PCB's Removal via Treatment Plant 12/13/77

Bill

You were concerned about how much of a PCB reduction will take place in the Waste Treatment Plant influent stream after the new chemical treatment facilities are installed at Sanger Treatment Plant.

Here is some available data

I Waste Treatment Pilot Plant data (see attached) would indicate a reduction from 77 ppb PCB's to 27 ppb (equivalent to a 65% reduction)

Mike Freeman tells me in the chemical treatment, PCB
A) Lime treatment
B) Add polyelectrolyte, ATLAS 2A2, as a flocculant
C) Settle
D) Decant liquor (no filtration)

He says a test could be simulated using gram jars and flocculant as Paul Heisler suggested but the results would be suspect because of PCB's adhering or being absorbed into the test equipment.

II See attached Lab Development report where various degrees of PCB reduction were possible by using various techniques. (The starting material at 54 ppm is much higher than Waste Treatment Plant influent)

This is for your information. If you think tests should be made to simulate new facilities you will have to follow-up with Heisler, Freeman, Horner?

MONS 058217

Earl Stewart

From the desk of
E. E. STEWART

In chemical treatment with
1) lime treat
2) Add polyelectrolytes
ATLAS 2A2
as a flocculant
3) Settle
4) Decant liquor (No
filtration)
Information from Mr. Tessman
12/11/73

II. CURRENT LEV

D. 3. Str
nei
tri
Ame
Mob

4. Tan
fro

5. Pla
Tow

6. Pla

III. CURRENT TEC

A. Filtrat

ppb

's

's

s

PCB that are initially present. Have been about 3 ppb after filtration of material at 40 ppb level initially.

B. Carbon Treatment - Anniston data indicate PCB reduction to 20 ppb by carbon adsorption of PCB and reduction to 5 ppb when filtration follows carbon treatment.

Muriatic acid after carbon treatment has residual PCB content about 3.5 ppb.

Carbon treatment and filtration have permitted reduction in PCB content of tank car washes from about 50,000 ppb to 7 ppb.

C. Waste Treatment Pilot Plant

Pilot data indicate reduction as follows. Average of two runs.

Influent	77 ppb PCB's
Lime treated	27 ppb
Sand filtered	22 ppb
Carbon treated	7 ppb

At this time there is no research in progress to permit removal of PCB from aqueous streams to values below the carbon removal capability of 5 ppb. Carbon treatment of all streams are not contemplated at this time.