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Asbestos, Sound Science, And Public Perceptions

Why We Need A New Approach To Risk

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Thank you, Chris [DeMuth], for that kind introduction; I also want to thank you and the American Enterprise Institute for sponsoring this very timely conference on business and the environment.

Business always has had, always *will* have, a crucial role in environmental protection; and that role is probably more in the spotlight now than at any time in the past. At the same time, it's clear that the impact of environmental protection efforts on the economy as a whole, and on the operating expenses of individual businesses, is growing—and it's growing rapidly.

Consequently all of us have a common interest in finding the most effective, most efficient means of ensuring the environmental integrity of our nation and our planet. And I want to encourage you, both during this conference and after you've had some time to reflect on your discussions here, to come up with some suggestions for innovative new ways to engage the marketplace in environmental protection.

Now in saying that, I'm aware that there are some significant barriers to overcome before we can expect the widespread adoption of environmentally-oriented business and agricultural practices. I recognize, for example, that efforts to develop and implement cleaner industrial processes and environmentally friendly products is risky—it is time-consuming—and it's expensive. It demands the active participation and support of the public sector as well as the commitment and good-faith efforts of the private sector.

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Not long after my appointment was announced, I had occasion to make the customary rounds of the members of the Senate Environment and Public Works Committee, to whom it would fall to consider my nomination.

One of my most memorable visits was with Senator Moynihan; as Chris DeMuth can tell you, conversations with Senator Moynihan are *always* memorable.

He sat me in a very nice Windsor chair, about which he said, "This is a Republican chair...this is appropriate, I think, for the new EPA Administrator to sit in."

Then he perched his little half reading glasses back on his nose, and he fixed these two fingers, picador-like, on me.

And looking down his nose, he said, "Above all—above all—do not allow your agency to become transported by middle-class enthusiasms!"

Well, I assured him that wouldn't happen; and later I came to a conclusion about what he meant. What he meant, I decided, was, "Respect sound science; don't be swayed by the passions of the moment."

I take it that all of us at this conference are dedicated to avoiding being transported by temporary enthusiasms; I most of all.

I am, I was, I will be. In the end, sound science is our most reliable anchor in a turbulent sea of environmental policy and regulation. It can help a very hard-pressed agency, the focal point of enormous public expectations, to administer eight ambitious statutes with highly constrained resources; to try to fulfill, on a virtually level operating budget, all the obligations layered upon us over the years by the Congress—acting, ultimately, on behalf of the American people. Sound science can help us set priorities based on risk, to the extent that we are able to do so within the scope of our statutory mandates.

Indeed, the rigorous analysis of risk is fundamental to *all* of EPA's regulatory programs. Without some way of determining relative levels of risk, we would quickly become mired in a regulatory swamp, wherein all problems were equally important; all risks would have to be addressed with equal urgency; and accordingly, *nothing* would get done.

Unfortunately, as Senator Moynihan and many others have noticed, we are much closer to that kind of regulatory swamp than any of us would like.

Too often our priorities are set, not by our best judgment about relative levels of risk, but by public opinion—opinion only partially informed by our efforts to build a dependable decision-making framework on a foundation of sound science.

The perceptions and priorities of the general public are not always well aligned with what you and I might think of as "real" risks to public health and the environment. And when decision-making comes down to a choice between the judgment of professional scientists and government officials on the one hand, and the will of the people on the other, it's no contest: the people win.

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Now, that is as it should be; in our democratic system, government is, and *should be*, sensitive to the concerns of the public.

But it is also true that legislators and regulators alike—not to mention the judicial system—can become absorbed in responding to public perceptions that are driven by the dramatic, the sensational, and the well-publicized. And the price we pay for this responsiveness can be a diminished ability to deal effectively with less obvious, but perhaps more significant, public health and environmental problems.

