

F. No. J-11011/889/2007-IA II (I)  
Government of India  
Ministry of Environment, Forest and Climate Change  
(I.A. Division)

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Dated: 9<sup>th</sup> March, 2016

To ✓

**M/s JSW Cement Ltd**  
3<sup>rd</sup> Floor, Block-B Surya Towers,  
105 Sardar Patel Road, Secunderabad  
Hyderabad, Andhra Pradesh-500003

**Subject: Enhancement of Clinker Production Capacity (2 to 2.5 MTPA) and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA of OPC/PSC/GGBS of M/s JSW Cement Ltd., at village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh - Environment Clearance regarding.**

Sir,

This has reference to your online application No. IA/AP/TND/31713/2014 dated 12th 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. The ToRs to the project was awarded by the Ministry of Environment, Forest and Climate Change vide letter No. J-11011/889/2007-IA.II (I) dated 22nd October, 2014 for preparation of EIA/EMP report. The proposed project activity is listed at S.No. 3(b), under category 'A' of the Schedule of EIA Notification, 2006 and appraised at the Central level.

2.0 The proposal is for enhancement of Clinker production capacity from 2.0 MTPA to 2.5 MTPA and change in product mix from 4.80 MTPA (1.10 OPC + 3.70 PSC) to 4.80 MTPA (1.10 OPC + 3.70 PSC/ GGBS) of M/s JSW Cement Ltd. The project is located in Village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh and was initially received in the Ministry on 21.07.2014 & 18.11.2014 for obtaining Terms of Reference (TOR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during its meeting held on 30.07.2014 and 09.01.2015 and prescribed TORs to the project for undertaking detailed EIA and EMP study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change prescribed TORs to the project on 22.10.2014. Subsequently, an amendment in the TOR was made on 12.06.2015.

3.0 The project proponent presented the existing capacity and proposed expansion as under:

| Projects | Present Capacity | Proposed Expansion | Capacity After Expansion |
|----------|------------------|--------------------|--------------------------|
|----------|------------------|--------------------|--------------------------|

|                           |                            |      |                               |
|---------------------------|----------------------------|------|-------------------------------|
| Clinker Production (MTPA) | 2.0                        | 0.50 | 2.50                          |
| Cement Production (MTPA)  | 4.80 (1.10 OPC + 3.70 PSC) | Nil  | 4.80 (1.1 OPC + 3.7 PSC/GGBS) |
| Captive Power Plant (MW)  | 36 (18 x 2)**              | -    | 36 (18 x 2)                   |

4.0 It has been mentioned that the expansion will be carried out within the existing land area of 263.05 ha and no additional land will be used for the proposed expansion. The topography of the area is flat (flat/undulated) and reported to lie between 15°40'15" to 15°41'24" N Latitude and 78°27'21" to 78°27'54" E Longitude in Survey of India top sheet No.57 I/6, at an elevation of 260 m AMSL. River Kundu is at a distance of 2.2 Km from the project site towards WSW direction with bed level of 248 m AMSL. High Flood Level of River Kundu is at 230 m AMSL and is at a distance of 2.2 km from the plant site. The average elevation of plant site is 261m AMSL. Modification/diversion in the existing natural drainage pattern at any stage has not been proposed. 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 ore for the plant would be procured from the captive limestone mine (linkages nil). Coal will be imported from South Africa, Indonesia and Australia and other raw materials from local market. The ore transportation will be done through belt conveyor (Limestone from captive mine to plant), sea route (imported coal), rail and road.

| Raw Material                                              | Quantity (in MTPA)         |                            | Sourced from       | Mode of Transport                |
|-----------------------------------------------------------|----------------------------|----------------------------|--------------------|----------------------------------|
|                                                           | Before Expansion (present) | After Expansion (proposed) |                    |                                  |
| Limestone                                                 | 3.0                        | 3.75                       | Captive Mines      | Closed Belt Conveyor             |
| Coal                                                      | 0.30                       | 0.375                      | Imported           | Road/<br>Railway line being laid |
| Aluminous Laterite                                        | 0.015                      | 0.019                      | Kerala             | Road                             |
| Flue Dust                                                 | 0.062                      | 0.077                      | JSW Steel, Bellary | Road                             |
| Gypsum                                                    | 0.10                       | 0.125                      | Cochin/Imported    | Road                             |
| Slag                                                      | 2.4                        | 3.7                        | JSW Steel, Bellary | Road                             |
| Power plant – coal MTPA (Power Plant not yet established) |                            | Imported coal - 0.18       | Imported           | Rail                             |

