



Uttarakhand Irrigation Department
सिंचाई विभाग उत्तराखण्ड

Jamrani Dam Multipurpose Project
जमरानी बाँध बहुउद्देशीय परियोजना
Nainital, Uttarakhand,
नैनीताल, उत्तराखण्ड,

List of clearance obtained:

S. No.	Clearances/ Permissions/ NOC	Dept./ Ministry/ Commission	Dated	Letter No./ MOM Issue	Page No.	Remark
1.	Project Sanctioned by Planning Commission	Govt. of India	05.05.1975	II-2(43)/75-I&CAD	1-2	Cost of Project 61.25 Cr.
2.	CSMRS,	Ministry of Water Resources, GOI	23.07.2007	29/36/Jamrani/ BM-II/ CSM/ 2006/680	3-4	
3.	ST Population under R & R	NGO Division, Ministry of Tribal Affairs, GOI	17.04.2008	F.No.22040/106/2007 -NGO	5	NOC
4.	FE & SA, CWC,	F.E. & S.A. Dte. CWC, GOI	02.12.2009	2/ 2/ 2009/ FE & SA/ 701	6	Specific Seismic study
5.	Hydrology,	Water Science Dte. (N), CWC, GOI	01.03.2011	1/ UP/215/83/106-07	7-9	
6.	Irrigation Planning,	Irrigation Planning Directorate (N), CWC, GOI	05.07.2012	2/463/IP-88/NE/537	10-13	
7.	Power Potential Studies,	H.P.A Div., Central Electricity Authority, GOI	07.12.2012	207/27/2012- H.P.A/2821	14	
8.	Dam Design,	Conc. & Masonry Dams Design Dte. (N&W), CWC, GOI	07.01.2013	03/152/2006-CMDD (N&W)	15	
9.	Hydel Civil Design,	Hydel Civil Design Dte. (N&W), CWC, GOI	10.05.2013	11/23/2012/HCD-N&W/248	16	
10.	Gate Design of Dam,	Gates (N & W) Dte., CWC, GOI	16.05.2013	11/2/GD (N&W)/TE/2013/197	17	
11.	Construction Machinery / Q-Special T & P,	Construction Machinery Consultancy Dte., CWC, GOI	07.06.2013	21/ 16 2013- CMC/ 108,	18-20	
12.	BOQ - Electro-Mechanical Works,	HE&TD Div., CEA,GOI	21.11.2014	10/20/HE&TD-2014/1896	21	
13.	Forest clearance	Forest Conser. Div., MoEFF&CC, GOI	25.04.2018	F.NO.8-36/2813-FC	22-24	
14.	Inter-state matters on MOU,	Inter-State Matters-2 Dte.,CWC, GOI	25.05.2018	2/6/ISM-2/2017/189	25	
15.	Cost - Electro-Mechanical Works,	HPA Div.,CEA, GOI	06.11.2018	207/14/2004/HPA 1031	26-27	
16.	International clearance/ JRC angle,	Flood Manag. Wing, MoWR, RD&GR, GOI	29.11.2018	Z-23011/ 4/ 2014-Ganga (Pt-1) 3675-76	28	
17.	Project Cost Approval	Cost Appraisal (Irrig.)-I Dte., CWC, GOI	04.02.2019	10/3/2018/CA(I)-1/51-52	29-32	
18.	B.C. Ratio	Irrig. Planning (N) Dte., CWC, GOI	09.02.2019	8/7/U.U./2004/IP (N) 38	33	
19.	TAC of project (11.02.2019)	PAO (N), CWC, GOI	18.02.2019	16/ 27/ 2019/-PA(N)/583-611	34-41	
20.	State Finance Concurrence	Govt. of Uttarakhand	01.11.2019	1416/II(2)-2019-17(06)/2005 T.C.-1	42	
21.	Drinking Water & Sanitation	Ministry of Jal Shakti	29.11.2019	W-11035/4/2019-JJM-II (Part-II)	43	
22.	NOC from MNRE	Ministry of New & Renewable Energy, GOI	05.12.2019	-	44	Received By Mail
23.	Environment Clearance	MoEF & CCF, GOI	13.12.2019	J-12011/04/2007-IA-I (R)	45-54	
24.	PPR from MoHUA	Ministry of Housing & Urban Affairs, GOI	16.12.2019	K-14011/09/2019-UD Desk	55	
25.	NMCG Clearance	National Mission for Clean Ganga	17.12.2019	F.No. TE-11015/2/2019/NMCG/669	56-57	

Yojana Bhavan,
Parliament Street,

New Delhi, the 5th May, 1975

To,

The Secretary,
Irrigation Department,
Government of Uttar Pradesh,
Lucknow.

Sub. Irrigation Programme- Jmrani Dam Project - Acceptance of
Sir,

I am directed to convey that the Jmrani Dam Project in the district of Nainital, estimated to cost Rs. 61.25 crores, the salient features of which are given in the enclosed annexure, has been considered acceptable subject to the following observations.

- (a) Detailed ground water investigations should be carried out in the canal command and the operation of the surface water resources ~~that~~ should be properly integrated with ground water exploitation.
- (b) Remodelling and renovation of the existing system should be given first priority.
- (c) Since the storage is working out very costly effective soil conservation measures should be taken up in the catchment of the Reservoir even from now on.
- (d) There is an urgent need for enforcing suitable water rates and betterment levy.
- (e) The suggestion of the Water Management Division to omit high water requirement crops like paddy and sugarcane should be given careful consideration and the final crop pattern finalised after detailed soil survey of the command area.

2. The project may be executed in accordance with the approved outlays.

Yours faithfully,

Sd/- K.S.S. Murthy
for Secretary, Planning Commission

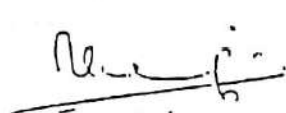
Government of India
Central Water Commission
Cost Engineering (Irr) Dte.

Sub: Jamrani Dam Project (U.P) - Modified estimate.

Project Appraisal Directorate(North) may kindly refer CWC U.O. No. 10/28/74-CE(I)/162 dated 16.3.89 wherein clearance to the modified estimate of the above project was accorded by this Dte. from cost angle for Rs. 143.33 crores. The state Project engineers vide their letter No. 274/Camp - Okhla dated 27.4.89 addressed to Director P.A.(N) Dte. and copy to us have now intimated that as per decision taken in the meeting held in the chamber of Member P & P, Central Water Commission on 3.4.89, the cost of drainage has to be calculated per hact. on the basis of a sample drainage plan of about 5000 hact. and the provision for the same has to be made on the entire CCA. Accordingly the State Project engineers have worked out a rate of Rs. 178/- per hact. for drainage works and by applying this rate to the entire CCA the cost of drainage has been worked out to Rs. 282.40 lakhs against the earlier provision of Rs. 148.58 lakhs under this sub-head. With this modification in the drainage sub head the cost of other sub heads provided on %age basis have also undergone slight modifications and the total cost of the project has been further modified from Rs. 143.33 crores to Rs. 144.84 crores. Modified abstract of cost with cost variation statement with reference to original project estimate to this modified revised estimate are enclosed herewith in duplicate. This directorate has no further comments to ~~offer~~ ^{offer} on this estimate.

This issues with the approval of Chief Engineer(CP&M)

Encl: As above.


(P.K.CHATTERJEE)

Government of India
Ministry of water Resources
Central Soil & Materials Research Situation

July 23, 2007

Subject:- DPR of Jamrani Dam Multipurpose project (Revised) Uttaranchal – reg. review

Reference: - CWC U.O. No. 2/140/06-PA (N)/ 1009, dated July 3, 2007

In view of the response of the Project Authorities, there are no further comments.

(Dr. A.K Dhawan)
Director

Director, Project Appraisal (N) Directorate, CWC Sewa Bhawan, R.K. Puram, New
Delhi

U.O. No.29/36/Jamrani/BM-II/CSM/2006/680

dated 24/07/2007

Government of India
Ministry of Water Resources
Central Soil & Materials Research Station

Plot No. 1, 2 & 3
New Delhi - 110 016
Ph: (011) 2656 3140 - 43; Fax: 2656 3103
E-mail: csms@plub.nic.in

July 21, 2007

Subject: DPR of Jamrani Dam Multipurpose Project (Revised) Uttaranchal - reg. review
Reference: CWC U.O. No. 2/140/06-PA(N)/ 1009, dated July 3, 2007.

In view of the response of the Project Authorities, there are no further comments.

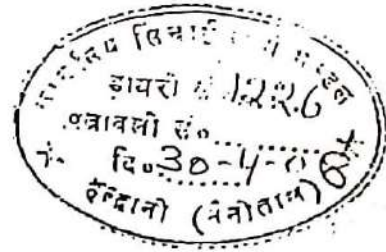

(Dr. A. K. Mahajan)
- Director

Director, Project Appraisal (N) Directorate, CWC, Sewa Bhawan, R.K. Puram, New Delhi

U. O. No. 29/36/Jamrani/DAM-II/CSM/2006/C80 dated 23/7/2007

24

F.No.22040/106/2007-/NGO
Government of India
Ministry of Tribal Affairs
(NGO Division)



R.No. 401, 'B' Wing,
Shastri Bhawan, New Delhi
Dated the 17th April, 2008

To

The Principal Secretary,
Tribal Welfare Department,
Government of Uttarakhand,
Dehra Dun.

Sub: Resettlement & Rehabilitation (R&R) Plan for Project-Affected Families (PAFs) in respect of Jamrani Dam Project, District Nainital, Uttarakhand-reg.

Sir,

Please refer to Government of Uttarakhand's letter No.226-G.O.I./II-2007-12/4(01)/2003 dated 22.1.2008 and No.645/IWC/R-13(Rehab.) dated 23.2.2008 of SE, Irrigation Works Circle, Haldwani, on the above mentioned subject. In this regard, I am directed to convey that in view of the information furnished by State Government that no scheduled tribe population are going to be displaced/affected by the construction of aforementioned project, the Ministry has "No Objection" to the R&R Plan in respect of Jamrani Dam Project, District Nainital, Uttarakhand.

Yours faithfully,

(Anurag Bajpai)

Deputy Secretary to the Government of India
Telefax: 23070508

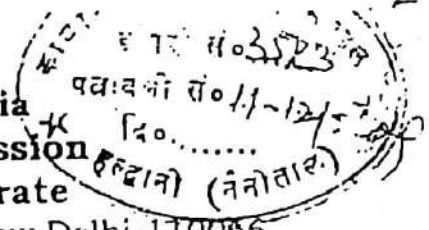
Copy to :-

- (i) The Secretary, Ministry of Water Resources, Government of India, New Delhi.
- (ii) The Secretary, Ministry of Rural Development, Government of India, New Delhi
- (iii) The Secretary, Ministry of Environment and Forests, Government of India, New Delhi.
- (iv) The Director General of Forests, Ministry of Environment and Forests, Government of India, New Delhi.
- (v) The Secretary (Irrigation Department), Government of Uttarakhand, Dehra Dun.
- (vi) The Director, Central Water Commission, New Delhi.
- (vii) Guard File.



Government of India
Central Water Commission
F. E. & S. A. Directorate

712(S), Sewa Bhawan, R.K.Puram, New Delhi-110066.
Tel/Fax.: 011-26101017, e-mail: fesadtc-cwc@nic.in



No. 2/2/2009/FE&SA / 701

Dated: 2/12/09

To

Sh. Ajay Verma,
Superintending Engineer,
Irrigation Works Circle,
Haldwani (Nainital),
Uttarakhand

श्रीमान मानक स्वीकृत

Sub: Site Specific Seismic Parameters for Jamrani Dam Multipurpose Project, Uttarakhand - Approval reg.

Ref: Report submitted through PA (N), CWC vide their letter No. 2/140/06-PA(N)/1417 dated 24.11.2008.

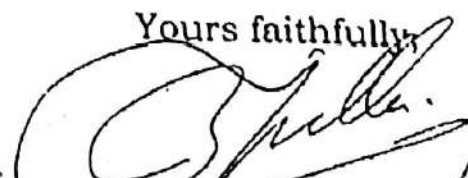
Sir,

National Committee on Seismic Design Parameters (NCSDP) in its XXI meeting held on 8th September, 2009, while deliberating the Jamrani Dam Multipurpose Project (Uttarakhand), has cleared the site specific seismic study of the project with following parameters:

MCE magnitude	7.5
PGA value for MCE condition	0.31g
PGA value for DBE condition	0.16g
Vertical spectral acceleration	2/3 of the corresponding horizontal value

The Committee has also accorded approval to the response spectra as furnished in IIT Roorkee's study report [Report No. EQD-3006/2008-09 (March-2008)].

Yours faithfully,


(Dr. B.R.K. Pillai)
Director (FE&SA) &
Member-Secy. NCSDP

11/12/09

केन्द्रीय जल आयोग

जल विज्ञान (उ) निदेशालय

507, सेवाभवन, आर. के. पुरम

नई दिल्ली-110066

791
28 03-2011

विशय : Jamrani Multipurpose Project, Uttarakhand.

संदर्भ : आपके पत्र सं, 165/Jamrani-3/पी-8/उ०००

दिनांक 8/1/2011

उपरोक्त संदर्भित पत्र का कृपया अवलोकन करें जिसमें इस निदेशालय से उपरोक्त परियोजना संबंधी रिपोर्ट की टिप्पणी भेजने का अनुरोध किया है। इस संबंध में इस निदेशालय से टिप्पणी प्रेषित की जा रही है

(ए.के.गोयल)
निदेशक

निदेशक पी.ए.नाथ को, ज०, आ०.

