Monsanto

E. V. John - General Offices

April 10, 1970

Mr. H. L. Minckler
Mr. D. J. Forrestal
Dr. R. E. Kelly
Mr. W. B. Papageorge
Mr. E. P. Wheeler

TO Mr. John R. Eck

On Tuesday (April 7), our New York public relations office received a call from Dr. Franklin Field, science editor for Station WNBC (the NBC-owned station) in New York. Dr. Field said that Congressman Ryan, from New York state, would make a statement on Friday, April 10, which would blast Monsanto and its pollution of the environment by polychlorinated biphenyls (PCBs).

Dr. Field asked that Monsanto supply an interviewee who could speak about PCBs in rebuttal to what Congressman Ryan would say.

The Organic division decided to send Elmer Wheeler, medical department and William Papageorge, environmental manager, functional fluids, to New York for the interview. The interview took place on Thursday afternoon, April 9, and it was a "tough one" according to Messrs. Wheeler, Papageorge and our New York public relations people in attendance.

We have received copies of Congressman Ryan's remarks and they are attached. (Marginal notes were made by Dr. Field during the interview). We can expect to receive numerous press queries following Congressman Ryan's news conference Friday.

Also attached is a copy of our current position statement on PCBs, which due to the above circumstances, will need immediate revision.

E. V. John

Edward V. John
Public Relations Manager
Organic Chemicals Division

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Attachment

MONS 058173

FOR RELEASE APRIL 10 — 11:00 A.M.

FOR FURTHER INFORMATION CALL:
Jules Rochstein (212) 926-8036

STATEMENT BY

CONGRESSMAN WILLIAM F. RYAN

ON

A NEW ENVIRONMENTAL HAZARD

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Today, I am calling for immediate action to prevent what may well be a major ecological disaster.

Recent scientific research has shown that polychlorinated biphenyls (PCBs), ingredients in many household and industrial products, pose a danger to the environment.

I am calling on the Nixon administration to mobilize all available resources to detail the extent of the threat and steps that can be taken to eliminate it.

I am asking the Department of Agriculture to ban the use of PCBs in insecticides.

Because scientists have found this new hazard in foods, I am asking the Food and Drug Administration to set food tolerance levels. The levels would probably be similar to the ones the FDA established for DDT, which is chemically similar to this new hazard.

I am also asking the FDA to consider banning this environmentally dangerous chemical. An immediate study should be instituted to determine whether a ban is necessary. Meanwhile, the FDA should require all products containing PCBs to be labelled.

I also call upon the Monsanto Company, which manufactures the chemical under the trade name of AROCLOR, to cooperate completely with the FDA and the National Commission on Product Safety to determine how much of a threat PCBs are to the environment.

I am also asking Monsanto to release all its production figures for its three Aroclor plants. Scientists tell me that only with these figures can they intelligently gauge how much of the chemical is getting into the environment.

Monsanto should immediately state, clearly and without equivocation, whether during the manufacturing process any PCBs are released to the environment, in any form; in what quantities they are released; and what control measures are in effect or being developed.

Monsanto should compile and release to the public a list of the uses of PCBs so that consumers can be aware of their presence.

Any manufacturer who uses PCBs should publish a list of the products containing these compounds; such products should be labelled as containing PCBs.

Until recently little was known about PCBs, even though its use is widespread. But now it is clear that disaster rides the winds in the form of this DDT-like chemical which is slowly but surely poisoning our environment, killing our birds, and poisoning our plantlife.

To the chemical industry, PCBs are a miracle ingredient in thousands of products from hydraulic fluid to plastic wrappings to insecticides to printing inks.

To scientists in several countries who have been carrying on independent research, PCBs are a menace that must be carefully watched before they claim human and animal lives.

The story of PCBs is an incredible tale of how man can pollute his environment simply by creating chemical compounds that will not breakdown in the wild--chemical compounds that are harmful to animal life.

It is also a tale of bureaucratic fumbling. The Department of Agriculture hasn't questioned the use of PCBs in insecticides because PCBs are considered an inert ingredient. Because of that curious classification there has been no attempt by the Division of Pesticide Regulation to ban the use of this chemical in pesticides.

While dangerous quantities of PCBs are sprayed into the environment as pesticides, this insidious chemical infects the environment through more roundabout means. Scientists are most alarmed at the quantities of PCBs they have discovered in birds, fruits, fish, conifer needles, human fat, and human milk.

It appears that PCBs are getting into the environment in many ways, through the exudes of manufacturing plants, through the weathering or friction wearing of knowlow materials, and through the burning of plastics containing PCBs.

It is interesting to note that although scientists on two continents independently found PCBs in wildlife Monsanto questions the research. It is also interesting to note that, when Dr. Robert Risebrough and Virginia Brodine were preparing a report on PCBs for the January-February issue of Environment, Monsanto said the chemicals are only used in so called "closed systems" where they could not affect the environment.

However, in a technical report issued by Monsanto on PCB uses, it clearly suggests dozens of "open system" uses including insecticides and printing inks. Monsanto can no longer be allowed to police itself. Federal action is necessary.

