

**F. No. J-11011/403/2006-IA II (I)**  
Government of India  
Ministry of Environment, Forest and Climate Change  
(I.A. Division)

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Dated: 29<sup>th</sup> September, 2016

To

✓  
**M/s Ramco Cements Ltd.**  
Kumarasamy Raja Nagar,  
Jaggayyapet Mandal, Krishna District  
Andhra Pradesh-521457.

**Subject: Modernisation of Integrated Kumarasamy Raja Nagar Cement Plant project for increase of Clinker production from 2.8 MTPA to 3.185 MTPA by Upgradation of Line-I & Optimum Utilisation of Line-II and Installation of 6 MW Turbo generator by M/s Ramco Cements Ltd., located at KSR Nagar, Jaggayyapet Mandal, District Krishna, A.P. - Environmental Clearance regarding.**

Sir,

This has reference to your online application No. IA/AP/IND/25565/2014 Dated 8<sup>th</sup> October, 2015 along with copies of EIA/EMP report seeking Environment Clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. An application for increase of Clinker production from 2.8 MTPA to 3.185 MTPA was initially received in the Ministry on 3<sup>rd</sup> November, 2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The ToRs to the project was awarded by Ministry of Environment, Forest and Climate Change vide letter No. J-11011/403/2006-IA.II (I) dated 11<sup>th</sup> June, 2015 for preparation of EIA/EMP report. The proposed project activity is listed at S.No. 3(b), 'cement plants' under Category 'A' of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry) of MoEFCC.

2.0 The proposal is for increase in the Clinker production from 2.8 MTPA to 3.185 MTPA by up-gradation and modernization of process line-I. The project was earlier accorded environmental clearance by the Ministry on 09.06.2009. The project is located at Kumarasamy Raja (KSR) Nagar, Jaggayyapet Mandal, Krishna District, Andhra Pradesh. The land requirement for the project is 812.75 Ac.(329 Ha.). No additional area is required for the proposed expansion. The general elevation at the plant area varies in between 50 – 60 m above MSL. The perennial river Krishna flows in the South. Paleru river drains the plant area. The other streams/nallahs are flowing towards South. 47 Nos. of RWH pits are made in the colony and 1 No. of RWH pit at plant to recharge the ground water level in the vicinity. The plant area is part of the Survey of India Topo sheet No. 65/D/I and lies between 16°52'24.90"N Latitude to 80°7'8.30"E Longitude and 16°52'41.20" N Latitude to 80°7'29.40"E Longitude. Following table presents the existing and the proposed facility:

Cement Plant	Present approved Capacity as per MoEF&CC EC (MTPA)		Proposed enhancement (MTPA)		Capacity after proposed enhancement (MTPA)	
	Clinker	Cement	Clinker	Cement	Clinker	Cement
Line - I	1.225	3.65	0.385	0.000	1.61	3.65
Line - II	1.575		0.000		1.575	
<b>Total</b>	<b>2.8</b>	<b>3.65</b>	<b>0.385</b>	<b>0.000</b>	<b>3.185</b>	<b>3.65</b>
Power plant	36MW		6MW		42MW	

3.0 The total manpower existing at the plant is 439 persons. No additional manpower is proposed. The cost of the expansion is about Rs. 100 Crores. Present water requirement of the plant is 6259.8 m<sup>3</sup>/day (cement plant + thermal power plant + limestone mines). It is proposed that additional water requirement for the expansion is 430 m<sup>3</sup>/day. The source of water is ground water and mine pits. The peak power consumption in the RCL Cement plant complex including mine is 45 MW. Power requirement is met from existing 2x18 MW captive thermal power plant and proposed 6 MW Generator. Additional power requirement was met from grid.

4.0 The limestone requirement for 3.185 MTPA (total) Clinker production after expansion is 4.46 MTPA. M/s RCL has necessary clearances for limestone production of 4.46 MTPA from Captive Limestone Mines. Following table presents the details of raw material, source and mode of transportation.

