

ANNEXURE -

DO No. 12/16/95-Hydel.II

the 17th August, 1998

IMMEDIATE

Dear Shri Gupta,

I am enclosing copy of DO letter No. 201/6/97-HAD/II/204 dated the 5th August, 1998 addressed to the Secretary (Power) by the Chairman, CEA regarding the proposal of NJPC to raise the height of Nathpa Dam.

You will appreciate that with a view to obtain peaking benefits, the dam height should be raised by 7m corresponding to FRL of 1495.5m. However, in view of the urgency of firming up the revised cost estimates and revised commissioning schedule with a view to obtain approval of the World Bank to the extension of World Bank loan beyond 31.12.1998, it was felt during the pre PIB meeting held under the chairmanship of JS&FA on 30th July, 1998 that the option 2(b) contained in the final report of WAPCOS was acceptable according to which there should not be immediate increase in the dam height. However, the dam foundation and Gates will be designed keeping in view the possibility of increasing the dam height, if considered necessary, and after concurrence of Government of India and Government of H.P. etc. are available on future date.

In view of the position explained above, while you may go ahead with the finalisation of Memorandum for consideration of the PIB, as discussed in the pre PIB meeting, you may kindly initiate action and take up the matter with the concerned organisation to speed up the required action as indicated in the letter dated 5.8.1998 of the Chairman, CEA.

Yours sincerely,

dc
(J. VASUDEVAN)

Shri Arun Gupta
Chairman-cum-Managing Director
NJPC Limited
Himfed Building
New Shimla

Copy to Chairman, Central Electricity Authority, RK Puram, Sewa Bhawan, New Delhi.

dc
Joint Secretary (Hydel)

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R.K. GARWAL
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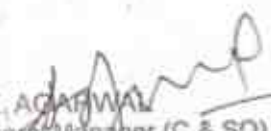
OPTION - 2 b : (Refer Plate - 7)

To construct the dam in Phase-I to EL 1493.50 m with overflow spillway crest at EL 1488.5 m which corresponds to permissible TWL for Bhaba Power Station and defer to Phase-II, the installation of crest gates until after the modification to Bhaba Power Station are carried out. Overflow spillway will consist of 2 bays of 5.5 m wide in block no. 6. The gates to be installed in Phase-II shall be 7.0 m high. The spillway bridge, as in option 2a, will have to be dismantled and reconstructed at EL 1498.5m in Phase-II.

This option envisages that, during lean season, the water level will be controlled by operation of sluice gates if ever control is necessary. Basically there should be no spill. Operation for peaking means reservoir drawdown to MDDL everyday. As soon as water reaches FRL, units will operate at such capacities as to use all water, since any water let down from the dam into the river is energy wasted. Spilling has to be resorted to only when flow in the river is more than the combined capacity of all the turbines with water in the reservoir at FRL/crest level 1488.50m. Sluices are required to operate only in such eventualities. If the sluices fail to operate in such an eventuality, the water will start spilling over the crest at EL 1488.5m and attain a level of 1491.00 m for a flow of 130 cumecs. Should that happen, the units in BPS will stop functioning as the TWL encroaches into its freeboard. There is no other risk whatsoever to BPS. However, the probability of such an eventuality is indeed very small. Still, if there are any reservations (there need not be any) to operate the sluice gates occasionally during the lean season, an additional temporary river sluice can be provided in block no. 3 with invert level at EL 1477.00 ±. One sluice of size 3.5 m x 3.5 m or alternatively two sluices of size 2.5 m x 2.5 m may be used. These sluice/sluices will discharge 130 cumecs with the reservoir level at 1488.5 m. The sluice/sluices shall be provided with vertical lift gates and stop logs and could be plugged in Phase-II, if necessary.

Advantage of this option over the option No. 2a are :

- No spillway profile modification would be required in phase-II, as spillway crest is proposed to be retained at 1488.5 m with 7.0 m high gates for attaining FRL 1495.5m in phase-II. As such there is no loss of energy during Phase-II work.
- Since, in Phase-I, spillway is proposed to be kept ungated, efforts for dismantling and reinstallation of gates as envisaged in option 2a. are not required.
- If the final decision is to have an intermediate FRL between 1488.5m and 1495.5m, height of gate and top of dam can be suitably restricted without complications.
- Unlike in 2(a), there will be no change in alignment of road across the spillway.
- The under-sluice stoplog grooves can also be raised in Phase-II without any problem.


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