uorocarbon Makers, Users k for a Stay of Sentence; te 'Great' Economic Impact

e economic impact of any action trict the uses of fluorocarbons in ol sprays and refrigerating appa- could be so great that the gov- ent should wait on research to rm the theoretical hazard that the icals may be having on Earth's ctive ozone layer.

s was industry's response given last to the Senate Subcommittee on the Atmosphere looking into the possible ction of the ozone layer. The industry rying to deal with the rising clamor he government should move now to t uses of the chemicals—at least uses involving release of fluorocar- 11 and 12 into the atmosphere.

industry's arguments were given by . Schuyler, vice-president and gener- nager of E. I. duPont de Nemours & Organic Chemicals Department; Vin- J. Marriott, vice-president of Conti- Can Company; Herbert T. Gilkey, of r-Conditioning & Refrigeration Insti- and J. W. Dickenson, vice-president of e Company and chairman of the Inter-Industry Council on Atmospheric Sciences.

At the same time, the committee received a statement from Dr. James P. Dogy, an atmospheric scientist advisor to the industry council, who said that scientific evidence fails to substantiate the theory that fluorocarbons pose a danger to the atmosphere.

NBS REPORT CITED

He said that recent work at the National Bureau of Standards raises the question that the photo-chemical cross section of fluorocarbons has been grossly over-estimated and that other corrections have resulted in a four-fold reduction in the magnithat fluorocarbons pose a danger.

Mr. Schuyler testified that the majority of the scientific community believes "no significant harm will result from delaying regulatory action until more conclusive information is available."

He estimated that some 4,000 persons are employed in US fluorocarbon production, sales and research and another 2,000

Continued on Page 36

EEC Bets on Petrochemicals

Despite the escalation in crude oil ices, that is reflected in all down- eam products, West Europe's petro- emical industry is committed to large- ale investments at least to 1980 be- use of market demands.

However, trends in the area's manacture of petrochemicals involve ater plant utilization, wider economof scale and increased plant flexibil- . There is a growing awareness of the ngers of ultimate overcapacity and industry is said to be taking steps to id this.

Manufacturers are being encouraged locate new production units in develnent areas (especially Southern Eue) while new types of plants, such as ating units for offshore sites, are of- ing interesting possibilities for the fue.

These are some of the conclusions reached by Information Research, Ltd. of London, in a study of trends in the West European petrochemical industry and its future world role.

The report sees naphtha continuing as the preferred raw material for petrochemical production in Western Europe at least for the next decade.

It's expected trends in cracking techniques will allow heavier fractions or even crude oil to be used, since there are several proprietary processes in various stages of development.

Non-petroleum feedstocks (oil shale, coal, oil sands, fermentation products) are unlikely to be viable commercial possibilities at least until the 1980's.

Demand for naphtha in the EEC is

Continued on Page 61

PCB's Are Found In More Waterways; New Curbs Planned

By ALLEN F. RICHARDSON

Recent disclosures of widespread PCB's contamination in New York waterways have renewed alarms that the toxic chemical is present in high amounts not only in this area, but in remote parts of the planet as well.

Despite the efforts of Monsanto Company, the lone US producer, to limit the sales of the PCB's to special applications—where danger to the environment is minimized—decades of industrial use make immediate solutions impossible.

Environmental Protection Agency (EPA) and the New York State Environmental Conservation Department are seeking a viable standard that will slow plant discharges of PCB's. Investigation is under way to determine how PCB's presence in air and water can be eliminated.

PCB's (polychlorinated biphenyls) are thought to cause liver cancer and skin diseases in chimpanzees and rats. Its effect on humans is yet to be established.

Ogden R. Reid, the State environmental commissioner, said last week that several species of fish in the Hudson River have been contaminated with PCB's and possibly were unfit for human consumption.

After a meeting with forty scientists studying the problem, Mr. Reid concluded that the Hudson may be "approaching irre-

Continued on Page 20

Reforming Catalyst Pact Is Signed by Kellogg, ICI

M. W. Kellogg Company Division of Pullman, Inc.; Imperial Chemical Industries Ltd.; Dr. Haldor Topsoe, and Haldor Topsoe, AS, have reached an amicable disposition of a patent dispute, Kellogg reported last week.

The actions thereby brought to conclusion began in 1968 and concerned patents covering alkalized steam-reforming cata-

Continued on Page 26

C Joins Together C, Sobin Chemicals New Chemical Group

ternational Minerals & Chemical oration has formed a new busiorganization entitled IMC Chemi- Group, which combines Sobin icals, Inc., and Commercial Soli Corporation.

in and CSC became wholly-owned liaries of IMC earlier this year in sep-

Mississippi Chemical Buys Florida Land; Hopes to Make Phosphate Rock by 1980

Mississippi Chemical Corporation has contracted to purchase a 14,000-acre phosphate rock deposit in Hardee County, Fla., and is planning a multi-million dollar mining and processing facility to utilize that deposit.