6.0 The ground water table reported to range between 3-5 m below the land surface during the post-monsoon season and 12-15 m below the land surface during the pre-monsoon season. Based on the hydro-geological study, it has been reported that the radius of influence of pumped out water will be 500 m. Further, the stage of groundwater development is

reported to be 24% and 24% in core and buffer zone respectively and thereby these are designated as safe.

7.0 No additional water will be required for the proposed expansion. Existing water requirement is 4500 m<sup>3</sup>/day, out of which 3000 m<sup>3</sup> /day of fresh water requirement will be obtained from the bore wells (groundwater) and the remaining requirement of 1500 m<sup>3</sup> /day will be met from the harvested rainwater stored in mine pits as well as from the treated waste water to be generated from the Captive Power Plant to be set up in future.

8.0 The power requirement of the total project is estimated as 40 MW and the total power will be tapped from the state grid. No additional power will be required for the proposed expansion. The Captive Power Plant, for which the Environmental Clearance is already in place, will reduce the sourcing of power from the grid to the extent it generates, once established.

9.0 It has been reported that there is no population in the core zone of the project. No R&R is involved. It has been envisaged that no families need to be rehabilitated. It has been reported that no solid waste will be generated due to the project. Greenbelt has already been developed in an area of 95 ha, i.e. 34% of the total area. Consent to Establish/Consent to Operate for the plant has been obtained from the Andhra Pradesh State Pollution Control Board.

10.0 Public Hearing for the project was exempted vide amended TOR letter J-11011/889/2007 IA.II (I), dated 12<sup>th</sup> June, 2015.

11.0 Since the expansion is carried out through optimization and de-bottlenecking of the existing equipments and processes, there will be no capital cost involved in this project as no additional equipment/ machinery will be installed. Present recurring cost for environmental protection measures is Rs. 111 Lakhs per annum. However, it is proposed to spend an additional amount of Rs.40 Lakhs per annum as recurring cost towards environmental protection measures post expansion. The proponent has mentioned that there is no court case to the project or related activity.

12.0 The matter was considered by the Expert Appraisal Committee (Industry-I) in its 2<sup>nd</sup> meeting held on 28<sup>th</sup> -30<sup>th</sup> December, 2015. After detailed deliberations, the Expert Appraisal Committee (I) recommended the project for Environmental Clearance and stipulated Specific Conditions along with other environmental conditions while considering for accord of Environmental Clearance.

13.0 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 proposal of Enhancement of Clinker Production Capacity (2 to 2.5 MTPA) and change in product Mix from 4.8 MTPA (1.1 MTPA OPC & 3.7 MTPA of PSC) to 4.8 MTPA of OPC/PSC/GGBS of M/s JSW Cement 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 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 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. Arsenic and Mercury shall be monitored in emissions, ambient air and water.
- ix. The coal yard shall be lined and covered.
- x. 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 use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.
- 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, 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 / re-processors only.
- xv. The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.
- xvi. 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 Environment (Protection) Rules, 1986 and with necessary approvals.
- xvii. Efforts shall be made to use of 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 MPPCB.
- xviii. 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.
- xix. 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.
- xx. The project proponent shall provide for LED lights in their offices and residential areas.
- xxi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.
- xxii. At least 2.5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured accordingly in a time bound manner.

- xxiii. 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.
- xxiv. A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xxv. 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.
- xxvi. 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 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, 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  $PM_{10}$ ,  $PM_{2.5}$ ,  $SO_2$  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 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 form 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.

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


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

16.0 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.

  
(Amardeep Raju)  
Scientist 'D'

**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-500018, Andhra Pradesh.
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.

  
(Amardeep Raju)  
Scientist 'D'