It is here, in the public arena where "real" risks and public perceptions collide, that the regulatory process can slow to a crawl; where decisions, once finally made, are challenged, delayed and even overturned; where consistency and predictability go out the window, costs grow exponentially—and the commercialization of new products and technologies is stymied.

An excellent example of a clash between real risks and public perceptions is the current controversy over asbestos in the nation's schools and public buildings.

As a conservationist and as a lawyer, I have a good deal of experience with what has been called "the law of unintended consequences."

Our experience with asbestos is a good illustration of that law in action, in two very different ways:

First, in terms of the unanticipated adverse health effects caused by a substance that was regarded, earlier this century, as a miracle fiber, widely used in construction and many other applications;

And second, in terms of how the public, and the marketplace, have responded to the government's efforts to *deal* with those health effects.

Several decades ago, scientists discovered that exposure to high levels of asbestos among shipyard and other workers had caused a variety of serious, sometimes fatal, diseases, including asbestosis, mesothelioma, and lung cancer. In response, both EPA and the U.S. Occupational Safety and Health Administration (OHSA), through the 1970s and 1980s, established and then tightened regulations to limit exposure to the public at large, and to asbestos workers in particular.

In addition, Congress passed special legislation in the mid-1980s establishing a comprehensive asbestos inspection and control program for the nation's primary and secondary schools—a program aimed at protecting children and school maintenance and custodial workers from exposure to airborne asbestos fibers.

Most recently, the unusually compelling medical evidence on asbestos led to my decision last year to phase out virtually all *remaining* uses of asbestos in consumer

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products, in order to prevent the introduction of additional asbestos into the environment.

Now at this point, one might have thought the basic regulatory structure and the necessary public understanding were in place to bring the asbestos problem under control.

No such luck; in recent months the "law of unintended consequences" has reappeared to haunt the asbestos program.

Based on recent meetings I have held with school officials—including a delegation representing the U.S. Catholic Conference—on discussions with members of Congress, and on a recent spate of inaccurate and sometimes tendentious articles and columns in the news media, it's clear to me that a considerable gap has opened up between what EPA has been trying to say about asbestos, and what the public has been *hearing*.

EPA has been trying, especially in the last few years, to emphasize the importance of managing asbestos "in place" whenever possible. We've stressed that approach because the unnecessary removal of asbestos-containing materials may actually pose a *greater* health risk than simply leaving them alone—so long as the materials are undisturbed and unlikely to be disturbed.

As is true with any hazardous substance, the mere *presence* of asbestos poses no risk to human health; only when asbestos fibers are released into the air and breathed into the lungs do they become a health risk.

However, many school officials and commercial building owners, apparently responding to pressure from citizens, contractors or mortgage bankers, have opted to remove the asbestos from their buildings, even if there are *no* health-related reasons for doing so.

Just last month, for example, the Chicago *Tribune* reported that a school district in Downers Grove, Illinois, a Chicago suburb, had won voter approval of a $1.1 million bond sale for safety improvements in its two high schools—including what was described as an expensive asbestos removal program.

The newspaper quoted one school official as saying the asbestos program was so expensive because the asbestos is buried deeply within the school's walls. This official was quoted as saying that removal contractors will "have to rip the walls apart, take the asbestos off the pipes in the pipe chases and seal up the walls again."

Now, I am not familiar with all the facts in this case—our regional office in Chicago is looking into it—but it appears on the face of it that this is an extreme overreaction to the mere presence of asbestos.

Based on the newspaper's description, the situation does not appear to pose a hazard from a health standpoint; yet this school district may be getting ready to spend a great deal of money on an unnecessary asbestos removal.

Even more disturbing is the fact that an asbestos situation that may have posed virtually no risk at all could, if this removal is not properly conducted, turn into a fairly significant health risk.

Furthermore, schools are not the only buildings where unnecessary asbestos removals are being carried out; we've learned that a

number of commercial building owners also have undertaken expensive, and from a health standpoint probably unnecessary, removals, primarily for financial reasons.

