CHHUNGER CHAL H.E. PROJECT

SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Pithoragarh
River	Dhauli Ganga (Sarda Basin)
Dam site	D/S of confluence of Horba Yankti with Dhauli Ganga river and about 1.3 km upstream of Chal village
Nearest Airport	Delhi
Nearest rail head	Tanakpur
Location of Dam Site	
Latitude	30^{o} 11' 15" N
Longitude	80^{o} 34' 30" E

HYDROLOGY

Catchment area at dam site	840 sq km
Maximum average Discharge at dam site	59.13 cumec
Minimum average Discharge at dam site	39.01 cumec

RESERVOIR

Full reservoir level (FRL)	2780 m
Minimum drawdown level (MDDL)	2769 m
Gross storage at FRL	3.73 M cum
Live storage	1.49 M cum
Area under Submergence at FRL	13.2 ha

DIVERSION TUNNEL

Number	1
Size	7.0 m dia
Length	530 m
Diversion discharge	238.28 cumec

DAM

Type	Concrete Gravity Dam
Top elevation of dam	2783

Height of dam above deepest foundation level	78 m
Length of dam at top	192 m
River bed level	2720 m

SPILLWAY

Design flood	4517.4 cumec
Type	Ogee spillway
Crest elevation	2759 m
Number & length	2 bays of 14 m each in 3 blocks
Energy dissipation type	Ski jump bucket

INTAKE

Invert level	2759.0 m
Number	2
Size of gate opening	4.0m x 4.0m
Trash rack	5m x 10m

DESILTING CHAMBER

Number	2
Size	12.5m(W) x 15m (h)
Length	266 m
Design discharge	57 cumec each
Particle size to be removed	0.2 mm and above

HEAD RACE TUNNEL

Number	1
Size	5.5 m dia
Shape	Horse shoe
Length	3.545 km

SURGE SHAFT

Number	1
Size	12 m dia
Height	81.0 m

PRESSURE SHAFT

Numbers	1
Size	4.6 m dia
Length	400 m

POWER HOUSE

Type	Underground
Installed capacity	240 MW
Number of units	2
Power house cavern size	21 m x 89 m
Type of turbine	Vertical Francis
C.L. of turbine	2466.5 m
Rated Head	292.83 m

TAIL RACE

Size	5.5 m dia
Type	D shape Tunnel
Length	147 m
Design Discharge	91.2 cumec
River Bed Level	2468.0 m
Normal TWL	2473.0 m

SWITCHYARD

Size	GIS on the floor above the transformer cavern of size 14 m x 50 m

POWER GENERATION

Installed capacity	240 MW
Annual energy generation	
i) 90% dependable year	853.28 GWh
ii) Energy in 90% year on 95% availability	845.12 GWh
CONSTRUCTION PERIOD	5 years and 9 months