अ.शा.पत्र सं, जलविज्ञान(उ)निदे०/1/48/218/83/106-67 दिनांक 1.3.2011

✓ Copy to -

The Superintending Engineer
Irrigation Construction Circle-II
Haldwani
Distt - Nainital
Uttarakhand.

Jamrani Multipurpose Project, Uttarakhand

1. Project

Jamrani Project envisages construction of a Diversion Barrage in its first phase on Gola River at Kathgodam in district Nainital, Uttarakhand State and 130.6 metres high dam in second phase across river Gola about 10 kilometres upstream from Kathgodam near Jamrani village with a live storage capacity of 144.3 MCM to meet demands for irrigation and drinking water. The Jamrani multipurpose project was earlier sanctioned by the Planning Commission in 1975. The first phase of the project (construction of Barrage at Kathgodam) was completed in 1982 and investigations were continued for the Phase-II i.e. construction of main dam. The State Government submitted hydrological studies for the main dam to CWC in 1988 using the available data up to 1987. The catchment area up to the dam site is 450 sq.km and up to Gola barrage is 600 sq.km.

The project authorities, again submitted the DPR. The Hydrology report for the project was examined and preliminary comments of Hydrology Dte. were issued in February, 2008. Now, the project authorities have submitted the compliance to the same. The compliance of the project authorities has been examined and observations on the same are as given below.

2. Data Availability

The following data is reported to be available with the project authorities.

1. Rainfall data of the Gola river catchment from 1987 to 2006
2. Discharge data of Gola river at weir/barrage from 1948 to 2006
3. Observed Gola river discharge at Jamrani dam site from 1977 to 2006.
4. Observed daily silt data from 1985 to 2006 during monsoon period.
5. Flood data at Gola barrage from 1983 to 2000.
6. Weekly meteorological data from 2002 to 2006 at Pantnagar.

2. Water Availability Studies

Flow data at Jamrani dam site for the period from 1977 to 2006 has not been found consistent with project catchment rainfall and with the flow data observed at Gola barrage site. Flow data at Gola barrage is available for the period 1949 to 2006. The series at Gola barrage is also not homogenous for the entire period. However, the flow data of the Gola barrage for the period from 1977 to 2006 has been found homogenous. Keeping in view the quality of flow data, the data at Gola barrage site for the later period from 1977 to 2006 has been considered for working out the flow series at Jamrani dam site on catchment area proportion. Annual yield at the project site in 75% and 50% dependable years works out to 283.06MCM and 393.31 MCM respectively. The same

may be adopted for the planning of the project. 10-daily flow series at the project site is enclosed at **Annexure-I**. However, it is suggested that the project authorities may establish a proper hydro-meteorological observation network in the project catchment for collection of quality data and review the water availability of the project when adequate data is available.

4. Design Flood

Design flood for the project has been worked out based on the 1-day point PMP value of 66.3 cm. Loss rate has been considered as 2.5 mm/hr. Base flow has been considered as 0.05 cumec/sq.km. UG has been derived from the Flood Estimation Report of CWC for the zone-7. The PMP value for the project works out to 8427 cumec.

Comments

PMF value of 8427 cumec may be adopted for planning of the project at this stage. PMF hydrograph is enclosed at **Annexure-II**. However, to have a judicious estimate of the catchment response function it is suggested that the short interval rainfall-runoff data may be collected to review the design flood at a later stage.

5. Sedimentation

CWC recommended a sedimentation rate of 14.29 ha-m/100sq.km/yr earlier in 1987. The same has been considered in the current studies and the New Zero Elevation for 100 yrs and 50 yrs works out to 668 m and 651.5 m respectively against the original bed level of 635m. Revised Elevation Area Capacity tables are enclosed at **Annexure-III**.



21



भारत सरकार
केन्द्रीय जल आयोग
सिंचाई आयोजन । दक्षिण । निदेशालय

203 सेवा भवन रामकृष्णपुरम्
नई दिल्ली 110066
Ph. No. 011-26104280
Email : ipdte@nic.in

विषय : Jamrani Dam Multipurpose Project, Uttarakhand.

संदर्भ : CWC. I.D. No.2/140/2009/Part-2/PAN/804 Dated 25-06-2012.

Please refer to letter mentioned above vide which the replies of State Govt. to the earlier comments of this Directorate and modified irrigation planning for project has been furnished. The same has been examined and observations / comments of this Directorate along with previous background of the project are as under:

Background:

The Jamrani Dam project was earlier considered by TAC and approved by Planning Commission in year 1975. The revised proposal of Jamrani Dam Project was also considered by TAC in year 1989. The approved revised planning as per the TAC note of Year 1989 is as under :

Headworks:	Roller compacted concrete gravity dam 130.60 m high Catchment area (450 Sqkm)	
Pickup barrage	at Kathgodam (10 km downstream with catchment area of 600 Sqkm)	
75% dependable yield	300 MCM (at dam site) and 500 MCM (at barrage site)	
Gross storage	208.6 MCM	
Live storage	144.30 MCM (FRL 762 m)	
CCA :	150302 ha	
Annual irrigation	existing	78786 ha
	Additional (intensification)	60600 ha

Kharif	100034 ha
Rabi	37597 ha
Zaid	1755 ha
Intensity of Irrigation	92.7 % of CCA
Irrigation water requirements	417.19 MCM
Water supply requirements	52.93 MCM
Evaporation losses	5 MCM
Total water demand	475.12 MCM

Cropping Pattern:

S.N.	Season	Name of the Crop	As per TAC Note of 1989		%age
1.	Kharif	Paddy	33675 ha	100034 ha	22.4 %
2.		Maize	8632 ha		5.7%
3.		Soyabean	33402 ha		22.2%
4.		Sugarcane	12577 ha		8.4%
5.		Pulses	11748 ha		7.8%
6.	Rabi	Wheat	21109 ha	37597 ha	14%
7.		Peas	6530 ha		4.3%
8.		Lahi	4704 ha		3.1%
9.		Vegetables	1594 ha		1.1%
10.		Pulses	3660 ha		2.4%
11.	Zaid	Moong	351 ha	1755 ha	0.22%
12.		Urad	351 ha		0.22%
13.		Maize	351 ha		0.22%
14.		Vegetables	351 ha		0.22%
15.		Fodder	351 ha		0.22%
		Total	139386 ha		92.7 %

The revised DPR of the project was further received in this Directorate vide letter no. CWC. I.D. No.2/140/2009/Part-2/PAN/322-31 Dated 28/02/2006 and observation on the same (which were mainly on B.C. Ratio as no change in scope of the

Project in respect of irrigation planning aspects was observed then) were communicated vide this office letter dated 19/03/2007. The project authorities have submitted their replies on the same. The same was examined and it was observed that the observations on B.C. Ratio were not complied fully. The same was communicated to PA(N) Dte. of CWC vide this office letter of even number dated 06/06/2012.

Comments:

Now with the letter under reference above, the modified irrigation planning has been furnished in compliance to this Directorate's observation dated 06/06/2012. In this regard, it is to mention that the revised water planning for the project was not sought vide this office letter dated 19/03/2007 and certain observation regarding the B.C. Ratio computations had been communicated. However as per the revised proposal furnished now, it is observed that Department of Irrigation and Drainage Engineering, College of Technology, G.B. Pant University of Agriculture & Technology carried out a study titled "Assessment of possible changes in existing Cropping pattern and available water resources in the command area after the construction of Jamrani dam, May 2010. Based on the studies carried out, the proposed cropping pattern has been reviewed and revised. A copy of letter from Ministry of Agriculture Dated 24th November 1988 regarding approval of cropping pattern has been furnished (old annexure of revised DPR). Three distinct sub regions in the command area have been mentioned namely Bhabar sub-region (12541 ha), Tarai (20015 ha) and Gangetic (117471 ha) totaling to 150027 ha. Average rainfall in Bhabar region has been mentioned as 1761 mm (at Haldwani) and in Tarai region as 1475 mm(Pantnagar).

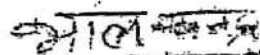
A ten daily discharge series for Jamrani site in cumecs stated to be approved by Hydrology Directorate of CWC has been given for period of 29 years (from Year 1977-78 to 2005-2006). In addition, water availability from different canal systems has been stated as 88684 Ham or 886.84 MCM. As far as the groundwater is

concerned, total number of tube well in the command have been stated as 36903 nos. (422 being state tube wells and 36481 private tube wells) and total draft of the ground water in project command has been stated as 89544 ham of 895.44 MCM. The water planning has been discussed along with the availability of water resources in the command (three regions).

The water planning furnished now has been compared with that in TAC note of Year 1989. The cropping pattern has been revised with minor changes. The water requirements for proposed cropping pattern (worked out as 416.29 MCM) are same as mentioned in the TAC note of 1989. Overall crop water requirements computations seem to be in order.

The B.C. Ratio computations based on the approved estimated cost of the project may be furnished for examination.

ग्रह मुख्य अभियन्ता (सिंचाई आयोजन) के अनुमोदन से जारी किया जाता है ।



(माल चन्द्र विश्वकर्मा)

निदेशक, सिंचाई आयोजन, दक्षिण

निदेशक परियोजना मूल्यांकन (PA-N), केन्द्रीय जल आयोग

कें. ज. आ. आई. डी. सं. 2/463/IP-88/NE/ 527 दिनांक: 05/07/2012



भारत सरकार
केंद्रीय विद्युत प्राधिकरण
जल विद्युत परियोजना मूल्यांकन प्रभाग
सप्तम तल, सेवा भवन

(212)



[आई.एस.ओ : 9001-2008]

विषय: Jamrani Multi-purpose Project in Uttarakhand by Irr. Deptt., Uttarakhand – Examination of Chapter on Power Potential Studies.

Reference may please be made to PAC letter No. 2/UTR/3-03/CEA/06-PAC/4567 dated 25.7.2012 forwarding therewith a chapter on power potential studies of the above project. The power potential studies and additional inputs provided subsequently have been examined in the Division and our observations in this regard are given below :

Jamrani Multi-purpose Project (14 MW) is proposed on river Golā. The scheme is envisaged to have 130.6 m high barrage. Live capacity of 144.3 MCM would be created behind the barrage between FRL (EL 762 m) and MDDL (717.47 m) to meet drinking water and irrigation requirement. Priority would be for meeting the drinking water and irrigation demand. Water released for irrigation and any surplus water would be utilized for power generation. The scheme would utilize head between FRL and TWL.

Water series of 29 years (1977-78 to 2005-06) approved by CWC vide letter dated 01.3.2011 has been utilized for carrying out power potential studies based on reservoir simulation studies. Project capacity being less than 15 MW, 75% dependable year worked out as 1979-80 have been utilised to fix installed capacity.

After examination of above PPS Chapter/ inputs, an installed capacity of 14 MW as proposed by Irr. Deptt., Uttarakhand is found to be generally in order. Further installed capacity would need to be reviewed on account of the following :

- Any change in operating levels (FRL, MDDL, TWL) etc.
- Any change in reservoir operational pattern on account of silt management.
- Any change in water conductor system losses.
- Consequential change in design head.
- Any other aspects which gets derived during the detailed appraisal of DPR.

This may be conveyed suitably to CWC.

This issues with the approval of Member (Hydro), CEA.

Yac (Sd/-) CEF
(पी.सी.जिलोहा),
का/१० निदेशक (एच.पी.ए.)
०७/१२/१२

निदेशक (पी. ए. सी.), के.वि. प्रा.।

पत्र संख्या- 207/ 2012 -एच.पी.ए./ 2821 दिनांक: 07/12/2012

केन्द्रीय जल आयोग
कंकाट चिनाई बांध अभिकल्प (उ.एच.प.) निदेशालय

विषय: Jamrani Multipurpose Dam Project(3 x 10 MW), Uttarakhand

संदर्भ: Project Authorities letter dated 03-12-2012 & 21-12-2012.

Please refer to above letters. The following are the further comments that may be complied before detail designed stage:

1. The investigations as recommended by this office letter dated 18-07-2006 may be carried out and results be submitted.
2. The seismic parameters used in the stability analysis may be derived from the PGA values as approved by National Council of Seismic Design Parameters (NCSDP). The stability analysis may be done considering seismic coefficients according to NCSDP and submitted.
3. The trajectory bucket with plunge pool type energy dissipation arrangement has been proposed for the project. Other options of EDA may also be examined in the detailed design stage. The spillway along with different options of EDA may be model tested for their size and efficacy before final adoption. The results of the model studies may be intimated.
4. The detailed dynamic analysis of the dam (OF and NOF) may be carried out and report may be intimated.
5. The efficacy of sediment management through two nos. low level sluices with invert at El. 701.0m may be tested on physical model and report may be submitted.
6. Provisions for suitable measures against slope stability hazards, differential settlement of foundation rocks, major slides in reservoir area, grouting, geological surprises etc. may be made.

The cost implications involved in above studies / change in dam section may be accounted for in the cost estimates. Subject to incorporation of above, this directorate has no further comments to offer.

