Monsanto

St. Louis - General Offices

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ANNISTON - PCB - CLEANUP PROGRAM

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CONFIDENTIAL - F. Y. I. AND DESTROY

Following are the moves underway resulting from the FDA findings of high levels of PCB in fish taken from Choccolocco Creek downstream from it's confluence with Snow Creek.

STATUS

(1) We are presently discharging to Snow Creek about 16#/day of PCB (down from 250#/day in '69). Measurements of departmental waste streams show a total loss of only 2#/day. The discrepancy is believed due to; (a) sampling problems in departmental waste streams where two-phase systems of water and free aroclors may be present, and (b) possible pickup of PCB by leaching previously deposited PCB from the limestone neutralization pit which also acts as a settling basin.

(2) Work to further reduce losses presently underway:

a) Sump is being installed at the aroclor department to capture free aroclors from the 275 gpm flow. This is believed to be the largest departmental source of sewer loss because of the liquid arocolors frequently observed. However, sampling work did not confirm the belief because, no doubt, of inherent sampling problems. The project was due for completion on 9/1, and had been delayed because of an underground spring.

b) Curbing is being installed at drum loading area with dry pick up of spilled aroclors planned.

c) Investigation of treatment methods - adsorption by activated carbon showing most promise to date.

(3) Joe Crockett, Secretary of the Alabama Water Improvement Commission, will try to handle the problem quietly without release of the information to the public at this time. He believes that FDA will not precipitately in this matter (he did not advise how FWQA might react). Dr. Myers, Director of Public Health of Alabama, wants toxcity information on PCB's and this will be conveyed personally to him by Jack Garrett next week.

PROGRAM

(A) Public Relations - E. V. John developed a proposed statement to be used in event of public disclosure but, after consultation with Legal, felt it should not be used because of the recent lawsuit instituted against the plant by BASS. Therefore, an innocuous, essentially "no comment" type statement is being drafted.

(B) Operator Education - All Anniston personnel have been readvised of the necessity to avoid sewering of any aroclor.

(C) Mechanical Program

(1) Departmental Sump - at extra cost of $2,000, work is proceeding on an overtime basis with completion expected 8/12/70. This will eliminate the possibility of large losses from the operating area.

(2) Loading Area - Washup of spilled aroclor has been stopped and dry pick via sand instituted. Curbing project is being expedited.

(3) Neutralization Pit Clean out

(a) Immediately, the settled material downstream of the limestone will be removed as well as possible by pumping, with minimum stirring of the water. The solids (and aroclors) will be landfilled.

(b) By-Pass of Neutralization Pt. - On crash basis, trenches will be dug to allow diversion of all water from the limestone pit. This will take 1 - 2 weeks and will cost about $10,000.

In addition, it will be necessary to provide caustic neutralization of the acid wastes. This will be handled in the aroclor department via installation of a pH controller and valve with temporary piping and trucking facilities. Cost will be about $5,000 plus about $500 per day for caustic during the period when the alternate neutralization is required. During this period, PCB losses should be no more than 5 - 10 lbs./day.

(c) Cleanout - The pit will be thoroughly cleaned out with probable removal of the present deteriorated asphalt membrane and replacement (possibly) by a plastic membrane which can resist aroclors. The plant will consider possible structural changes to permit more affective operation and ability to make future cleanouts without the present by-pass steps. Recommendations relative to this will follow.

(4) Water Flow Reduction - Present total flow through pit is 700 gpm. For at least several of the streams, reduction of flow will result in immediate reduction of PCB to Snow Creek. More important, reduction of flow will minimize future treatment costs.

In conjunction with the pit by-pass work in 3(a) above, approximately 200 gpm of aroclor free water will be permanently diverted. Included in the first reduction are the chlorinator cooling streams and most of the water coming from the Niran flare tower. Details of how this will be accomplished will be available by 8/14/70.

Over the next 3 - 4 months, further water conservation projects will be installed with objective of reducing the stream to the lowest practical amount, now estimated to be about 300 - 400 gpm. The projects will involve multiple use of water and further diversions of aroclor - free water.

(5) Final Treatment - Based on some indications (and much hope), by September, the actions above may approach the present plant objective of 10 ppb of PCB's in 700 gpm (or 0.1 #/day). The hope is raised because dissolved aroclor has shown a pronounced affinity for surface adsorption (as on walls of sample bottles). The solids generated by the limestone neutralization are believed to retain aroclor passing by them. Therefore, adequate settling and/or filtration following neutralization with periodic removal of the solids may accomplish the necessary treatment (along with water flow reduction). The plant will proceed on preliminary design of filtration facilities with and without carbon treatment between neutralization and filtration. The design will be available for action in case the reduction is not as great as hoped-for or in case the control agencies demand more complete removal (control agency requirements are a completely unknown factor at present). By the time a decision must be made relative to final treatment, we should have better information on requirements and methods.

(D)Fish, Mud and Water Sampling - Since our fish samples from nearby Choccolocco Creek also showed high levels of PCB's, we are instituting more sampling to determine extent of the problem. Early during the week of 8/10, legal size fish will be caught in Choccolocco Creek near to confluence with the Coosa River (Logan Martin Lake). Fish will also be taken from the lake. If these samples show high (≥5.0 ppm) levels of PCB, sampling will be extended to points down the Coosa River. A high priority will be given these samples by Scott Tucker.

Progress reports will follow at suitable intervals.

Paul B. Hodges/n.p.

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