Officials of the firm told Hardee County officials at a recent meeting that they "hoped to be producing phosphate rock by 1980" from the deposit, located approximately six miles southwest of Wauchula, for our 250,000 farmer-customers in the decades ahead," says Mississippi Chemical president Tom C. Parry.

Organized and run by Southern farmers, Mississippi Chemical is now said to be the largest fertilizer supplier in the eight-state Gulf area stretching from Florida to Texas.

The firm uses roughly a million tons of phosphate rock annually at its large Pascagoula production complex, and has hereto-

Continued on Page 25

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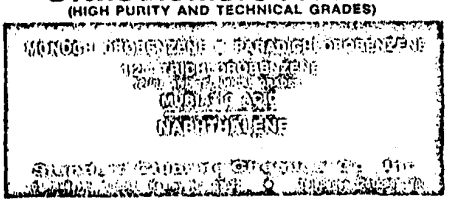

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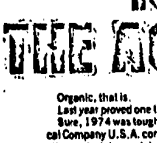

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PCB's Are Found

Continued from Page 5

versible and irreparable damage. Restoration, he said, "is a process that could take decades."

A spokesman for Mr. Reid told CMR that the gathering was "organizational and exploratory in nature." No conclusions on a course of action have been reached.

But, the Environmental Department is aiming for zero discharges by September 30, 1976.

The General Electric Company has been charged with dumping PCB's into the Hudson. The company operates two plants on the river at *Hudson's Falls and Fort Edward*, about 60 miles north of Albany.

PCB's are used in the manufacture of electrical equipment. Apparently, the chemical finds it way into the river through sewer pipes that carry GE's industrial rinse water.

Thirty percent heavier than water, *PCB's sink to the bottom of rivers and* lakes, attaching to silt and sediment. They are highly soluble in fats and concentrate in underbellies and eggs of fish.

GE has admitted to dumping as much as thirty pounds of PCB's a day into the river. Published reports indicate that the figure may have been much higher in the past.

State officials are also concerned that PCB's in the ground surrounding the plants may be running into the Hudson during rain storms. They believe that accidental spills have also contributed to the problem.

While the State is involved in the issue, the EPA has also begun proceedings to halt GE's activities in this area. Federal standards *set five parts per million of PCB in* fish as the highest allowable amount.

According to Mr. Reid, fish have been found in the Hudson containing 13.4 parts per million to over 100 parts per million.

To contain the problem, EPA has issued a permit to GE that would lower the discharge rate considerably. The agency *wants only 99.94 grams per day let into the* river by 1977. The abatement schedule, which is set up by EPA in such cases, was objected to by GE.

GE asked and received a hearing on the *permit*, slated for some time this year. The action, in effect, delays the abatement schedule until GE and EPA can work out *their differences.*

An investigative team from EPA found, last week, that GE had already reduced the amount of PCB's being discharged into the water. A preliminary report says the company is now down to about three to five pounds per day.

Meanwhile, EPA is examining the permit. A spokesman *for the agency said last* week that "we are in the process of setting policy on PCB's." Apparently, the agency now wonders if the provisions are stringent enough. They are also studying the effect of *PCB's residues* in landfills.

PCB's are used as a heat transfer fluid in electrical capacitors and transformers. At one time it was used in a variety of products, including carbonless carbon papers, handsoaps and food packaging. The presence of these materials in various areas near river banks has worried those close to *the problem.*

They feel that PCB's could be a problem for years to come as the chemical washes down in loose soil, contaminating the rivers and lakes and eventually ending up in drinking water.

Eradicating PCB's from water is a difficult task, according to W. B. Papageorge, *manager of Monsanto's product acceptability* department. "We are watching this issue closely," he comments. "knowing how difficult it is to separate PCB's from water."

Monsanto has controlled the PCB's coming *from its plants since the early 1970's*, when PCB's were first scrutinized. Losses from the company's production unit are less than *one-half* pound per day. *And, that* water is further treated by a municipal plant.

By the time the water reaches the Mississippi, says Mr. Papageorge, the amount of PCB's are close to zero. "We are talking about parts per trillion, if any," he adds.

Mr. Papageorge has worked closely with the *EPA on the problem for nearly six* years. He thinks the odds of meeting the New York State standard by next year are long. "*I don't know if anybody can meet* that," he says.

Another problem inherent in PCB's levels and set standards is what Mr. Papageorge calls "a moving target." "One of *the functions of a changing technology* is that we may not be able to call a zero standard valid in future years. Present measuring systems may be inadequate."

PCB's were first detected as a long-lasting *contaminant in 1966.* At that time Monsanto began phasing it out of its production line. The company has voluntarily limited its sales of PCB's to "*sealed systems.*"

The chemical is shipped in heavy gauge steel drums and tankcars with special safeguards to eliminate exposure to the environment. Monsanto now makes about 40 *million pounds per year*, down from a peak of 80 million pounds. PCB's are also produced in Western Europe, the Soviet Union and China.