(शैवाल घोष)
निदेशक

निदेशक, घ. मू. (उ.) निदेशालय, के. ज. आ., 407(द), सेवा भवन, रामा कृष्ण पुरम नई दिल्ली

कै० ज० अ० आई डी क० - 03/152/2006 - CMDD (उ. एवं प.) / दिनांक 07.01.2013

Copy to : i) Director, Gates Design(N&W), CWC, Sewa Bhawan
ii) Director, HCD(N&W), CWC, Sewa Bhawan



Tel: 011-26104203

Government of India
Central Water Commission
Hydel Civil Designs (N&W) Directorate

282

603 (S), Sewa Bhawan
R.K. Puram, New Delhi

- Sih: Jamrani Multipurpose Dam Project, Uttarakhand- reg.
- Ref: i) Letter no. 3004/PC/H/R-13 (HCD), dated 30/04/2013
ii) CWC U.O no. 2/140/PA (N)-2012/901, dated 15/04/2013
iii) CWC U.O no. 11/23/2012/HCD (N&W)/155-157, dated 28/03/2013
iv) CWC U.O no. 11/23/2012/HCD (N&W)/36 - 38, dated 22/01/2013
v) CWC U.O no. 2/140/Vol-IV/2010-PA (N)/167, dated 21/01/2013
vi) CWC U.O no. 2/140/Vol-IV/2012-PA (N)/2298, dated 12/12/2012
vii) CWC U.O no. 11/23/2012/HCD (N&W)/669-70, dated 07/12/2012
viii) CWC U.O no. 2/140/vol-II/2012-PA (N)/1795, dated 12/10/2012
ix) CWC U.O no. 2/140/2009-PA (N)/1211, dated 13/08/2012.

Kind attention is invited to letter under reference ix) vide which a report on design of civil structure along with copy of reply to the observations of GSI was received in this office from your directorate. One volume of DPR of Jamrani Dam multipurpose Project, Uttarakhand was received vide reference viii) and other three volumes were received on 07/11/2012 by hand in this Directorate from PA (N) Directorate for examination from Hydel Civil Design aspects. After examination from hydel civil design aspects, the observations were communicated vide letter at reference vii). In response to our observations, point wise clarifications were received from PA (N) directorate vide letter mentioned under reference v). The approval of an installed capacity of 14 MW duly vetted by CEA was received vide letter under reference vi) above. The further observations on clarifications from hydel civil design aspects were communicated vide letter at reference iv). In response to this office letter under reference iv), power potential parameters as finalized by CEA, were received from PA (N) directorate vide letter under reference ii).

Please refer to letter under reference i) above on the cited subject from Superintending Engineer, Project Circle Irrigation Department, Government of Uttarakhand with a copy endorsed to CE (PAO), CWC vide which revised chapter on hydel civil design aspects after incorporating corrections/modifications in the design and drawings, in response to our letter under reference iii), has been enclosed for appraisal.

The final observations from hydel civil design aspects are as under:

1. The hydraulic design of intake structure may be reviewed at detailed design stage. The velocity through trash racks proposed now is on the lower side. The Froude number at gate is on the higher side. The unit size of metallic trash rack proposed now is 3.01m (wide) X 3m (high) which may be reduced for ease of lifting and maintenance. Rib beams above the top slab (EL. 717.47m) of trash rack structure are not required.
2. The thickness of penstock as designed and as shown in the drawing no. nil, sheet 1 dated April, 2013 may be shown in all other drawings correctly.
3. The BOQ and cost estimate may be revised keeping in view the comments/modifications suggested by this directorate.

Subject to incorporation of the above observations of this Directorate, there are no further comments/observation on the hydel civil design aspects from this Directorate.

This issues with the approval of Chief Engineer -Design (N&W).

(J Chandrashekhar Iyer)
Director

Director, PA (N), Dte., CWC, Sewa Bhawan, R. K. Puram, New Delhi
CWC U. O. No. 11 / 23 / 2012/ HCD-N&W/ dt. 10-05-2013

Copy to:

- 1) Director, Gates (N&W), CWC, Sewa Bhawan, R.K. Puram, New Delhi
- 2) Director, CMDD (N&W), CWC, Sewa Bhawan, R.K. Puram, New Delhi

(2)

Central Water Commission

Gates (N&W) Directorate

Subject:- Technical Examination of DPR for Jamrani Multipurpose Dam Project, Uttrakhand- Gates and operating equipments – reg.

Ref: - U.O. No. 2/140/2013-PA(N)/787 dated 22.03.2013 from PA(N) Dte.

PA(N) Dte. may refer their U.O. No. 2/140/2013-PA(N)/787 dated 22.03.2013 on the subject regarding compliance of the observations on Gates Design aspects submitted by the project authorities vide their letter no.1903/IWC/R-13 dated 19.03.2013 in response to our observations communicated vide letter no. 11/2/GD(N&W)/TE/2013/96. Dated 7.03.2013 to PA(N) Dte. Project authorities have also submitted some additional details regarding hydro mechanical Equipment, estimate of quantities etc. vide their letter no. 1155/PCH/R-13(Gates) dated 14.05.2013 to PA (N) Dte., and a copy has been endorsed to this Dte.

These details are now examined and it is to intimate that most of the observations, pointed out at DPR stage, have been taken care by the project authorities, and provision of quantities is in order. However, overall arrangement of gates and operating equipment will have to be as per the final details of civil structure at detailed design stage. The above DPR may be treated as cleared in so far as this Dte. is concerned.

This issues with the approval of Chief Engineer Design (N&W)

[Signature]
16/5/13
(S. D. Sharma)
Director (GD N&W)

Director PA(N), CWC, Sewa Bhawan, R. K. Puram, New Delhi

✓ C W C U. O. No. 11/2/GD(N&W)/TE/2013/197 Dated 16/5/2013

Copy forwarded for information to:

- i. Director, HCD (N&W) Dte, CWC.
- ii. Director, CMDD(N&W) Dte. CWC



**Government of India
Central Water Commission
Construction Machinery Consultancy Directorate**

Sub: Project Report of Jamrani Multipurpose Dam Project, Uttarakhand
Ref: No. 2/140/vol-IV/2013-PA(N)/1133 dt. 4/06/2013

Reference is invited to above I.D letter of PA(N) Directorate vide which the cost estimate (chapter-9 of DPR) along with the revised chapter on Construction Schedule, Material & Equipment was forwarded for examination from plant planning angle.

It is observed that the revised chapter on Construction Schedule, Material & Equipment does not include the construction methodology and equipment planning for river diversion arrangement. Further, construction schedule/programme has not been appended indicating the quantum of works, working and non-working season etc for various activities of the project. However, prices, numbers and output of various equipment considered under analysis of rates which have bearing on item rates, have been examined and observations in this regard are as follow:

- a) Under analysis of item rates, the output capacity of various equipment such as 3.0 cum Shovel/Hyd. Excavator, dumpers and drilling equipments (for drilling the charge holes) is taken on lower side. Further, while working out the output of dumper per hour, an operating efficiency may not be applicable when 50 min working in an hour has already been considered. In respect of 3.0 cum hyd. Excavator and drilling equipment, following output may be adopted for the purpose of analysis of rates:

Sl. No.	Name of the Equipment	Output
1	3.0 Cum Hyd. Excavator for Common earth	230 cum/hr (loose)
2	3.0 Cum Hyd. Excavator for Rock well blasted	190 Cum/hr (Loose)
3	Jack Hammer drilling progress rate	6m/hr
4	Wagon/Crawler Drilling Progress rate	15m/hr
5	Drill Jumbo Drilling progress rate	50m/hr/boom

- b). It is understood that river diversion arrangement includes provision of a Diversion Tunnel. However, Item rate for underground rock excavation for tunneling has not been included under analysis of item rates.
- c) There is discrepancy in the unit rate of batching & mixing plant of 300 Cum/hr capacity adopted for calculating the use rate of the same in the cost estimate. This may be corrected. The unit rate for calculating use rates of the following equipment may be restricted to the rates as given below:

Sl. No	Name of Equipment	Unit rate as per the CWC (in Lakhs)
1.	Batching & Mixing Plant(300 cum/hr)	750.00
2.	Aggregate Processing Plant (150 T/Hr)	250.00

केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION

As far as provision under subhead Q-special T&P of the cost estimate is concerned, equipment worth Rs 729.87 Lakhs (unit -I) and Rs 172.10 Lakhs (unit -II) have been provided under Q-Spl T&P in the cost estimate. It is also indicated that Rs. 66.52 Lakhs worth of equipment have already been procured upto 3/2005 under Q-spl T&P for unit-I.

It has been observed that the construction of project would be carried out through award of contract. Accordingly as per CWC guidelines, the provision under subhead 'Q-Special T & P' of the cost estimate is to be restricted to general purpose equipment and inspection & transport vehicles only. The list of equipment for departmental ownership had been reviewed and revised and prices corrected wherever required. The provision towards repairs of some of the already procured equipment kept under Q-Spl T&P subhead, has been deleted as the same does not form part of Special T&P as per CWC guidelines. The net provision to be kept under sub-head Q-Spl T&P has been worked out as Rs.532.86 lacs (Unit-I) and Rs.107.48 lacs (Unit-II) as indicated in the list enclosed as Annexure -I.

In view of above, project may be considered acceptable for a provision of equipment worth Rs.532.86 lacs (Unit-I) and Rs.107.48 lacs (Unit-II) under Q-Spl T&P subhead subject to the modification as suggested vide Sl. No. (a) to (c) above and suitably incorporating the same under analysis of item rate while finalizing the cost estimate of the project.

Encl:a/a


07.06.13
(Atul Jain)
(Director)

Director, PA(N) Dte, CWC, Sewa Bhawan, R.K. Puram, New Delhi- 110066
I.D.No. 21/16/2013-CMC/ 108 dt. 07-6-2013


10/06

केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION

Annexure-I

Jamrani MultiPurpose Project, Ultrakhand
List of transport & inspection vehicles under Q special T&P sub-head

Sl. No.	As proposed by Project Authority				As accepted by CMC Dte. from plant planning angle		
	Particulars	Quantity	Unit rate(lakhs)	Total Cost (lakhs)	Nos.	Unit rate(lakhs)	Proposed cost charged to Q-special T&P (Rs in lacs)
Unit-I							
1	Equipment Already Procured			66.52			66.52
	a) Motor Grader	1			1		
	b) Water Tanker 10 KL	1			1		
	c) Core Drilling Machine	2			2		
	d) Electric Pump 20HP	2			2		
	e) Jeep	3			3		
	f) Concrete Mixer 10/7 cft	2			2		
	g) Needle Vibrator	4			4		
	h) D-8 Tractor(Crawler)	1			1		
	i) Truck 10 Ton	1			1		
2	Water sprinkler 10 KL	2	23.55	47.10	2	16.00	32.00
3	Road Roller 10T	1	15.85	15.85	1	15.85	15.85
4	Tar Roller	2	1.98	3.96	2	1.98	3.96
5	Core Drilling Machine	1	12.55	12.55	1	12.55	12.55
6	Electric Pump 30HP	10	3.25	32.50	10	0.70	7.00
7	Electric Pump 20HP	8	0.95	7.60	8	0.60	4.80
8	Electric pump 10HP	15	2.10	31.50	15	0.50	7.50
9	Diesel Pump 15HP	10	1.56	15.60	10	0.60	6.00
10	Truck 10 Ton	4	12.34	49.36	4	12.34	49.36
11	Crane 10T	1	121.56	121.56	1	18.00	18.00
12	Car	4	6.09	24.36	4	5.00	20.00
13	Jeep	12	5.87	70.44	12	4.50	54.00
14	Shift bus	4	16.22	64.88	4	14.00	56.00
15	Mini bus	4	9.56	38.24	4	9.56	38.24
16	School bus	2	15.65	31.30	1	14.00	14.00
17	Ambulance	1	3.50	3.50	4	3.50	14.00
18	Explosive Van	1	5.65	5.65	4	5.65	22.60
19	Oil Tanker	2	9.36	18.72	2	9.36	18.72
20	Workshop Equipment	LS		61.50	LS		50.00
21	Tractor(Pneumatic)-Repairing	2	0.46	0.92	0	0.00	0.00
22	D-4 Tractor (Crawler)- Repairing	1	4.15	4.15	0	0.00	0.00
23	Generating Set - Repairing	1	2.11	2.11	0	0.00	0.00
	Total			729.87			532.85
Unit-II							
1	Diesel Truck 7.5MT	2	18.00	36.00	2	12.34	24.68
2	Bus	2	14.00	28.00	2	14.00	28.00
3	Ambulance	1	9.80	9.80	2	3.50	7.00
4	Oil Tanker with pulling unit	1	17.50	17.50	1	16.00	16.00
5	Jeep	6	10.50	63.00	6	4.50	27.00
6	Generating Set 25KVA	2	2.40	4.80	2	2.40	4.80
7	Other Misc	LS		13.00			0.00
	Total			172.10			107.48



Government of India
Ministry of Power
Central Electricity Authority
Hydro Engg. & Technology Development Division
Sewa Bhawan, R.K. Puram, New Delhi - 110066



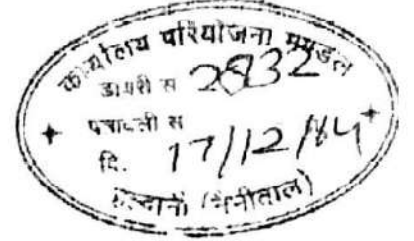
(ISO 9001:2000)

119

No. 10/20/HE&TD-2014/1896

Dt. Nov., 2014

Director
Project Appraisal (N). Directorate
Central Water Commission,
407 (S). Sewa Bhawan,
R. K. Puram,
New Delhi



Subject: Jamrani HEP (4 x 3.5 MW) - Examination of revised chapter of EM Equipment and drawings

Sir,

Please refer to letter no. 2189/PCH/R-13 dated 9th October, 2014 from S.E. (Project Circle Haldwani), Irrigation Deptt., Haldwani, Distt. Nanital, Uttarakhand enclosing therewith a copy of revised chapter of Electro-Mechanical equipments and drawings alongwith clarifications to our earlier comments for our examination. These have been examined and we have no further comments on revised E/M chapter and related drawings. However, comments on BOQ are enclosed as Annexure. A copy of revised BOQ incorporating our comments may be furnished for examination.

