

F. No. J-11011/165/2014-IA.II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110003
E-mail: dirind-moefcc@gov.in
Tel: 011-24695368
Dated: 20.05.2019

To

M/s Shree Cement Ltd
122-123, Hans Bhawan,
1, Bhadurshah Zafar Marg,
New Delhi-110002.

Subject: Greenfield integrated cement project consisting of clinker (2.4 MTPA), cement (4MTPA), captive power plant (25 MW) and waste heat recovery power generation (15 MW) of M/s Shree Cement Ltd located at Village Pedagarlapadu, Mamdal Karempudi, District Guntur, Andhra Pradesh- Environmental Clearance regarding.

Sir,

This is reference to your online application vide proposal no. **IA/AP/IND/26358/2014** on 23.02.2016 along with copies of EIA/EMP report seeking environmental clearance under the provisions of the EIA Notification, 2006 for the project mentioned above and communication received to MoEF&CC vide letter SCL/EC/AP/2018-19 dated 26.12.2018. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under category 'A' of the Schedule of EIA Notification, 2006. Therefore, the proposal is appraised at the Central Level.

2.0 The Proposed Greenfield Integrated Cement Plant Project of M/s Shree Cement Limited located in Village Pedagarlapadu Tehsil Dachepalli District Guntur State Andhra Pradesh was initially received in the Ministry on 15th April 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 23.06.2014 and prescribed TORs to the project for undertaking detailed EIA study for the purpose of obtaining environmental clearance. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs for conducting EIA study vide Lr. No. J.11011/165/2014-IA.II (I) dated 11.08.2014.

4.0 The project of M/s Shree Cement Ltd. located in Village Pedagarlapadu, Tehsil Dachepalli, District Guntur, AP is for setting up of a new Greenfield integrated Cement Plant for production of 2.4 Million Tons Per Annum Clinker, 4.0 Million Tons Per Annum Cement, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony.

5.0 The total land required for the project is 142.79 ha (Plant: 100.49 ha and Residential colony: 42.30 ha), out of which 102.92 ha (72.09%) is agricultural land, no, grazing land and 39.87 ha (27.92%) is other land (4.896 ha is Government Land). No forestland is involved. Out of total required 142.79 ha land, 122.55 ha has been purchased on mutual basis, agreement has been made of 15.34 ha and allotment of 4. 9 ha Government land is under process. No river passes through the project area. It has been reported that a village pond is exist near the project area and modification/diversion in the existing drainage pattern at any stage has not been proposed.

6.0 The topography of the area is flat and reported to lies between 16° 30' 51" N to 16 31' 25" N and 79° 43' 48" E to 79 44' 40" E for Plant Site and 16°30'46" to 16°31' 13" N and 79°44'25" to 79°44'56" E for Residential colony in Survey of India Topo Sheet No. 56P/10 at an elevation of 120 m AMSL. The ground water table reported to ranges between 10 to14 m below the land surface during the post-monsoon season and 12 to18 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 364 m. Further, the stage of groundwater development is reported to be 80% and 34% in core and buffer zone respectively and thereby these are designated as safe areas.

7.0 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. The area also does not report to form corridor for Schedule-I fauna. The list of flora and fauna provided through the Ecology Expert reporting presence of no schedule-I fauna in the study area (Section-3.8, Chapter-3 of EIA Report).

8.0 The process of project: Limestone, gypsum (chemical gypsum, synthetic gypsum and Indian & imported mineral gypsum), bauxite, iron ore and fly ash and pond ash are the raw materials/additives required for the cement plant. Coal (Indian and imported) & pet coke (Indian and imported) will be used as feedstock for cement plant and Coal will be used as fuel for the power generation. Pre-calciner dry process technology will be used for Clinkerization. VRM and Ball mill will be used for cement grinding. Air cooled condenser technology will be used for power generation and waste heat recovery unit will be installed.

9.0 The targeted production capacity of the Clinker is 2.4 Million Tons Per Annum, Cement 4.0 Million Tons Per Annum, 25 MW Captive Power Plant (CPP), 15 MW Waste Heat Recovery Power Generation (WHRS) and Residential Colony. The limestone for the plant would be sourced from adjacent Captive Limestone Mines. The ore (bauxite, iron) transportation will be done through road and rail.

10.0 The total water requirement of the project is estimated as 1350 m³/day, which will be obtained from the groundwater. The permission for drawl of groundwater is obtained from CGWA vide Letter No. 21-4 (283)/SR/CGWA/2012-

1687 dated 20.09.2013 and renewal application submitted on 20.02.2016 & 01.11.2018.

11.0 The power requirement of the project is estimated as 35 MW, which will be obtained from the proposed CPP, WHRS and Power Grid.

12.0 Baseline Environmental Studies were conducted during winter season i.e from December 2014 to February 2015. Ambient air quality monitoring has been carried out at 8 locations during December 2014 to February 2015 and the data submitted indicated: PM₁₀ (38 µg/m³ to 73 µg/m³), PM_{2.5} (18 to 41 µg/m³), SO₂ (4 to 8.6 µg/m³) and NO_x (9 to 13.8 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.1 µg/m³ with respect to the PM₁₀, 0.4 µg/m³ with respect to the SO₂ 1.4 µg/m³ with respect to the NO_x.