In some cases, it appears that mortgage bankers are *requiring* that asbestos be removed before approving loans secured by the property, because they're worried about property devaluation. In other cases, building owners are concerned about the expense of liability insurance or the cost of legal claims if an occupant of the building develops an asbestos-related disease.

Just consider the irony in this situation: the market, so often accused in the past of undervaluing externalities like pollution and resource depletion to the detriment of the environment, is now helping to foster an expensive overreaction to an environmental problem to the detriment of businessmen.

At EPA, we are constantly updating our risk assessments as scientific knowledge advances;

The market, however, is not solely responsible for this situation; nor are the school officials who go beyond what the government requires. The government, and EPA specifically, must also accept a share of the responsibility for the misperceptions that have led to unwarranted anxiety and unnecessary asbestos removals.

The asbestos issue shows us that even when we try to communicate clearly about environmental hazards, misperceptions and overreactions can still occur. And it underscores the fact that environmental risk assessment is anything but an exact science; it must cope with a great deal of uncertainty

With asbestos as with most hazardous substances, we rarely have enough information, or information of sufficient quality, to make unequivocal, unambiguous decisions about risk. Most of our conclusions about human health risks are based on debatable assumptions and projections, which may or may not accurately predict human health effects.

But while we often don't have all the scientific data we would prefer, we also don't have the luxury of waiting for it to come in before we take action. Based on what we do

know, we must, and will, take a cautious, protective approach until we get better data, and until we learn more about the effects of toxic substances on human cells and ecosystems and the mechanisms by which diseases are caused.

Now, this prudent approach, with all its uncertainties, can lead to a number of problems in terms of public perceptions.

If we perform a risk assessment on a substance like asbestos and declare it, based on the best information available to us at the time, a carcinogen, or even a potential carcinogen, we should hardly be surprised if the public's immediate reaction is: "Keep this stuff away from me and my children!"

If government is going to sound the alarm about potential threats to public health and safety—and we certainly have an obligation to do so—we must also state clearly just what these threats are, and how best to deal with them.

And when inappropriate public reaction *does* occur, we have a responsibility to step up promptly and explain exactly what we know—and don't know—so the public can make an informed judgment of the situation.

At EPA, we are constantly updating our risk assessments as scientific knowledge advances; we are insisting that these assessments be subjected to rigorous internal and external peer review; and we are looking for ways to achieve greater consistency in our use of risk assessments across the range of EPA decision-making.

As the science evolves, we have an additional obligation to share this new information with the public. The public has a right to know which risks are regarded as serious by the government, and which are not. And government also has a duty to alleviate public confusion by speaking with one voice on questions of risk whenever possible.

With specific respect to asbestos, EPA is taking a number of steps to clarify the degree of risk posed by asbestos, and also to reinforce our guidance on appropriate response strategies.

We're conducting major research on the extent of asbestos exposure in buildings under the auspices of the Health Effects Institute - Asbestos Research in Boston. The Institute is also reviewing all the relevant literature on the

controversial subject of possible differential health effects associated with the various types of asbestos.

We're conducting a thorough evaluation of the asbestos-in-schools program, to determine how effective it has been for schools and what aspects of it, if any, may be appropriate for public and commercial buildings. And I might note here that, contrary to several of the recent press reports, EPA specifically recommended two years ago that Congress *not* expand the asbestos-in-schools program to other buildings until further study could be done on the need for such a program.

The asbestos-in-schools review will look at whether inspections are being done properly; it will assess the quality of the management plans prepared for the schools; and it will evaluate the training of school personnel and the effectiveness of the schools' response actions.

We recently completed a year-long policy dialogue with representatives of all the interests

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affected by asbestos in public and commercial buildings—real estate groups, lenders and insurers, trade unions, asbestos contractors and consultants, a public health group, and government agencies.