S. No	Raw Material	Existing 2.80 MTPA Clinker & 3.65 MTPA Cement	Proposed 3.185 MTPA Clinker & 3.65 MTPA Cement	Source	Mode of Transport
1	Limestone	3.91	4.45	Captive Mines	Road
2	Iron Ore	0.097	0.11	Bellary	Road
3	Laterite	0.159	0.181	Rajahmundry	Road
4	Coal	0.432	0.490	Singareni Collieries	Rail
<b>Total Clinker Production</b>		<b>2.80</b>	<b>3.185</b>		
<b>Clinker export for other Units</b>		<b>0.835</b>	<b>1.221</b>		
5	Clinker used for Cement Manufacturing	1.964	1.964		
6	Gypsum	0.286	0.286	Coramandel	Road

7	Fly Ash	1.112	1.112	Vijayawada Thermal Power Station	Road
8	Slag	0.286	0.286	Vizag Steel Plant	Road
<b>Total Cement Production</b>		<b>3.65</b>	<b>3.65</b>		

5.0 Additional waste water generated due to installation of 6 MW turbine generator will be 95 m<sup>3</sup>/day. The existing neutralization pit is sufficient to handle waste water generated due to expansion. Treated water would be utilized for cooling purpose in cement plant, greenbelt development and ground water recharge.

6.0 All the flue gas outlets designed for particulate emission of less than 30 mg/Nm<sup>3</sup>. Domestic wastewater generated is treated in STP of 700 KLD capacity. No additional solid waste would be generated from proposed expansion. With respect to the greenbelt development, it is mentioned in the EC dated 7<sup>th</sup> February, 2007 and 9<sup>th</sup> June, 2009 that PP has to develop 172.75 ha (69.63 %) of total 248.08 ha area in and around the cement plant. So far greenbelt of 130.24 ha (52.5 % of 248.08 ha) as on 30.11.2014 has been developed.

7.0 The Public hearing of the project was held on 25<sup>th</sup> August, 2015. The issues raised during public hearing *inter-alia* include start of ITI, greenery development, beautification of lake, depletion of water level etc.

8.0 The proposal was considered by the Expert Appraisal Committee (Industry-I) during its 2<sup>nd</sup> meeting held on 28<sup>th</sup> -30<sup>th</sup> December, 2015 and 4<sup>th</sup> meeting held on 25<sup>th</sup> -26<sup>th</sup> February, 2016. The EAC (Industry-I) recommended the project for Environmental Clearance and stipulated Specific Conditions along with other environmental conditions while considering for accord of Environmental Clearance.

9.0 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 Modernisation of Integrated Kumarasamy Raja Nagar Cement Plant project for Increase of Clinker production from 2.8 MTPA to 3.185 MTPA by Upgradation of Line-1 & Optimum Utilisation of Line-II and Installation of 6MW Turbo generator of M/s Ramco Cements Ltd, 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 shall 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 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 all the stacks shall be provided. After expansion, limit of SPM shall be controlled within 50 mg/Nm<sup>3</sup> by installing adequate air pollution control system viz. Electrostatic precipitators, bag house, bag filters etc. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly.
- iv. Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report shall be prepared and submitted to the Ministry and its Regional Office at Bangalore within 3 months from the date of issue of the letter.
- v. Pet Coke can be used in the total Coal Mix with 60 % Pet Coke and 40 % Indian & Imported coal combination for Cement Plant use.
- vi. A Greenbelt of 130.24 ha (52.5 % of 248.08 ha) as on 30.11.2014 has been developed, which should be maintained as it is.
- vii. As proposed, Electrostatic precipitators (ESPs) to clinker, bag house to kiln / raw mill, coal mill and pulse jet bag filters to cement mill and slag mill shall be provided to control gaseous emissions within 50 mg/Nm<sup>3</sup>. Bag filters shall also be provided at transfer points. Water sprinklers shall be provided to control dust emissions in cement plant and mine area.
- viii. Ambient air monitoring shall be carried out in and around the project site and efforts shall be made to control and minimize the particulate matters to bare minimum. One ambient air quality monitoring station shall be installed in downwind direction. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard.
- ix. The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. Crusher shall be operated with high efficiency bag filters. All conveyers shall be covered with GI sheets.
- x. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM particularly in mine area and other vulnerable areas.
- xi. Data on ambient air quality, stack emissions and fugitive emissions shall be regularly submitted on-line to the Ministry's Regional Office at Bangalore, Central Pollution Control Board (CPCB) and A.P. Pollution Control Board (APPCB) as well as hard copy once in six months. Data on SPM, SO<sub>2</sub> and NO<sub>x</sub> shall also be displayed outside the premises at the appropriate place for the general public.

