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State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl
Secretary

May 24, 1978

BOX 7921
MADISON, WISCONSIN 53707

IN REPLY REFER TO: 3210-3

Mr. Ken Wachal
Lauson Division
Tecumseh Products
1604 Michigan Avenue
New Holstein, WI 53061

Dear Mr. Wachal:

In response to Mr. William's request for Department data I am enclosing a summary of events together with data related to the issuance of Order 2A-78-1190 to the Tecumseh Products Company and the City of Sheboygan Falls. In addition I am sending a summary of Department actions leading to and following the discovery of high levels of PCBs in Sheboygan River fish.

If you have questions on the information please telephone me at 608/266-7721.

Sincerely,
Bureau of Water Quality

Stanton J. Kleinert, Chief
Surveillance Section

SJK:ng
Enc.

cc: Allen W. Williams, Jr. - Foley & Lardner
David A. Baker - Foley & Lardner
Mary Ann Calef - Attorney General Office

Sent on 5/25/78 → { E. Scholtz - 3rd District
 { Chuck Hammer & Jim Kutz - Madison
sent 5/20/78 { Mayor Gladys Mouken - Sheboygan Falls
sent 5/31/78 - Bill Foucade citizens for a better environment

SUMMARY OF EVENTS RELATED TO
THE ISSUANCE OF ORDER 2A-78-1190 TO
THE TECUMSEH PRODUCTS COMPANY AND THE
CITY OF SHEBOYGAN FALLS

1. On April 4, 1978 the Department visited the Diecast Division of the Tecumseh Products Company at Sheboygan Falls. Samples of hydraulic fluids from the diecast machines were obtained. Trace amounts of PCBs (2.5, 6.0, 7.0 PPM) were found in the hydraulic fluids indicating that PCBs had been used in the past. The cooling water effluent from the plant to the river was sampled, but no PCBs were detected in laboratory tests of the sample. The effluent from the plant to the sewage treatment plant was also sampled and was found to contain 2.2 PPB PCBs. Although PCBs were found in the discharge to the sewage treatment plant, the concentration was low and probably is of little significance.
2. On May 9, 1978 the Department collected sediments from the Sheboygan River and also collected samples of fill material from the dike on the bank of the Sheboygan River immediately behind the Diecast Division Plant. Preliminary laboratory screening of the fill material from the dike indicated PCBs were present.
3. On May 11, 1978 the Department visited the Diecast Division Plant to take samples of soils and fill material from the company property immediately within the plant fence. Samples of fill material were also taken from the dike bordering the Sheboygan River behind the plant. Laboratory tests of the samples are provided in attachment 1. The highest concentrations of PCBs (from 43,800 to 120,000 PPM) were found in granular oil absorbent material present on the dike and also found within the fenced area of the plant. During periods of high water the Sheboygan River flows along the dike and is in direct contact with highly contaminated fill materials. During rains PCBs in the dike are subject to washing into the stream. PCBs in other locations on the plant property are likely to soak into the ground and reach the river via ground water discharge.
4. During the visit of May 11, 1978 company officials provided the Department with a letter dated April 28, 1978 from its supplier of hydraulic fluids which indicated that the last purchase of hydraulic fluids containing PCBs was made in March, 1971 (attachment 2). The letter also stated that the company converted to a non-PCB water-glycol based hydraulic fluid. The conversion to the water-glycol based hydraulic fluid took place from October, 1972 to May, 1973.
5. Preliminary screening of fish samples taken above the Sheboygan Falls Dam upstream from the diecast plant indicate relatively low levels of PCBs (Final test results are not yet available but our chemists indicate the values on the chromatograms will be below 5 PPM). Test results for carp samples collected above the Kohler Dam downstream from the diecast plant are as follows:

Species and Length	PPM PCB	Percent Fat
Carp (F 25")	240	9.3
Carp (F 25")	180	3.8
Carp (F 22")	150	6.4
Carp (F 25")	250	5.6
Carp (F 27")	250	12.2
Carp (WF 22-25")	350	11.6

F indicates a fillet sample and WF indicates a whole fish sample.

