

(18) If, even with additional safeguards, you are of the opinion that the present power-house should not be extended, what do you consider the best method to adopt for the generation of the remaining half of the possible power at this location ?

I consider that the position of the present power-house is quite secure, and that there is no risk in proceeding to extend the station on the lines followed prior to the occurrence on the 7th June. I therefore believe that it will be practicable and safe to run the power-house up to its present and proposed installed capacity.

(19)–(20).

(19) Having examined the geological evidence and the formation as disclosed by the test holes, do you consider that it was reasonable to erect the dam and the power-house on the sites selected ?

(20) If your answer to No. (19) is in the negative, what conclusions do you derive therefrom ?

Aside from the possibility of earthquakes and volcanic eruptions, which do not fall within the scope of my report, I believe it is quite reasonable to have erected a dam and a power-house on the sites selected.

(21) Having given full consideration to the conditions of the headrace, and in the event of your opinion precluding its further use, what alternative method would you recommend for the delivery of water to the penstocks ?

I consider that the headrace need not be abandoned, provided remedial measures as outlined in my report be taken to cure the damage and prevent further accidents.

(22)–(23).

(22) Prior to the present trouble occurring, and owing to the rapid erosion taking place below the spillway dam, authority was given to concrete the "falls." After examining the plans and specifications for this work, do you consider the proposal a proper one, possessing reasonable prospects of success, and what is your opinion of the estimated cost ?

(23) If you do not consider above proposal for concreting the "falls" a proper one, what is your alternative suggestion for dealing with this portion of the scheme and preventing further erosion ?

I consider it necessary to take measures in order to either consolidate the "falls" or hamper the speed of the destructive processes.

The proposal indicated by the Public Works Department, that aims at a consolidation of the falls, has not yet been worked out sufficiently in detail to enable an examination. It is therefore impossible to pass any definite judgment upon said project, or to compare it with any other scheme that might be conjectured.

In view of the magnitude of the works and the bearing they have on the public safety and on the successful operation of other parts of the hydro-electric plant, I cannot take it on my responsibility to present even the outlines of a project without a very careful study. This study, however, would require considerable time not only for ordinary office-work, but, very probably, even for the carrying-out of extensive hydraulic model tests.

For these reasons, and taking into account also the time that would be needed for the execution of a project of consolidating the "falls," I feel inclined to believe that no scheme of consolidation can be brought to a successful end within the time needed to bring other parts of the hydro-electric plant into working-order, which latter work should not take more than three-quarters of a year to accomplish.

Knowing that the enforced stoppage of Arapuni has caused a great scarcity of power, I have tried my best to find out whether there are any minor and less expensive means by which it might be possible to hamper the scouring processes to such a degree as to prevent them, at least temporarily, from being a menace to public safety and to the successful