

July 10, 1956

Dr. B. D. Gleissner

Mr. J. Burton

Passaic Valley Sewerage Commission

cc: Mr. W. R. Taylor

A drive has been started to clean up the Passaic River, principally from an appearance point of view, but in turn this has started the Passaic Valley Sewerage Commission to checking on our effluent. On July 2nd the local inspector, Frank Capone, stopped in and checked our effluent. At the time the only effluent sampled was an alkaline filtrate from 2,4-D containing some particles of solids. He expressed himself as satisfied with this and also seemed satisfied with my statement that, although occasionally some of our effluent might be slightly acid or slightly alkaline, there was no substantial quantity of either present and that they averaged out so that we contributed no appreciable alkalinity or acidity to the river.

However, the next day he came back with the chief inspector (Michael D. Andolino) and A. S. Goldberg (assistant director of sanitation control) and found no acid effluent, but Mr. Goldberg and Mr. Andolino took strong exception to any caustic effluent or any materials containing solids. As an immediate step I agreed to run the 2,4-D alkaline filtrate into the sanitary sewer. This job was completed yesterday.

Presumably, they are going to be back at least for the time being on frequent inspections but at this time it is difficult to anticipate how much trouble we may run into. I will keep you informed of further significant developments.

Attached is an outline of our general history and problems on effluent.

They requested a diagram of all our connections and materials going to the sanitary sewer and the river. I promised to provide this as soon as possible but said that we are short-handed and would not be able to do it immediately.

JB: jp
Attach.

John Burton

CENT. ENGINEER	
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Newark Effluent Problem

cc: Mr. W. R. Taylor

From 1949 to 1953 we had a sporadic problem with discharges of acid to the river. During most of this time we were dumping all of our spent sulfuric acid from DDT and until 1951 we were dumping all of our mariatic acid in the river.

We were subject to frequent inspection by the New York Harbor District, who was primarily concerned with keeping oil and acid out of the water because of hindrances to navigation. The most important of these appeared to be oil and we had to keep our river edge in a state of cleanliness to show we were not allowing any oil seepage whatsoever. We rerouted our lines containing HCl to underneath the surface of the water so that they were never detected as a source of acid effluent. In 1951 we started recovering most of our byproduct mariatic which substantially decreased our acid effluent.

In 1954 we had several visits by the inspector and on the last visit he collected a sample of acidic discharge from the 2,4-D sewer. This is the "acid filtrate" 2,4-D operation and contains a small amount of excess sulfuric acid. However, although he took this sample back to their laboratory for testing, we not only never had a complaint in connection with it, but never had an inspector from this agency visit us again.

In 1955 we had no inspections of any kind, although their inspection boat cruised the river and we believe at times took samples from the river near our plant.

In 1955 we installed a trial pump at the river edge midway between 2,4-D and DDT to determine whether there was too much acid in the river from our discharges to interfere with the use of the water at our bulkhead for cooling purposes. The installation was very successful and we found no corrosion on the iron piping used. In connection with this a number of pH readings were taken of the river at our bulkhead and they averaged approximately 6.0 with no readings below 5.0. We currently plan to install a 500 gpm pump to use this river water for cooling purposes here.

In 1956 we began to return our spent sulfuric acid to General Chemical which eliminates the remaining biggest source of acidic effluent.

The visit of the Passaic Valley Sewerage Commission on July 2nd was the first inspection we had this year and the first time we have had contact with this agency. They tell me that there are four or five agencies which are interested in keeping the Passaic clean, but that most of these look to the Passaic Valley Sewerage Commission as the policing agency. They say they are also concerned with discharges into the Newark sanitary sewer since the effluent from the Newark sewage treatment system goes

into their trunk sewer. Their requirements, as far as the river is concerned, are no color, solid materials, acidity, nor alkalinity. They also do not want any materials with a high B.O.D., although they realize there is no fishing in these waters.

They do not have any particular specifications on material going into the Newark sanitary sewer as long as its pH is above 4. They particularly specified that the 2,4-D alkaline filtrate would be satisfactory to go into the sanitary sewer, although at the time at least, they did not know about its high phenolic content.

In general, I feel that if we clean up some of the materials which have some noticeable content of solids that we are not appreciably contaminating the river which has a tremendous flow at this point. The proof of this is our own planned river pump installation. The high phenolic content of our effluent however might some day be a serious problem if they try to make this an area where fish would live, but on the other hand they would first have to clean up the oil scum from the river which to date they have not been able to do. Nevertheless, in view of their strict rules which these various agencies have, we will have to continue to out-wit them as we have in the past or spend a substantial amount of money for neutralizing our effluent and for construction of a larger sanitary sewer out to Lister Avenue. Every year that we can stall this off we are saving ourselves a substantial amount of money and increasing the likelihood that we may have more land at that time to give us room to install some type of neutralization system. If the phenolic content of our effluent should eventually prove troublesome to the City of Newark, we could eliminate the principal part of that by separating out the bulk of our phenols and thus reduce our effluent to the level of various other industries in Newark which are handling phenolic compounds. Since the effluent from the city treatment goes out to sea, Newark does not have the serious problem in this connection that a town such as Des Moines has. Therefore, I think our fundamental position is safe at this location, although we may have to spend some capital and operating money to keep out of trouble if we are not able to continue to outwit the various agencies concerned with the Passaic River.

In view of the recent activity of the Passaic Valley Sewerage Commission, we are going to study our effluent problem as much as time permits with the idea of reducing our immediate contamination as far as possible and determine what we might do in the event that we are subject to really strict inspection and control.

This includes checking the possibility of enlarging our sanitary sewer to possibly handle substantial quantities of neutralized waste. Of course, one of the main problems is that we do not have adequate area to set up a limestone pit for neutralization.

John Burton

JB: jp