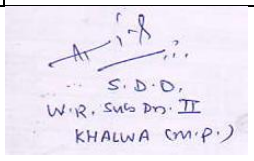
Salient Features of Alternate Dam Sites of Aulliya Medium Project

S.No.	Particulars	Alternate - 1	Alternate - 2 (Proposed)	Alternate - 3
I	General			
	Name of Project	Aulliya	Aulliya	Aulliya
	Type of the Project	Irrigation	Irrigation	Irrigation
	Location	Near Aulliya Village	Near Roshani Village	Near Aulliya Village
	Latitude	21^0 53' 48" N	21^0 53' 57" N	21^0 53' 27" N
	Longitude	76^0 59' 08" E	76^0 56' 03" E	77^0 01' 32" N
	River Basin	Narmada	Narmada	Narmada
	Located on River	Ghodapachhar River	Ghodapachhar River	Ghodapachhar River
	Sub basin	Chhota Tawa Sub Basin	Chhota Tawa Sub Basin	Chhota Tawa Sub Basin
	Tehsil	Khalwa	Khalwa	Khalwa
	District	Khandwa	Khandwa	Khandwa
	State	Madhya Pradesh	Madhya Pradesh	Madhya Pradesh
II	Hydrology			
	Catchment Area	59.900 sqkm.	108.208 sqkm.	49.40 sqkm.
	Intercepted Catchment Area	-	-	-
	Net Catchment Area	59.900 sqkm.	108.208 sqkm.	49.40 sqkm.
	Raingauge Station	Makrai	Makrai	Makrai
	Period of Data Availability	1979-79 to 2007-08	1979-79 to 2007-09	1979-80 to 2007-08
	Available Annual Yield at Dam Site 75% Dependable	12.86 Mcum.	23.235 Mcum.	10.60 Mcum.
	No. of Proposed U/S Project	Nil	Nil	Nil
	Planned Utilization by the U/S Projects	Nil	Nil	Nil
	Hydrometeorologic Station	Harda	Harda	Harda
III	Design Flood			
	Estimated SPF	594.32 cumecs	1073.63 cumecs	490.14 cumecs
	Flood Lift	0.90 m.	Nil	Nil
IV	Sediment Estimation			
	Sediment Rate	476 cum/sqkm/year	476 cum/sqkm/year	476 cum/sqkm/year
V	Principal Levels			
	Lowest Sill Level	375.480 m.	346.100 m.	379.80 m.
	Full Reservoir Level	383.500 m.	355.000 m.	400.00 m
	Maximum Water Level	384.400 m.	355.000 m.	400.00 m
	Top Bund Level	386.400 m.	358.000 m.	403.00 m.
	Capacity at L.S.L. (wrt. Original capacity)	1.426 Mcum.	0.785 Mcum.	1.47 Mcum.
	Capacity at F.R.L. (wrt. Original capacity)	12.123 Mcum.	26.246 Mcum.	10.60 Mcum.
	Submergence at F.R.L.	224.20 Ha.	487.06 Ha.	287.50 Ha.
VI	Irrigation			
	Net Culturable Command Area	1625.00 Ha.	5000.00 Ha.	2830.00 Ha.
	Annuval Irrigation Proposed	2144.00 Ha.	5000.00 Ha.	2830.00 Ha.
Vii	Domestic Water Supply			
	Quantum of water made available	0.475 Mcum.	0.63 Mcum.	0.63 Mcum.
VIII	Utilization in 30 years (working table)			
	Period of Study	30 years from 1978-79 to 2007-	30 years from 1978-79 to 2007-08	30 years from 1978-79 to 2007-08
	Average annual water utilized for irrigation	10.153 Mcum.	19.218 Mcum.	8.67 Mcum.
	Average annual reservoir evaporation	1.201 Mcum.	2.351 Mcum.	1.300 Mcum.
	Domestic water supply	0.475 Mcum.	0.63 Mcum.	0.63 Mcum.
	Average annual utilization	11.829 Mcum.	22.199 Mcum.	10.60 Mcum.
	Net CCA	2641.00 Ha.	5000.00 Ha.	2256.00 Ha.
	Intensity of irrigation	100.00%	100.00%	100.00%
	Average delta of 30 years for proposed croping	473.54 mm.	473.853 mm.	473.54 mm.
IX	Dam Data			
	Type of Dam	Earthen dam Zonal Section	Earthen dam Zonal Section	Earthen dam Zonal Section
	Total Length of Earth Dam including Spillway	1900.00 m.	1782.00 m.	1800.00 m.
	Maximum Height of Dam	22.90 m.	20.80 m.	25.00 m.
	Surplussing arrangement			
	Type of Weir	Un Gated Spillway	Gated Spillway	Gated Spillway
	Length of Weir	135.00 m.	72.50 m.	56.00 m.
X	Submergence Datails			
	Total Submergence area	224.20 Ha.	487.06 Ha.	287.50 Ha.
	Private Land			
	(i) Irrigated	145.86 Ha.	352.26 Ha.	180.30 Ha.
	(ii) Un Irrigated	13.89 Ha.	32.18 Ha.	22.50 Ha.
	Govt. Land	16.12 Ha.	48.02 Ha.	12.40 Ha.
	Forest area	48.330 Ha.	54.60 Ha.	72.30 Ha.
	Forest Classification	F3	F3	F3
	Village submergence	Nil	Nil	One (Village Bhagpura)
	Submergence Ratio	7.74%	9.74%	12.72%
	Techno Economic feasibility	Not feasible	Feasible	Not feasible



