BROOKINGS, S.D.
REGISTER
D 4 540

OCT 4 1977

ily Register

Single Copy 15¢
Lower by Carrier

Tuesday, October 4, 1977

16 Pages

Unusual quantities of PCB found near Colman

FRONT PAGE

By JERRY LESLIE
Register State Editor

COLMAN—Six samples of soil and vegetation from the Colman area showed the presence of a chemical pollutant in higher quantities than usually found in the South Dakota environment.

The chemical found near Colman is a compound known as a polychlorinated biphenyl (PCB), a substance toxic to fish, animals and humans in certain quantities, and linked to birth defects in humans.

PCBs are chlorinated hydrocarbons manufactured today principally for use as insulator material in electrical transformers and in electrical capacitors.

They were previously used in paints, sealants, adhesives, caulking compounds, copying paper, insecticides, hydraulic fluids, and inks, until Monsanto Corporation, the only domestic producer, voluntarily restricted its sales beginning in 1971 to so-called "closed cycle" systems such as capacitors and transformers.

Kevin Wester, 25, a senior journalism student at South Dakota State University, took the six samples, paid to have them analyzed at the SDSU Station Biochemistry, and planned to publish his story tonight in the SDSU Collegian, student newspaper.

The samples were so few—six samples in three locations—that they cannot be considered statistically accurate about the possible source, the extent of distribution, and the seriousness of the situation. They also do not tell how long the pollutants have been there.

But they do show an abnormal presence of a chemical ranked by environmentalists at the top of their list of dangerous pollutants, and warrant the taking of further samples in the Colman area.

A minimum of 48 samples would be needed to give evidence about source location, distribution of the PCBs, and direction of drift, a statistician said. At a commercial rate of about $70 per sample, the laboratory analysis alone on 48 samples could cost $3,300.

Samples tested locally

Wester had his samples analyzed by Dr. Yvonne Greichus, professor of chemistry in the pesticides laboratory of Station Biochemistry at SDSU. She is considered an expert on PCBs because of her research and published papers on the subject.

Here are the results of the tests on the six samples.

At a site 100 yards south of S.D. 34 on the west edge of Colman, soil contained 23.3 parts per million, (ppm), and foliage contained .69 parts per million PCB.

See related story below.

At a site a half mile southwest of Colman in a cornfield, soil showed .72 parts per million, and corn leaves showed 1.66 parts per million PCB.

At a site 15 miles north of Colman, soil contained .19 parts per million, and corn leaves showed .26 parts per million PCBs.

For comparison, here are some other PCB readings from this part of the state, that show that the Colman readings are higher than usual.

At Porter Bait Farm four miles south of Brookings, the owners try to keep chemicals away from their property because of their fish ponds. Dr. Greichus in her own research uses the bait farm as a control site and repeatedly turns up less PCBs than she can detect in her laboratory, or in other words less than .02 ppm.

Dr. Greichus, in extensive sampling of the sediment of Lake Poinsett, found an average of all samples of .13 ppm PCBs.

Wester's six samples from Colman are all higher than the Lake Poinsett or Porter Bait Farm samples.

Yet pollution more severe than that found in the Colman area can be found in other parts of the nation. For example, on the extreme level, a goldfish from the Hudson River at Poughkeepsie, N.Y.,

Continued on page 2

n area
ned: Lc

MONS 000910

tested out at 233 ppm, while a carp from the Ohio River at Cincinnati contained 133 ppm of PCBs.

More tests needed

Dr. Greichus emphasized the inadequacy of six samples for drawing conclusions. "Six samples does not constitute a research project." However, she said her lab spent a week analyzing the samples and checked them twice for accuracy.

The Food and Drug Administration has set tolerance levels for residues of PCBs in certain foods and animal feeds, and some of the Colman levels exceed

For the record

Hospitals

BROOKINGS HOSPITAL
Births

Sept. 30

Mr. and Mrs. Ken Weinberg, Arlington, a boy.

Mr. and Mrs. James Pulscher, 1485 Eighth St. S., a girl.

Oct. 2

Mr. and Mrs. Tom Kozisek, 214 Seventh St., a girl

Thefts

David Kneip, Rt. 12 Normandy Village, reported Thursday that someone removed several engine parts, including the distributor and carburetor, from his vehicle. Estimated value is $250

Randy Minor reported Saturday that stereo tapes were taken from his pickup while it was

Colman PCB

Continued from page 1

some of these tolerances, although the Colman tests were on soil and corn leaves.

The two samples of corn leaves and foliage nearest Colman were higher than the FDA tolerance of .30 ppm for animal feed. And one soil sample closest to Colman was higher than all the FDA tolerance levels for both foods and animal feeds.

The Environmental Protection Agency estimates that half the American population is walking around with one to three ppm in the fatty tissues of their body.

The most conspicuous example of PCB contamination occurred in Japan in 1968 when more than 1,000 persons consumed rice oil contaminated by accidental leakage of heat transfer fluid.

Effects in that case included stillbirths, undersized infants, bone and joint deformities, fatigue, headaches, pain in joints, anemia, acne eruptions, pigmentation changes and others.

In those cases in Japan the average intake of PCBs was 2 grams per person and the lowest level causing symptoms was 0.5 grams over a period of 50 days.

In addition, workers using chemicals to make capacitors at two General Electric plants north of Albany, N.Y., complained of allergic dermatitis, nausea, dizziness, eye irritation and asthmatic bronchitis.

Monkeys develop signs of PCB intoxication within one to two months at doses as low as 2.5 and 5.0 ppm in the diet. The likelihood of man consuming these concentrations on a continuous basis is remote, but the test points out that only small amounts of these compounds are required to produce toxicity and a safe level has not been established.

Tolerance levels

Here are the FDA tolerance levels for PCBs taken from the Code of Federal Regulations as revised April 1, 1977.

Milk (fat basis) 2.5 ppm, manufactured dairy products (fat basis) 2.5 ppm, eggs .5 ppm, finished animal feeds for food-producing animals (except feed concentrates, supplements, and premixes intended for food producing animals 2 ppm, fish and shellfish (edible portion) 5 ppm, infant and junior foods 0.2 ppm, and paper food packaging material intended for use with human foods 10 ppm.

PCBs are slower to break down in the environment than DDT and are known to increase in concentration as they go up the food chain. For example, in a Greichus study at Lake Poinsett, concentrations of PCBs were 66 times as high in the sediment as in the water, 978 times as high in aquatic plants, 17,000 times as high in fish, and 8,000 times as high in a cormorant carcass.

Lawyers plead for release of Nixon aides

WASHINGTON (AP) — H.R. Haldeman is repentant. John D. Ehrlichman has "demonstrated continuing contrition." John N. Mitchell is "truly sorry."

Their lawyers argued before U.S. District Judge John J. Sirica today that for these reasons, and others, the three men should be released from prison now.

Each man was close to Richard M. Nixon when he was president. Each was among the most powerful men in the first Nixon administration. Each is serving at least 2½ years in prison for multiple criminal acts in the Watergate

MONS SNOW 000911