CAUVERY NEERAVARI NIGAMA LIMITED



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No. CNNL/CE(I)S/TAW-2/WSB/2019-20/

To.

The Director & Member Secretary, River Valley and Hydroelectric Projects, Ministry of Environment, Forests and Climate Change, Government of India, Indira Paryavaran Bhavan, Lodhi Road, New Delhi.

Sir,

Sub: Mekedatu Balancing Reservoir and Drinking Water Project in Ramanagara and Chamarajanagar Districts of Karnataka by M/s Cauvery Neeravari Nigam Limited, Government of Karnataka (File No. J-12011/10/2019-IA-1 (R), Proposal No. IA/KA/RIV/108673/2019) – reg.,

Ref: Minutes of the 25th Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 19.07.2019

The subject project has been considered in the 25th Meeting of the Expert Appraisal Committee meeting held on 19.07.2019 and sought additional information / clarification for issue of ToRs. As desired, the compliance to the observations is herewith enclosed for your kind perusal and onward issue of ToRs at the earliest for preparation of EIA & EMP report for the subject project.

Encl: Compliance Report

Yours faithfully,

Chief Engineer CNNL, Irrigation (South) Mysore – 570 024

Mekedatu Balancing Reservoir and Drinking Water Project in Ramanagara and Chamarajanagar Districts of Karnataka by M/s Cauvery Neeravari Nigam Limited (File No. J-12011/10/2019-IA-1 (R), Proposal No. IA/KA/RIV/108673/2019)

Ref: Minutes of the 25th Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 19.07.2019

Observation 1) While doing the study on the Analysis of Alternatives, there is no consideration of alternate sites and rather two options at one location of different dam height have been considered. It requires to be revisited and the best alternative be decided after a detailed study.

Compliance: A study has been carried out to identify the locations which can be considered for selecting the site to locate the balancing reservoir was undertaken using available data, topographical maps and inspection of selected reaches of the rivers. Nearly 3 locations were identified along the Cauvery River between Shivanasumdram and Mekedatu since locating any reservoir in the upstream of Shivanasamudram would deviate the project objectives. The details of the options worked out are given below;

Table – Details of the alternative Balancing Reservoirs

No.	Particulars	Balancing Reservoir – 1 (Upstream of proposed Reservoir)	Balancing Reservoir – 2 (Proposed Reservoir)	Balancing Reservoir – 3 (Downstream of proposed Reservoir)
1.	Name of the River	Cauvery	Cauvery	Cauvery
2.	Geographic location	12°15'33.49"N	12°16'20.91"N	12°17'16.03"N
		77°26'51.87"E	77°26'25.88"E	77°25'37.30"E
3.	Location of the site as regards to District / Taluk	(1) Kollegal Taluk, Chamarajanagar District(2) Kanakapura Taluk, Ramanagara District(3) Malavalli Taluk of Mandya District		
4.	Elevation of the River bed with respect to Mean Sea Level (m)	348.00	352.00	370.00
5.	FRL (m)	440.00	440.00	470.00
6.	MWL (m)	441.20	441.20	471.20
7.	Height of the Dam (m)	92.00	88.00	95.00
8.	Storage capacity in TMC	68.00	67.16	61.00
9.	Total Land required for the project (Ha)	5807.40	5252.40	5897.40
10.	Cost in Crores.	9900	9000	10500

In case of Balancing Reservoir -1, the river course is narrow and flows very rapidly due to steep bed fall. The accessibility to the project site is quite difficult due to irregular geological formations. The maximum designed flood discharge of 8 Lakh Cusecs would submerge the historical Mekedatu site located at a distance of 500 m downstream of the proposed dam site. The presence of hillock in between obstructs the construction activities thereby widening the submergence of forest area.

Whereas in case of Balancing Reservoir -2, the site is accessible and there will be less submergence of forest land. The site is also having favorable geological formation and availability of founding strata at shallow depth. The site is maintaining safest distance with historical Mekedatu site which is about 1.8 Km downstream. In other words even during the peak flood discharge of 8 Lakh Cusecs, the probability of submergence of historical Mekedatu site will be remote. At this location the river course is normal and wide. The capacity of water storage at this site is in line with hydrological studies to store 67.16 TMC of water.

