



J-13012/12/2015-IA.I (T)
Government of India
Ministry of Environment, Forest and Climate Change

Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003.

Dated: 26.02.2018

Sub: Expansion by addition of 2x800 MW (Phase-II) Imported Coal based Super Critical Thermal Power Project at Village Yelluru, Taluk Udupi, Distt. Udupi in Karnataka by M/s Udupi Power Corporation Limited (UPCL)- reg. amendment in Environmental Clearance.

Sir,

This has reference to your online application no. IA/KA/THE/27676/2015 dated 8.8.2017 and documents vide dated 21.8.2017 w.r.t the above mentioned project.

2. It has been noted that the Environmental Clearance for the above mentioned project has been issued vide Ministry's letter dated 1.8.2017. It has been also noted that you have requested for certain changes in the EC. The Ministry has examined the proposal.

3. It is clarified that as per para 4(i)(b) of CRZ Notification, 2011, for those projects which are listed under CRZ notification and also attract EIA notification, 2006 (S.O.1533 (E), dated the 14th September, 2006), for such projects clearance under EIA notification only shall be required subject to being recommended by the concerned State or Union territory Coastal Zone Management Authority (hereinafter referred to as the CZMA).

4. As per the provisions of para 4 (ii)(d) of CRZ Notification, 2011 and as recommended by KSCZMA, laying of pipeline facilities for intake of cooling water and outfall for discharge of treated water or cooling water from Thermal Power Plant are permitted in CRZ areas.

5. The following changes have been incorporated in the EC dated 1.8.2017.

- i. At para 2, line 2: '13.5.2015' shall be replaced with '13.8.2015'.
- ii. At para 2, line 5: '2x660 MW' shall be replaced with '2x600 MW'.
- iii. At para 3, line 3: 'Padubidri' shall be replaced with 'Nandikur'.
- iv. At para 6, line 4: '600-610 0C' shall be replaced with '600-610 degree C'.
- v. At para 24 (A)(vi): 'NIO' shall be replaced with 'NEERI'.

6. The following additional conditions have been stipulated for marine facilities in CRZ areas.

- i. The marine impact assessment due to proposed activities and mitigation measures thereof as recommended by NIO in the marine EIA report shall be implemented.

- ii. As recommended by NIO, the intake and outfall pipelines in 25 m corridor along with pumps & diffusers shall be installed as below. Coordinates of intake and outfall have been recommended by NIO.

Details	Quantity	Pipeline details	Location of drawl/discharge point from the shore line
Intake	Seawater: 24,381m ³ /hr (10,000 m ³ /hr for existing plant and 14,381 m ³ /hr for proposed power plant	1.4 m dia x 2 nos.	650 m from the shore line & -6.8 CD.
Outfall	Discharge: 18,589 m ³ /hr (7,850 m ³ /hr for existing plant & 10,739 m ³ /hr for proposed plant	1.2 m dia x 1 no.	1750 m from the shore line & -7.5 CD

Sea Water Intake:

- iii. The withdrawal of seawater shall be preferably through a pipeline with a riser equipped with a velocity cap arrangement and bar screen to arrest the impingement of large marine organisms.
- iv. In all tide conditions (particularly at spring low tides) the riser head must be flooded with the required submergence of seawater above its top.

Effluent Release:

- v. At the effluent release point, maximum temperature of the discharge water shall not be more than 5°C and salinity shall not exceed 50 ppt with respect to that of the ambient seawater.
- vi. Use of antifouling agents like chlorine / hypochlorite, shall be carefully controlled. The chlorine concentration shall not exceed 0.2 ppm at the effluent release point.
- vii. The effluent when released at the selected location shall attain sufficient dilution so that near ambient water quality (particularly temperature and salinity) is attained within 500 m from the release location, at low tide.
- viii. The site selected based on mathematical modeling shall ensure absence of recirculation of the effluent plume in the seawater intake area under all tidal conditions.
- ix. The effluent shall be released through a properly designed multiport diffuser above the seabed to facilitate its efficient initial mixing with the receiving seawater. Overall temperature and salinity of the seawater shall not exceed 0.6°C and 1.15 PSU at outfall diffuser/ the discharge location as predicted by NIO.
- x. The location of the diffuser shall be marked with a solar lighted buoy to avoid accidents.
- xi. Efficacy of the diffuser shall be ascertained at least once in 2 years through dye dispersion or radioactive tracer studies and corrective

actions such as cleaning of the diffuser from marine growth, removal of silt deposits etc shall be taken up, if warranted.