Concentrations of PCB's have also been *found in the Great Lakes Region, Orange* County, and the Los Angeles and the Passaic River, which flows into the Chesapeake Bay. In the New York State area, PCB's have been discovered in Lake Champlain and the St. Lawrence river.

Monsanto and environmental experts are confused over sources of findings. Since Monsanto does not have customers in many of these areas, spillages from several years ago are suspected. Speculation is that the chemical somehow becomes part of the evaporative process or is pumped into the *air from incinerator stacks.*

Normal incinerators for city and office wastes often do not achieve high enough temperatures to destroy PCB's. As a result, it is volitized, goes up in the heavens and *comes back in the form of rain or snow.*

The chemical has been found in Wisconsin snow. Researchers have also discovered PCB's traces in remote forests of Sweden and corn samplings from Antarctica.

Before the hazards of PCB's were discovered, it was "virtually dumped into the environment," says one expert. This proba-

AROMATIC PRICE CHANGES

Week Ending Sept. 19, 1975

ADVANCED

None

REDUCED

None

COMPARATIVE PRICE INDEXES
(1956-1959 average)

Last Week	Prev. Week	Last Month	Sept. 20, 1974
200.15	200.15	200.15	104.03

For Current Prices See Page 40.

Aromatic Organic Imports: July 1975

		July 1975		June 1975	
		Volume	$ Value	Volume	$ Value
Benzene	gal	902,239	430,718	5,819,874	1,760,599
Coaltar	lb.	967,580	31,291	3,043,498	98,324
Creosote oil	gal	—	—	4,315,338	2,373,886
Cresols o-, m-, purity 75 percent	lb	9,381	3,909	1,814,939	1,096,158
Cumene	lb	14,089,943	1,761,243	35,139,993	3,919,799
Melamine	lb	240,012	66,227	206,000	79,329
Naphthalene solids, under 79° C	lb	75,400	20,265	34,930	9,520
Naphthol AS and derivatives	lb	186,477	237,943	77,396	262,793
Phenol	lb	—	—	2,219,761	343,907
Phthalic Anhydride	lb	1,561,302	384,810	1,467,707	373,188
Picolines	lb	991,535	195,996	132,885	24,801
Styrene	lb	174,975	31,980	1,289,116	227,455
Toluene	gal	2,726,898	1,932,414	364,412	172,279
Vat blue (C.I. 73)	lb	437,503	828,857	185,362	168,238
Xylene	gal	1,827,485	624,033	2,232,953	1,961,853
Xylenols	lb	34,391	40,537	32,536	34,949

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bly accounts for the pervasiveness of the chemical, he believes.

In addition, the US is the only country actively seeking to control the amount of PCB's in the environment. It is feared that amounts of the chemical are still being imported in finished products.

Food packaging is suspected. Several years ago, some cereal products and noodles sold in the US were found to contain high levels of the contaminate. It has since been banned in such uses.

Health Groups to Fight

Continued from Page 3

including the Rachel Carson Trust for the Living Environment.

Dr. Samuel S. Epstein, specialist in environmental cancer from the School of Medicine, Case Western Reserve University, one of the speakers, commented that the USDA's lack of concern about the impact of pesticides on health is "irresponsible."

He said the department wants proof that pesticides cause cancer in humans, before they are banned, not just in test animals. He added that this is a "a prostitution of science and an abrogation of moral responsibility."

Sen. Gaylord Nelson of Wisconsin, whose strong feelings on protection of the environment are well known, also saw in the House legislation a backward, rather than forward, step in protecting human health and the environment. He said that the present law is fundamentally sound and should not be modified.

" The Pesticide Act provides for careful weighing of benefits against risks, for economic impact studies, and for conclusive scientific evidence that a substance is harmful before it can be controlled or prohibited from use," he said. "To change the law now before it has been given a chance to be implemented fully, would be premature and unwarranted, and a step backward."

An enforcement policy change being written into the law provides that the Secretary of the Treasury shall prohibit the entry into the US of meats and other food products from countries which allow the use of pesticides banned in this country until and unless each lot of such imported products has been inspected and found to contain no toxicant residues in excess of that allowed in the US.

The measure also requires that the EPA Administrator, in determining whether to begin proceedings to cancel the registration of a pesticide, or to change it classification, shall take into consideration, among other factors, the impact of such action on production and prices of agricultural commodities, retail food prices, and on the agricultural economy in general.

The bill also carries several new provisions which would permit farmers to self certify their qualifications to apply restricted use pesticides, to exempt certain animal feed and animal drugs from regulation by EPA, and to give notice to the Committee on Agriculture of the House and Senate when EPA proposes new regulations.

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