Further in case of location of Balancing Reservoir – 3, the downstream flow of the water is turbulent flow due to the influx of floods from Arkavathy river which is joining the River Cauvery downstream of this site. Moreover, there might be afflux due to backwater effect in Arkavathy river resulting in temporary submergence of additional forest land when there is a release of heavy floods of 8.0 Lakh cusees. The water level at this location would reach up to Shivanasamudram and will submerge major portions of the existing power house affecting the generation to a great extent. This may call for complete relocation of the power house if it has to meet the original power generation. The forest area submergence at this location is more in view of maximum water spread. At this site there is no rapid fall in the natural bed slope required for hydroelectric power generation.

Considering the above merits and demerits of each location, the Balancing Reservoir -2 location would be ideal in terms of technoeconomic feasibility, less forest submergence with good geological formation to store the available water. Hence, this location has been selected as a part of DFR for which the CWC had accorded in-principle approval and directed the Government of Karnataka to proceed further for preparation of DPR. Map showing the location of alternative sites is enclosed as **Annexure-1**.

Observation 2) The forestland and wildlife area will be diverted as per the provisions of Forest (Conservation) Act, 1980 and Wildlife (Protection) Act, 1972, respectively. However, a total of 4,996 ha (WLS and RF) area will be involved and this seems to be very high. Once again, optimization of the land required to be attempted.

Compliance: The detailed analyses of alternatives were studied (as detailed in Sl. No. 1) and the submergence of 4996 ha of forest land is the lowest. Hence, Balancing Reservoir - 2 is considered as the most suitable and feasible site for the proposed location.

The project in its operation phase will create reservoir in the backwaters leading to the creation of favorable environment / habitats, provides drinking water facilities to wildlife during summer season and thereby enhances the biodiversity of the region. The reservoir helps in providing drinking water to elephants and thus human — elephant conflicts can be minimized. Following are the instances showing construction of reservoir is beneficial to wildlife in Karnataka;

Karnataka Forest Department, Govt. of Karnataka in its Wildlife Management Plan of Bhadra Tiger Reserve (2005-2015) reported that;

"the bird life in the Sanctuary, is abundant and outstanding. The Sanctuary, and the surrounding environs provide the birds a rich and varied habitat. The Bhadra reservoirs and their backwaters are a bird watchers delight" (Page 52).

"The elephants, in Bhadra Wildlife Sanctuary, also follow a similar pattern. In the dry months they congregate towards the backwaters of the Bhadra reservoirs and perennial water holes, where there is abundance of water and grass. After the first showers, they move into the forest" (Page 53).

The Director, Nagarahole National Park, Karnataka Forest Department expressed on migration of elephants with respect to Kabini Backwaters during summer and reported in daily newspaper 'The Hindu 'on 08.02.2016 as follows;

"With backwaters being a source of perennial water, elephant herds from Bandipur, Nagarahole, Mudumalai and Wayanad are known to congregate there during summer, when water holes and fodder dry up in the national parks" (Page 2 para 2).

"Elephants in hundreds can be sighted during the peak summer season" (Page 2 para 4).

"Besides water, elephants congregate in large numbers to feast on the fresh shoot of grass along the banks and the foreshore of the Kabini backwaters" (Page 2 para 5).

"When the water-level in the backwater starts to plummet, fresh grass sprout up from the moist bed and the elephants feast on them as fodder" (Page 2 para 6).

It is evident from the above findings and published literature which are in public domain, construction of dam / reservoir will create large waterbodies and ensure availability of water throughout the year resulting in the improvement of wildlife habitat, aquatic life and availability of fodder for herbivores in abundance which the wild animals will cherish.

Further, the proposed Mekedatu reservoir helps in conservation and fishery development activities to restore the fish species by transplanting culture and commercially important species in order to augment fish production and to facilitate proliferation of fishes indigenous to the system.

