

M E M O R A N D U M

April 1, 1976

To: Gary Rothwell

From: Douglas Houck

Subject: Longview Fibre Co. Class II Inspection

On February 26, 1976, Mike Morhous and I met with Dick Wirtz of Longview Fibre. We installed composite samplers at the end of the chlorine contact chamber of their STP and alongside their sampler at the discharge pipe of their industrial waste effluent. A 250 ml aliquot was taken every 30 minutes by both samplers. Four grab samples of 500 mls each were taken from the influent of their STP over a 24 hour period. These grab samples were composited and analyzed as one composite sample. The chlorine residual as determined by the DPD method was slightly greater than 6.0 ppm. No fecal coliform bacteria was found from grab samples taken on the 26th.

They measure the flow from their sewage treatment facilities with a non-standard 90 degree v-notch weir. The design of a standard v-notch weir was discussed with Dick Wirtz. Although the flows recorded and reported are not very accurate it does give an approximation of the flow. While I measured a flow of .21 MGD Longview Fibre Company was recording a flow between .1 - .14 MGD.

On the 27th Morhous and I returned to pick up the samplers and finish the inspection. Besides the 24 hour composite sample of the industrial waste, two grab samples were taken to determine how representative Longview Fibre's samples were. A grab sample was taken from their sampling line and another grab sample was taken at the opening of the discharge pipe. The data shows that with the location and sampling procedures that were used at the time of the survey, Longview Fibre was collecting a representative sample of their industrial wastewater.

There was no way of measuring the flow of their wastewater discharge as they were having trouble with the effluent flow meter. The flows that they have been reporting are incoming flows. Longview Fibre measures their effluent flow with a pressure drop meter over a 100 foot section of line. The flow used to compute the loadings is the mean of the total flow for the 26th and 27th. The following table gives DOE's and Longview Fibre's laboratory results along with the NPDES daily average effluent limitations.

	DOE		Longview Fibre	NPDES	
	<u>Sewage</u>	<u>Ind.</u>	<u>Industrial</u>	<u>Sew.</u>	<u>Ind.</u>
BOD <sub>5</sub> 1bs/day (mg/l)	(20)	48,839 (120)	48,839 (120)	38.0	60,000
T.S.S. 1bs/day (mg/l)	(22)	26,047 (64)	19,536 (48)	38.0	37,000
Flow (MGD)	.21		48.8	0.15	60
Chlorine Residual (mg/l)	6			0.5	
Fecal Coliform (colonies/100 ml)	10				

The table shows that Longview Fibre is in compliance with their daily average effluent limitations.

It is felt that the significant difference between the reported T.S.S. values is due to laboratory technique. The major difference between DOE's and Longview Fibre's T.S.S. procedure is the type of filter holding apparatus used to support the filter paper. The diameter of the Gooch crucible, which the DOE uses, is 2.4 cm versus a 5.5 cm diameter funnel that Longview Fibre uses. This allows Longview Fibre Company to filter 150 ml of sample while DOE can only filter 25 ml and 50 ml of sample. A grab sample taken on March 17 by Longview Fibre Company was split and analyzed for T.S.S. by both labs. This time DOE ran the test using both Standard Method and Longview Fibre's method #54. The largest diameter filter holder that DOE had was only 3.5 cm instead of the 5.5 cm diameter filter holder than the method called for. Even with the slightly larger diameter the DOE could filter only 50 ml while Longview Fibre Company filtered 120 ml. There was only a 14 percent difference for this analysis versus a 25 percent difference for the analysis on the composited samples. In both cases Longview Fibre was reporting lower values than did the DOE.

It is recommended that an effort be made to accurately measure the effluent flow of both the sewage and industrial effluent and that the possibility of discontinuing chlorination of their sanitary sewage effluent be looked into. This could be done by stopping chlorination and taking bacteriological grab samples for fecal coliform from both the sanitary sewage effluent and the industrial effluent. It is felt that because Longview Fibre Company has a secondary treatment plant and due to the nature of the industrial waste that discontinuing chlorination will not cause a health problem. It would save Longview Fibre money and reduce the number of chlorinated organics released to the environment. There appears presently no reason to have a chlorine residual as high as 6.0 ppm in their effluent.