CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

file

Date: May 12, 1978 File Ref: 3210-3

To: Stan Kleinert

From: Tom Sheffy

Subject: PCB Sampling of Tecumseh Products, Sheboygan Falls

John Schultz and I visited the Tecumseh Products facility on May 11, 1978.

We met with Plant Manager Dee Sherman and his assistant Ken Miller. We told them we wanted to collect soil samples from the backyard area, and they were very cooperative. We offered to provide them with duplicates of the samples we collected but they declined the offer.

In our conversation with Mr. Sherman he indicated the following:

1. Tecumseh Products bought out a previous owner of the facility, Die-Cast Corp., on September 8, 1966.

2. PCB hydraulic fluid was used at the plant site through 1971. Mr. Sherman furnished a letter from Chem-Trend (attached) verifying the purchase of PCB hydraulic fluids by Tecumseh.

3. Tecumseh Products does not own frontage on the Sheboygan River. The narrow strip of property between the Tecumseh cyclone fence and the river is owned by the City of Sheboygan Falls. The flood dike that lies on this strip of land was constructed by the City of Sheboygan Falls.

4. Flood waters have risen above the dike and onto Tecumseh property twice in the last few years.

We took soil samples from the Tecumseh property as well as the flood dike which separates the Tecumseh property from the Sheboygan River. The specific sample sites and sample descriptions are attached. Photos of each sample site were taken.

There is considerable evidence on the Tecumseh property behind the plant, which is enclosed by a cyclone fence, that oil of some kind was dumped on the ground. Several areas are denuded of vegetation and the upper layer of soil is oily and dark brown in color.

Within the fenced area are several rubble piles containing factory waste, and one pile of oil-absorbent material (similar to kitty-litter or speedi-dry) mixed with bits of aluminum. I speculate that the oil-dry material was used under the die-cast machines to absorb leaking hydraulic fluid.

The oil laden absorbent (with aluminum fragments) from under the die-cast machines was probably swept up and dumped in the yard behind the plant.

The flood dike separating Tecumseh property from the river is approximately 150 yards long, 10 feet high, and 10 feet wide at the base. At about six locations on the dike, we observed exposed oil-absorbent material mixed with aluminum fragments, and pieces of red hydraulic hose. I speculate that this material is of the same origin as the oil-absorbent material found within the fenced area. The spots where oil absorbent material is visible on the dike are as much as 4 feet deep in places. The slope from the dike to the river is about 45 degree and provides an ideal situation for this material to be washed into the Sheboygan River. Although about six places on the dike show exposed oil-dry material, an unknown amount may be incorporated within the dike.

Preliminary lab screening has shown that the samples of oil-absorbent material contain 46,000 PPM PCB or about 4.6% PCB. This means that a ton of this oil dry material on the dike would contain about 100 pounds of PCB. The possibility of many tons of contaminated soil on the river bank is quite real.

Some questions that remain unanswered right now are:

1. How much PCB hydraulic fluid did Tecumseh buy from Chem-Trend?

2. Who built the dike and when?

3. Who deposted the oil-dry material and hydraulic hose on or within the dike?

4. When did Tecumseh construct the cyclone fence between the dike and their property?

5. How much of the oil-dry material has already been washed into the river by rain and flooding?

My initial recommendations are:

1. All of the PCB bearing spoils on Tecumseh property and on or within the dikes should be removed and hauled to an approved PCB disposal site.

2. Mr. Sherman has been plant manager for at least 10 years (since before Die-Cast Corp. was bought out by Tecumseh Products). He should be asked to account for the presence of oil-dry material on the dike.

3. River sediments should be thoroughly monitored downstream to determine if PCB residues are sufficiently high to warrant dredging and/or burial.

TS:bb

Attach.

