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PROGRAM CBS EVENING REPORT

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"DOOMSDAY DILEMMA" -- PART 2

JIM JENSEN: This evening we present Part Two of a four-part special report "Doomsday Dilemma", in which Art Editor Leonard Harris and Science Editor Earl Ubell look into the effects of pollution on the environment. In this evening's report, Ubell, with the cooperation of the New York Botanical Gardens in the Bronx, demonstrates what may happen if the rate of pollution should speed up.

EARL UBELL: This greenhouse is our doomsday laboratory. It begins as a spot of manmade beauty on the grass, and like this greenhouse the earth has a finite capacity for injury beyond which human life cannot be sustained. With this place full of things like railroad trains, electric generators, garbage, pollutants, overpopulation, it could support no life, and all of those things came from the tremendous growth of our industry, which not only created its own pollution but gave us the things with which to destroy the environment.

And of course our industries have created millions of automobiles, trucks and motorcycles; each one powered by the internal

MONS 030402

combustion engine, an engine that creates thousands of new chemicals. From this spigot, from this exhaust on automobiles and motorcycles comes substances like carbon monoxide which has been implicated in heart disease, substances that have been indicted in cancer, and lead which has been accused of blighting the brains of babies. For every thousand gallons of gasoline burned, these machines produce 3500 pounds of chemicals, and those chemicals are spewn up into our atmosphere. We are now learning that our atmosphere is not an inexhaustable sewer.

Our environment contains many different pollutants, many different chemicals, and what scientists are finding out these days is that combinations of these chemicals can produce catastrophes, even in small amounts. For example, farmers fertilize their soil with nitrates. Those nitrates sink into the soil and then they're washed down to the rivers, and from the rivers into lakes and ponds, and into the oceans. Symbolically, all the nitrates.

The nitrates encourage the growth of microscopic plants. Those plants soon fill up the ponds and lakes; some say in a matter of a few years, rather than thousands of years, as would occur naturally.

Farmers also use phosphates, which are like super-fertilizers, and they, too, get into the soil and from there into the rivers and act as super-fertilizers for the algae.

It turns out that detergents also have phosphates, every single one of them in some amount, and when every housewife washes her daily wash or her weekly wash the residuals of those phosphates

get into the waters, into the sewage system, and end up into the ponds and oceans and seas.

The interaction of the phosphates and nitrates in our waters is complex. Not only do the microscopic plants choke our lakes, but in the view of some scientists they could encourage the growth of bacteria that produce human disease. The whole mess is aggravated by human raw sewage bearing not only the bacteria, but more nitrates and phosphates, and at this moment most of our sewage is untreated.

And, of course, industry contributes its share, like throwing into our oceans acids of unknown types and quantities. Sulphuric acid, of course, is the most common. Into the stream it goes. The effect of these chemicals is to wipe inland waters clean of their large life; fish, clams, amphibians, and aquatic animals which keep our balance in nature.

Industry also produces many metallic salts, things like chromium which have been implicated in cancer, and these salts also get into the environment.

With the coming of the motor car has come motor oil, great quantities of oil which move all over the world in gigantic tankers which sometimes, of course, crack open, and then begin to pollute the waters and the beaches.

And then there are special chemicals like DDT, which has become ubiquitous. Right now every human being in the world has a little DDT in his fat and what the resultant consequence will be nobody really knows. There are chemicals like PCB which is used in plastics. When you burn the plastics the PCB gets into the

atmosphere, into the soil, and into the water. Both have become widely distributed.

Taken all together these substances can affect our earth drastically. Some say they can affect the oxygen production in the ocean so that we will soon run out of that life-giving resource. Others suggest that carbon dioxide which is made by burning coal and oil can bring a new ice age by warming up the earth, just as the glass in this greenhouse traps the sun's heat, or we can flood our continents.

And the speed of man's subjugation of environment grows apace as he builds more industries, builds more refineries for oil, more factories to process phosphates which, in effect, turn out more detergent; more chemical plants to produce unending quantities of chemicals. All with the intention of making life better, but perhaps making it ultimately precarious.