- xii. Continuous online (24 x7) monitoring system for Temperature, Salinity and Chlorine shall be installed to monitor the effluent. Location of monitoring shall be close to discharge point (not more than 200 m from discharge point).
- xiii. Suitable screens shall be placed across the intake channel to prevent entrainment of life forms including eggs, larvae, juvenile fish, etc., during extraction of seawater. Annual loss of commercial fishing due to screen impingement is about single commercial trawler, As compensation, boats shall be provided to fishermen for deep sea fishing.

Common to intake and effluent:

- xiv. The pipeline shall be buried below the seabed at a depth to ensure its stability under rough sea conditions particularly during cyclone / tsunami. The depth of burial will depend on the seafloor strata but normally the top of the pipeline shall be at least 1 m below the bed level.
- xv. In the surf and intertidal zones the pipeline shall be buried below the maximum scour level.
- xvi. If the substratum is rocky the pipeline may be anchored to the rock provided the geology of the area satisfactorily supports the structure which shall be ascertained through geo-technical investigations.
- xvii. Exposed pipeline section and riser shall be protected by armour stone from waves, boats anchoring, fishing activities etc.
- xviii. The location of the riser & diffuser shall be marked with a solar lighted buoy to avoid accidents from boats.
- xix. Marine / Sea water quality shall be monitored once in 6 months at about 8 stations in a grid with effluent release location at the centre. The area of monitoring shall not be less than 30 km². Parameters to be monitored shall be as follows:
 - a. *Physico-chemical*: Temperature, Salinity, pH, Dissolved Oxygen, Biochemical Oxygen Demand, Nutrients (Nitrate, Nitrite, Ammonia, Reactive Phosphate) and Petroleum Hydrocarbons.
 - b. *Biological*: Fecal Coliform, E-Coli, Primary Productivity, Phytoplankton (Chlorophyll a, Phaeophytin, Population, Species), Zooplankton (Biomass, Population, Species) and Benthos (Biomass, Population, Species).
 - c. *Sediment*: Grain size, Total Organic Carbon, Petroleum Hydrocarbons and Heavy Metals (Lead, Cadmium, Mercury, Copper, Nickel, Zinc, Chromium)
- xx. NIO or any other reputed institute specialized in marine ecology shall prepare a comprehensive monitoring report identifying deviations if any from the baseline studies conducted prior to the commissioning of the marine outfall. The report shall suggest corrective actions and the project proponent must take if deviations from the baseline are found.
- xxi. EMP cost to be revised to minimum 50 lakhs/annum.

xxii. Mangroves are located on the banks of Mulki river/Estuary at about 7.5 km. As part of EMP, Mangrove plantation shall be taken up in an area of 50 Ha, in consultation with forest department/ specialist agencies, along the coast and on the bank of Mulki River/Estuary.

7. All other conditions mentioned in the EC letter dated 1.8.2017 shall remain the same, as applicable.

Yours faithfully,



(Dr. S. Kerketta)

Director, IA-I

The Authorised Signatory

M/s Udupi Power Corporation Ltd.

Lotus Tower, 1st Floor, 34,

Devaraja Urs Road, Race Course,

Bangalore-560001.

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (SZ), Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore - 560034.
5. The Secretary (Environment and Ecology), Department of Forest Environment & Ecology, Govt. of Karnataka, Room No. 708, Gate 2, Multi Storied Building, Dr.Ambedkar Veedhi, Bangalore - 560 001
6. The Chairman, Karnataka State Pollution Control Board, Parisara Bhavan, #49, 4th & 5th Floor, Church Street, Bangalore-560001.
7. The Deputy Commissioner & District Magistrate, Udupi District, Karnataka-576101.
8. Guard file/Monitoring file.
9. Website of MoEF&CC.



(Dr. S. Kerketta)

Director, IA-I