

F.N. J-11011/421/2011-IA.II (I)
Government of India
Ministry of Environment, Forest & Climate Change

Indira Paryavaran Bhawan
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Date: 24th February, 2015

To

M/s Chettinad Cement Corporation Ltd.,
603, 6th Floor, Rani Seethai Hall
Building, Anna Salai,
CHENNAI - 600 006.

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Sub: Proposed Integrated Cement Plant with a Capacity of 3.5 MTPA, WHRB with a Power Generation capacity of 8 MW and CPP with a capacity of 2x50 MW of M/s **Chettinad Cement Corp. Ltd.**, at vill. Pedagarlapadu & Kesanupalli, Manadl Dachepalli, Dist. Guntur, A.P. - Environmental Clearance (EC) –reg

Sir,

This is with reference to this Ministry's grant of Terms of Reference (TOR) dated 13.10.2011 and this Ministry's letter dated 12.11,2013 extending the validity of the TOR and letter of MOEF dated 21.04.2014 amending the TOR dated 13.10.2011 for proposed relocation of the Integrated Cement Plant at a distance of 500m from the earlier location and near to the captive limestone mine. The Final common EIA-EMP Report for the Integrated Cement Plant-cum-Limestone Project has been received vide letter Chettinad Cement/Dachepalli New Plant/MoEF/EC dated 21.04.2014 and letter dated 18.11.2014 submitted.

The proposed project activity is listed at S.No. 3(b) under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEF.

2. M/s Chettinad Cement Corporation Ltd and their EIA-EMP consultant M/s Pioneer Enviro Laboratories & Consultants Private Limited - Hyderabad who are NABET accredited for Cement Sector.

3. M/s Chettinad Cement Corporation Ltd has proposed to establish an Integrated Cement Plant with Waste Heat Recovery Boiler and Captive Power Plant at Pedagarlapadu & Kesanupalli Villages, Dachepalli Mandal, Guntur District, Andhra Pradesh. The land requirement for the Cement Plant & Captive Power Plant is 115.74 ha and around 80 % of the land has been acquired. The land requirement for the colony is 15.78 ha. The total land requirement is 132.52 ha (325 acres). The longitude and latitude of the project site is 79°44'52.4"E and 16°32'45.0" N respectively. No Forest land is involved. No Defense



*Issued
25/2/15*

Installation, Biosphere Reserve, National Park/Wild Life Sanctuary, Ecologically Sensitive Area is located within 10 km radius of the project site. No court case/litigation is pending against the proposed project. Peddagarlapadu village is located at a distance of 1km from the project site. The water bodies exists in the study area are: Naguleru Vagu (a streamlet) at 2.3 Kms, Kesanupalli Major Canal at 2.0 Kms, Tangeda Major Canal at 0.2 Km, Nadikudi Major Canal at 5.9 Kms, Ramapuram Major Canal at 8.1 Kms, Akurajupalli Major Canal at 9.5 Kms, Dachepalli Major Canal at 5.7 Kms and Nagarjuna sagar Right bank canal at 9.2 Kms. Further, seasonal nallah is passing through the colony area and seasonal nallah is passing at distance of 0.5 Kms. from the plant boundary. The proposed investment for Cement & Captive Power Plant will be Rs. 1100 Crores. The capital cost and recurring cost towards Environmental Protection Measures will be Rs 40 crores and Rs 1.2 crores /annum respectively. Rs. 55 Crores is earmarked towards the Enterprise Social Commitment (CSR activities) based on Public Hearing issues.

4. The capacity of proposed project activity has been tabulated below:

S. no	Facility	Capacity
1.	Cement Plant for manufacturing (Ordinary Portland Cement, Portland Pozzolana Cement & Portland Slag Cement)	3.5 million tons per annum
2.	Generation of Power through Waste Heat Recovery Boiler from Waste Hot Gases of Kiln	8 MW
3.	Captive Power Plant for generation of Power through FBC technology	2 x 50 MW

5. Raw materials required for the proposed cement plant are Limestone (5.32 MTPA), iron ore (0.27 MTPA), bauxite (0.27 MTPA), gypsum (0.18 MTPA), fly ash (1.05 MTPA), slag (0.70 MTPA), coal for clinker (imported - 0.480 MTPA; Indian - 0.779 MTPA; Indian + imported: 0.542 MTPA) and coal for CPP (imported - 0.533 MTPA; Indian - 0.866 MTPA; Indian + imported: 0.603 MTPA). Limestone will be sourced from the captive mines. PP is yet to obtain the environmental clearance from the Ministry for the limestone mining. Coal will be imported from South Africa/Indonesia. Domestic coal will be sourced from SCCL. As per the MoU submitted, the ash and sulphur content in the imported coal would be 12% and 0.6-1.0% respectively. Power requirement will be met from the CPP.

6. Ambient air quality monitoring has been carried out at 8 locations during October 2013- December 2013 and the data submitted indicated: PM₁₀ (30.40µg/m³ to 47.60µg/m³), PM_{2.5} (14.40 to 28.10 µg/m³), SO₂ (6.6 to 16.80 µg/m³) and NO_x (6.8 to 18.40 µg/m³). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs would be 3.0 µg/m³, 7.20 µg/m³ and 2.8 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. Crushing plant will be provided in the plant with enclosure. Electrostatic Precipitators (ESP) will be provided to Cooler & FBC boilers and Stacks of adequate height and Bag houses and Stacks/Vents will be provided to Raw Mill Kiln, Coal Mill, Cement Mill and Bag Filters will be provided for Primary and Secondary Crushers, Silos, Conveyor Transfer Points. All conveyors will be covered with GI sheets. All internal roads will be asphalted to prevent fugitive emissions due to vehicular movement. Water Sprinkling will be ensured at Coal Yard.



