Monsanto

Aroclor Wildlife

~~CONFIDENTIAL~~

FROM ANNISTON, ALABAMA

DATE May 12, 1969

SUBJECT

REFERENCE Memo PBH to WFT/CFB 4/28/69

TO Paul B. Hodges
General Offices

cc: V. R. Haupt
D. B. Hosmer - G.O.
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E. G. Wright

This Copy For

B/U 7/31/69

~~7/15/69~~

Status?

The following information is a summary of our telephone conversation of May 9, 1969, complying with your request in reference memo.

The Anniston Plant plans for poly-chlorinated biphenyl (PCB) determinations in liquid waste streams including sources, quantities and recommended actions are included. We do not plan to look for atmospheric losses based on our present mutual feeling that losses to the atmosphere are negligible.

The target dates are based on 1) one man full time (E.G.Wright) sampling, correlating and reporting these and other studies; 2) one chemist for one to two months and sufficient analyst time thereafter; 3) that adequate methods are developed and reduced to plant practice in time; 4) that adequate instruments and instrument time are available. Items two through four require reshuffling of the Anniston Laboratory plans and will be discussed with W. A. Kuhn and J. E. Smith (since low color Aroclor 5460 sample preparation is affected). Also, although electron capture equipment exists at Anniston it is not presently set up and operating. This will make meeting your proposed schedule of being ready to run PCB analyses by the Tucker method by June 2 unlikely.

Proposed Plan

1. Obtain gross samples of Snow Creek for visual checks to determine presence of discrete, non-aqueous liquid phase in pools or other stream bottom areas.

   Completion determined when downstream limit of discrete, non-aqueous liquid phase has been established.

   Start 5/1/69
   Complete By 7/1/69

2. Obtain and analyze for PCB, samples of mud and water from Snow Creek at two points downstream of limit established in (1).

   One of the sampling points will be at the mouth of Snow Creek. Two sets of samples taken two weeks apart will be used. (Total of 8 samples)

   Target Completion 8/1/69

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Proposed Plan (Cont'd)

3. Obtain two samples of mud and water from Choccolocco Creek - one near Snow Creek confluence and second 8-10 miles down stream near Jackson Shoals. Same frequency as (2) above (Total of 8 samples). — Target Completion 8/1/69

4. Further action on mud and water samples will be decided after results of 1 thru 3 are in. — Decision Target 8/15/69

5. Complete the in-plant survey now underway to identify and quantify sources of PCB to the sewer.

   a) Identify all departments utilizing or processing Aroclors. — Completed 4/15/69

   b) Audit Aroclor and HCl departments (previously identified as major sources) to determine source and amount of PCB loss to sewer. — Target Completion 7/1/69

   c) Recommend means of recovering, eliminating, or reducing losses from sources identified in (b). — Target Completion 8/1/69

   d) Define requirements and rough cost to assure ourselves that loss of Aroclor to Snow Creek (Solid and Liquid Aroclors) is limited to solubility losses. — Target Completion 10/1/69

6. Establish continuing monitoring systems:

   a) For loss of Liquid (or Solid) Aroclor to Snow Creek (hopefully zero). — Target 6/1/70

   b) For weekly or monthly PCB on our effluent to Snow Creek (<u>solubility losses</u>). — Define Needs 9/1/69

   c) Establish water sampling station on Choccolocco Creek to monitor PCB and Parathion. — In Operation 6/1/70

7. Investigate means of disposal of Aroclor scrap.

   This would need to be a cooperative venture between Research, Marketing, WGK, Anniston and CED since the problem is not unique to a single Monsanto location and is facing our customers too. — Schedule for 1970/71

That completes the proposed plan. There are a few other points I'd like to mention though.

1. The Anniston Plant is proceeding with projects to reduce the Aroclor in recovered HCl - some of which is sewered.

   a) The "catch-tank" in the HCl off-gas line has been successfully started up and is collecting some material.

   b) A membrane type coalescer is to be installed in May to remove organics from the absorbed HCl.

   Aroclor from these two sources will be buried in the toxic dump.

2. Gross sampling of Snow Creek started the week of 4/28/69. Snow Creek outfall has been monitored for pH and % HCl for several years. (Potassium and mercury analyses are no longer run)

3. Preparations are well underway to start the Aroclor/HCl departmental audits. Actual sampling should start within a week, if the analyses can be run.

4. The only departments using or processing Aroclors at Anniston are:

   a) P_2S_5 - a Therminol system. This is drained to drums when replacement of Therminol is required. This has been done in this manner since startup.

   b) Aroclor

      Processing
      Two Therminol systems
      Floor cleanings
      Spills
      HCl off-gas

      No significant amount is lost from tank car cleaning since any material (including heels) is drained into drums, cleaning cloths are put in trash containers. Both drums of liquid and rags are sent to the dump.

5. Present estimate of PCB analysis time indicates 2 to 3 man-hours are required per sample. This may well limit us to two to three samples per day.

6. Present guess on future monitoring is that we would need to add one man to the laboratory staff and buy an instrument (at about $10,000) to support an adequate program.

7. An audit of the Parathion and PNP Departments will be carried out this summer in addition to the proposed program. This work is urgently needed to establish how close we are now approaching the ultimate capacity of the biological treatment plant and whether or not reduction through an in-plant control program is feasible. Answers are required

Points (Cont'd)

urgently because they determine the course of action of the sulfur recovery system proposed for Parathion as well as the ultimate production capacity of the Parathion Plant. While Parathion belongs to the Ag Division the biological treatment plant belongs to the Organic Division.

I hope this summary will serve your present needs. Many thanks for the suggestions in your 4/28 memo. As you can see many found their way into our program proposal.

W. F. Taffee

jw