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MEETINGS WITH METROPOLITAN EDISON
RE THREE MILE ISLAND - DOCKET 50-289

EARSTB:DRL:RLW RT-229

The first of two meetings was held with the DRL staff in Room 107, Bethesda, on October 17. The second meeting was held with both the DRL staff and the ACRS subcommittee present at Hershey, Pennsylvania, on October 19. At both meetings the attendance included the writer, as well as Eric Meyer of the Radiohydrology Branch, USGS, and Mr. Richard McLenore of Gibbs and Hill, one of the applicant's consultants.

Mr. Meyer made some opening comments on the 17th to the effect that he believed that the channel constriction below Conewago rapids (just below the York Haven Dam) probably was the controlling element in the river stage profile in this area. He had been to the Corps of Engineer's office in Baltimore to get detailed data on high water marks which were recorded in the 1936 flood, in which the flow in this area was approximately 750,000 cfs. Since the maximum probable flood is about 1.1 million cfs, the data from this flood would be very helpful.

Mr. McLenore presented a description of his flood hydrograph calculations. These indicated that he did not start at the channel constriction because of the rough bottom between this point and the dam, an area which has not been surveyed. Instead, he began with initial water levels above the dam, assumed a variety of bottom roughness factors, and balanced the flows through the three channels above the dam to arrive at consistent levels at the north end of Three Mile Island. He left us the impression that he had done a thorough job of analysis, and that it matched measured flood levels fairly well, even though it was obvious he had not started at the right point in the river, and that there was some tendency to distort facts.

It was agreed that McLenore would bring his special bottom profile survey data with him to the meeting on the 19th, along with some computer printouts, so Mr. Meyer could review these and evaluate them.

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At the meeting on the 19th, a considerable amount of time was spent in exploring the river by boat, inspecting York Haven Dam, and locating high water marks from the 1936 flood on the east bank of the river.

It was found that the high water mark of 295.2 feet at the mouth of the Conewego Creek at Falmouth was on a wall forming the south side of the creek channel at a point between the road bridge and the railroad bridge. The railroad bridge was downstream from the water mark, and had only 3 small arches for the water to pass through. The top of these was submerged some 4 or 5 feet at the recorded water level, as was the entire bridge structure, including the level of the tracks at that time. Thus, if there was much flow under this bridge at the time, the water mark would be above or below the level of the river, depending on the direction of flow.

We also located another high mark (approximately) on a railroad bridge about a mile north of Falmouth. This one appeared to be only a foot or two above the top of the arch under the bridge, indicating the level was a more reliable indication of the true level of the river.

After the site visit, Mayer, McLenore, and the writer had an extensive private discussion of the situation, with no other participants. McLenore stated that he had some paper from the Corps of Engineers which indicated that the maximum probable flood would produce a level of 308.7 feet at Olmstead Air Base, a short distance up the river from the site, just past another channel flow constriction. He has since forwarded this to Mayer, and it proved to be part of a graph of flow versus river stage, but the source of the graph is not indicated. It appears to be derived from gage readings at the air base, and we will attempt to learn about the reliability of this gage point, whose existence is unknown to us at this time. If this value is reliable, we might be able to estrapolate down stream to the site to determine the flood level there.

As it became apparent that there was no straightforward way to resolve the flood level problem, McLenore offered to raise the levee around the site from 307 feet to 310 feet, and indicated that he might be able to raise it two feet more at no great expense.

Although no direct statements to the effect were made by DEL, it became apparent that if some reasonable degree of credibility can be established for the level derived for Olmsted, then something very near 310 feet would be acceptable at the site. However, there is still some problem about the level at the south end of the site area.

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