are present at levels ranging from a few parts per billion to 4 parts per billion are anise, apples, bananas, basil, broccoli (perhaps the reason President Bush didn't like broccoli), Brussels sprouts, cabbage, cantaloupe, carrots, cauliflower, celery, cinnamon, cloves, cocoa, comfrey tea, fennel, grapefruit juice, honeydew melon, horseradish, kale, mushrooms, mustard, nutmeg, orange juice, parsley, parsnips, peaches, black pepper, pineapples, radishes, raspberries, tarragon and turnips.

It must be emphasized that the issue of how risk is identified, assessed, defined, understood, prioritized, communicated and managed, and the manner in which perception, emotion and hysteria are handled, is among the most critical environmental problems of today and

tomorrow. Resources can be best allocated to address actual and significant risks, yet public perception often drives the response of public officials. EPA must understand the role of science in determining public policy. It is necessary to recognize the misuse or absence of science in an effort to justify a position or alarm the public.

Specifically, EPA should:

- Recognize that the media is frequently a conduit for an abundance of misinformation and a shortage of critical scientific inquiry behind many of the "catastrophe-of-the-week" issues.
- Recognize that if all the alleged environmental catastrophes were scientifically factual, we would have many times the morbidity and mortality rates that we actually have. The interests served by numerical exaggeration include those entities whose funding or political importance varies with the hysteria surrounding a particular issue. Environmental health and protection personnel and agencies must refute scare stories which are not based on sound epidemiology, toxicology and risk assessment.
- Question reports which base a problem on finding one anecdotal example, e.g., one cancer patient near a hazardous waste site, that capitalizes on appeal to the emotions. Epidemiologists term this the "I know a person who..." syndrome.
- Beware of individuals and organizations who use "science" to front and further their organizational and political objectives. Peer-reviewed science does not depend on media manipulation, Hollywood personalities or slick public relations.
- Beware of "predicted" morbidity and mortality figures pulled out of the air by self-styled "experts."
- Be scientifically critical. Too many so-called "professionals" are actually only regulators and functionaries, ever ready to accept, promote and enforce the current party line or misinformation. Examples of environmental extremism surround the issues of radon, asbestos removal, Alar, below regulatory concern (BRC) disposal of low level radioactive wastes and the Waste Isolation Pilot Project.
- Be wary of accepting problems based only on extrapolations and correlations rather than on good epidemiological and toxicological cause-and-effect studies. The science of epidemiology attempts to sort out from myriad chance correlations those meaningful ones which might involve cause and effect. It is important to understand, however, that epidemiological methods are inherently difficult and that it is not easy to obtain convincing evidence. There are also many sources of bias. For example, because there are so many different types of disease, by chance alone one or more of them may occur at a higher frequency in any given small population. The science of toxicology provides evidence as to whether correlation is credible.
- Recognize that there is frequently a difference between science based facts and public perception.
- Always question, challenge, investigate alternative solutions, and analyze existing and proposed regulations and standards to determine the validity of their scientific base. Existing programs, standards and regulations tend to be magical and take on a life of their own. They are seldom challenged. A standard in motion tends to remain in motion in a straight line unless impeded by an equal and opposite force. EPA should provide the scientific "equal and opposite force" to challenge the prevailing understanding of risk.
- Place a high value on scientific excellence when developing public policy.

- Remember that people tend to overestimate risk from rare but dramatic events. They also tend to underestimate common events such as unintentional injuries and deaths, and the slow homicide and suicide caused by tobacco. They disdain changing preconceived notions about risks and priorities. People are quick to dismiss evidence as erroneous or biased if the information contradicts their preconceived opinions.
- Understand that many Americans, and even some environmental practitioners, seem to exhibit a love of calamity. Some extremists are applauded and profit from false predictions of environmental calamity, some of which become translated into public hysteria and public perception, thence into political action, and finally into expensive and unnecessary programs and public policy. Those promoting such hysteria accept no responsibility for their false statements and predictions.
- Understand the problem before proposing a solution, and fit the solution to the problem rather than the problem to the solution.
- Realize that the proper standard for environmental health and safety is not "zero-risk," but "net societal benefit," or "net impact." Zero-risk is not ordinarily economically or practically attainable, and the cost of pursuing zero-risk for one particular issue precludes resources essential for addressing more important problems.
- Understand that an unnecessary or poorly designed or overly expensive program becomes even more difficult to stop or alter once a bureaucracy or an industry is developed to promote the program. The issues of asbestos removal and radon detection and management provide excellent examples.
- Utilize the environmental health and protection model In the decision-making process for environmental health and protection issues, rather than the medical model. The former looks at the community, nation or planet as the patient and, in principle, allocates resources to maximize health and environmental quality for all. The latter, once a pathology is diagnosed, provides everything possible to cure the pathology without regard for resources, priorities or effects beyond that one particular patient.

*Sincerely,*

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E.N.D./SPRING 1993