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Luncheon Address

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Thank all of you for that nice welcome. It has been interesting for me to be with you for the last day and a half. You noticed I did not say that I enjoyed it. It is the first time I think in my life that I have ever been in the company of almost exclusively lawyers and people engaged in the legal profession. I find it most revealing.

(Laughter.)

I have discovered several things of which I was totally ignorant, the most important being that there is an enormous gap between science and law. I have learned in the last day and a half that science does not matter in environmental law. It does not count for anything. Most astonishingly, I learned yesterday that potholes in the State of Nebraska are considered to be navigable waters. I am still grappling with that one. First I want to see the boat. (Laughter.)

I want to remind the speaker who made the statement about potholes that there was a court case in the Seventh Circuit about two years ago which ruled that potholes, drainage ditches, and other isolated bodies of water, including mud puddles not associated with obviously navigable waters, could not be so considered for the purposes of the Clean Water Act. That information was transmitted to the responsible government agencies. What do you suppose happened? They ignored it and they are still identifying potholes, mud puddles, and what have you as navigable waters of the United States. Well, so be it. We can be flexible in science, but not to the point where we will accept potholes as navigable water.

I would like now to comment upon the interesting area of environmental law, and bring out what seem to me some of the pertinent
scientific facts that really underlie the issues in the hope that somehow these two great professions, law and science, will come together in the future. I hope that, by the time I finish, some of you might begin to think, maybe just a little bit, that scientific facts have some role to play in environmental law.

With respect to environmental law, I want to comment on the issues from the standpoint of someone totally outside the legal profession, an interested bystander, if you will, who has been observing the consequences of the application of various laws and regulations, and what this has meant in terms of a number of activities.

Let me start by saying that there is no body of law, I think, that has as absolutely committed, determined, vociferous, and protective a constituency as environmental law does. One wonders a little bit why that should be so. I believe that one of the answers is that nature has been elevated in the environmental movement to the status of a religion, one that is not human based. Indeed, it is a kind of religion that is the ultimate in laissez faire. It holds that everything should be left alone, that nature knows best, that all nature is pure and sacred, and that only man is vile. They would not dare to say “woman,” would they? (Laughter.)

Well, are they right? What are the consequences of holding to such a philosophy? Curiously enough, and I may be wrong in this because my experience and my knowledge is not that complete in environmental law, I believe that there is no environmental law yet passed among the many dozens that defines the term “environmental.” It is assumed that everybody knows what the environment is. However, one of the basic problems with environmental laws is that they apply uniformly across the country. The United States is blessed with a great variety of natural areas different from one another. A meadow is neither a desert, nor a forest, nor a stream, nor a river. We have mountains. We have areas below sea level. We have coasts and various types of shorelines. We have rivers and lakes. We have a tremendous variety of environments. The same problems do not exist in all these areas. Even if they did, the same solutions would not apply.

Let me use ground water as a simple example. If you are concerned about ground water, it makes a big difference whether that ground water is within four feet of the surface as it is in Florida or 4000 feet below the surface as it is in some of the arid Southwestern states. Science makes a difference in what you are able to do, but the laws apply uniformly without regard to these factors. We get rules and regulations that indicate how much of this or how much of that shall be considered to be toxic or hazardous without taking hormesis into account.
You all know what "hormesis" is, don't you? The concept of hormesis was first enunciated in the 16th century by a physician who took the name Paracelsus. He put it simply: "There is nothing that is poison and everything is poison." That is certainly true. It all depends on how much. Thus, when we have rules and laws that tell us that this much of something is poisonous or toxic, it has to have some basis in fact because the amount for any particular substance will differ.

We have U.S. Environmental Protection Agency (EPA) standards that require, for example, the City of Columbus, Ohio, to hold the amount of atrazine, an herbicide used in some of the surrounding farms and never detected in the city water supply at levels higher than five parts per billion, to only three parts per billion, despite the fact that there is ample scientific evidence showing conclusively that it takes a level of at least 35,000 parts per billion to cause any detectable health effect.