Chem-Trend Incorporated
3205 E. Grand River
Howell, Michigan 48843
Telephone (517) 546-4520
Telex: 720 483

April 28, 1978

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

Dear Mr. Wachal:

This is an addition to the information I gave you in a letter yesterday concerning PCB's. In reviewing the history of Chem-Trend sales of hydraulic fluids to the Sheboygan Falls die casting plant, we find that they used two Chem-Trend products previous to HF-20.

In 1970 and 1971, we sold a fire-resistant hydraulic fluid called HF-30. This product was about 85 percent PCB. In 1970 there was beginning to be evidence that PCB's were being found widely in the environment, so Chem-Trend elected to stop selling HF-30 well before any restrictions were placed on use or sale of PCB. The last shipment of HF-30 to Sheboygan Falls was in March, 1971. After that, they used HF-31, a synthetic fluid based on chlorinated paraffins. Unlike PCB, the chlorinated paraffins are non-toxic and biodegradable, so they are not in the same hazard or persistence category as PCB.

Next, over a period from October 1972 to May 1973, the Sheboygan Falls plant converted to use of HF-20, a water-glycol based hydraulic fluid. The conversion requires a drain and flushing procedure, since water-glycol HF is not compatible with synthetic (non-aqueous) types. Our experience with analysis of hydraulic fluid from one other die casting shop whose history of fluid use is similar shows that our recommended drain and flush procedure reduces PCB content of the remaining hydraulic fluid to the level of about 10 to 20 parts per million.

This history shows that there was at least one PCB source although it ended in 1971. You probably also had a source in Monsanto hydraulic fluids used previous to HF-30, although I do not know which Monsanto fluid was used. How this information fits with your current situation will have to be determined by your company, of course.

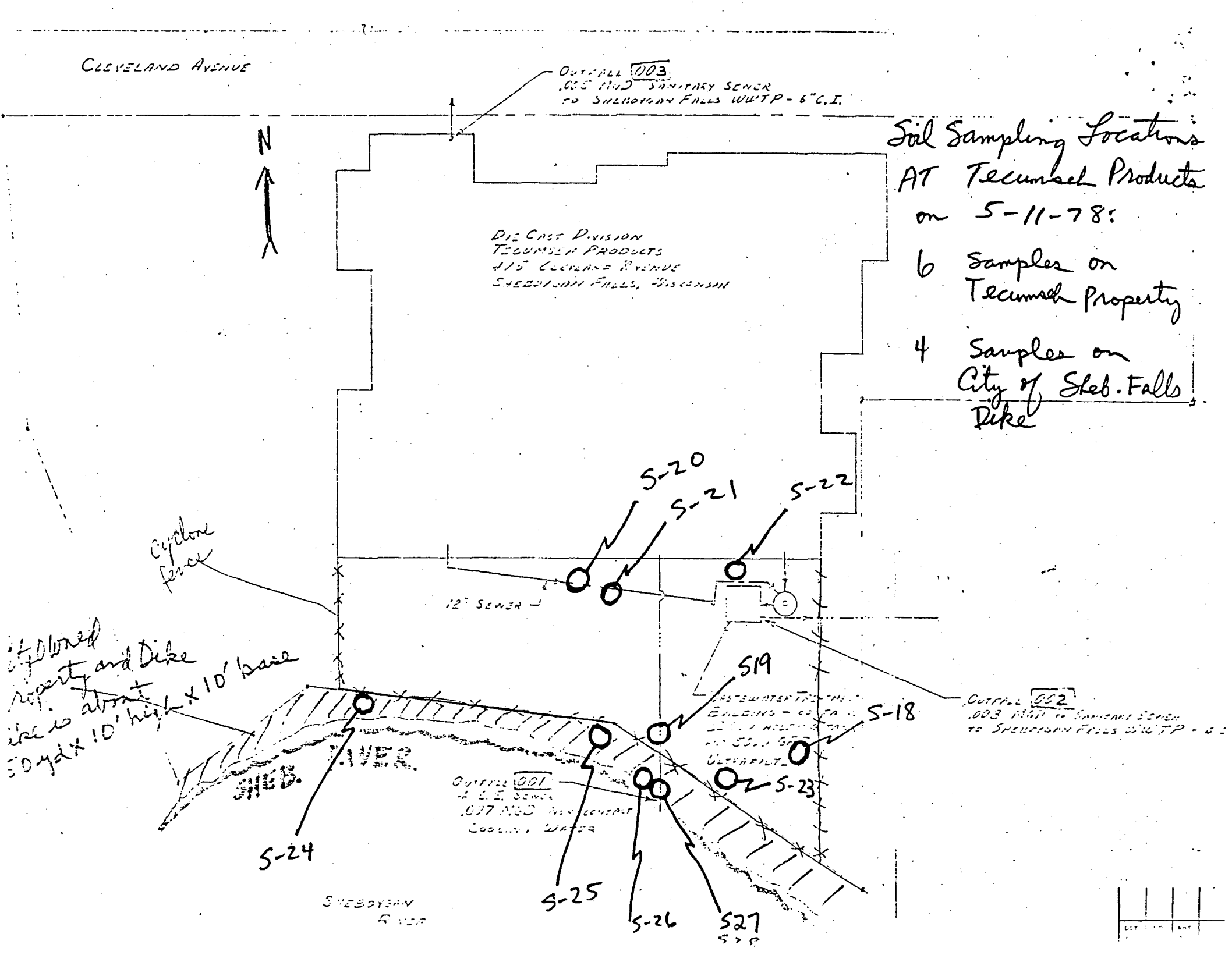
If you have any further questions, please feel free to ask us.