Encl: As above

Yours faithfully,

[Signature]
Director
21/11/14

- Copy to: ✓ Superintending Engineer (Project Circle Haldwani), Irrigation Deptt.,
Haldwani, Distt. Nanital, Uttarakhand.
2. Chief engineer HPA, CEA
3. Chief Engineer PAC, CEA

F. No. 8-36/2013-FC
Government of India
Ministry of Environment, Forests & Climate Change
(Forest Conservation Division)

Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi: 1100 03,
Dated: 25th April, 2018

To,
The Principal Secretary (Forest)
Government of Uttarakhand.
Dehradun.

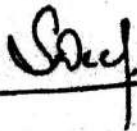
Sub: Diversion of 351.55 ha. (original proposed area 381.43 ha) ha of forest land in favour of Executive Engineer, Jamrani Dam Project, Irrigation Department, Government of Uttarakhand for construction of Jamrani Dam Project in District Nainital, Uttarakhand.

Sir,

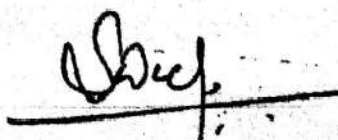
I am directed to refer to the Government of Uttarakhand letter No. 20/7-1-2013-300 (4160) / 2013 dated 15.04.2013 on the subject mentioned above seeking prior approval of the Central Government under Section-2 of the Forest (Conservation) Act, 1980 and to say that the proposal has been examined by the Forest Advisory Committee constituted by the Central Government under Section-3 of the aforesaid Act.

After careful examination of the proposal of the State Government and on the basis of the recommendations of the Forest Advisory Committee, ***In-principle approval /Stage-I Clearance*** of the Central Government is hereby granted for diversion of 351.55 ha. (original proposed area 381.43 ha) ha of forest land in favour of Executive Engineer, Jamrani Dam Project, Irrigation Department, Government of Uttarakhand for construction of Jamrani Dam Project in District Nainital, Uttarakhand, subject to the following conditions:

- (i) Legal status of the diverted forest land shall remain unchanged;
- (i) Compensatory afforestation shall be raised over non- forest land equal to the diverted forest land. At least 1000 plants per hectare (351.55 hectares x 1000 = 351550 plants) shall be planted over identified non-forest land with provision for ten years on subsequent maintenance.
- (ii) 25% of CA cost will be deposited extra by the user agency for soil and moisture conservation (SMC) activities on the CA land.
- (iii) State Government shall submit documents indicating efforts of State Government to rehabilitate 6 villages which are coming in submergence areas including Hadia khan ashram and temple.
- (iv) The land identified for the purpose of CA shall be clearly depicted on a Survey of India topo-sheet of 1:50,000 scale;
- (v) The Civil Soyam land Identified for raising compensatory afforestation shall be transferred and mutated in favour of the State Forest Department before issue of the Stage-II clearance and the said non-forest land as identified for raising Compensatory Afforestation shall be notified by the State Government as RF under Section-4 or PF under Section-20 of the Indian Forest Act, 1927 or under the relevant Section(s) of the local Forest Act, as the case may be, within a period of six months.


25.4.18

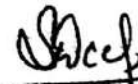
- (vi) The State Government shall provide DGPS map/shape file identify for balance plantation. The shape file may also be provided.
- (vii) The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation at the current wage rate in consultation with State Forest Department in the account of Ad-hoc CAMPA of the concerned State through online portal. The scheme may include appropriate provision for anticipated cost increase for works scheduled for subsequent years;
- (viii) The User Agency shall transfer online, the Net Present Value (NPV) of the forest land being diverted under this proposal, as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. 5-3/2007-FC dated 05.02.2009. The requisite funds shall be transferred through online portal into Ad-hoc CAMPA account of the State Concerned;
- (ix) The approved Catchment Area Treatment (CAT) Plan shall be implemented at the cost of the user agency and commensurate funds shall be deposited through online in the account of Adhoc CAMPA account;
- (x) The User Agency shall pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
- (xi) The user agency should ensure that the compensatory levies (CA cost, NPV, etc.) are deposited through challan generated online on web portal and deposited in appropriate bank online only. Amount deposited through other mode will not be accepted as compliance of the Stage- I clearance;
- (xii) The Forest clearance will be for a period co terminus with the lease period specified in the lease agreement. The State Government will submit the lease agreement document specified in the lease agreement;
- (xiii) The State Govt. ensure that the user agency shall implement the R&R Plan as per the R&R Policy of State Government in consonance with National R&R Policy, Government of India before the commencement of the project work. The said R&R Plan will be monitored by the State Government/Regional Office of MoEF &CC along with indicators for monitoring and expected observable milestones;
- (xiv) The user agency in consultation with the State Government shall create and maintain alternate habitat/home for the avifauna, whose nesting trees are to be cleared in this project. Birds nests artificially made out of eco-friendly material shall be used in the area, including forest area and human settlements, adjoining the forest area being diverted for the project.
- (xv) The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates;
- (xvi) The State Government shall complete settlement of rights, in terms of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, if any, on the forest land to be diverted and submit the documentary evidence as prescribed by this Ministry in its letter No. 11-9/1998-FC (pt.) dated 03.08.2009 read with 05.07.2013, in support thereof;
- (xvii) The user agency shall carry out muck disposal at pre-designated sites in such a manner so as to avoid its rolling down. The dumping area for muck disposal shall be stabilized and reclaimed by planting suitable species by the user agency at the cost of project under the supervision of State Forest Department. Retaining walls and terracing shall be carried out to hold the dumping material in place. Stabilization and reclamation of such dumping sites shall be completed before handing over the same to the State Forest Department in a time bound manner as per Plan.
- (xviii) The State Government and the user agency shall ensure that the tress available between full reservoir level (FRL) and FRL-4 meters are not felled;



- (xix) The User agency shall undertake afforestation along the periphery of the reservoir;
- (xx) User agency shall provide free water for the forestry related projects;
- (xxi) The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
- (xxii) Any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;
- (xxiii) The layout plan of the proposal shall not be changed without the prior approval of the Central Government;
- (xxiv) No labour camp shall be established on the forest land;
- (xxv) The User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
- (xxvi) The user agency will abide by the applicable recommendations of the State Government including State Forest/Wildlife Departments;
- (xxvii) The forest land shall not be used for any purpose other than that specified in the proposal and forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
- (xxviii) No damage to the flora and fauna of the adjoining area shall be caused;
- (xxix) The User Agency shall submit the annual self - compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year;
- (xxx) Any other condition that the concerned Regional Office of this Ministry may stipulate, from time to time, in the interest of conservation, protection and development of forests & wildlife; and
- (xxxi) The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and National Green Tribunal Order(s) pertaining to this project, if any, for the time being in force, as applicable to the project

After receipt of compliance report on fulfilment of the conditions mentioned above, the proposal shall be considered for final approval under Section-2 of the Forest (Conservation) Act, 1980. Transfer of forest land shall not be affected till final approval is granted by the Central Government in this regard.

Yours faithfully,



(Sandeep Sharma)

Assistant Inspector General of Forests (FC)

25.4.18

Copy to:

1. The Principal Chief Conservator of Forests, Government of Uttarakhand, Dehradun.
2. The Nodal officer, O/o the PCCF, Government of Uttarakhand, Dehradun.
3. Addl. PCCF, Regional Office (Central), Dehradun.
4. User Agency
5. Monitoring Cell of FC Division, MoEF&CC, New Delhi
6. Guard File.



(Sandeep Sharma)

Assistant Inspector General of Forests (FC)

25.4.18



Government of India

भारत सरकार

Central Water Commission

केन्द्रीय जल आयोग

Inter State Matters-2 Dte,

अंतरराज्यीय मामले निदेशालय



Fifth floor, Sewa Bhawan
R.K.Puram, New Delhi-66

रामा कृष्ण पुरम, नई दिल्ली -६६

Telephone No: 011-29583207

Email: ism2dte@gmail.com

Sub: MoU between Govt. of UP and Govt. of Uttarakhand regarding Jamrani Dam MPP- reg.

Ref: Lr no, 2/140/2013 -PA(N)/ 331 dated 15.03.18

May kindly refer to the letter cited above forwarding therewith MoU between Govt. of UP and Govt. of Uttarakhand regarding Jamrani Dam MPP for comments from Inter State aspect.

In this regard, The MoU has been examined in light of earlier comments of IP(N) Dte. Lr no. 423 dated 06.06.2006. The MoU shows that an agreement has been reached between party States Uttar Pradesh and Uttarakhand regarding sharing of cost and sharing of water. Accordingly, the earlier comments have been complied with and there is no further comment to offer w.r.t Inter State aspect.

This issues with approval of CE (IMO).

(Rajesh Kumar)
Director

Director, PA(N) Dte. CWC, Sewa Bhawan, New Delhi

File no. 2/ 6/ ISM-2/ 2017/ 109 dt. 25.05.18



भारत सरकार

Government of India

विद्युत मंत्रालय

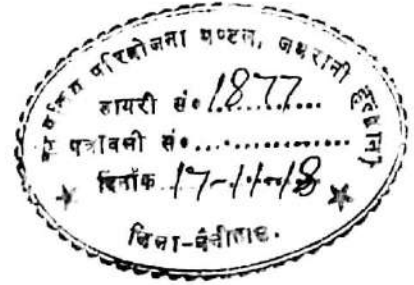
Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

जल विद्युत परियोजना मूल्यांकन प्रभाग

Hydro Project Appraisal Division



विषय: Jamrani Dam Multipurpose Project in Uttarakhand by Irrigation Department-
Examination of Cost of Electro-Mechanical Works- reg.

Reference is invited to PA(C) Directorate letter no. 2/UTR/03/CEA/2006/PAC/2428-29 dated 26.09.2018 on the subject cited above forwarding therein cost estimates of E&M works of Jamrani Dam Multipurpose Project submitted by Irrigation Department, Uttarakhand for an estimates cost of ₹7902.60 Lacs for examination.

Based on Design and BoQ of E&M works vetted by HE&TD Division and a series of discussions held with the officials of Irrigation Department, Uttarakhand, the developer reviewed and submitted cost of E&M works for ₹4303.31 Lacs at March, 2018 price level.

Based on the above, the cost estimates of E&M Works has been examined in HPA Division and vetted for ₹4267 Lacs at March, 2018 price level. A copy of vetted cost estimates of E&M Works is enclosed at Annexure.

Encl.: As above.

पत्रावली सं० 1444
साईन नं०
दिनांक 19-11-18

राकेश
06.11.2018
(राकेश कुमार श्रोत्रिय)
उपनिदेशक (एच.पी.ए.)

Director (PAC), CEA

No.: 207/ 14/ 2004/ HPA /03/

Copy to: 1. Director, Project Appraisal (North), CWC

✓ Superintending Engineer, Project Circle- Jamrani,
Irrigation Department, Haldwani-Uttarakhand- 263126

Dated: 06.11.2018

जबीलन अभियन्ता
परियोजना मण्डल, जमरानी
हल्द्वानी (नैनीताल)

पत्रावली सं० 1877/पमजए/आर-13 (प्रोजेक्ट) दि० 19-11-18

निर्माण खण्ड-II को अय संलग्न सूचनाएं एवं कांस्ट्रक्शन कार्यवाही हेतु उपलब्ध है।
संलग्नक- उपरोक्तानुसार।

जबीलन अभियन्ता
परियोजना मण्डल, जमरानी
हल्द्वानी (नैनीताल)

Jamrani Dam Multipurpose Project (14 MW)
Abstract of Cost Estimates of Electro-Mechanical Works

Price Level: March, 2018

S. No.	Item: Particulars	Cost of Equipments, Services, Overheads and Taxes & Duties			
		Indian Component (₹ Lacs)	Foreign Component		Total (₹Lacs)
			(fc)	(Equivalent in ₹Lacs)	
1	Preliminary	62.00			62.00
	Goods & Services Tax (as applicable)	11.16			11.16
2	Generating Plant and Auxiliaries				
	a) Generating Units and Associated Accessories	1728.53			1728.53
	b) Auxiliary electrical equipment for power station	334.51			334.51
	c) Auxiliary mechanical equipment and services for power station	280.92			280.92
	d) Transportation, handling and Insurance charges @ 6% of 2 (a), (b) & (c)	140.64			140.64
	e) Erection and commissioning charges @ 8% of 2(a), (b), (c) & (d) excluding spares	180.03			180.03
	f) Goods & Services Tax (as applicable)	461.35			461.35
	Sub-Total (Generating Plant and Equipment)	3125.98			3125.98
3	Switchyard and Pothead Yard Equipment & Services				0.00
	a) Substation equipment, auxiliary equipment and service of switchyard and Pothead yard	699.81			699.81
	b) Transportation, handling and insurance charges @ 6% of 3 (a)	41.99			41.99
	c) Erection and commissioning charges @ 8% of 3 (a), (b) excluding spares.	55.98			55.98
	b) Goods & Services Tax (as applicable)	138.14			138.14
	Sub-Total (Substation Equipment, Auxiliary Equipment and Services of Switchyard)	935.93			935.93
4	Contingencies @ 1% on items 2 & 3	40.62			40.62
5	Tools and Plants @ 0.5% of item 2 & 3	20.31			20.31
6	Sub-Total (Item 1 to 5)	4196.00			4196.00
7	Establishment Charges (as applicable)	50.00			50.00
8	Sub-Total (Item 6 & 7)	4246.00			4246.00
9	Audit & Account Charges @ 0.5%	20.68			20.68
	GRAND TOTAL	4266.67			4266.67
			4267		

2/11/21
6/11

Government of India
Ministry of Water Resources, RD & GR
(Flood Management Wing)

11th Block, 8th Floor,
CGO Complex, Lodhi Road,
New Delhi-110003

Sub : Jamrani Multipurpose Project in Uttarakhand- Clearance from International/ JRC angle- reg.