Here is why federal action is necessary. Here's the nature of the physical threat. Scientists tell us that like its chemical cousin, DDT, PCBs cause birds to lay eggs with pitifully thin shells, shells that are too weak to protect embryos. The experts also tell us that PCBs have a negative effect on the reproductive capacity of animals.

PCBs also have disastrous effects on human beings. If they have contact with the skin, they cause chloracne, a serious skin condition. If inhaled, the result is even more dramatic and frightening. Among the symptoms are nausea, rapid breathing, loss of weight, and a lowered red blood cell count. More serious results are the deterioration of the kidneys, jaundice, and atrophy of the liver. In sufficient quantities PCBs can cause death.

The incredible thing about the PCB menace is that its effects on man and animal have long been documented by chemists and biologists. Suddenly we have come to realize that this potentially dangerous chemical is in the environment. We must banish it from the environment now—before it is too late.

FOR RELEASE APRIL 10 -- 11:00 A.M.

FOR FURTHER INFORMATION CALL:
Jules Nothstein (212) 938-8036

EXTRACTS FROM MONSANTO COMPANY'S TECHNICAL BULLETIN
O/PL-306 ON AROCLOR (PCB) USES

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PCBs are manufactured in the United States only by the Monsanto Company, under the trade name AROCLOR.

In its Technical Bullatin, O/PL-306, Monsanto describes qualities of aroclor, such as fire retardance, corrosion resistance, and adhesivity. This bulletin suggests "scores of new uses that could not be performed by any other known material." Five seperate bulletins are offered to give additional information for uses in resins, chlorinated rubber, emulsion adhesives, protective coatings, modifers for polysulfides, fire-retarding plasticizers and wax compounds.

Aroclor plasticizers are suggested for protective coatings, such as in chemical plants, sealing compounds, adhesives, lacquers, inks, varnishes, free films, fabric coatings and pigment dispersions; components or extenders in elastomers and waxes. Page 5 describes Aroclor's compatibility with twenty-seven "common plastic materials" such as asphalt, rubber, paraffin and resins. Other uses: in molded products, brake linings, chemically-blown vinyl foam (such as was recently reported in NEW YORK TIMES for making a cave-like bedroom) and in vinyl-asbestos floor tile.

In describing the applications of Aroclor in adhesives, the bulletin remarks (p. 14) "When the slight odor of Aroclor is objectionable in an adhesive for certain applications, it can be easily masked, at negligible cost, by the addition of a small amount of Santomask II."

Other uses are in prime coats for concrete storage tanks for gasoline and fuel oils; as base coats for concrete wood-kiln coatings (which are exposed to heat, moisture, and wood distillates).

On page 21, under "Aroclor in Rubber" appears the sentence: "Typical applications include protective and decorative coatings for swimming pools, stucco homes, steel structures, tank cars, and both wood and metal maritime

In chlorinated-rubber formulations, Aroclor is suggested for heat-sealing adhesives, electrical coatings, paper and textile coatings, and printing inks. Other versions are designed for wire and cable coatings, and for "tacky coatings for fabric or paper."

Page 25 says "Insecticides, for example, can be blended into such coatings to make insect traps or barriers on tree trunks for foliage or fruit protection."

Other uses: sealing and caulking compounds; automobile-body sealants; paint compositions; tracing paper, window envelopes, and other paper-transparentizing; and hot-melt resins for the protection of tools and metal parts.

On page 31, "high-chlorine-content Aroclor plasticizers" are described as "widely used in the manufacture of low-cost, flame-resistant lacquers" for paper coatings, lacquers for plastics, and hot-melt adhesives. Page 33: heat-resistant aluminum paints and enamels, such as for jet-engine components, exhaust manifolds, and incinerators. Page 34: Waxes containing Aroclor are widely used in making dental castings, costume jewelry and precision-cast aircraft parts. "Aroclor with waxes make excellent and inexpensive sealers for masonry, wood, fiberboard, and paper."

On page 36 it is explained that the kill-life of chlorinated insecticides is extended by Aroclor acting as a vapor suppressant and as a sticking agent, enabling the insecticide to remain toxic on hard surfaces "for as long as three months."

For its moisture-proofing qualities, Aroclor is suggested on page 36 for use in waxes, such as paraffin; oils such as mineral oil or drying oils; and as a coating for paper and cloth.

Page 37: an "important ingredient" in mimeograph ink for use on bond paper; in the preparation of imitation gold leaf; as pigment vehicles for decoration of glass and ceramics; as grinding and dispersing mediums.

Page 38: "Aroclor plasticizers are essential components of coatings for flame-proofing cotton drill for outer garments and for rendering olive-drab canvas fire-retardation, water-repellent, and rot-proof for tents, tarpaulins, etc..."

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Page 50: a "potential problem from the standpoint of both inhalation and skin contact" and suggests the use of closed systems and local-exhaust

ventilation. It also mentions that vapors of Aroclor "at room temperature should not be breathed in a confined space..."