Now you all know, of course, how much or rather how little a part per billion is. It is not easy to get a mental concept. It is small. (Laughter.) It is a tiny bit. It is eenie weenie. To put it simply: One part per billion is equivalent to about one drop of Vermouth in five train car loads of gin. (Laughter.) It is not much.

One of the great failures, if I may use that term, of modern technological society is that instruments have been developed to measure those amounts accurately. They can even measure parts per trillion, and dioxin has to be measured to that amount for the purpose of discharges from pulp mills. One part per trillion would be equivalent to one drop of Vermouth in 5000 car loads of gin. Is that amount of dioxin dangerous? No. Hazardous? No.

But we have laws that say if you can detect the presence of it at a site, the site is a hazard, it is toxic, and therefore it is a Superfund site. Most Superfund sites are identified by such amounts of dioxin. How does EPA determine whether there is enough toxic material to declare some place a Superfund site? Mostly on the basis of the estimated amount of dioxin present.

They have settled on parts per trillion for dioxin. This standard is based on a risk study which supposes that a child sitting in the midst of such a site eats the dirt twenty-four hours a day for seventy years and thus would have one chance in a million of contracting cancer. Well, it is conservative. (Laughter.) The question is, "Does it make any sense scientifically?" No. Does it make any sense economically? I would say that the one in a million cutoff adopted by EPA, the Occupational Safety and Health Administration (OSHA), and other health agencies is based on the induced fear of cancer. That is a risk of one in a million.
for contracting cancer, not the certainty of the cancer and not a cancer death.

Since 1950 the number of cases of every one of the various kinds of cancer that we know of, and there are many, many different ones with many different causes, has been declining, with the exceptions of lung cancer, which is caused by smoking, and certain types of very rare neurological cancers, which could not be identified before present day nuclear medicine. The fact is that cancer, with the single exception of childhood leukemia, which is really quite rare, is a disease of old age. Because we have such a much expanded life expectancy now, more people are living longer and more people are getting cancer. But when the facts are adjusted for age, every cancer has been declining in amount since 1950. This information seems not to be widely disseminated.

Although most environmental law is based upon the premise that toxic chemicals, the things that are manufactured by human beings, are the cause of most cancers, the fact is that they cause less than one-half of one percent of all of the cancers. That can easily be determined by contact with the National Cancer Institute.

What is it costing the economy in this country to hold to such standards and have environmental regulations and laws set by this means? Well, since it started basing its risk analyses on the possibility of cancer risk, EPA has spent $6 billion. The entire budget of the National Cancer Institute is $2 billion. There have been several people, including one EPA official, who refuses to be identified publicly, who say the very best thing that EPA could do to contribute to the understanding and better control of cancer would be to give its entire budget to the National Cancer Institute. (Laughter.)

This brings me to another aspect of environmental law. We have too many laws permitting too many agencies to do some of the same things. Let me digress for just a moment to tell you that I come into this area truly from the point of naivete with respect to law. I grew up at a time when we were taught that our nation is a nation of laws. I have always believed that and have had some kind of respect and awe for laws, except the ones I do not happen to obey, like the seatbelt law. (Laughter.) We were taught, and I have always understood, that law is made by the legislative branch of government, that law is interpreted and transgressions taken care of by the judicial branch, and that law is administered by the executive branch of government.

In the field of environmental law, that no longer applies for two reasons. The Congress, in its wisdom, has been passing laws either so utterly detailed or so totally ambiguous that it is left up to agencies and the employees of agencies to interpret the laws the way that they want. These laws are passed for all the best, good, and noble reasons,
but it is left to the agencies to promote regulations that have the force of law. All of these things give us considerable problems because we now have to contend with some monster called administrative law, which I do not understand, and which seems to have nothing to do with due process or proper rules of evidence.

Nevertheless, all these things have combined to create a situation in which much environmental law and regulation are being imposed and administered by bureaucrats and employees at various levels. A GS-12 can come onto a property and impose a fine on a property owner if he thinks he detects some wetlands or something like that. All these things are being done by one and the same people.

In other words, the bureaucracies are making law, administering law, and punishing transgressions. And as often has been said, when that happens (and that, to my understanding, was the reason for the separation of powers originally in our government), the power to make the law, to administer it, to interpret it, and to punish transgression, are concentrated in one branch of government. That constitutes tyranny. I believe that is not too strong a word to describe the way in which environmental law is being applied to the citizens of our great country.