Ref : CWC ID. No. 2/140/2018-PA(N)/ 1780-81 dated 15.11.2018

This has reference to the above mentioned letter dated 15.11.2018 on the subject cited matter vide which a revised 'Check List' and brief note on the Jamrani Dam Multipurpose Project, Uttarakhand has been submitted to this office for its clearance from International/ JRC angle.

On the basis of this revised 'Check List', CWC has recommended the proposal of Irrigation Department, Haldwani, Uttarakhand which states that **"the project will enhance the lean water flow by 0.64 Cumecs (monthly average) as compared to nil before the project. The project will not have any adverse impact on the inflow in lean season on Farakka, The project will enhance the lean season flow"**; therefore, the implementation of this project may not have any adverse bearing on the water availability in river Ganga during lean season period (1st January to 31st May, every year).

In view of above, the undersigned is directed to convey the clearance/ 'No Objection' of FM Wing, MoWR, RD & GR of this Ministry from International/ JRC Angle to "Jamrani Dam Multipurpose Project, Uttarakhand", subject to following conditions:

1. During and post execution of Jamrani Dam Multipurpose Project, Gola river flows will not be lifted/ diverted by the project authority during lean season (1st January to 31st May, every year) and thus the lean season flow, if any will remain unaffected during and after the execution of this project.
2. Only monsoon flows of Gola river would be stored in the proposed Jamrani Dam for subsequent diversion during lean season. The said diversion of water through Jamrani Dam Multipurpose Project would be for the said purpose as stated by the project authority.
3. The Project Authority shall establish a mechanism to ensure that no lean season flows are diverted from Gola river and necessary mechanism would be provided by them to ensure the release of uninterrupted lean season flows into the river through the body of the Jamrani Dam.
4. The Government of Uttarakhand and Uttar Pradesh shall not exceed the water utilization from Ganga basin as stipulated in the agreement(s), if any, among the co-basin states.

Further, CWC is advised to take necessary concurrence from National Mission for Clean Ganga (NMCG) as the project lies in Ganga basin.

(R.R Sambharia)

Sr. Joint Commissioner-I (FM)

Phone/Fax : 24362160

Director, PA(N), CWC, 7th Floor(S), Sewa Bhawan, RK Puram, New Delhi-110066

MoWR, RD & GR No. : Z-23011/4/2014-Ganga(Pt.-1)/367-78 dated: 29th November, 2018

Copy for kind information to:

Chief Engineer (PAO), CWC, Sewa Bhawan, R.K. Puram, New Delhi.



भारत सरकार
Government of India
केन्द्रीय जल आयोग
Central Water Commission
लागत मूल्यांकन (सिंचाई)-I निदेशालय
Cost Appraisal (Irrigation)-I Directorate

6 वाँ तल(द), सेवा भवन
6th Floor (S), Sewa Bhawan
आर.के.पुरम, नई दिल्ली-110066
R. K. Puram, New Delhi
ई-मेल: caidte-cwc@nic.in

Subject: Examination of Cost Estimate of "Jamrani Dam Multi-purpose Project", in State of Uttarakhand - Regarding.

- Ref:**
- i. प्रमुख अभियंता सिंचाई विभाग उत्तराखंड कार्यालय के पत्रांक:प्र./अ./नि.अनु./पी-15 (जमरानी) दिनांक:11, दिसम्बर, 2017
 - ii. CWC Lr. No. 2/148/2017-PA (N)/559-60 dated 10/04/2018
 - iii. CWC ID No. 10/03/2018/CA (I)/71 dated 17/04/2018
 - iv. CWC Lr. No. 2/148/2017-PA (N)/790-91 dated 30/05/2018
 - v. CWC I.D. No. 10/3/2018/CA(I)-1/126 dated 05/06/2018
 - vi. CWC Lr. No. 2/140/2018-PA (N)/1165-66 dated 20/07/2018
 - vii. CWC I.D. No. 10/3/2018/CA(I)-1/198-199 dated 13/08/2018
 - viii. CWC Lr. No. 2/140/2018-PA (N)/1369-70 dated 05/09/2018
 - ix. CWC I.D. No. 10/3/2018/CA(I)-1/223-224 dated 14/09/2018
 - x. CWC I.D. No. 10/3/2018/CA(I)-1/228-230 dated 20/09/2018
 - xi. CWC Lr. No. 2/140/2013-PA (N)/1604 dated 22/10/2018
 - xii. CWC Lr. No. 2/140/vol-V/2013-PA (N)/1773-75 dated 14/11/2018
 - xiii. CWC Lr. No. 2/140/vol-V/2013-PA (N)/228 dated 23/01/2019

Engineer-in-chief of Irrigation Department, Uttarakhand had requested to this office for acceptance of earlier submitted cost estimate of DPR of Jamrani Dam Multi-purpose Project (amounting to Rs 2350.56 Cr @ PL 2015) vide letter under reference (i).

Vide Letter under reference (ii), the cost estimate of the project amounting to Rs 2816.53 Cr @PL Jan, 2018 was forwarded for examination. The comments/observations on this cost estimate was communicated vide letter under reference (iii). In reply to these observations, cost estimate of the project amounting to Rs 2751.83 Cr @PL May, 2018 was forwarded for examination vide Letter under reference (iv). However, the project estimate had not been updated as per the guideline which was earlier communicated during discussions and comments/observations.

Further, vide Letter under reference (v), observations were communicated. In compliance to our earlier comments vide this office letters of even no. dated 17/04/2018 and 05/06/2018., cost estimate of the project amounting to Rs 2573.10 Cr @PL May, 2018 was forwarded to this office vide letter under reference (vi). The submitted cost estimate had been examined in light of communicated comments vis-à-vis their compliance and further detailed observations were made vide letter under reference (vii). In reply to these observations, RCE of the project amounting to Rs 2600.20 Cr @PL May, 2018 was forwarded to this office vide Letter under reference (viii).

In continuation, a meeting regarding major technical issues with respect to cost appraisal of the project (for the resubmitted cost estimate for an amount of Rs 2600.20 Cr at May, 2018 price level) was held under the chairmanship of the CE (PAO) on 12.09.2018 in his chamber and the minutes of meeting were issued vide Letter under reference (ix). In addition to this, a letter was issued for furnishing additional data/information related to the project to project authority for expeditious cost appraisal of the project vide Letter under reference (x).

In reply to observations sent vide letters under references (ix) & (x), cost estimate of the project amounting to Rs 2880.70 Cr @ PL May, 2018 was forwarded for examination vide Letter under reference (xi). On this cost estimate, discussions have been held among State Govt. officials and it is requested to them that the proper referencing of quantities and rates in the cost estimate may be submitted. Accordingly, the project authority has submitted the Cost Estimate for an amount of for an amount of **Rs 2954.45 Cr @ PL May, 2018** to PA(N) Dte. which was forwarded to this office vide letter under reference (xiii).

After detailed examination, Cost Estimate for **Jamrani Dam Multi-purpose Project in State of Uttarakhand** has been vetted amounting to amounting to **Rs 258409.59 Lakh say Rs 2584.10 Cr @PL May 2018** considering the following points:

1. Cost has been finalized on the basis of certificate of correctness of quantity under different subheads issued by competent project authority.
2. Project authority may be requested to review the works items, quantities of work items and their rates as per actual construction design and drawing before award of work.
3. The reasons of variation from the approved cost accepted in 43rd TAC is not possible at this stage as the project was approved 30 years long back that is in 1989.
4. The present estimate for canal works includes construction of two new feeder canals namely Tarai feeder & Jamrani feeder and the renovation/re-modelling works of the canals, which was constructed during 1980's and requires renovation.
5. The finalised cost under subhead B-Land is subject to change on final awards/approved EIA/EMP reports. The EIA & EMP studies for the project are yet to be approved by MoEF & CC, GoI.
6. The provision under Canal works (Sub Head D, L, U & V) is provisionally vetted based on 'quantities and reasonability of rate' certified by Project Authority at this stage. However, the actual cost under this sub head may be worked out before the final award of work.
7. The estimated cost under sub-head L-Earthwork:
 - A. Includes construction of two new canals namely Jamrani canal and Tarai feeder. The estimate has been prepared using typical rectangular cross sections with R.R. Masonry. As now a days, the canals are made in trapezoidal section with CC lining, therefore project authority is requested:
 - i. The cross- section of these canals may be appropriately reviewed before construction.
 - ii. As the guideline says that the provision for main/branch canals shall be based on detailed surveys, therefore the estimate may be worked out as per actual construction design & drawings for total length of the canals before award of the work.
 - B. Renovation work, taken on the basis of per Km cost and using single typical cross-sections for each canal. Therefore, the vetted cost is provisional and tentative and is based on 'quantities and reasonability of rate' certified by Project Authority at this stage. However, the actual cost under these sub heads may be worked out based on actual construction design & drawings before the final award of work.

8. The estimated cost under sub-heads U-Distributaries, minors & sub minors and subhead V-water courses which includes mainly renovation work, taken on the basis of per Km cost and using single typical cross-sections of the canal. Therefore, the vetted cost is provisional and is based on 'quantities and reasonability of rate' certified by Project Authority at this stage. However, the actual cost under these sub heads may be worked out based on actual construction design& drawings before the final award of work.
9. The present estimate is for construction of new feeder canals namely Tarai feeder and Jamrani feeder and the renovation/remodelling works of the canals which was constructed during 1980's and requires renovation. It is pertinent to mention that repair & renovation/modernization works proposed under sub heads D-Regulator, L-Earthwork, U-Distributaries, minors & sub-minors and V-water Courses by the project authorities are ERM in nature, which should not be integral part of the present cost estimate. However, since the project was constructed long back, therefore the cost has been provisionally included in the project cost, which may be duly considered.
10. The GST provision in the estimate has been appraised subject to condition that the expenditure on this account shall be incurred as per actual and to be incorporated & verified during construction based on evidence of making GST payments.
11. The provisions under subhead S-Power Plant has been vetted by CEA for an amount of Rs 42.67 Cr at March PL 2018. And the same has been kept @ May PL 2018 based on the certificate of the project authority.

The general abstract of cost of the said project is enclosed as Annexure for further necessary action at your end. It is also requested that the copy of updated Cost Estimate of vetted amount may be arranged and provided to this Directorate before put up to TAC.

This issues with the approval of Chief Engineer (PAO), CWC.

Encl: As Above

बलराम कुमार
(बलराम कुमार) 04/02/19
निदेशक

निदेशक, परियोजना मूल्यांकन (उत्तर) निदेशालय, के.ज.आयोग, सेवा भवन, नई दिल्ली ।

CWC I.D. No. 10/3/2018/CA(I)-1/ 51-52

दिनांक: 04/02/2019

प्रतिलिपि सूचनार्थः

मुख्य अभियंता (परियोजना मूल्यांकन संगठन) के प्रधान निजी सचिव, के जा आ नई दिल्ली ।

Name of Project: Cost Estimate of "Jamnani Dam Multipurpose Project" in State of Uttarakhand.