It suggests "the use of gloves and protective garments because of the possible occurrence of a condition called chloracne."

Aroclor is sold in Tank cars, 500 to 600-lb. steel drums, 100-lb. bags and 50-lb. cans.

From Chemical Week

Chemical Week for August 9, 1969, announced that "Monsanto, by mid-1970 would be bringing its worldwide plasticizer capacity to more than 600 million lbs./year." (p. 27)

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FOR FURTHER INFORMATION CALL:
Julan Rochstein (212) 934-6036

AN ENVIRONMENTAL HAZARD REPORT

From Congressman William F. Ryan

The Perilous Plastics: Fact Sheet on Polychlorinated Biphenyls (PCBs)

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Polychlorinated Biphenyls (PCBs) are chemical compounds manufactured in the United States by the Monsanto Company under the trade name AROCLOR. PCBs and their residues are extremely toxic to fish, birds, animals and humans. They have a direct action on the skin, producing a severe form of acne. They may produce a variety of effects ranging from nausea and loss of weight to increased respiration, lowered red blood cell count and inhibition of carbohydrate metabolism. More serious effects are those on the kidneys. The principal effect, however, is on the liver (possibly leading to atrophy, followed by death).

As PCBs are not soluble in water, they are (like DDT) very persistent in the environment. This insolubility factor makes PCBs capable of being widely distributed over the earth via air currents. (Once being ingested by animals or humans, they are soluble in fat.)

PCBs, especially those of high chlorine content, resist biological breakdown. Once released, they are a long-term hazard.

A Mystery Pollutant

PCBs have recently been identified[1] as the mystery pollutant, similar to DDT and sometimes mistaken for it, found in analyses of pesticide residues.

Soren Jensen and Gunnar Widmark, Swedish scientists, reported in 1966 that these chlorine-containing compounds were PCBs. Jensen and Widmark also found PCBs in fish and sea birds, in conifer needles, and in some samples of human fat.

Monte Kirven, of the San Diego Natural History Museum, in studying DDT compounds present in the eggs of Peregrine falcons, found this same

1/ Environment, Jan.-Feb., 1970, More Increase in the Mist, by Dr. Robert Risebrough and Virginia Brodine, pp. [illegible].

unknown compound. Fernlating, he found the Swedish paper and, with further laboratory work, identified the trouble-maker as PCBs.

Distribution in the Environment

PCBs have found in widely distributed samples of marine birds, the fish on which marine birds prey, freshwater fish and terrestrial birds. But, by far the most frightening hazard is the effect of PCBs on human beings.

PCBs may be taken into the body by direct action upon the skin or as a vapor taken through the respiratory tract. The effect on the skin is chloracne. The early symptoms are pimples and dark pigmentation; later, more serious eruptions. Persons who have been continuously exposed to PCBs may suffer nausea, vomiting, loss of weight, edema and abdominal pain. The most severe effects are jaundice and atrophy of the liver. Experiments with laboratory animals confirm the high toxicity of PCBs when injected, fed, or applied to the skin.2/

PCBs have been detected in citrus pools and in citrus fruits. The probable source of this contamination is the biphenyl-impregnated wrapping. (Fruit pulp: 0.01 to 0.90 ppm; peel: 1.0 to 473 ppm; whole fruits: .2 to 121 ppm). Humans can ingest PCBs in such contaminated foods; or, it may be possible that they could absorb these compounds through the skin from the handling or friction-wearing of the wrappings.

The uses of biphenyls recommended by the Monsanto Company (see excerpts from the Monsanto Company's Technical Bulletin O/FL-306) are so varied and comprehensive that hardly anyone can escape contact with them. Besides wrapping for fruits, they are used in the coatings of batties, sponge-resistant paper, fire-resistant and fire-retardant compounds, photothermographic copy sheets, decorative sparkling plastics, asphalt, adhesives, ink, paraffin, resins, rubber, paints, pesticides, sealing compounds, aluminum foil, cellophane, polyester film, paper, and olive-drab canvas for tents, tarpaulins, etc., etc.

How do PCBs enter the marine system

It is possible that, in the manufacture of PCBs, vapors or particles are released to the environment. In answer to questions about stack control, Monsanto merely states that "extensive efforts are in practice...to prevent [illegible] to the environment..." 3/

In public statements, Monsanto claims that PCBs are being used in closed systems, such as in hydraulic fluids and it also admits to "several applications" where PCBs are made part of a solid material. We know that hydraulic oil escapes to the environment. There is also the danger from friction-contact with plastic food wrappings and from the wear and weathering of the solid materials, producing PCBs in the form of tiny particles or vaporous matter.

Most containers, such as plastic wrappings, bottles, etc., must eventually be destroyed, either in home or municipal incinerators. At the high temperatures, necessary to burn municipal wastes, PCBs may be released to the atmosphere as vapors and fumes, which would be highly toxic. The burning would produce oxides of PCBs, more toxic than the unoxidized.