And next month we will publish a guide for building owners entitled *Managing Asbestos in Place;* developed with the help of several affected groups, the guide puts asbestos risk in perspective and provides practical guidance on managing asbestos materials in buildings.

This document, like the other guidance EPA previously has published, strongly recommends in-place management when asbestos is discovered. A well-run, in-place management program often can reduce the risk of developing an asbestos-related disease to a negligible level, and may be cheaper than complete removal.

This is, in fact, the key message that needs to be conveyed with respect to asbestos; and since it apparently has not reached large segments of the public, I am today commissioning a major management review of our asbestos

communications effort—*including* a look at the guidance being given to school districts by contractors and management planners.

This review will be conducted by Lew Crampton, EPA's assistant administrator for communications and public affairs, who led my 90-day study of the Superfund program last year.

our environmental decisions must never become popularity contests

Unfortunately, as I indicated earlier, the asbestos case is hardly an isolated instance of mis-communication and misunderstanding.

Given these communication problems—these clashes between sound science and public perceptions—what can we in government do to foster public trust in science-based regulation, while continuing to serve the public's interest?

Let me take a few minutes to share some thoughts on that question, based on my time in office so far:

First, it's clear that we must do a better job of educating and informing the public about our regulatory decision-making process, and *involving* the public in that process.

To be fully effective, the federal agencies charged with protecting public health and safety must be able to communicate constructively to an informed public—a public that trusts the processes and the people involved in making risk-related decisions.

As Henry Ward Beecher observed, "Anxiety in human life is what squeaking and grinding are in machinery that is not oiled. In life, trust is the oil."

To win that trust, we must do a better job of explaining the legal mandates under which we operate; how the regulatory process works; and how we factor risk-benefit tradeoffs and other considerations into our decisions.

We must listen carefully and respond to the public's concerns; and the public for its part needs to understand that EPA must and will continue to rely on a rational, science-based process for determining when to take risk management actions.

And while our environmental decisions must never become popularity contests, it is entirely

appropriate, even necessary, to bring the public into the debates on which our decisions turn.

Second, instead of seeing the environment in individual segments, we need to see it as a whole—as, in fact, it really is.

Much misunderstanding and mistrust results, I think, from the fact that the public tends to lump problems together, while government, with its patchwork of media- and pollutant-specific legislation and regulatory programs, and the large number of Congressional committees and subcommittees

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concerned about the environment, tends to separate them into discreet packets.

While EPA tries, for example, to determine what level of a particular chemical in food, in the air, or in drinking water might pose unreasonable health risks, citizens look at the entire spectrum of chemicals to which they are exposed in daily life—in the home, on the job, and in between—and worry about cumulative effects as well as effects from multiple sources of exposure.

Frankly, I think the public has the right idea.

EPA, and government in general, need to take a broader, more integrated view of the full costs and benefits of environmental action or inaction.

We must find ways to compare environmental risks across programs, and to concentrate on those areas where we can realize the greatest benefits for human health and the integrity of natural systems.

And we must continue to broaden the factors we explicitly consider in making risk management decisions to reflect legitimate cultural and ethical values and concerns, as well as the inherent uncertainties of risk assessment.

Third, we need to scale what we might call the Twin Peaks of environmental policy for the 1990s: risk reduction and pollution prevention.

Risk reduction and pollution prevention must become the watchwords for all of our environmental protection programs.

I believe it is unrealistic to expect that we can ever achieve consensus on what constitutes an "acceptable" level of risk. There are too many unknowns, too many competing social values and policy agendas, too many trade-offs between various kinds of costs and benefits. The search for the Holy Grail of risk management—the so-called "bright line" that would let policy-makers determine, under any and all circumstances, whether a particular level of risk is "acceptable" or not—seems doomed to failure.

In my view, a much more effective approach to risk assessment is for us to identify the most significant, most troublesome kinds of risk, through a strategic planning process based on relative risk; and then work to protect human health and the environment by focusing our resources and efforts on the most important risks first.

