COMPANY CONFIDENTIAL

Monsanto

FROM (NAME & LOCATION) E. E. Stewart, W. G. Krummrich Plant

DATE March 17, 1972

SUBJECT POLYCHLORINATED BIPHENYLS (PCB) - SEWER ANALYSIS

REFERENCE

TO : Messrs.
Clarrie Buckley
Harry Campbell
Bill Caraway
Al Frerking
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Ed Stewart

cc: Messrs.
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The addressees met 3/14/72 to review the present method of reporting the amounts of chlorinated biphenyls present in the various sewer streams that are analyzed. At present, a chromatographic analysis is made of the sample. Calculations are made based on peak heights, and chlorinated biphenyls are reported as Aroclor 1221, 1242, 1248, 1254 and/or 1260. The respective amounts of each reported Aroclor are totaled, and this latter amount is used to calculate the amount of polychlorinated biphenyls (PCB's) present in the sewer stream.

Each respective Aroclor is a mixture of different chlorinated biphenyls. The lower Aroclors contain more of the lower (mono) chlorinated biphenyls, and the higher Aroclors contain more of the higher (poly) chlorinated biphenyls. Some Aroclors contain the same components. In those cases when the component used for peak height measurement is present in different Aroclors in the sample, we are double counting. This is true when 1221 and 1242 or 1242 and 1254 are reported. Orthochlorobiphenyl is common to 1221 and 1242.

It was agreed by those present that the laboratory would discontinue reporting specific amounts of 1221 and 1242 present unless a disproportionate amount of 1221 is present. The analyst would make this judgement. This will eliminate double counting when both 1221 and 1242 are reported. At this time we will continue reporting 1242 or 1248 and 1254 or 1260 separately even though there is a slight overlapping of some components.

There was some question when we began producing 1105 and 1109 whether we should report monochlorinated biphenyls as PCB's in the sewer streams. The guide given by W. B. Papageorge was "if the amount (A-1221 or A-1109) begins to exceed the amounts of other PCB's present, we should report as PCB".

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Therefore, using the above information as a guideline, I suggest:

1. When peak heights would indicate the 1221 amount to be less than 1242 or 1248 and 1254 or 1260, do not include 1221. If the peak height would indicate the presence of some 1221, so state on your tabulation sheet.

2. When peak heights would indicate the 1221 amount to be greater than 1242 or 1248 and 1254 or 1260, include 1221 as a separate Aroclor being present.

Please note the attached table. Based on previous analyses, I would recommend we count or not count as I have indicated.

Edward E. Stewart

/emz

att.

MONS 042699

AROCLORS

REPORT PRESENCE OF 1221	1221	1242 or 1248	1254 or 1260	DO NOT REPORT PRESENCE OF 1221
X	292 ppb	159 ppb	15 ppb	
	440	641	224	X
	15	22	7	X
	80	73	50	X
	103	189	70	X
	31	45	7	X
	311	288	127	X
	607	727	245	X
	17	21	8	X
	25	61	22	X
	95	122	52	X
	48	64	15	X
	534	823	174	X
X	2697	1923		
	121	209	184	X
	31	36	10	X
X	1920	1320		
	3985	7148	3743	X
X	728	268	140	
X	21900		50	
X	22300		39	
X	5061	406	70	
	4	7	2	X
	21	12	17	X
	46	78	180	X
	114	190	60	X
	9	29	21	X
	51	59	18	X
	22	18	7	X
X	392	205	95	