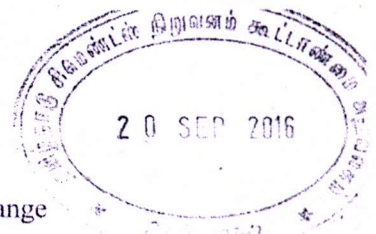


F. No. J-11011/83/2014-IA II (I)  
Government of India  
Ministry of Environment, Forest and Climate Change  
(I.A. Division)



Indira Paryavaran Bhawan  
Jor Bagh Road, Aliganj,  
New Delhi - 110003  
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Dated: 8<sup>th</sup> September, 2016

To ✓

M/s Tamil Nadu Cements Corporation Limited  
2<sup>nd</sup> Floor, LLA Building,  
735 Anna Salai, Chennai,  
Tamilnadu - 600002.

*Board  
maybe approved*

**Subject: Enhancement of Cement Plant production (from 0.5 MTPA to 1.63 MTPA) and clinker production (from 0.475 MTPA to 1.475 MTPA) by setting up of a new production line of 1 MTPA clinker and 1.13 MTPA Cement Production by M/s Tamil Nadu Cements Corporation Limited (A Tamil Nadu Government Enterprise), located at Village Kairulabad, Dist. Ariyalur, Tamil Nadu - Environmental Clearance regarding.**

Sir,

This has reference to your online application No. IA/TN/IND/22026/2014 Dated 12<sup>th</sup> January, 2016 along with copies of EIA/EMP report and subsequent letter No./TANCEM/Ari.Cement.Expansion/EC/MoEF/2014-2016-3 dated 6<sup>th</sup> May, 2016, seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The ToR's for the proposal were prescribed by MoEFCC vide letter No. F. No.J-11011/83/2014-IA-II(I) dated 27<sup>th</sup> June, 2014 for the preparation of EIA-EMP report. The proposed project activity is listed at S.No. 3(b) in Cement Plant under Category 'A' of the Schedule of EIA Notification 2006.

2.0 The proposal is for enhancement of production of cement plant from 0.5MTPA to 1.63 MTPA and clinker from 0.475MTPA to 1.475MTPA by installing a new production line of 1MTPA clinker and 1.13 MTPA cement production at Village Kairulabad, Dist. Ariyalur, Tamil Nadu. Following table presents the existing and the proposed capacities:

S. No	Unit	Existing Capacity (Unit - I)	Proposed Expansion by New Unit (Unit - II)	Total Capacity after Expansion
1	Clinker Production	0.475	1	1.475
2	Cement Production	0.5	1.13	1.63

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3.0 The project proponent has applied to the Ministry for environment clearance for the first time as the project was not attracting the provisions of EIA Notification, 1994. The cement production from the plant was commenced in the year 1979 prior to EIA Notification, 1994 coming into force and therefore, the plant is running based on the Consent to Operate accorded by the State Pollution Control Board.

4.0 The total land required for the project is 67.15 ha which has already been acquired by the project proponent. No additional land is required for the proposed enhancement. No forestland is involved. Out of the total land requirement of 67.15 ha, an area of 7 ha is for the existing plant area and 13.56 ha area is for the proposed new plant, 22.15 ha is for green belt and 24.44 ha is vacant area. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project.

5.0 The topography of the area is flat. No cut and fill are required. The site lies between North latitude 11°8'32.92"N - 11°9'2.00"N and East longitude 79°5'24.88"E to 79°6'4.85"E in Survey of India topo sheet No. 58/M/4, at an elevation of 80 m AMSL. No River passes through the project area and no diversion is proposed which affects the natural drainage. The ground water table depth ranges between 15m below the land surface during the post-monsoon season and 20m below the land surface during the pre-monsoon season. The stage of groundwater development is reported to be less than 70% in buffer zone and thereby these are designated as safe area.

6.0 The limestone requirement will be met from captive limestone mines. The limestone transportation will be done through trucks. Following table presents the details of raw material:

Raw Material	Quantity (MTPA)			Source	Mode of Transport
	Present Unit	Expansion Unit	Total		
Limestone	0.6	1.5	2.1	Kallankurichi, Kairalabad, Periyagalur and Ameenabad & Anandavadi etc.	Road
River Sand/ Granite & Chips	-	0.01	0.01	Local (30 Km)	Road
Gypsum	0.021	0.05	0.071	STERLITE (400 Km), SPIC and FACT	Road
Dry / Wet fly ash	0.028	0.13	0.158	METTUR Thermal Power, TNPL, NLC	Road
Coal (80% Indigenous & 20% imported)	0.08	0.15	0.23	Singareni Collieries Telangana & Imported Coal	Rail

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7.0 The present water consumption of the plant including colony is about 1160 m<sup>3</sup>/day. Additional water requirement of the plant is 450 m<sup>3</sup>/day (including domestic requirement). Water is sourced from ground water. The present power requirement for the project is estimated at 11 MVA and it is proposed that an additional power of 17 MVA will be required for the project. The entire power requirement will be sourced from the grid.

