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PROGRESS REPORT
TECHNICAL SERVICES DEPARTMENT
ANNISTON, ALABAMA PLANT

JOB NO. 002-1026 **REPORT NO.** 1 **DATE** February 16, 1970

TITLE: Work Plan for Identifying and Quantifying PCB Losses at Anniston

OBJECTIVE: To determine how much Aroclor is being lost and to pinpoint as closely as possible where these losses are occurring. Also, to determine some economical (if possible) means of reducing these losses.

PERSONNEL: E. G. Wright (G. W. Miller)

REPORTED BY: E. G. Wright

SUMMARY: The purpose of this work will be to quantify the PCB losses from the Anniston Plant. The sources of these losses are already known by the previous sampling which was done in the Aroclor department during 1969.

Sampling will be conducted at four points within the Aroclor department: (1) Aroclor chlorinator sewer, (2) Aroclor still room sewer, (3) HCl department sewer, (4) warehouse sewer. The other sample points which will be monitored will be the total plant effluent and the HCl neutralization pit influent.

Extreme care will be exercised in the handling and the preparation of the samples for analysis. This is being done because of the extremely sensitive analytical method which will be used to analyze the samples (i.e., PPB range).

Equipment is presently on order to provide an "Aroclor-free" lab and also to provide the necessary analytical instrumentation. Present estimates are that the "Aroclor-free" lab will be installed by May 31, 1970. In the meantime, an off-site lab will be set up. A technician is presently being trained and will spend full time on this work.

FUTURE:
1. Continue sampling through 1970 to evaluate cleanup work.
2. Make recommendations on the locations of sumps.
3. Provide analytical support for PR&D work on Aroclor pollution.

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E. G. Wright
Technical Services Department

ANNISTON

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Details

1. Sampling: Sampling of the waste streams will be accomplished by using small peristallic type pumps. All samples will be 24 hour composite samples with the exception of samples collected outside the plant (i.e., Choccolocco and Snow's Creek). These samples will be "grab" type samples. All of the residue (mud) samples will be "grab" samples. Present thinking is that sampling will begin during the week of March 16. Samples from outside the plant and residue samples will be collected a minimum of one time per month.

2. Flow Measurements: Flow measurements will be made and recorded at each of the sample points daily. These measurements will be made by fabricating and installing Weirs for each of the sewers which will be sampled.

3. Sample Collection: Extreme caution to prevent contamination will be exercised during the collection of these samples. This is necessary due to the high sensitivity of the analytical method (PPB). All sample bottles will be prewashed with C.P. acetone, rinsed with distilled water and capped tightly to prevent contamination. All sample collection bottles (i.e., bottles used to collect 24 hour samples in field) will be inspected each time a sample is taken, and if any visible organics are left in the bottle, it will be taken to the laboratory to be washed with C.P. acetone. Only glass bottles will be used both for the collection of the samples and transporting the samples to the laboratory since polyethylene or other synthetic bottles could possibly absorb some Aroclor and consequently contaminate later samples.

4. Analytical Method: The method which will be used is a gas chromatographic - electron capture method which was developed by Dr. E. S. Tucker at Organic Research. The necessary equipment has been ordered and delivery is expected by March 1. Setting up the equipment should take approximately two weeks. Therefore, sample analysis can probably begin March 16.

5. General: The first phase of sampling will be of two months duration. Approximately five to six samples per day will be analyzed for PCB. This will require full time (8 hrs./day) for a technician and about half time for the pollution control engineer. The second phase of the sampling period will continue through all of 1970. The primary purpose of the second phase of sampling will be to evaluate the effectiveness of any cleanup measures taken (i.e., sumps, coalescing units, carbon treatment, etc.). Analytical support will also be provided for the PR&D study on Aroclor cleanup. This program will represent a cost of ≈50 M dollars in 1970; this includes new instrumentation, laboratory facilities and required manpower to execute this program.

E. G. Wright

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