But now let me be a little bit more specific. Let us take water. Incidentally, water is something that cannot be used up. We have as much water today as we ever had or ever will have. We cannot make water. I mean that in the purely scientific sense now. (Laughter.) We cannot produce it. We can only use it and it recirculates. Generally, it recirculates in a large system that carries water into the oceans from which the water evaporates into clouds and returns all over the earth, including the land, as rain. It is always the same amount.

What we really have to be thinking about with respect to water is the way in which we use it. If we put it this way, can anybody believe that it makes good sense to go to all the trouble to make sure that the water is totally safe and clean for drinking and cooking purposes, and then use it to wash our cars, to flush our toilets, to water the garden, or to use for industrial processes? No. We demand potable water for everything, and that is where our problems lie. What we should be thinking about is developing dual systems so that we retain potable water for personal uses only. I think that this may come some day.

Now, in the 1977 Clean Water Act, there are extensive definitions that refer to the purpose of restoring and maintaining the integrity of the nation's waters. What better purpose could we have? Restore and maintain the integrity of the nation's waters. Restore to what level? What is the original integrity of the waters and how does that get maintained?
If one then looks at the definition that is applied to polluted water, and what constitutes pollution of water, we find that in the end nothing except distilled water can legally be discharged into any natural body or onto the land. It would be better if that water was triply distilled because, under the Clean Water Act, this is how pollution of water is defined: “The term ‘pollutant’ means dredged spoil, solid waste, incinerator residues, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.”

None of these can be discharged legally in any amount into our natural waters. So one has to ask the question: “What is not a pollutant?” Distilled water. Does it make any sense? Scientifically no. But from what I have learned in the last day or two, maybe legally, yes. (Laughter.)

When the first Clean Water Act was passed in 1972, it covered requirements for the analysis of about two dozen different pollutants. I just read to you the list of general categories of pollutants that must now be analyzed for any certified municipal potable water supply. And if we break down these categories, the list actually amounts to more than 300 identified hazardous or toxic materials, even though in any one system only about four or five of them would be important. Nevertheless, every single drinking water system is required to analyze for all 300. You all wonder why your water bills are going up?

Under the latest amendments, lead and chlorine content are also tested. We now have, by tenfold, the most rigid requirement in the world for lead content, and there is no good scientific basis for it at all. When this amendment was being considered, even Mr. Dingell pointed out that the studies on which EPA based its lead standard were false and that the people involved had, and I quote Mr. Dingell, “cooked the books.” Nevertheless, that is the standard that we have. It is costing an enormous amount of money.

The second standard is chlorine. The greatest contribution to public health that was ever made, as far as water is concerned, was the introduction of water chlorination. That is the primary reason we have conquered practically all waterborne diseases in the United States. But in its wisdom, EPA recognized that chlorine has byproducts such as chloroform, which is produced if you heat the water. There was an internal paper produced questioning whether small amounts of chloroform from the chlorination of water supplies might lead to an infinitesimal number of cancer risks.

So far nobody in this country has taken that paper seriously. But a few months ago it was taken seriously in Chile. They stopped chlorinating the water supplies in their cities. Just at the same time a ship-
load of contaminated seafood arrived in port and started a cholera epidemic, which is still continuing throughout South America—all because they believed, on the basis of an EPA report from the United States, that chlorination might possibly cause some cancer.

There is a second paper now circulating, also from EPA, which points out that if you breathe the steam produced by heating chlorinated water, you have to breathe some chloroform, and chloroform at some level can be shown to be carcinogenic. But remember, everything is poison and nothing is poison. EPA has not determined at what level it is carcinogenic, but EPA has proposed a new rule that makes taking showers with chlorinated water illegal, because you breathe the steam in an enclosed area, thereby putting yourself at some risk. Your health is going to be protected whether you want it to be or not.

Cancer from water pollution has never been reported to have occurred; yet we are controlling many, many such pollutants even though we have already removed from natural waters and from the ambient atmosphere, about ninety percent of all of the identified pollutants that were there about twenty years ago.