8.0 It has been envisaged that no solid waste will be generated. The sludge generated from the STP will be used as manure for plantation. An area of 22.15ha has been developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities with about 10,000 plants. It is proposed to increase the density by planting 1500-2000 trees per hectare.

9.0 The Public hearing of the project was held on 04.11.2015 under the Chairmanship of District Revenue Officer, Ariyalur. The issues raised during public hearing *inter-alia* include employment, supply of drinking water, improvement of roads etc.

10.0 The capital cost of the project is Rs 600 crores and the capital cost for environmental protection measures is proposed as Rs 54crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 4.72crores. The proponent has mentioned that there is no court case on the project to the related activity.

11.0 The proposal was considered during the 5<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for Industry-I held on 30<sup>th</sup> – 31<sup>st</sup> March, 2016 and 7<sup>th</sup> meeting of the EAC for Industry -I held on 30<sup>th</sup> May to 1<sup>st</sup> June and recommended the project for Environmental Clearance and stipulated Specific Conditions along with other environmental conditions while considering for accord of environmental clearance.

12.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant environmental clearance to the above mentioned enhancement of Cement Plant production from 0.5 MTPA to 1.63 MTPA and clinker production (from 0.475 MTPA to 1.475 MTPA) by setting up of a new production line of 1 MTPA clinker and 1.13 MTPA Cement Production by M/s Tamil Nadu Cements Corporation Limited (A Tamil Nadu Government Enterprise), under the provision of EIA Notification dated 14<sup>th</sup> September, 2006, as amended, subject to strict compliance of the following Specific and General conditions:

**A. SPECIFIC CONDITION:**

- i. The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.
- ii. The Standards issued by the Ministry vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 and subsequent amendment dated 9<sup>th</sup> May, 2016 and 10<sup>th</sup> May, 2016 regarding cement plants with respect to particulate matter, SO<sub>2</sub> and NO<sub>x</sub> shall be followed.



- iii. 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 viz Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO<sub>x</sub> burners shall be provided to control NO<sub>x</sub> emissions. Regular calibration of the instruments must be ensured.
- iv. Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- v. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- vi. AAQ Modelling shall be carried out based on the specific mitigative measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.
- vii. 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.
- viii. A statement on carbon budgeting including the quantum of equivalent CO<sub>2</sub> being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO<sub>2</sub> that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.
- ix. For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc
- x. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- xi. The coal yard shall be lined and covered.
- xii. The project proponent shall prepare a report on impact of project on surrounding reserve forests within six months and will get it approved from the State Forest



Department. A copy of the same should be submitted to the Ministry and its Regional Office.

- xiii. The project proponent shall take all precautionary measures for conservation and protection of wild fauna spotted in the study area. A Wildlife Conservation Plan specific to this project site shall be prepared in consultation with the State Forest and Wildlife Department. A copy of the Conservation plan shall be submitted to the Ministry and its Regional Office.
- xiv. The project proponent will also provide the latest status of the environmental compliances in respect of its existing plant.
- xv. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- xvi. 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.
- xvii. 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.
- xviii. 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, SPCB and CPCB.
- xix. 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 / re-processors only.
- xx. The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.
- xxi. 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

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utilisation of such wastes as per the Environment (Protection) Rules, 1986 and with necessary approvals.

- xxii. Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulations and prior approval of the TNPCB.
- xxiii. 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 and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.
- xxiv. The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.
- xxv. The project proponent shall provide for LED lights in their offices and residential areas.
- xxvi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxvii. At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.
- xxviii. In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure 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. 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.
- xxix. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention

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and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.

- xxx. To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.
- xxxi. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Tamil Nadu Pollution Control Board and the State Government.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).
- iii. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> 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 Chennai and the SPCB/CPCB once in six months.
- iv. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.
- v. 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).
- vi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- vii. The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
- viii. 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 socio-economic development activities in the surrounding

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villages like community development programmes, educational programmes, drinking water supply and health care etc.

- ix. Requisite funds 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, Forest and Climate Change (MoEFCC) 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 Chennai. The funds so provided shall not be diverted for any other purpose.
- x. 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.
- xi. 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 MOEFCC at Chennai. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.
- xii. 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 MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Chennai / CPCB / SPCB shall monitor the stipulated conditions.
- xiii. The environmental statement for each financial year ending 31<sup>st</sup> 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 MOEFCC at Chennai by e-mail.
- xiv. 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, Forests and Climate Change (MoEFCC) 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



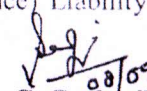
shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Chennai.

- xv. 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.

13.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.


14.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

15.0 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)  
Scientist 'F'

Copy to:-

1. The Secretary, Department of Environment, Government of Tamil Nadu.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi, 110 032.
3. The Chairman, Tamil Nadu State Pollution Control Board, 100, Anna Salai, Guindy, Chennai-600032.
4. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), I<sup>st</sup> and II<sup>nd</sup> Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 600034.
5. Guard File / Record File/Monitoring file.

  
(Dr. Satish C. Garkoti)  
Scientist 'F'