

ADDENDUM TO ‘EMPLOYER’S REQUIREMENTS’

1.6 Fixed parameters

iii. Component wise hydraulic & geometric parameters:

Parameter	Modification / addition	Remarks
Spillway:		
Size of gates	Stands modified as follows “Size of gate should be adequate to pass the design discharge (SPF+GLOF) with one gate in inoperative condition.”	Modification
Spill way crest elevation	It shall not be above average river bed level.	Addition of new parameter
Under sluice:		
Type	Stands deleted	Modification
No of Gates	Stands deleted	Modification
Size of Gates	Stands deleted	Modification
Type of Gates	Stands deleted	Modification
Energy dissipation arrangement	Stands deleted	Modification
It is not mandatory to provide Under sluice for Silt flushing arrangement as because Silt flushing can be envisaged through the main spillway when Spill way crest is not set at an elevation above average river bed level.		Addition of new condition
Intake System		
Length	Stands deleted	Modification
Number of Trash Rack & Size	Stands modified as “Trash rack shall be provided with mechanical cleaning arrangement. Velocity through racks at 30% clogging should not be more than 0.85 m / sec. Trash Rack sill level shall be 1.0m above the average River bed level”	Modification
Numbers of Intake Gates & Size	Stands modified as “Intake shall be provided with Service and Emergency gates. The number and size of the Gates shall depend on the Intake arrangement. ”	Modification
Power House, GIS & Pot head yard		
Distance from A line to B line	Stands deleted	Modification
Minimum Distance from A line to B line	4.40m \pm 0.5m	Addition of new parameter
Distance D line to E line	Stands deleted	Modification

Width of GIS & transformer hall	15.0m \pm 0.5m	Addition of new parameter
Size of draft tube Gate	Stands modified as “As per Design Requirement but not less than 7.0 m(Width) x 3.95 m (Height) when Draft Tube discharges directly into Tail pool without any intermediate pressurized element.”	Modification
Tail Pool		
Width at top elevation across flow direction on upstream side	Stands deleted	Modification
Minimum clear width at bottom across flow direction on upstream side	Stands deleted	Modification
Minimum clear length at bottom along the flow direction from d.t pier face	Stands deleted	Modification
Dimensions of Tail Pool where Draft Tube discharge directly into Tail pool without any intermediate pressurized element.		Addition of new condition
Average length across flow direction	50.0m \pm 2.5m	
Average width along flow direction	25.5m \pm 1.0m	
Where Pressurized element of Tail Race Tunnel/ Duct is introduced between Draft tube and Tail Pool, Volume of Tail pool shall be same as the volume of a Tail pool of dimensions indicated in above.		Addition of new condition
Bench & floor at upstream of E line	This parameter heading stands replaced by “Bench & floor at upstream or downstream of GIS & Transformer building”	

iv. Salient Electro-Mechanical works:

Following paras are added under the respective sub heads

Turbine:

In case any pressurised component like Tail race tunnel/ duct is introduced between the Draft tube and Tail pool, the sum total of the head loss from Intake up to MIV and the head loss in the Tail Race Tunnel/ duct shall not be more than 9.20 m.

GIS & Transformer Building:

The GIS & Transformer building shall be a 2(two) storey building to be provided at the service bay elevation at the upstream of D-Line or Downstream of B Line of the Powerhouse depending on the orientation and outline of layout of Power house finalised by the EPC contractor for optimizing excavation and concreting work.

1.7 MINIMUM DESIGN, FACILITY, UTILITY AND FINISHING IN CIVIL WORKS

1.7.3 Power House:

The following para is added.

The orientation and outline of layout of Power house and Tail race shall be finalised by the EPC contractor for optimization and similarly, the alignment of Weir, Intake, intake channel, Head race Channel etc. of the Tato-I HEP shall be duly considered to avoid interference in construction as well as O&M of the two projects.

The GIS & Transformer hall may be thus located on upstream or downstream side of the Machine hall in a manner that do not conflict with the E&M requirements.

A Tail Race tunnel/ duct may be introduced between the Draft tube exit and the Tail pool provided this does not adversely impact the performance of the E &M works and the total head loss is contained within the limit stated herein.

Drawings of the concerned components of the Tato-I HEP are **enclosed here with.**

1.7.4 Barrage, Intake and Temporary Stage Diversion of River: Barrage, Intake and Temporary Stage Diversion of River:

The following paras are added-

It is not mandatory to provide Under sluice for Silt flushing arrangement as because Silt flushing can be envisaged through the main spillway when Spill way crest is not set above the average river bed level.

Divide and/or Skimming walls required for preventing cross circulation, vortex, silt flow into intake etc. in different flow conditions shall be decided on the basis of 3 D Physical model test.

The following para stands deleted.

“Divide wall at upstream and downstream of the under sluice shall be mandatory for isolating the Intake from flow through spillway to prevent cross circulation of water/silt at upstream and facilitating formation of hydraulic jump for energy dissipation at the downstream respectively.”

1.7.5 Water conductor system, Underground excavation and lining:

The following para stands deleted.

“The contractor shall also workout head losses in the Water conductor system and shall make necessary modifications if required to contain maximum head loss in steady state condition in the WCS from the Intake at Reservoir up to the Upstream of Main Inlet Valve of P.H Units within 7.87M and this shall have to be demonstrated while commissioning the Units in presence of the Employer.”

The following para is added

“The contractor shall also workout head losses in the Water conductor system and shall make necessary modifications if required to contain maximum head loss in steady state condition as follows

- a) If the Draft Tube discharge directly into the Tail Pool without any intermediate pressurized element, then the Head loss in the WCS from the Intake at Reservoir up to the Upstream of Main Inlet Valve of P.H Units shall be within 7.87m
- b) If there is any pressurized element like TR Tunnel/ duct etc. between the Draft tube exit and the Tail pool, then the sum total of the head loss from Intake to upstream of MIV and the maximum head loss in the elements shall be within 7.87m.
- c) Containment of Head loss within the aforementioned limit shall have to be demonstrated while commissioning the Units in presence of the Employer.

The parameters /provisions stipulated here-in-above shall supersede the respective parameters /provisions mentioned elsewhere of the bid document in case of any contradictions.