7. Total water requirement for the cement plant is 2000 KLD which will be met from Ground Water & River Krishna. The permission for the ground water & surface water drawl is yet to be obtained by the PP. CT Blow Down, Boiler Blow Down, DM Plant/ RO Rejects, Waste Water from Workshop, Service Water, Sanitary Waste Water from Plant & Colony will be the sources of Waste Water. Total effluent generation will be 659 KLD and out of which trade effluent will be 409 KLD and sanitary waste water from Plant & Colony will be 250 KLD. The trade and domestic effluents will be treated in ETP & STP respectively to comply with CPCB/APPCB norms and the treated effluents will be utilized for greenbelt development, dust suppression and for ash conditioning.

8. Fly ash will be used in the cement plant. Bottom ash will be used for the as bed material for boiler, for laying roads, for brick making, etc. Solid wastes from STP will be used as manure for Green Belt. The Municipal Wastes from Township will be handled as per MSW Rules and Regulations. Waste oil generated from the proposed Cement & CPP will be 44 kl per annum and will be stored in covered HDPE drums in a designated area and same will be given to APPCB/CPCB authorized agencies. 43.41 Ha of greenbelt will be developed within the Plant & Colony premises as per CPCB norms (33%) in consultation with local DFO as per CPCB norms.

9. Public Hearing/Public Consultation was conducted by Andhra Pradesh Pollution Control Board on 5.3.2014 under the chairmanship of ADM - Guntur District. The issues raised during public hearing are pollution issues, employment to the local people, construction of junior college, use of imported coal for the proposed project and formation of village committees etc which were addressed in the EIA- EMP report.

10. The proposal was considered in the 21st meeting of Expert appraisal Committee (Industry) meeting held on 30th July 2014 to 1st August 2014. After detailed deliberations the Committee recommended the project for environmental clearance and stipulated of the following specific conditions along with other environmental conditions while considering accord of environmental clearance.

11. The Ministry of Environment, Forests & Climate Change on the basis of the aforesaid recommendations hereby grants environmental clearance under the provisions of the EIA Notification 2006 with the following conditions:

- i. The expansion project shall comply with the new MOEF Standards vide GSR 612 (E) dated 25.08.2014 with respect to particulate matter, SO₂, NO_x for Cement sector.
- ii. Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO_x burners shall be provided to control NO_x emissions. Regular calibration of the instruments must be ensured.
- iii. All the pollution control devices/equipment in raw mill/kiln, kiln feeding system, clinker cooler, coal mill, cement mill, and cement silo, shall be interlocked so that in the event of the pollution control devices/systems not working, the respective unit(s) shut down automatically.

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- iv. Proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and implemented as part of the Integrated project.
- v. The proponent shall provide an interlocking system to ensure that whenever the ESP is not in operation, the raw material feeder will automatically stop and restart only with the restart of ESP.
- vi. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
- vii. Arsenic and Mercury shall be monitored periodically in emissions, ambient air and water.
- viii. The coal storage yard shall be lined and covered.
- ix. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and shall not be overloaded. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- x. Total fresh water requirement after the proposed expansion of the cement and captive power plant shall not exceed 2000 m³/day to be sourced from the groundwater and River Krishna. Prior permission shall be obtained from the Competent Authority for water drawl. A five year water management plan shall be made so as to achieve reduction in ground water withdrawal.
- xi. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
- xii. Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.
- xiii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Chennai, SPCB and CPCB.
- xiv. All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / reprocessors only.

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- xv. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008. Efforts shall be made to use fly ash maximum in making Pozzolona Portland Cement (PPC). A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at chennai. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in cement manufacturing.
- xvi. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xvii. The proposed cement plant kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes such as oil sludge, cut tyres, etc.
- xviii. The proponent shall examine and prepare a plan for utilisation of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilisation of such wastes as per the E(P) A Rules, 1986 and with necessary approvals.
- xix. As proposed, green belt over 33 % of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xx. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxi. All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 5.3.2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bangalore.
- xxii. The proponent shall prepare a detailed CSR Plan for every next 5 years for the existing-cum- expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Bangalore. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.
- xxiii. Risk Assessment and Disaster Management Plan with focus on Disaster Prevention and Safety shall be prepared and a copy submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB within 3 months of issue of environment clearance letter.



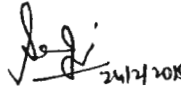
- xxiv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

A. GENERAL CONDITIONS:

- i. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
- ii. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM₁₀, PM_{2.5}, SO₂ and NO_x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore and the SPCB/CPCB once in six months.
- iii. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.
- iv. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).
- v. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- vi. The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
- vii. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socioeconomic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.
- viii. Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.
- ix. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.

19

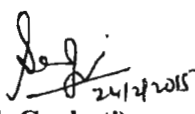
- x. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF at Bangalore. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM₁₀, PM₂₅, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xi. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore/ CPCB / SPCB shall monitor the stipulated conditions.
- xii. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEF at Bangalore by e-mail.
- xiii. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bangalore.
- xiv. Project authorities 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 and the date of commencing the land development work.
12. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
13. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
14. 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 Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.


(Dr. Satish C. Garkoti)
Director



Copy to:

- i. The Secretary, State Department of Environment, Government of Andhra Pradesh, Mantralaya, Hyderabad.
- ii. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- iii. The Chairman, Andhra Pradesh State Pollution Control Board, 2nd Floor, HUDA Complex, Maitrivaram, S.R.Nagar, Hyderabad- 500 038.
- iv. The Additional Principal Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IVth Floor, E8iF Wing, 17th Main Road, Koramangala, Bangalore-560034.
- v. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi- 110003.
- vi. Guard file/ Record file/Monitoring file.


(Dr. Satish C. Garkoti)
Director

