

August 9, 1960

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FIELD LETTER OF ALLAN E. MILLER AND R.C. COLLINS

Dr. Joe Ling, senior sanitary engineer of Central Engineering, has been assigned the problem of sewage disposal and water purification at the Chemolite Plant. Dr. Ling has only been with the company approximately eight months and was curious to learn a little more of the background of various problems pertinent to his problem.

In particular, he is trying to determine the source of the pollution of the #1 Jordan well. (See report of Joe Ling and Larry Hudak, August 1, 1960). Since the source of contamination of the #1 well we all felt is within the sphere of activity of our Chemolite plant.

Dr. Ling has developed a series of test methods to try and determine the ground water flowage. He had heard of the trouble which we had on the previous two settling ponds along the Bulrington railroad tracks and was curious of the extent and nature of our problem, and why we felt it was seepage from these ponds at that time. The complete subject was reviewed and the site revisited and it was noted that there was still a spring with an organic smell and appearance oozing from the gravel strata approximately 30 feet from the top of the bank along the railroad track. Dr. Ling was going to sample this material and get an actual determination for organic constituents. While there, he wanted to show us the nature of his pilot plant operation where he is trying to develop a satisfactory method to cut down on our solids in our sewage disposal. He has developed a Rube Goldberg procedure which seems to be working quite satisfactorily on a pilot plant stage. He has adapted the basic principals to our use and feels that he can reclaim some of the chemicals which are now being wasted. One chemical ~~ix~~ which he hopes to recover is fluoride. He has acquired from the St. Paul

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sewage system, some bacteria which he is endeavoring to climatize to eat the phenol and on his pilot plant pond it is working reasonably satisfactorily. He has an aeration system and feels that he is able to control his BOD quite satisfactorily. As a matter of fact, algae is beginning to form around the edges of his pond. This pond is a plastic lined hole with a diameter of approximately 25 feet. Dr. Ling hopes to have completed his study within the next six months and will make his recommendation to the management. He has constructed a weir on the pond and also anticipates constructing two weirs in the man-holes leading into the main pond.

Dr. Ling is going to investigate the hot water softening procedure in Building #2 as we pointed out to him that the dates of construction of this system seems to coincide with the start of our pollution problem. If this is negative, he then anticipates putting various electrolytes into the phenol waste and measure a ground water flow by his resistance method. We also discussed various locations where various test wells could be drilled to measure the seepage of the existing pond.

Dr. Ling was very appreciative of the information we were able to give him and he is going to keep us informed of his progress, and if we can help him in any other manner, he is going to call us.

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