GENERAL ABSTRACT OF COST

Sr. No.	Project Sub Head	Approved Cost accepted in 43rd TAC meeting held on 18.05.1989	Project Cost @ Price Level May, 2018										Grand Total		Amount in Lakh
			UNIT - I			UNIT - II									
			Expenditure incurred upto March, 2018	Balance Cost	Total Cost	Expenditure incurred upto March, 2018	Balance Cost	Total Cost	Expenditure incurred upto March, 2018	Balance Cost	Total Cost				
1	DIRECT CHARGES	3	4	5	6	7	8	9	10	11	12				
1	Works														
1	A - Preliminary	177.55	218.22	2969.19	3187.41	1.46	206.75	208.21	219.68	3175.94	3395.62				
2	B - Land	352.45	20.65	21107.41	21128.06	14.23	3159.17	3173.4	34.88	24266.58	24301.46				
3	C - Works	9443.30	390.00	134084.13	134474.13	85.61	0.00	85.61	475.61	134084.13	134559.74				
4	D - Regulator & Measuring Devices	14.85	0.00	0.00	0.00	0.00	151.30	151.30	0.00	151.30	151.30				
5	E - Falls	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
6	F - C. D. Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
7	G - Bridges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
8	H - Escape	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
9	I - Navigation Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
10	J - Power plant & Civil works	0.00	0.00	3835.82	3835.82	0.00	0.00	0.00	0.00	3835.82	3835.82				
11	K - Building	496.95	216.48	3389.32	3605.80	0.00	0.00	0.00	216.48	3389.32	3605.80				
12	L - Earth Work & Lining	727.65	0.00	0.00	0.00	678.87	34011.53	34690.4	678.87	34011.53	34690.40				
13	M - Plantation	3.00	0.68	52.06	52.74	0.00	0.00	0.00	0.68	52.06	52.74				
14	N-Tanks & Reservoir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
15	O - Miscellaneous	448.00	100.00	2089.44	2189.44	2.03	101.31	103.34	102.03	2190.75	2292.78				
16	P - Maintenance	119.36	613.32	1418.50	2031.82	0.00	442.73	442.73	613.32	1861.23	2474.55				
17	Q - Special Tools & Plants	67.60	66.52	466.34	532.86	0.00	107.48	107.48	66.52	573.82	640.34				
18	R - Communication	189.50	270.56	540.39	810.95	0.00	0.00	0.00	270.56	540.39	810.95				
19	S - Power Plant & Electric System*	0.00	0.00	4267.00	4267.00	0.00	0.00	0.00	0.00	4267.00	4267.00				
20	T - Water Supply Works	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
21	U - Distributary & Minors	164.20	0.00	0.00	0.00	0.00	2792.79	2792.79	0.00	2792.79	2792.79				
22	V - Water Course	375.76	0.00	0.00	0.00	0.00	7317.34	7317.34	0.00	7317.34	7317.34				
23	W - Drainage	282.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
24	X - Environment & Ecology	58.00	58.54	8895.17	8953.71	0.00	0.00	0.00	58.54	8895.17	8953.71				
25	Y - Losses on Stock	29.86	2.92	3.55	6.47	0.00	1.11	1.11	2.92	4.65	7.57				
	Total of I - Works	12963.13	1957.89	183118.31	185076.20	782.20	48291.506	49073.71	2740.09	231409.82	234149.91				
II	Establishment	1367.18	383.40	14580.98	14964.38	0.00	4964.56	4964.56	383.40	19545.54	19928.94				
III	T & P	129.63	0.00	1788.51	1788.51	0.00	482.92	482.92	0.00	2271.43	2271.43				
IV	Suspense	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
V	Receipt & Recoveries	-135.30	-2.92	-361.80	-364.72	0.00	-16.63	-16.63	-2.92	-378.43	-381.35				
A	TOTAL: DIRECT CHARGES	14344.64	2338.37	199126.01	201464.38	782.20	53722.35	54504.55	3120.57	252848.36	255968.93				
	INDIRECT CHARGES														
(a)	Capitalised value of abatement of land revenue	9.45	0.00	74.61	74.61	0.00	51.96	51.96	0.00	126.57	126.57				
(b)	Audit & Accounts charges	129.63	0.00	1831.18	1831.18	0.00	482.92	482.92	0.00	2314.10	2314.10				
B	TOTAL: INDIRECT CHARGES	139.08	0.00	1905.79	1905.79	0.00	534.88	534.88	0.00	2440.67	2440.67				
	Total of Direct & Indirect Charges (A + B)	14483.72	2338.37	201031.80	203370.17	782.20	54257.22	55039.42	3120.57	255289.02	258409.59				

* As finalised by CEA.

Say Rs 258410 Cr

04/02/19
Director



Government of India
भारत सरकार
Central Water Commission
केन्द्रीय जल आयोग
Irrigation Planning(North) Directorate
सिंचाई आयोजन (उत्तर)निदेशालय

5th Floor Sewa Bhawan
5th तल सेवा भवन,
R.K. Puram, New Delhi-66
राम कृष्णपुरम, नई दिल्ली-66
Telephone No.:011-29583236
Email:lpndle-cwc@nic.in

Sub: Examination of statement of BC Ratio of Jamrani Dam- reg.

Ref: (i) CWC Letter No. 2/140/Vol-V/2012-PA(N)/479 dated 07.02.2019.

(ii) CWC Letter No. 2/140/Vol-V/2012-PA(N)/437-41 dated 06.02.2019.

(iii) CWC Letter No. 2/140/Vol-V/2013-PA(N)/494 dated 08.02.2019.

(iv) Appendix F(1) and F(2) format received from the State Government forwarded by CE (PAO), CWC on 09.02.2019.

May please refer to the endorsement no. (i) under reference above vide which the BC ratio statement of the Jamrani Dam Project, Uttarakhand has been forwarded to this Directorate for examination. The same has been gone through and it is observed that the project authorities have resubmitted the BC ratio (appendix F(1) and F(2) signed by Chief Engineer (level- II), Irrigation Department, Haldwani, Uttarakhand) submitted earlier by them vide their letter dated 11.09.2018 without complying with the comments of this Directorate issued vide letter no. 191-92 dated 25.09.2018. The same was brought to the notice of Director (PA-N) of CWC on the same day (i.e., 07.02.2019). Further, the PA(N) Dte, CWC vide letter no. (ii) under reference above have forwarded the finalised cost of the project as Rs. 2584.10 crore (@ May, 2018 PL) and vide letter no (iii) under reference above have forwarded the revised break-up of the finalized estimated cost of Rs. 2584.10 crore (@ May, 2018 PL. The cost allocated to irrigation sector in the revised finalised cost of the project is stated as Rs. 1526.73 crores. Further, the cost of Unit I works is indicated as Rs. 1952.68 crores.

The project authorities have further resubmitted the revised appendix F(1) and F(2) signed by Chief Engineer (Level-II), Irrigation Department, Haldwani, Uttarakhand after complying with the observations of this Directorate dated 25.09.2018 in this regard. While forwarding the said format, it has been stated that the project authorities (irrigation department) are in touch with the Director, Agriculture, Uttarakhand and will get the above format signed in a couple of days. PAO, CWC may ensure the submission of the same by the project authorities. The arithmetic calculations of the revised BC ratio worked out by the project authorities as 1.09 have been checked and the calculations are found to be in order.

This issues with the approval of Member (WP&P), CWC.


(B.C. Vishwakarma)
Director (IP-N)

Chief Engineer (PAO), CWC, Sewa Bhawan, New Delhi

CWC ID No. 8/7/U.U./2004/IP(N)/38

dated: 09.02.2019

Copy to: Director (PA-N Dte), CWC, Sewa Bhawan, New Delhi.

32

Government of India
Central Water Commission
Project Appraisal Organization

Telefax: 011-29583512
Email: cepriap@nic.in

7th Floor (S), Sewa Bhawan,
R. K. Puram, New Delhi-66
Dated: 18/02/2019

Minutes of Meeting

A copy of the Summary Record of Discussion of the 141st Meeting of the Advisory Committee of MoWR, RD&GR on Irrigation, Multipurpose and Flood Control Projects, held under the Chairmanship of the Secretary, MoWR, RD&GR on 11/02/2019 at CWC, New Delhi is enclosed herewith for information and further necessary action, please.

Comments, if any, may kindly be forwarded to the undersigned within 15 days.

Encl: As above



(C K L Das)

**Member Secretary of the Advisory Committee &
Chief Engineer (PAO)**

To,

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, 1st Floor, North Block, New Delhi.
3. Secretary, Department of Power, Room No. 205, S.S. Bhawan, II Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests & CC, 4th Floor, Prithvi Block, Indira Paryavaran, Jor Bagh, New Delhi.
5. Secretary, Department of Agriculture, Cooperation & Farmers Welfare, R. No. 126, Krishi Bhawan, New Delhi.
6. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, New Delhi.
10. Additional Secretary (Energy), NITI Aayog, Room No. 249, Yojana Bhawan, Sansad Marg, New Delhi.
11. Adviser (WR&LR), NITI Aayog, Room No. 209, Yojana Bhawan, Sansad Marg, New Delhi.
12. Joint Secretary & Financial Adviser, MoWR, RD & GR, Room No-401, S.S. Bhawan, New Delhi.

Special Invitees:

1. Additional Secretary, MoWR, RD&GR.
2. Member (D&R), CWC, New Delhi.
3. Member (RM), CWC, New Delhi.

4. Member (WP&P), CWC, New Delhi.
5. Chairman, GFCC, Patna, Bihar
6. Chief Executive Officer, Polavaram Project Authority (PPA), Hyderabad
7. Joint Secretary (IC&GW), MoWR, RD&GR.
8. Member-Secretary, UYRB, New Delhi.
9. Principal Secretary, Irrigation Department, Govt. of Uttarakhand, Dehradun
10. Principal Secretary, Irrigation and Water Resources Dept, Govt. of Uttar Pradesh, Lucknow.
11. Principal Secretary, WRD, Govt. of Andhra Pradesh
12. Chief Advisor (Cost), Department of Expenditure, Ministry of Finance, 2nd Floor, Lok Nayak Bhawan, New Delhi.
13. Commissioner (State Projects), MoWR, RD & GR, Room No-411, S. S. Bhawan, New Delhi.
14. Commissioner (FM), MoWR, RD & GR, CGO Complex, 11th Block, 8th Floor, Lodhi Road, New Delhi.
15. Chief Engineer (PPO), CWC, New Delhi
16. Chief Engineer (IMO), CWC, New Delhi

Copy for kind information to:

17. Sr. PPS to Secretary, MoWR, RD & GR, Room No. 407, Shram Shakti Bhawan, New Delhi.

Government of India
Ministry of Water Resources, River Development and Ganga
Rejuvenation
Central Water Commission

**SUMMARY RECORD OF DISCUSSIONS OF THE 141st MEETING OF THE
ADVISORY COMMITTEE OF MoWR, RD&GR FOR CONSIDERATION OF
TECHNO-ECONOMIC VIABILITY OF MAJOR & MEDIUM IRRIGATION,
FLOOD CONTROL AND MULTIPURPOSE PROJECT PROPOSALS HELD
ON MONDAY, FEBRUARY 11TH, 2019 AT CENTRAL WATER
COMMISSION, NEW DELHI**

The 141st Meeting of the Advisory Committee of Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD&GR) for consideration of the techno-economic viability of Major & Medium Irrigation, Flood Control and Multipurpose Project Proposals was held under the Chairmanship of Shri U.P. Singh, Secretary to the Government of India, MoWR, RD&GR on Monday, 11th February, 2019 at Central Water Commission, Sewa Bhawan, New Delhi. The list of members of the Committee or their representatives/nominees/special invitees and officers from various Ministries/Organizations and representatives of State Government who attended the meeting is at Annexure.

I. Confirmation of the Minutes of the 140th meeting of the Advisory Committee

It was informed that the 140th Meeting of Advisory Committee of MoWR, RD&GR for consideration of the techno-economic viability of the Major & Medium Irrigation, Flood Control and Multipurpose Project Proposals was held on 22/01/2019 at MoWR, RD&GR, Shram Shakti Bhawan, New Delhi. The Summary Record of Discussions of the 140th Meeting was circulated vide letter No. 16/27/2018-PA(N)/383-408 dated 30/01/2019. No comments on the same have been received.

The Advisory Committee confirmed the Summary Record of Discussion of the 140th meeting of the Advisory Committee as circulated.

2013-14 PL based on the quantities approved in Advisory Committee Meeting held on 04/01/2011 is Rs. 27081.62 Cr.

Specific Conditions:

1. Statutory clearances e.g. Environment, Forest, Wildlife, Tribal Affairs and R & R etc. especially in the light of the Court Cases as applicable.
2. Submission of State Finance Concurrence by the Project Authority.

General conditions to be implemented during the project:

1. Correctness of quantities, correctness of supporting documents and fulfilment of conditions of acceptance of DPRs/RCE of specialized directorates of CWC / CEA by the State Govt. and clearance from other Central/State agencies.
 2. Adhering to all the observations/conditions communicated by specialized Directorates of CWC / CEA in respect of hydrology, inter-state aspects, irrigation planning and design aspects.
 3. Participatory Irrigation Management (PIM) may be encouraged by State Govts. and Water Users Associations (WUAs) shall be formed at appropriate stage to ensure awareness and participation of farmers in order to achieve the specific objectives. Later on, once project is completed WUAs may be involved in Operation and Maintenance of Canals, Warabandi etc. to ensure PIM.
 4. The micro irrigation shall be encouraged in the command as per feasibility.
 5. Proper water charges from the farmers shall be collected and this revenue shall be used for Operation & Maintenance (O&M) of project in the future.
 6. Minimum environmental flow in the downstream of the river may be ensured as per the prevailing law / as per the terms and conditions stipulated by MoEF & CC.
- 2. Revised Cost Estimate (RCE) of the Jamrani Dam Multipurpose Project, Uttarakhand (RCE, Major Multipurpose, Estimated Cost Rs. 2584.10 Crore @ PL May, 2018, BC Ratio 1.09)**

A presentation on the project was made by the Project Authorities. It was informed that the Jamrani Dam Multipurpose Project, proposed by Govt. of Uttarakhand, envisages construction of Roller Compacted Concrete Gravity Dam near Jamrani village across river Gola, a tributary of river Ram Ganga in district

Nainital, Uttarakhand. Apart from benefit of hydropower to the tune of 14 MW, the project would provide irrigation benefit to 1,50,302 ha CCA in Nainital & Udham Singh Nagar districts in Uttarakhand and Rampur & Bareilly districts in Uttar Pradesh. A Memorandum of Understanding (MoU) has already been signed between the two states of Uttarakhand and Uttar Pradesh for the sharing of cost and benefits of the project.