OFFICE OF THE EXECUTIVE ENGINEER
WATER RESOURCES DIVISION KHANDWA

Memo No. 3311 /work/2017/Aulliya Medium Khandwa, Dated 1/10/17

AULLIYA MEDIUM IRRIGATION PROJECT

Justification Note for locating the project in forest land of Aulliya Medium Irrigation Tank

Aulliya Medium Irrigation Tank envisages construction of earthen bund on Ghorha Pachharh river near village Roshani of Khalwa block. which has a catchment area 108.21 sq.km. The project is proposed to serve the irrigation need of 5000 Ha. cultivavle area. A detailed survey has been carried out to achieve optimum benefits with minimum project cost and minimum submergence area. For this purpose a study is done for alternative dam sites with different height and finally F.T.L. is decided at R.L. 355.00 m. with 22.20 MCM live storage to irrigate 5000 Ha. land and to supply 0.63 MCM water for drinking purpose.

It is again Stated that the proposed alignment and F.T.L. covers minimum forest area under submergence.

1/10/17

(S.M. CHATURVEDI)
EXECUTIVE ENGINEER
WATER RESOURCES DIVISION KHANDWA


KADWALYA RESERVED FOREST
CHABUTRA PROTECTED FOREST
RUPERAL SUBMERGENCE AREA
COMMAND AREA OF EXISTING TIGARIYA TANK
RIGHT BANK CANAL
CHABUTRA PROTECTED FOREST
EAST KALIBHIT RESERVED FOREST
KADWALYA RESERVED FOREST
SHUTIBELA
GHUTIDEVZ
COMMAND AREA OF EXISTING ITWA MAMADAN TANK
Chormachan Dam
Alignment of Proposed Dam (Approach)
LEFT BANK CANAL
FRL=NWL= 355.00m
PROPOSED DAM CATCHMENT NO 3
Narmada Main Alignment
C.3
FRL=363.00m
EAST KALIBHIT RESERVED FOREST
KALIBHIT
Catchment Limit
TIGARIYA RESERVED FOREST
AULIYA RESERVOIR
Certified that the Catchment Area has been Varified by me and found 108.208 sq/km.
Executive Engineer
Water Resources Division
LEGEND
River & Nala
Catchment area limit
Command area limit
C.G.
Gauge & Discharge Site
FRL , Submergence area , Alignment
Command area by Lift
Command area by Gravity
Existing Tank Commanc area
PROJECT NAME: AULIYA
LATITUDE, LONGITUDE: 21° 57' 57" 76° 59' 03"
CATCHMENT AREA (A): 108.208 sq km
LENGTH OF RIVER (L): 25.450 km
ELEVATION AT RIVER START: 740.00 m
LENGTH OF RIVER FROM A POINT NEAREST TO CENTER OF GRAVITY (Lc): 13.15km
CLIENT: NARMADA VALLEY DEVELOPMENT AUTHORITY (NVDA) BHOPAL, MADHYA PRADESH
PROJECT: MEDIUM AND MINOR PROJECTS IN NARMADA BASIN GROUP 'A'
TITLE: INDEX MAP OF AULLIYA MEDIUM PROJECT
CONSULTANT: SECON PRIVATE LIMITED BANGALORE - 66
SCALE
2500m 2000 1500 1000 500 0 2500m
1:50000 OR 2CM=1KM
(Contours are approximate)
ASSISTANT ENGINEER FIELD 1 NARMADA NAGAR MADHYA PRADESH
EXECUTIVE ENGINEER, WATER RESOURCES DIVISION NO.25 KHARGONE
SUPERINTENDING ENGINEER, N.D.CIRCLE No.5, SANAWAD
CHIEF ENGINEER, INDIRA SAGAR PROJECT (CANALS), SANAWAD DISTRICT, KHARGONE,
SHEET NO 01 OF 01
DRAWING NO. SECON/NVDA/MMP/AUL MED PROJECT
REV. 0