

(4) Adapted the activated sludge process and a number of modifications thereof to the removal of BOD from papermill wastes.

(5) Aerated lagoons for improved waste treatment have provided a good degree of secondary treatment in some instances at reduced costs. Continued progress in this area is expected.

(6) Developed parameters for effective use of land disposal for liquid papermill wastes.

(7) Development of improved trickling filter media has successfully handled several difficult treatment situations.

(8) Development of adequate sampling techniques for mill, stream and air surveys.

The testimony contains other examples.

*Question 9: Is the pulp and paper industry doing anything to combat the problems of air pollution?*

Answer. The National Council has researched air pollution problems for better than 15 years. Definite progress has resulted from their work and the work of the larger corporations. For example, in the kraft industry a recent survey indicated that approximately half the mills have installed equipment or processes to reduce odorous emissions.

Air pollution problems are more confined to specific localities than are those of stream pollution. Most papermills are cognizant of good-neighbor responsibilities and have installed control equipment where possible. These consist of:

- (1) High stacks.
- (2) Black liquor oxidation.
- (3) Scrubbers.
- (4) Precipitators and dust collectors.
- (5) Catalytic furnaces.

Technology is limiting further progress in this area. Odor level measurement is expensive and not as precise as necessary. Odor abatement is impossible for many of the problem gases. Solutions are not known and so research is required before additional progress can be made. New methods of testing for odor pollutants have been developed at considerable cost as a necessary step toward finding specific solutions.

In April 1966, the National Council, along with the U.S. Public Health Service and the University of Florida, jointly sponsored a conference attended by scientists, engineers, and representatives of enforcement authorities from six countries whose objective was the assessment of the total current technology in the field of air pollution problems within the kraft pulp industry. The compilation of all presently known knowledge should provide an excellent base for determination of the direction of future research in this field.

*Question 10: What type of legislation can the Federal Government pass to help the paper industry deal with its pollution problems?*

Answer: The American Paper Institute has presented testimony this year before the appropriate Subcommittee of the Senate Public Works Committee (on May 12), and before the House Public Works Committee (on July 13), concerning proposed water pollution abatement legislation. In this testimony the institute has set forth in detail its position regarding the type of legislation which it supports at the