In view of the above, though the project may involve submergence of 4,996 Ha of forest and wildlife land for about 3% of the overall geographical area of the sanctuary; subsequently, during the operation phase, it will benefit the wildlife in many ways. Mandatory Wildlife Management Plan at the Landscape level will be prepared in consultation with experts to avoid any disturbances during construction phase. Further, necessary applications for obtaining Forest clearances and in accordance with recommendations from National Board for Wildlife (NBWL) through State Board for Wildlife (SBWL) for submergence of 4,996 Ha of forest and wildlife land will be submitted through proper channels.

Observation 3) The private land to be acquired as per the Right to Fair Compensation and Transparency in Land Acquisition Act, 2013.

Compliance: Land acquisition & Rehabilitation and Resettlement will be carried out as per the provisions of Right to Fair Compensation and Transparency in Land Acquisition Act, 2013.

Observation 4) As there are couple of representations received from the Tamil Nadu State Government requesting not to grant ToR to the present proposal. The EAC opined that an amicable solution be arrived at between the two states and put up for reconsideration for grant of ToR.

Compliance: The Cauvery Water Disputes Tribunal award as modified by the Hon'ble Supreme Court vide its judgement dated 16.02.2018 under Clause XIII and XVIII states as below:

"Clause XIII:

"The States of Karnataka and Tamil Nadu brought to our notice that a few Hydro-Electric power projects in the common reach boundary are being negotiated with the National Hydro Electric Power Corporation (NHPC). In this connection, we have only to observe that whenever any such Hydro-power project is constructed and Cauvery Waters are stored in the reservoir, the pattern of downstream releases should be consistent with our order so that the irrigation requirements are not jeopardized".

Clause XVIII:

"Nothing in the order of this Tribunal shall impair the right or power or authority of any State to regulate within its boundaries the use of water, or to enjoy the benefit of waters within the State in a manner not inconsistent with the order".

It is pertinent to note that the judgment of the Supreme Court, reported in law journal 2000 (9) SCC 572, has directed that, the consent of other riparian States is not necessary for utilization of its own water resources. The relevant and pertinent part of the judgment is quoted below:

".... Though it may be fully desirable for all the States to know about the developments of the other States but neither the law on the subject requires that a State even for utilization of its own water resources would take the consent of other riparian States in case of an inter-State river" (para 53, page 644 of law journal 2000 (9) SCC 572).

Further, the judgement of Supreme Court has also directed that, the Central Government is not duty bound to take the consent of other States while sanctioning any project of any of the riparian States. In this regard, the relevant and pertinent part of the judgement is quoted below:

".... In the absence of any legal basis for such stand we are not able to agree with the stand taken by the State of Andhra Pradesh that the Central Government was duty bound to take the consent of other States while sanctioning any project of any of the riparian States" (para 51, page 640 of law journal 2000 (9) SCC 572).

The Mekedatu Balancing Reservoir Project is very much essential to store the water and to regulate the releases to the Tamil Nadu as per the monthly schedule and also to meet the drinking water requirement of Bangalore city and surrounding areas. This will be in consistent with the order of the Tribunal as modified by the Hon'ble Supreme Court dated 16.02.2018.

From the above, it implies that Karnataka can take up Mekedatu Balancing Reservoir and Drinking Water Project on its own accord, while maintaining the requirements of the award.

Excess flows over and above the stipulated releases at Biligundlu CWC gauging station is resulting in substantial flows going waste into the sea which is evident from the flow data of last 45 years wherein, flows in excess of 177.25 TMC of water had flown in more than 30 years. It is pertinent to note that the construction of Mekedatu Balancing Reservoir Project will help in storing the water in good monsoon period so that the regulation can be met. .

Hence, the question of amicable solution does not arise since the project gets qualified based on the merits. Government of Karnataka earnestly requests the Ministry of Environment, Forest and Climate Change, Government of India to approve the TORs at the earliest.

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