The Project was earlier approved by the Planning Commission in May, 1975 for Rs.61.25 crore and construction was taken up in the year 1977. The construction of the Barrage at Kathgodam, 40 km length of feeder channels and 80% of distribution system had been completed by 1982 under Phase-I to reap the quick benefits from the project. Further, the 1st Revised Cost Estimate, amounting to Rs. 144.84 Crore (March, 1987 PL), was accepted by the Advisory Committee in the 43rd meeting held in 1989. Now, the 2nd Revised Cost Estimate, amounting to Rs. 2584.10 Crore @ PL May, 2018, with BC ratio 1.09 is put up to the Advisory Committee.

The Chief Engineer, Irrigation Department, Uttarakhand further informed the Committee that Jamrani Dam Multipurpose project is a crucial initiative in view of the drinking water requirements of the area and a provision of 42.70 MCM has been made for drinking water under the project.

After detailed deliberations, the proposal was accepted by the Advisory Committee subject to submission of the following by the Project Authority:

1. State Finance Concurrence for the finalized cost estimate (Rs. 2584.10 cr).
2. Stage-II Forest Clearance.
3. Environmental Clearance.
4. Concurrence of NMCG in respect of e-flow.
5. State Agriculture Department Certificate in respect of rate and yield of agricultural produce.

General conditions to be implemented during the project:

1. Participatory Irrigation Management (PIM) may be encouraged by the State Govts and Water Users Associations (WUAs) shall be formed at appropriate stage to ensure awareness and participation of farmers in order to achieve the specific objectives. Later on, once project is completed WUAs may be involved in Operation and Maintenance of Canals, Warabandi etc. to ensure PIM.
2. The micro irrigation shall be encouraged in the command as per feasibility.

3. Proper water charges from the farmers shall be collected and this revenue shall be used for Operation & Maintenance (O&M) of project in the future.
4. Minimum environmental flow in the downstream of the river may be ensured as per the prevailing law/as per the terms and conditions stipulated by MoEF & CC.
5. Acceptance of project proposal by Advisory Committee of MoWR, RD&GR does not guarantee any eligibility towards release of fund under any existing scheme of MoWR, RD&GR such as AIBP, PMKSY, RRR, FMP etc or funding from any external multilateral agency.

B. Flood Control Projects:

1. **Revised Project Estimate for Construction of Khajuha Jhunjunia Andharpurwa Marginal Bund on the left bank of river Rapti in district Shrawasti, Uttar Pradesh (RCE, Estimated Cost Rs. 46.3726 Crore @ PL 2016, BC Ratio 2.60:1)**

A presentation on the project was made by the Project Authority. An introduction to the background of the project was made, wherein it was informed that the scheme has been formulated to overcome the damages due to flood water of river Rapti towards the left side of river. The Project Authority informed that during the floods, the water spreads in vast area and reached up to district headquarters. The link road which connects the district headquarters to other district roads get flooded during flood every year resulting in obstruction in communication, transportation, health facilities and other relief measures. The construction of the Marginal Bund has been proposed to overcome this problem.

The Marginal bund originates near village Jhunjhuniya tied up to Bahraich-Bhinga road District Shrawasti and terminates near village Andharpurwa ghat Tehsil Ikauna, District Shrawasti. The total length of the bund is 22.500 km, which would protect 15,412 Ha of agricultural land and a population of 98,350 persons of 85 villages. The current project proposal includes the construction of remaining portion of 16.76 km of total 22.500 km long earthen embankment. It is proposed to fill the remaining gaps (of 16.76 km) & raising of section due to the new HFL and maximum discharge recorded in 2017 in Rapti River. It is also proposed to construct 46 nos. of ramps for convenience of villagers as per the site conditions.



LIST OF OFFICERS PRESENT IN THE 141ST MEETING OF THE ADVISORY COMMITTEE OF MoWR, RD&GR ON IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECTS ON MONDAY, 11TH FEBRUARY, 2019 AT 10:30 AM IN THE COMMITTEE ROOM (2ND FLOOR), CWC, SEWA BHAWAN, NEW DELHI:

Shri U.P. Singh, Secretary, MoWR, RD&GR

In Chair

Members of the Advisory Committee or their representatives/nominees

S/Shri/Smt

- | | |
|--|------------------|
| 1. S. Masood Husain, Chairman, Central Water Commission | Member |
| 2. Jagmohan Gupta, JS & FA, MoWR, RD& GR | Member |
| 3. P. C. Jiloha, Chief Engineer, HPA, CEA (Representing Chairman, CEA) | Member |
| 4. Shyla Titus, Director, Ministry of Tribal Affairs (Representing Secretary, Ministry of Tribal Affairs) | Member |
| 5. R. A. S. Patel, Assistant Commissioner, DAC&FW (Representing Secretary, Department of Agriculture, Cooperation & Farmers Welfare) | Member |
| 6. C.K.L. Das, Chief Engineer, PAO, CWC | Member Secretary |

Special Invitees:

MoWR, RD&GR

S/Shri

1. Akhil Kumar, Joint Secretary (A&GW)
2. K. Vohra, Commissioner (SPR)
3. Anup Kumar Srivastava, Senior Joint Commissioner (SPR-I)
4. Rakesh Toteja, Senior Joint Commissioner (FM)
5. A K Shukla, Senior Joint Commissioner (SPR-II)
6. Rahul Varshney, Deputy Director, UYRB

O/o Chief Adviser (Cost)

S/Shri

1. B. Bandyopadhyay, Adviser (Cost)

Central Water Commission

S/Shri

1. N.K. Mathur, Member (D&R)
2. S.K. Haldar, Member (WP&P)
3. R.K. Pachauri, Chief Engineer, PPO



4. Navin Kumar, Chief Engineer, IMO
5. Bhupinder Singh, Director, NP Dte
6. B. C Vishwakarma, Director (IP-S) Dte
7. Rajiv Kumar, Director, PA(C) Dte.
8. G L Bansal, Director, EA Dte.
9. Balram Kumar, Director, Cost Appraisal (Irrigation-1) Dte.
10. B P Pandey, Director, ISM-1 Dte
11. P Devender Rao, Director, CMDD Dte
12. Piyush Ranjan, Director, PA(N) Dte
13. S S Bonal, Director, CMC & CA(I)-2 Dte
14. Ashish Tripathi, Deputy Director, Cost Appraisal (Irrigation-1) Dte.
15. Sanjay Meena, Deputy Director, PA(N) Dte.
16. Mahesh Kumar Gupta, Deputy Director, NP Dte.
17. Nagendra Kumar Singh, Deputy Director, NP Dte.
18. D. S. Prasad, Deputy Director, Cost Appraisal (Irrigation)-2 Dte
19. Pradeep Kumar, Deputy Director, Cost Appraisal (HWF) Dte.
20. M Amanullah, Deputy Director, Cost Appraisal (Irrigation-1) Dte.
21. K. Iyappan, Deputy Director, PA(N) Dte.
22. Siddhant Azad, Assistant Director, NP Dte,
23. Durgendra Singh, AD-II, PA (N) Dte.
24. Sachichidanand Singh, AD-II, NP Dte.

Officers from the Ganga Flood Control Commission (GFCC)

S/ Shri

1. Arun Kumar Sinha, Chairman, GFCC, Patna
2. Joginder Singh, Member, GFCC, Patna
3. Vivek Pal, Director, GFCC, Lucknow

Officers from the State Government of Uttarakhand

S/Shri

1. M C Pandey, Chief Engineer-2, Irrigation Dept, Haldwani
2. S. K. Singh, AE, Irrigation Dept, Haldwani
3. Shah Nawaz, AE, Irrigation Dept, Haldwani
4. R P Joshi, AE, Irrigation Dept, Haldwani
5. N Papnai, AE, Irrigation Dept, Haldwani

Officers from the UJVNL, Uttarakhand

S/Shri

1. Rajeev K Agarwal, ED, Lakhwar Project, UJVNL
2. S.K. Singh, General Manager (C), UVJNL, Lakhwar



From,

Bhupinder Kaur Aulakh,
Secretary,
Govt. of Uttarakhand.

To,

Director-PA(S),
Government of India,
Central Water Commission,
Project Appraisal (South) Directorate,
410(S), SevaBhawan, R.K. Puram,
New Delhi- 110066

Irrigation Section-2

Dehradun: Date 01 November
October, 2019

Subject:- State Finance Concurrence for Jamrani Dam Multipurpose Project
Distt - Nainital (Uttarakhand)

Sir,

This has a reference to above subject regarding submission of State Finance Concurrence (SFC) in respect of Jamrani Dam Multipurpose Project Distt. Nainital (Uttarakhand). The Government of Uttarakhand hereby conveys State Finance Concurrence for Rs. 2584.10 Crore at price level 2017-18 in respect of aforesaid project.

Yours faithfully,

(Dr. Bhupinder Kaur Aulakh)
Secretary

o/c

No. 1416 /II(2)-2019-17(06)/2015 T.C.-I, dated.

Copy to

1. Secretary, Finance, Govt. of Uttarakhand.
2. PS to Chief Secretary to bring it to the notice of Chief Secretary, Uttarakhand.
3. EnC, Irrigation Department, Uttarakhand.

(Dr. Bhupinder Kaur Aulakh)
Secretary

o/c

W-11035/4/2019-JJM-II (Part-II)

Government of India

Ministry of Jal Shakti

Department of Drinking Water & Sanitation

4th Floor

Pt. Deendayal 'Antyodaya' Bhawan

CGO Complex, Lodhi Road

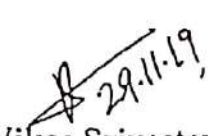
New Delhi-110 003

Date: 29th November, 2019**OFFICE MEMORANDUM**

Subject: Preliminary Project Proposal Report - (PPRID - 10637) - Project titled Jamrani Drinking Water Multipurpose Project.

The undersigned is directed to refer to above mentioned PPRID submitted by Sh. Dharendra Singh Kachhawaha, Superintending Engineer, Irrigation Department, Uttarakhand in the DEA's EAP portal and to say that the said proposal is supported by this department with the following comments as under:

- i. Jal Jeevan Mission (JJM) aims to provide Functional Household Tap Connection (FHTC) to rural household. hence this provision may be included in the cost estimate, if not done already;
 - ii. The service level proposed should be at least 55 lpcd as per JJM norms;
 - iii. No of villages proposed to be covered should be marked in IMIS of this Department;
 - iv. The maintenance of rural water supply systems of the village should be handed over to the Gram Panchayat or its sub-committee i.e. Village Water and Sanitation Committee/ Paani Samiti after completion of the project, such provision should be included in the proposal;
 - v. Non-duplicity Certificate should be provided by the State Government in r/o coverage of Households/ Villages as proposed in the said project.
2. This issues with the approval of Secretary, DDWS.


(Vikas Srivastava)

Under Secretary to Govt. of India

Email: vikas.sri@nic.in

To,

Additional Secretary (FB&ADB)
Department of Economic Affairs
Ministry of Finance
Room no. 141, North Block
New Delhi

12/5/2019

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

Subject: **Comments on PPR No. 10637 titled "Jamrani Drinking Water Multipurpose Project"**

Date: 05/12/19 12:33 PM

From: "IR Division" <ir.mnre@nic.in>

To: Dherendra Singh Kachwaha <sso1-irri-uk@gov.in>

Cc: nb.raju@nic.in, chalapathi.rao@nic.in,
amitpverma@hotmail.com, foukpaodelhi@gmail.com

Sir,

With reference to Preliminary Project Proposal Report (PPRID-10637) dated 22-11-2019 regarding Jamrani Drinking Water Multipurpose Project, the comments of this Ministry are as under:-

This being a multipurpose project with a component of 14MW hydro power project. Ministry supports setting up the 14 MW Hydro Project. Since neither any support from MNRE/ Central Government has been envisaged in the project proposal for the hydro-power component nor any scheme for supporting SHP is available in the Ministry at the moment, Ministry's support would be without any financial commitment on the project at the moment.

This has the approval of Joint Secretary, MNRE.

Regards,

International Relations Division
Ministry of New and Renewable Energy
01124364188

No. J-12011/04/2007-IA-I (R)
Government of India
Ministry of Environment, Forest & Climate Change
(IA.I Division)

Indira Paryavaran Bhawan
3rd Floor, Vayu Wing
Jor Bagh Road
New Delhi-110 003

Dated: 13th December, 2019

To

The Office of Executive Engineer,
Jamrani dam construction Division-I
Damuvaduga-Kalhgodam,
Distt Nainital, Uttarakhand

Sub: Jamrani Dam Multipurpose Project by Irrigation Department, Uttarakhand –Regarding Environmental Clearance.

Sir,

This has reference to your online proposal no. **IA/UK/RIV/80127/2006** and your letter No. 110/J.D.C.D-2/Environment Clearance dated 30.01.2019 on the above-mentioned subject.

2. The above referred proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric projects in its 27th meeting held on 23.09.2019. The comments and observations of EAC on the project may be seen in the Minutes of the meeting which are available on the web-site of this Ministry.