One of the things that is seldom mentioned is how much credit we should be given for improving things over the last couple of decades. Of course, the environmental laws have helped. But like so many good things, they can go overboard and we are now getting, I think, into the area of no return. According to statements from EPA, in cleaning up ninety percent of the known air and water pollutants, we have made tremendous improvements in air and water quality, but it has cost us a lot of money. Ninety percent cleanup has so far cost $1.4 trillion dollars. There are those who say ninety percent is not good enough, that we have to clean up some more. Let's make it ninety-five percent. Calculations from EPA hold that for cleaning up the next five percent, it will cost an additional $1.6 trillion.

The time has come to ask the question: "How clean is clean enough?" How much can we afford to spend? How much can we burden our economy with costs that cannot be shown to have any measurable impact on a problem that might not be real? If we look back over the things that we have done besides the cleanups, we have made some mistakes. We have considered some things to be hazardous and have gone to a lot of expense and effort to clean them up only to find that they were not a problem at all. Do you remember the cranberry scare? It turned out to be nothing. Do you remember red dye number two? and saccharine? and cyclamates? Do you remember the mercury in tuna and in swordfish? It turned out that there was less mercury in their flesh than was dissolved in the waters of the oceans.
Do you remember the evacuation of Times Beach, Missouri, on the basis of infinitesimal amounts of dioxin contained in the used oil that was spread to keep down the dust of their dirt streets? After nearly ten years of study on dioxin at the Centers for Disease Control and Prevention in Atlanta, Georgia, Dr. Vernon Houk, who ordered the evacuation of Times Beach at a cost of about $140 million to all of you taxpayers to relocate everybody in that small town, found that the amount of dioxin present in Times Beach exposed the people there to a risk no greater than drinking two beers in a lifetime. Times Beach is still vacant.

Then we have PCB's. The worst thing that has ever happened to people exposed to massive amounts of PCB's is the development of a skin irritation called chloracne. Nothing else. And there have been massive contaminations. But because there was a theory that it might cause cancer somehow, PCB's were banned from use in electrical transformers. It was the only material we ever had that was not flammable and could operate in these systems. As a result of the ban, there have been a number of electrical fires in city systems across the country. More people have been burned and killed from these fires because of the loss of the PCB's than ever would have been hurt by their use.

Now, a substance that has just been included in the list of toxic and hazardous materials under EPA's control is quartz—a proper mineral term for sand. Sand is now considered a hazardous material. If you buy sand for a sandbox for a youngster the package has to say: "Danger, this material is carcinogenic." Yes, beach sand.

Moreover, the minerals that are now coming under control under the same toxic and hazardous rubric include iron, chromium, and selenium. I mentioned these three because they are to be eliminated entirely from water under the Safe Drinking Water Act. Iron is absolutely essential in our diet or we get anemia, but not too much iron. Enough, but not too much. If we lack chromium, which we usually get from the water, we are subject to diabetes. It is essential. Selenium is essential to prevent heart disease.

What are we doing to ourselves by taking an absolutist sort of attitude against these materials? As I look at it, I think we have trouble with environmental law on three levels. First, there are those actions taken by bureaucracies in promulgating regulations and in enforcing them that are not based either on common sense or on good science. If we look at wetlands for just a moment, the wetlands of course do not have a statute. There is no law that either identifies or says that wetlands have to be protected, none at all. The protection of wetlands comes under section 404 of the Clean Water Act, which gives
control to the Corps of Engineers over the dumping of drilling materials and sludge into the navigable waters of the United States.

Now, in trying to define what the term "wetlands" means, since it is not defined in law, the White House set up a group of agencies with some interest in wetlands. Not only the Corps of Engineers, but EPA, the Fish and Wildlife Service, and the Soil Conservation Service have defined "wetland." They did so in 1987 and modified the definition in 1988. The trouble is that the definition has fifty different interpretations. You can take your pick.

The one that is most widely used defines wetlands as any soil, any piece of ground, where water can be shown to rise within eighteen inches of the surface for five consecutive days during the year. As a result of that definition, forty percent of California is wetlands. There are a lot of wetlands in the desert. More than ninety percent of Alaska is wetlands. All of the Midwest is wetlands and so is Washington, D.C.