- xii. Asphaltting/concreting of roads and water spray all around the critical areas prone to air pollution and having high levels of SPM and RPM shall be ensured.
- xiii. 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.
- xiv. 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. Vehicular emissions shall be regularly monitored.
- xv. The wastewater from boiler blow down, DM plant regeneration waste water, UF & RO rejects shall be neutralized in neutralization tank and mixed with cooling tower blow down in a Central Monitoring Basin (CMB) and used for green belt development. 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.
- xvi. Permission for the drawl of ground water / mine pit water shall be obtained from the Central Ground Water Authority / State Ground Water Board (GGWA / SGWB) and a copy of the letter shall be submitted to the Ministry's Regional Office at Bangalore within 3 months of issue of the environment clearance.
- xvii. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from *air* pollution control devices shall be recycled and reused in the process and used for cement manufacturing. The sludge from sewage treatment plant (STP) shall be used as manure for green belt development. Organic wastes shall be subjected to vermin composting and used as manure for green belt. Inorganic wastes (papers and other wastes) shall be properly disposed off or sold to rag pickers/scrap dealers. Used oil and batteries shall be used in kiln as an alternate fuel and / or sold to authorized recyclers / reprocessors only.
- xviii. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.
- xix. Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.
- xx. All the fly ash shall be utilized as per Fly Ash Notification, 1999 subsequently amended in 2003. Efforts shall be made to use fly ash and slag maximum in making Pozollona Portland Cement (PPC) and Portland Slag Cement (PSC).
- xxi. Permission and recommendations of the State Forest Department regarding impact of proposed plant on surrounding reserve forests viz. Jaggayapeta Extension RF (0.2-10.5 km, E-S), Budavada RF (3.2-10.5 km, W), Ballusupadu RF (6-11 km, WNW), Gandrayi RF (8.5-11 km, NNW) and Kuntimaddi RF (8 km, SSE) shall be obtained

- and implemented. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.
- xxii. The company shall provide housing for 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
  - xxiii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
  - xxiv. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
  - xxv. 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.
  - xxvi. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office, SPCB and CPCB.
  - xxvii. A time bound action plan shall be submitted to reduce solid waste generated due to the project related activities, its proper utilization and disposal.
  - xxviii. A Risk and Disaster Management Plan shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
  - xxix. All the commitments made to the public during Public Hearing/public consultation meeting shall be satisfactorily implemented and adequate budget provision shall be made accordingly.
  - xxx. 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.
  - xxxi. The proponent shall prepare a detailed CSR Plan for every year for the 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. 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.

- xxxii. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/procedure to bring into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xxxiii. 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.
- xxxiv. The project proponent shall provide for LED lights in their offices and residential areas.

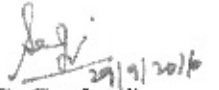
**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Andhra Pradesh 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, Forest 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 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.
- 10.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- 11.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- 12.0 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 Andhra Pradesh.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi, 110 032.
3. The Chairman, Andhra Pradesh State Pollution Control Board, A-3, Industrial Estate, Santathnagar, Hyderabad, Andhra Pradesh-500018.
4. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), 1<sup>st</sup> and 2<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'