6. On May 12, 1978 Order 2A-78-1190 was issued to the Tecumseh Products Company and the City of Sheboygan Falls (attachment 3).
7. The Department will discuss remedial actions with the Tecumseh Products Company. An effective and thorough cleanup of PCBs on the dike and within the fenced area of the plant can be accomplished. Such a clean up would prevent future losses of PCBs from the property to the river system.
8. To date Tecumseh Products at Sheboygan Falls is the only clearly established significant source of PCBs to the Sheboygan River. The Department will continue the Sheboygan River investigation to detect sources of PCBs and to determine the concentrations of PCBs present in the River sediments.

Summary Prepared By,

Stanton J. Kleinert
May 24, 1978

TECHISEH PRODUCTS SOIL SAMPLES*

Location	Sample Description	Sample Depth	Date of Sample Collection	Date of Analysis	PCB (PPM)
S-18	8' from east fence, dark oily spot on ground. Pic. 1	topsoil - surface to 2" deep	5-11-78	5-12&13-78	390.0
S-19	5' from south fence, granular oil absorbent material, alum. bits. Pic. 2	6" deep	5-11-78	5-12&13-78	120,000.0
S-20	10' from bldg., sandy soil, oil dump area only soil. Pic. 3	surface to 3" deep	5-11-78	5-12&13-78	2,300.0
S-21	10' from bldg., sandy gravelly soil, oil dump area oily sample. Pic. 4	surface to 3" deep	5-11-78	5-12&13-78	660.0
S-22	3' from bldg., between oil sep. & bldg., black tarry soil sample, oil dump area. Pic. 5	surface to 3" deep	5-11-78	5-12&13-78	380.0
S-23	3' from south fence, low area below rubble pile, topsoil sample. Pic. 6	topsoil - surface to 4" deep	5-11-78	5-12&13-78	1,500.0
S-24	Granular oil absorbent material, alum. bits, outside of south fence on dike. Pic. 7	4-8" deep	5-11-78	5-12&13-78	120,000.0
S-25	Granular oil absorbent material, alum. bits, 2' outside of south fence. Pic. 8	4-8" deep	5-11-78	5-12&13-78	78,500.0
S-26	Granular oil absorbent material & alum. bits on river side of dike. Pic. 9	4-8" deep	5-11-78	5-12&13-78	54,000.0
S-27	Granular oil absorbent material & alum. bits, hydraulic hose on river side of dike. Pic 10	4-8" deep	5-11-78	5-12&13-78	43,800.0

*Laboratory analysis for these samples was performed by soaking 50-100 milligrams of sample in ethanol for 1-8 hours. The extract was then injected directly into the gas chromatograph. This procedure is a more rapid (but equally reliable) detection method for high levels of PCB, than the standard column elution method (see attached methods).

Attachment 1

CLEVELAND AVENUE

OUTFALL 003
.665 I.D. SANITARY SEWER
TO SHERBOURN FALLS WWTP - 6" C.I.



DIE CAST DIVISION
TECUMSEH PRODUCTS
415 CLEVELAND AVENUE
SHERBOURN FALLS, WISCONSIN

Soil Sampling Location
AT Tecumseh Products
on 5-11-78:
6 samples on
Tecumseh Property
4 samples on
City of Sher. Falls
Dike

Cyclone
fence

City of Sherburne
property and dike
is about
50 yd x 10' high x 10' base

12" SEWER

S-20
S-21
S-22

S-19

S-18

OUTFALL 052
.603 I.D. SANITARY SEWER
TO SHERBOURN FALLS WWTP

OUTFALL 001
2" L.E. SEWER
FOR GENERAL
COOLING WATER

WASTE WATER TREATMENT
BUILDING - 60' DIA.
- 10' HIGH
- 10' DIA. SEWER
ULTRAFILT.

S-23

S-24

S-25

SHERBOURN

S-26
S-27