How do we accomplish risk reduction? One of the most important ways is to emphasize pollution prevention: to look at risk management options that eliminate the *source* of the risk.

Not only is this approach more effective and more consistent with market incentives than traditional "end-of-pipe" treatment and control, but it also avoids much of the expense and frustration that is inherent in managing, treating, or shunting wastes off to other environmental media.

For example, in the case of two particularly troublesome substances—lead and dioxin—EPA has set up multi-program task forces that are looking for ways to reduce overall exposures to these substances from *all* sources.

Recently we announced an action plan to require reductions in the amount of dioxin discharged into streams, spread on land in sludge, and incorporated into paper products, even though we are still a long way from scientific agreement on the degree of risk posed by the presence of trace levels of dioxin in water and food.

The focus of the plan is on reducing the *formation* of dioxin, not on removing it after the fact. We plan to announce a similar plan for lead soon.

Let me conclude with another word or two about the economic impact of environmental protection.

This Administration is serious about the protection of public health and the environment. But at a time of severe resource constraints, it also behooves us to be serious about the *costs* of environmental programs.

The intimate relationship between the economy and the environment is a profound reality of modern life. Right now the nation spends more than $80 billion a year on environmental programs, mostly private money. Our capital and operating expenditures on pollution control and cleanup, as a percentage of our gross domestic product, are higher than most, if not all, of the other western industrial nations—in the range of 1.5 to 1.7 percent.

And according to a forthcoming EPA report, that expenditure could double—to around 3 percent of GNP—in the 1990s as the revised Clean Air Act takes effect and the multi-billion-dollar cleanups of hazardous waste sites and government nuclear facilities move forward.

What we are trying to do in the Bush Administration—and the President's package of proposed Clean Air Act amendments is only the first example—is to begin the search for a more coherent, more integrated way of looking at the trade-offs between continued economic growth and environmental improvement.

That's why the Administration has been so careful to analyze the cost of every measure in our clean air bill. The President's clean air proposals will put the United States on the path toward dramatically cleaner air by the end of the century; and equally important, by allowing flexibility and incorporating market incentives, the President's bill will achieve the pollution reductions we need *in the most cost-effective way possible.*

It will thus bring about environmental improvements without unnecessarily impeding economic growth over the long term.

I noted at the beginning of this talk that our decisions must be based on sound science. This is true whether we're talking about traditional risk assessment and "end-of-pipe" pollution control, or new approaches based on risk reduction and pollution prevention.

We must continue to improve our ability to assess and characterize risk; but the surest path to protecting human health and the environment, and to gaining the public's trust, lies in our ability to point to a steadily decreasing volume of, and exposure to, hazardous substances in the environment.

We know from experience that pollution prevention works, it can save money, and it can save lives. It means setting in place laws and policies, such as the creative market incentives in the President's proposed Clean Air Act amendments, that unleash American ingenuity to solve problems in new ways.

This approach will require us to change some fundamental precepts; it will ask that we think more carefully about the consequences of our actions on future generations; it will require those of us in the federal sector to work together as never before, both to achieve a consistent approach to risk and to communicate a consistent message to the public; and it will demand creativity and commitment from all of us—from government, from business, from the environmental community.

I am profoundly conscious of the many unmet environmental needs we face, and of the unprecedented impatience and high expectations of the American people. We will not meet these needs and expectations unless we work together.

Our challenge is to chart a prudent course through an increasingly passionate time; to demand good science in the face of "middle-class enthusiasms;" to set priorities based more explicitly on the opportunities to reduce risks; to take protective actions when necessary, even if we don't have all the data we would like; and above all, to get real and lasting results.

Results that will help foster the public trust that is the foundation of our democratic government; results that will produce a sounder, more consistent, and more successful program for protecting and enhancing the quality of our environment and the health of our citizens.

I invite you to join us in this effort. Thank you.