Very truly yours,

CHEM-TREND INCORPORATED

David B. Cox
Technical Director

DBC/dmc
cc: D. Durben
Mr. Snoeyenbos


Cleveland Avenue
Outfall 003
.625 MGD Sanitary Sewer
to Sheboygan Falls WWTP - 6" C.I.
N
Die Cast Division
Tecumseh Products
419 Cleveland Avenue
Sheboygan Falls, Wisconsin
Soil Sampling Locations
AT Tecumseh Products
on 5-11-78:
6 Samples on
Tecumseh Property
4 Samples on
City of Sheb. Falls
Dike
S-20
S-21
S-22
cyclone fence
12" Sewer
S19
S-18
Outfall 002
.003 MGD to Sanitary Sewer
to Sheboygan Falls WWTP
Outfall 001
S-23
S-24
S-25
S-26
S27
S-28

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

The following water samples were collected by Tom Sheffy + John Schultz (Name)
Surveillance Chemist (Title) on 5-11-78 (Date).
The samples were carried by Tom Sheffy (Name and Title)
to the State Laboratory of Hygiene on 5-11-78 (Date) for ~~phenol~~ PCB
analysis.

Tecumseh Products Eleb. Falls, WIS

Sample Number	Sample Description (see map of collection sites)
S-18	8' from East fence, dark oily spot on ground Pic. 1
S-19	5' from South fence, oil absorbent material, alum bits Pic. 2
S-20	10' from bldg., sandy soil, oil dump area oily soil Pic. 3
S-21	10' from Bldg, sandy gravelly soil, oil dump area oily sample Pic. 4
S-22	3' from Bldg, between oil sep. & bldg, black tarry soil sample, oil dump area pic. 5
S-23	3' from ~~South~~ fence, low area below rubble pile, top soil sample pic. 6
S-24	oil absorbent material, alum. bits, outside of South fence on dike Pic. 7
S-25	oil absorbent material, alum. bits, outside of South fence pic. 8
S-26	oil absorbent material & alum bits on river side of dike pic. 9
S-27	oil absorbent material & alum bits, hydraulic hose on river side of dike pic. 10
S-28	red hydraulic hose line buried in dike

I, Thomas Gibson Chemist III (Name and Title), received the samples described above on 5/11/78 (Date).