I started reading a list of things that we had been afraid of and then found that, after some expense, they turned out not to be important at all. Two of these are really serious. One is asbestos and the other is acid rain.

Let's take acid rain first. In 1980 the Congress of the United States authorized a study and allocated $500 million to get the best experts in the country working on the National Acid Precipitation Assessment Program. There were more than 500 scientists working on it and they were the best experts in the many different areas related to acid rain and its effect upon forests, lakes, streams, rivers, and so on.

The upshot of the ten-year study, which cost you all about $540 million, was that they were able to show in forty-seven volumes worth of evidence that the impact of acid rain on the Eastern United States, particularly New England, was indeed a nuisance, but no catastrophe, no big problem. No serious or deleterious impact upon any of the forests, except the Red Spruce in the high Adirondacks, which had been a stressed forest even in the last century, were shown.

They were able to show without question at all that less than one percent of all the lakes, rivers, and streams had been acidified. The problem in New England is that the soil itself is a poor, granitic soil. It has always been acidic and always will be. For a short period of time when deforestation was taking place, the ash from the burning sludge and the residue from the trees that were cut down made the soil alkaline, and that changed the pH of the lakes. As soon as that was all gone and the place reverted to farmland, towns, countryside, and so on, it became acidic again just as it had always been.
If one wanted to get rid of the acidity of the lakes, the one percent of them that have been affected by industrial affluence from the Ohio Valley, it could be done by using lime at a cost of about $50 million. Indeed, when the report was all completed, those who were in charge of it were asked how much benefit could be gained by the controls and the treatments, and things like that, and the answer was $100 million worth of benefit probably for a cost of many times more than that.

But more importantly, and what has not been widely released, is that we found that the acid rain has positive benefits. That has to do with New England. New England is very heavily forested now. It has happened almost without people realizing it. There was a time when New England was clear cut and there were farms and small villages everywhere. It has largely gone back to a forested area.

In fact, the State of Maine is more heavily forested than any other state in the nation. Ninety percent of the territory of Maine is covered by forests. Indeed, the forests of New England are some of the most vigorously growing and healthy forests in the country. Why? Because of acid rain. Because the sulfates and the nitrates, which are essential for plant growth, were carried by the polluted atmosphere blowing up from the industrialized Ohio Valley to the New England soil, which lacked sulfates and nitrates.

Of course, that is not what was supposed to happen. Incidentally, that information is also available in Sweden and in other parts of Scandinavia, which have found the same thing. When you have a soil that lacks these nutrients, this material can be supplied by so-called acid rain. It is, in fact, called the poor farmer's fertilizer. How much money should we spend removing those materials, those valuable materials? If we do that, you know, the forests are affected again because they are not getting their proper nutrients.

I would like to pick up again on the three levels I spoke of, the actions taken by bureaucrats under laws that do not specify how far they can go. The second level is that laws are passed which explicitly or implicitly require certain actions as, for example, there have been regulations counting as laws affecting wetlands.

Just to make a very quick observation, in the first place, nobody knows how much U.S. territory was swamp, marsh, or bog when the pilgrims landed, because nobody was doing geological surveys at that time. So it is only a guess how much marsh land and swamps we have ever had. But we are going to return it to that original state, whatever it was.

In any case, we are protecting areas that are wet, as well as areas that qualify under definition. In doing so we are inadvertently also protecting the mosquitos. As a result, we are having outbursts of
hordes of mosquitos in many parts of this country at the present time to the extent that people in Florida and the Upper Middle West, probably into New Jersey, cannot leave their homes after the sun goes down because the mosquitos are so numerous.

We cannot control the mosquitos, of course, because you cannot use pesticides on wetlands. Heaven help us, we cannot pour oil on those waters, and we cannot drain them. So the mosquitos are proliferating. That would be only a nuisance were it not for the fact that the mosquitos have a bad habit of biting people; they are blood suckers. I know of no redeeming quality possessed by mosquitos. (Laughter.)

