MONITORING

31
19

June 11, 1946

E. R. Jette

Herbert W. Drager

Preliminary Survey of Sewer System

As was arranged by your office, James Tribby and myself made a check of the project sewer system with Mr. McCall, sanitary engineer of the Zia Company, on Wednesday, June 5. We first stopped at the exits of the Tech Area acid sewer which empties north, northwest of the school area. The waste water from the sewer empties onto a flat section of ground near the edge of Pueblo Canyon. The refuge from the sewer has destroyed vegetation in the immediate area near the end of the sewer pipe and Tribby was able to detect, with instruments, the presence of a considerable amount of contamination.

The outlet to the Tech Area sanitary sewer, which also serves a small portion of the residential section across from the Tech Area, empties about 25 feet from the Tech Area acid sewer. There was also evidence of contamination at this outlet but the vegetation was not destroyed. The stream from the acid sewer and the sanitary sewer join down the side of Pueblo Canyon and then takes off in an uncertain direction. Neither of the two outlets or the stream is marked with warning signs.

Our second stop was at the site of the residential sanitary sewer north, northwest of T-218. The outlet of this sewer had detectable traces of contamination but the septic tanks appeared to be cold. However, it was difficult to make any measurement with the instruments we had with us because of the splashing water. The fact that the septic tank refuge did not show signs of contamination is easily explained by the density of the refuge.

Our check route took us to Los Alamos Canyon where we made a third stop at three small sewer outlets south of "X" building. Two of the three sewers were inactive at the time we checked them and the third showed signs of relatively little use. We were unable to accurately determine the presence of contaminated materials, but the foliage surrounding the sewer outlets is richer than would be found if caustic or harmful materials were emptied from the pipes.

The area south of the old D building laundry butments was our fourth stop, but no instrument checks were made because the ground is known to be contaminated at that point.

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Preliminary Survey of Sewer System .... Page 2

TA-1 ? where is this ?

At our next stop, south, southeast of "Y" building we found the sewer outlet and the surrounding ground with high Alpha and Gama radiation. The sewer empties out on a relatively flat piece of ground with a slight downward slope and the vegetation in the area surrounding the path of water has been destroyed and the rocks discolored by chemical actions.

The incinerator was checked next but we were unable to find signs of caustic chemicals or contamination in the noncumbustible furnace refuge or in the sewer sump.

Area V

At DP laundry we found the seepage pits, for waste water, were not functioning properly and that a large amount of contaminated water was lying above the ground in the pits. This of course produces a very serious ground contamination condition when the water evaporates.

After inspecting the sewer system plans with Mr. McCall, in the afternoon, at the U. S. Engineers Office, we checked the sewer location at DP east and west area. The sanitary sewer which serves building 51 and 52 empties out onto flat ground 25 yards from the fence on the north side of the site. The water wanders over the ground forming small pools against fallen trees and debris and then travels down a dirt road for about 200 yards before it turns into the canyon proper and disappears. No effort was made to check the refuge stream for contamination but it is very reasonable to expect that the water and the ground over which the water travels is highly contaminated. The same is true of the water which empties from the east area filter house into two seepage pits. These pits, like those at the laundry, are not functioning properly and the oil washing down from the precipitrons is lying on top of the ground. This is very definitely contaminated to a high degree. — Area I

Area V

The acid sewer outlet for the west area comes out on the south end of building 2 and travels to the edge of Los Alamos Canyon. The sewer line is intercepted by some type of septic tank and vaporization chamber which we were unable to inspect because it was made of heavy timbers solidly

Don't believe this was a designation see Special Sewer Map ENGC-5338

Sample No. 21 Area

fastened together. This line should be more thoroughly inspected on the future survey.

It is evident that most every sewer line orginating in the Tech Area or at DP site is contaminated. They are poorly planned, and even more poorly used and maintained. In several instances the septic tanks are too small and in almost every instance the septic tanks are not operating properly because of improper bacterial action.

It is very desirable that water and earth samples be taken at each sewer location to determine the degree of hazard. Further, it is desirable that some type of check be made by qualified technicians to determine why the sanitary sewers are contaminated or why the acid sewer should show evidence of refuge from sanitary installations.

place in monthly report

Mr. McCall was most helpful to Mr. Tribby and myself and he informs me that he has instructions to see this problem through to our satisfaction. I believe that the immediate future is none too soon to utilize Mr. McCall's experience and the help of others in a more clear determination of our problem and the necessary solutions.

Herbert W. Drager

HWD/lr

cc/ Graham
McCall
Tribby
file