

020411

To

R. E. Thurmond

Date

24 March 1975

From

J. F. OIk

Subject

Tailings Dike Break

At some undetermined time between the regular Mill Shift Foreman's inspection of the tailings pond on night shift of March 19, 1975 and 7 a.m., on that date, a break occurred in the east dike of the tailings pond. The break occurred at the point where the decant pipes were discharging water just opposite the CIL plant, and the cause of the failure is believed to be water seeping along the outside of the pipes. The Mill Surface Foreman inspected these pipes on the day before, and reported no evidence of seepage around them at that time. The break in this dike released the water stored in the east pond, and this water flowed down the old Rose Creek valley into the area where tailings had been discharged in the winter months. This tailings pond was formed by the plug that was placed across the valley during the fall, and operated quite successfully during the winter. This pond was also full of water, as it was operating as a secondary settling pond at that time. The volume of water that came through as a result of the break in the upper dike overflowed the top of the plug, and caused a breach in the dike, releasing both the water stored in this pond along with a quantity of tailings that were stored in the pond. An estimate of this quantity is being made. This surge of water and tailings went on down Rose Creek, and deposited tailings for about a mile downstream, and the dirty water overflowed the Rose Creek banks until the junction with Anvil Creek.

Work commenced immediately on day shift to repair the break in the east dike, and the mill was shut down to stop the discharge of water through the break so that effective repairs could be made. This was completed in the early afternoon, and the mill restarted. As the water level rose again in the pond, seepage through the repair was evident, so repairs were made with selected clay material from the pit, and all seepage was stopped and the pond sealed by Friday, March 21. The water level in the pond then started to build up again, and work started on a rock wier for decanting water from the pond. As of today, there has still been no discharge from the pond.

At the site of the winter pond, seepage water from the diversion ditch continued to flow through the breach in the plug, picking up silt and causing dirty water to continue to flow into Rose Creek. To alleviate this, the water level in the pumphouse reservoir was lowered to stop discharge into the diversion ditch, although this seepage continued. To provide a settling pond for this seepage water, a dam was constructed near the site of the new, permanent dam, downstream from the plug, above the point where this flow entered Rose Creek to provide a settling area for this water. This was completed on Saturday, March 22, using material from the mine hauled by mine haulage trucks. Further work to strengthen and raise this dike is in progress. Work is also underway to refill the breach in the plug, although

. . . 2

CYPRUS

this will take several more days due to overhangs of frozen material that require drilling and blasting on each side of the breach, as well as ice and frozen chunks that must be cleaned out of the bottom with a dragline.

During the period of March 20 through March 22, a representative of the Yukon Water Board was here observing the effects and the actions being taken. His main concern was that the discharge of the seepages through the breach in the plug would allow heavy metals to discharge into Rose Creek. The construction of the secondary settling pond, he felt, would rectify this. Also, two representatives of the Environmental Protection Service, one from Whitehorse and one from Vancouver, visited here, along with a representative of the Department of Fisheries. The EPS people were not particularly happy at the occurrence, but did not indicate that they felt that it was any ecological disaster that could not be rectified. Their recommendation was that, when feasible within the next month, we release enough water through the diversion ditch to provide a cleansing action downstream, and this, along with the spring runoff, would pretty well clean out the area downstream from the dam in Rose Creek. Also, on late Thursday, a reporter from the Whitehorse Star came out, and I told her basically what had happened and what was being done. Unfortunately, a story got into the Star in Friday's edition based on some statements by an EPS individual in Whitehorse before the full facts were known, and this has undoubtedly given us some bad publicity. I talked to the Star this morning, and a story will be in today's paper outlining what is being done, and the fact that the action has the approval of the EPS and Water Board. At the same time, I had Norm McCammon of Golder Brawner up here to give us his advice and approval and this fact will also be brought out.

Another action that was taken was to have water samples collected on a regular basis at the junction of the Pelly River and Rose Creek since Thursday. These samples will be analyzed, but they do not appear to have any solids in them, and samples taken downstream on Rose Creek on Thursday, while showing suspended solids and turbidity, were not above any limits on heavy metals. I will advise you of the results we get from the monitoring that was done since Thursday when they are available.

JFO:mb



J. F. Oik