3. Jamrani Dam Multipurpose Project envisages construction of 480m long and 130.60 m high (above river bed level) roller compacted concrete gravity dam across the river Gola, a tributary of river Ramganga, a flashy seasonal river which originates in Kumaon Himalayas and flows through South Eastern Kumaon in the State of Uttarakhand, India. Jamrani MPP is proposed near village Jamrani, district Nainital, Uttarakhand 10 km upstream of existing Gola barrage which is located near Kathgodam. The catchment area at proposed dam site is 450 km². The live storage created by project is proposed to be used for drinking water, irrigation & power generation. The live storage of the project about 142.72 MCM out of which 42.7 MCM will be utilized for meeting the requirement of drinking water to Haldwani city and an additional irrigation to 57,065 ha with an incidental hydro power generation of 14 MW installed capacity with estimated annual power generation of 64 MU out of which 57.74 MU would be available at bus bars. Construction of Jamrani dam was proposed to be constructed to provide augmentation storage for Gola barrage.

4. Total land required for the project is 475.19 ha, out of which forest land is 351.55 ha, private land is 89.68 and others is 33.96 ha. Project benefit besides additional irrigation area of 57,065 ha, 42.7 MCM for drinking water and annual power generation of 64 MU, includes pisciculture, attraction of tourism, recharge of groundwater in adjoining area, creation of employment among the local people, infrastructure development of the area, etc. After the

construction of Jamrani dam, employment opportunities and standard of living of the local people will be provided. Total cost of the project is Rs. 2584.10 crores.

5. Terms of Reference to the above project was issued on 23.04.2007 and the Public Hearing for the above mentioned project was held on 12.05.2008 in village Damuadunga, Tehsil Haldwani which is approximately 3 km away from the Kathgodam Railway Station. The meeting was presided by Upper collector, Nainital and Organized by Uttarakhand State Pollution Control Board, Dehradun.

6. EAC in the 35th meeting dated 19th Feb., 2010, had recommended Environmental Clearance. In absence of Forest Clearance for the diversion of forest land, EC of the Project was kept in abeyance till the Stage-I Forest Clearance (351.55 ha) for the project was obtained vide letter No. 8-36/2013-FC, dated 25.04.2018. After obtaining Forest Clearance, a request for reconsideration for grant of EC was made by the Project Proponent vide letter No. 681/PCH/R-13/E.I.A. dated 09.05.2018. The Ministry advised to upload the relevant documents for the EC application online for further reconsideration. Relevant documents were then uploaded online by the PP for consideration of grant Environmental Clearance. Proposal was then considered by the EAC in the 22nd meeting held on 27.02.2019. The EAC after detailed deliberations and considering all the facts of the project as presented by the PP, deferred the proposal and sought some additional information including one season baseline data. The Project Proponent (PP) submitted the additional information as sought by the EAC on 23.08.2019. Accordingly, proposal was considered in the 27th meeting held on 23.09.2019.

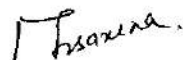
7. The Expert Appraisal Committee (EAC) in its 27th meeting held on 23.09.2019, after due consideration of the relevant documents submitted by the Project Proponent and clarifications furnished, have recommended for grant of Environmental Clearance for the project mentioned above. Accordingly, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification, 2006 and as amended thereof, subject to compliance of the following conditions and as given in Annexure I (i.e. Standard EC conditions for River Valley and Hydroelectric projects):

- I. The Environmental Management Plan (EMP), excluding Resettlement & Rehabilitation Plan cost, shall be strictly adhered to and a sum of Rs. 10669.23 lakhs (Capital cost: 10067.15 lakhs & annual Recurring cost: Rs. 95.81 lakhs) as the budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be revised.
- II. The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1st May, 2018 regarding Corporate Environment Responsibility. Project proponent shall require to invest Rs 1292.68 lakhs for CER activities as submitted to the Ministry for Education, Health care, Infrastructure development, Sanitations and drinking water facilities, Skill Development and Training, Environment Enhancement. The entire activities under CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the Regional Office as a part of half-yearly compliance report and to the District Collector.
- III. The environmental clearance is valid for a period of 10 years from the date of issue of this letter for commissioning of the project.

- IV. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an Independent Agency, decided in consultation with the Ministry.
- V. Any other clearances/permissions/approvals from any other organization/department, as applicable to the project shall be taken.
- VI. PP shall procure construction material only from those Govt./Pvt. Agencies/Corporations etc. that are having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.
- VII. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.
- VIII. Wildlife Conservation plan for all Schedules I species shall be implemented with the approval of the Competent Authority.
- IX. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- X. Project is falling in the dudwa-lagga tiger corridor therefore "*No Objection Certificate*" shall be obtained from Nation Tiger Conservation Authority (NTCA).
- XI. Project is located at a distance of 6.28 Km from the Nandhaur wildlife sanctuary and final ESZ notification **is not notified** therefore clearance from Standing Committee of the National Board for Wildlife (SCNBWL) shall be obtained.

This issues with approval of the Competent Authority.

Yours faithfully

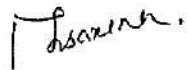


(Dr Mohit Saxena)
Scientist C

Copy to:

1. The Secretary, Ministry of Power, Sharm Shakti Bhawan, Rafi Marg, New Delhi-110001
2. The Secretary, Ministry of Water Resources, RD & GR, Shram Shakti, Bhawan, Rafi Marg, New Delhi - 110 001.

3. The Principal Secretary (Irrigation & Power), Government of Uttarakhand, Dehradun-248 006.
4. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi-110 066.
5. The Dy. Director General of Forests, Ministry of Environment, Forest and Climate Change, Regional Office (NCZ), Subhash Road, Dehradun- 248 001.
6. The Member Secretary, Uttarakhand Environment Protection & Pollution Control Board, Paryavaran Bhawan, E-115, Nehru Colony, Dehradun.
7. NIC Cell - uploading in MoEFCC's website.
8. Sr. PPS to JS (GM)
9. Guard file.


(Dr Mohit Saxena)
Scientist C

Standard EC Conditions for River Valley and Hydroelectric projects

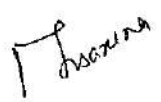
I. Statutory compliance:

- i. The project proponent shall obtain clearance from the National Board for Wildlife.
- ii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
- iii. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- iv. NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.
- v. Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crores.

II. Air quality monitoring and preservation

- i. Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.
- iii. Necessary control measures such as water sprinkling arrangements, etc. bet taken up to arrest fugitive dust at all the construction sites.

III. Water quality monitoring and preservation

- 
- i. Conjunctive use of surface water to be planned in the project to check water logging as well as to increase crops productivity. The field drains shall be connected with natural drainage system.

- ii. Remodelling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector drains, etc. are to be ensured on priority basis.
- iii. Before impounding of the water, Cofferdams for both at the upstream and downstream are to be decommissioned as per EIA/EMP report so that once the project is commissioned; cofferdam should not create any adverse impact on water environment including the rock mass and muck used for the Cofferdam.
- iv. As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the upstream and downstream of the project
- v. Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheet be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.
- vi. Mixed irrigation shall be practised and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective.
- vii. On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command Area Development Plan should be strictly implemented as proposed in the EIA/EMP report

IV. Noise monitoring and prevention

- i. All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Catchment Area Treatment Plan

Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.

M. Hazina

VI. Waste management

- i. Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balanced be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.
- ii. Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.

VII. Green Belt, EMP Cost, Fisheries and Wildlife Management

- i. Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.
- ii. Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for insitu conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.
- iii. Wildlife Conservation Plan approved by the Chief Wildlife Warden shall be implemented in consultation with the local State Forest Department.
- iv. To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.
- v. Compensatory afforestation programme shall be implemented as per the plan approved, if applicable.
- vi. Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.

VIII. Public hearing and Human health issues

- 
- i. Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt, if any.
 - ii. Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.

- iii. Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Labourforce to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.
- vi. Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.
- vii. Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Dam Break Analysis

IX. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 01.05.2018, as applicable, regarding Corporate Environment Responsibility.
- ii. Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long time livelihood generation
- iii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iv. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- v. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for

any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

- vi. Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.
- vii. Multi-Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the website of the Company.
- viii. Formation of Water User Association/Co-operative be made involment of the whole community be ensured for discipline use of available water for irrigation purposes.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by 5 prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

M. S. S. S. S.

No. K-14011/09/2019-UD Desk
Government of India
M/o Housing & Urban Affairs
(UD Desk)

Nirman Bhawan, New Delhi.
Dated 16th December, 2019

OFFICE MEMORANDUM

Subject:- Preliminary Project Report for Jamrani Dam Multipurpose Project (PPRID-10637)- reg.

The undersigned directed to refer to the subject matter cited above and to say that above mentioned project has been examined in this Ministry and it has been observed that, this project does not have any infrastructure related water supply distribution network or treatment facility but only has the source for water supply in future.

The project is basically a 'Dam', which needs to be appraised by M/o Jal Shakti only. Hence, the comments/observations of M/o Housing & Urban Affairs may be treated as NIL.

This issues with the approval of the Competent Authority.

Sd/-
(Sanjay Kumar)
Under Secretary to the Govt. of India
Telefax: 23061137

To,

Additional Secretary (FB&ADB),
D/o Economic Affairs, M/o Finance,
Room No. 141, North Block, New Delhi.

Copy to:-

✓ The Superintending Engineer (KA: Shri Dharendra Singh Kachchawaha),
Irrigation Department, Madho Singh Bhandari Bhawan, Yamuna Colony, Dehradun,
Uttarakhand 248001.


(Sanjay Kumar)
Under Secretary to the Govt. of India
Telefax: 23061137

F.No. TE-11015/2/2019/NMCG / 669

Dated: /12/2019

To,

Superintending Engineer,
Jamrani Multipurpose Project,
Uttarakhand Irrigation Dept.,
Haldwani, Nainital, Uttarakhand.

Sub: Jamrani Dam Multipurpose Project regarding prior approval of the project.

This has reference to Jamrani Dam Multipurpose Project and letter dated 21.08.2019 and other correspondences regarding prior approval of NMCG for aforementioned project.

2. The above referred proposal was considered by NMCG and prior approval for the said project proposal is hereby accorded subject to following condition:

- i. The project proponent shall adhere by the principles stated under section 4 of the Ganga river (Rejuvenation, Protection and Management) Authorities Order, 2016. Some of these Principles are as follows:
 - a. the chemical, physical, and biological quality of the waters of river shall be maintained;
 - b. the river shall continue to be managed in an ecologically sustainable manner;
 - c. the continuity of flow in the river shall be maintained without altering the natural seasonal variations;
 - d. the longitudinal, lateral and vertical dimensions (connectivities) of river shall be incorporated into river management processes and practices;
 - e. the integral relationship between the surface flow and sub-surface water (ground water) shall be restored and maintained;
 - f. the lost natural vegetation in catchment area shall be regenerated and maintained;
 - g. the aquatic and riparian biodiversity in River Ganga Basin shall be regenerated and conserved;
- ii. Minimum environmental flows in the downstream stretch needs to be maintained as per the Gazette notification S.O.5195 (E) dated 09.10.2018. These environmental flow norms need to be followed by the project proponent and regularly monitored by Central Water Commission by devising appropriate monitoring protocols under information to NMCG.
- iii. To mitigate the environmental impact of the project, activities mentioned in the Environment Management Plan (EMP) needs to be strictly adhered to by the project proponent. The compliance of EMP activities shall be regularly monitored by State Government/ concerned organizations under information to NMCG.

एन.एम.सी.जी. (जल शक्ति मंत्रालय, भारत सरकार)

प्रथम तल, मेजर ध्यान चन्द नेशनल स्टेडियम, इंडिया गेट, नई दिल्ली - ११०००२

NMCG (Ministry of Jal Shakti, Govt. of India)

1st Floor, Major Dhyan Chand National Stadium, India Gate, New Delhi - 110002



राष्ट्रीय स्वच्छ गंगा मिशन
National Mission for Clean Ganga

- iv. Project proponent shall make necessary arrangements to ensure that no untreated sewage/ waste water/ solid waste are discharged into the river during construction and post construction stages of project.
- v. All conditions imposed by any other concerned agencies needs to be complied with by the proponent and the compliance report shall be submitted as per requirement of the concerned agencies.
- vi. NMCG shall reserve the right to withdraw its approval in case of violation of any of the above mentioned conditions or conditions stipulated by other concerned organizations.

This issues with the approval of Competent Authority.

Yours faithfully,

(D.P. Mathuria)

Executive Director (Tech.)

Copy to:

1. Principal Secretary, Irrigation Department, 89, Rajpur Rd, Chander Lok Colony, Hathibarkala Salwala, Dehradun, Uttarakhand 248001
2. Project Director, SPMG Uttarakhand, 117- Indira Nagar, Dehradun -248001, Uttarakhand.
3. Joint Secretary (PP & RD), MoWR, RD & GR, Sharam Shakti Bhawan, Rafi Marg, New Delhi- 110002.

Copy for kind information:

1. PS to Secretary, D/o Water Resources, River Development & Ganga Rejuvenation, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. PPS to Chairman, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. PS to Director General, NMCG, New Delhi.
4. Deputy Director General, NMCG/ Executive Director (Admin)/ Executive Director (Projects)/ Executive Director (Finance)

एन.एम.सी.जी. (जल शक्ति मंत्रालय, भारत सरकार)

प्रथम तल, मेजर ध्यान चन्द नेशनल स्टेडियम, इंडिया गेट, नई दिल्ली - ११०००२

NMCG (Ministry of Jal Shakti, Govt. of India)

1st Floor, Major Dhyan Chand National Stadium, India Gate, New Delhi - 110002