However, when they bite us, besides taking our blood, they can and often do insert parasites. Some of the worse diseases known to the human race, scourges of the centuries, are carried by mosquitos. We get those diseases only by being bitten by a mosquito. They include malaria and encephalitis, two of the worst diseases that we know about, because once you contract them you cannot be cured. The symptoms can be treated and the pain can be relieved. But once you get malaria, you have it forever. Once you get encephalitis, the same thing is true.

Encephalitis is a particularly vicious disease because it is a virus carried by the mosquito, and once in the bloodstream, it never leaves the body. Sometimes, even years after the first episode, one may get a simple cold or a sore throat and so on, and then it breaks out again with enormous brain damage. That is the end result of most cases of encephalitis. We used to have epidemics of encephalitis. We are having them again. We used to have parts of our country almost unlivable because of malaria. We have had a tenfold increase in the number of cases of malaria in this country since we started protecting wetlands.

Sooner or later, my friends, we are going to have to sit down and make a decision. Either we continue to protect wetlands and protect mosquitos or we are going to protect human health. We are going to have to choose which is more important. Worse than that, I suspect it will be made more difficult because, in the intervening few years, we have had a lot of immigration into this country from parts of the world bringing in new types of mosquitos and new types of mosquito parasites that are going to cause outbreaks of such things as Dengue fever, bone break fever, yellow fever, and so on.

Well, there is not time to continue giving you all these sorts of examples, but I want to mention the third phase of law, the development of international environmental treaties, and I have to tell you just very bluntly, none of them is based on supportable and verifiable science.

The first one is the Climate Change Treaty, to address the so-called global warming. There is no evidence whatsoever to support
the widely held belief that the earth is warming up. All of the evidence points the other way. Before this year is out, I think we are going to see enough new information made public, even if we have to hammer down the doors of the newspapers and television studios to do it, to show that the whole global warming thing is nothing more than normal variation, and that there is no reason to believe that producing carbon dioxide is causing any kind of climate change whatsoever.

That will soon be followed, although it will take a little longer time, by the questions with respect to ozone. As with global warming, everything that supports the notion that chlorofluorocarbons (CFC's) or other things are destroying the ozone layer in our stratosphere is based upon theory and upon computer models. There is no direct evidence. The measurements that have been taken find CFC molecules barely reaching the lower stratosphere and then in amounts of only one or two parts per trillion. That is nowhere near enough to be able to do anything to the ozone layer at all.

Moreover, in all the stories about the ozone, what is totally overlooked are those places, for example, a meteorological station in Belgium, where ozone measurements have been taken continuously, twenty-four hours a day, on a daily basis since 1971. They show natural variations in the amount of ozone of as much as forty percent from day to day. There is much more evidence for other parts of the world. We have been misled because information that the public needs has not been widely disseminated.

Indeed, when it comes to these international treaties, I have to ask this question: "Who negotiates them?" I ask that from the perspective of a very brief period in my checkered past when, for five months, I was an Assistant Secretary in the Department of State. I believed then and I still want to believe now that international treaties are negotiated through the Secretary of State. Did the Secretary of State go to Rio De Janiero along with President Bush when he was forced by public opinion to sign the Climate Change Treaty? No, he never saw it. Did he have anything to do with the Montreal Protocol? No. That was negotiated by a functionary within the Department of State by the name of Richard Benedick, who was careless enough to write a book about it. It is called Ozone Diplomacy. In it he says that the signatory countries sounded the death knell for an important part of the chemical industry with implications for billions of dollars in investment and hundreds of thousands of jobs in related sectors.

Perhaps the most extraordinary aspect of the treaty was its imposition of short-term economic costs to protect human health and the environment against unproved future human dangers, dangers that rested on scientific theory rather than on firm data. At the time of
negotiation and signing, no measurable evidence of damage existed. None does today.

But we have these nice theories and so I want to call your attention in closing to something said by a very wise man a very long time ago. The year was 1530. And the man’s name was Niccolò Machiavelli. He said that a hypothesis is always more believable than a truth, for a theory can be tailored to our thinking and our already established beliefs. Whereas, the truth is only its own clumsy self. Ergo never seek the truth when a hypothesis will do. (Laughter.)

Thank you.