13.0 Ground water quality has been monitored in 8 locations in the study area and analysed. pH: 7.23 to 7.59, Total Hardness: 350 to 590 mg/l, Chlorides: 84 to 476 mg/l, Fluoride: 0.68 to 0.96 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 6 locations. pH: 7.16 to 7.51; DO: 3.9 to 4.8 mg/l and BOD: from 3.1 to 4.1 mg/l. COD from 8.4 to 9.8 mg/l.

14.0 Noise levels are in the range of 51.2 to 62.7dB(A) for daytime and 40.8 to 53.3 dB(A) for nighttime.

15.0 It has been reported that people in the core zone of the project is nil. Hence, no R&R is involved. It has been envisaged that families to be rehabilitated is nil.

16.0 It has been reported that a total of 30,000 tons/year ash will be generated from CPP, out of which 100% will be used in cement making. No solid wastes will be dumped in the earmarked dump yard. It has been envisaged that an area of 47 ha will be developed as greenbelt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17.0 It has been reported that the Consent to Establish/ Consent to Operate from the Andhra Pradesh State Pollution Control Board/ Pollution Control Committee will be obtained after getting EC.

18.0 The Public hearing of the project was held on 30.10.2015 under the chairmanship of Sri M. Venkateshwara Rao (Joint Collector – 2, Guntur District) for setting up of Integrated Cement Plant, Captive Power Plant and Residential Colony. Issues raised during public hearing were; land owners may cultivate the land till start of construction activity, employment and doing CSR activities. An amount of Rs.14.17 Crores has been earmarked for Enterprise Social Commitment based on public hearing issues.

19.0 The capital cost of the project is Rs.1234 Crores and the capital cost for environmental protection measures is proposed as Rs. 50 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 1 Crore. The employment generation in the proposed project is about 413 persons.

20.0 Greenbelt shall be developed in 47 ha which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as green belt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.

21.0 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

22.0 Details of the consultant: EMTRC Consultants Pvt Ltd, Delhi

23.0 The water requirement and wastewater generation as below:

	Plant	Colony	Total
Water Requirement	850 KLD of Groundwater	500 KLD of Groundwater	1350 KLD of Groundwater
Wastewater generation	80 KLD of RO Reject; 75 KLD of Sewage Generation	300 KLD of Sewage Generation	80 KLD of Ro rejects; 375 KLD of Sewage Generation

24.0 The proposal was considered in the 32nd meeting of EAC held during 11th - 13th June 2018 and reconsidered in 3rd REAC meeting held during 9th to 11th January, 2019. After detailed deliberations, the committee recommended the proposal for environmental clearance with the following specific conditions and general conditions mentioned in the para 25 below.

25.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Reconstitute Expert Appraisal Committee (Industry-I) and hereby decided to grant Environmental Clearance for the proposal '**Greenfield integrated cement project consisting of clinker (2.4 MTPA), cement (4MTPA), captive power plant (25 MW) and waste heat recovery power generation (15 MW) of M/s Shree Cement Ltd located at Village Pedagarlapadu, Mamdal Karempudi, District Guntur, Andhra Pradesh**' under the provision of EIA Notification dated 14th September, 2006, as amended, subject to strict compliance of the following Specific and General conditions:

Specific Conditions:

- I. The water requirement for the Plant shall be limited to 850 KLD of Ground Water and RO Reject generation shall be 80 KLD and Sewage Generation shall be 75 KLD. The water requirement for the Colony shall be restricted 500 KLD of Ground Water and the Sewage Generation shall be not be more than 300 KLD.
- II. The project proponent shall use at least 2% of alternate fuel (waste) in the co-incineration.
- III. Existing one-lane road stretch from plant to nearest rural road shall be developed to two-lane road.

A. Statutory compliance:

- i. The project authorities must strictly adhere to the stipulations made by the State 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 (MoEF&CC).
- iii. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- iv. The storage of NH_3 and other hazardous chemicals at the site shall be as per the provisions of Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 as amended from time to time

B. Monitoring of compliance

- i. The project proponent shall send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government.
- ii. The project proponent shall put on the clearance letter on the web site of the company for access to the public.
- iii. The project proponent shall inform the public through advertisement 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 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 (MoEF&CC) at <http://envfor.nic.in>.
- iv. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically.
- v. The project proponent shall monitor the criteria pollutants level namely; PM_{10} , SO_2 , NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- vi. The project proponent shall 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&CC, the respective Zonal Office of CPCB and the SPCB.
- vii. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as

prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

- viii. The project proponent 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.
- ix. The project proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
- x. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

C. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (Co-processing Cement); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system carryout to Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Recycle and reuse lime fines, coal fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after agglomeration.
- x. Ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
- xi. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xii. Provide Low NO_x burners as primary measures and SCR /NSCR technologies as secondary measure to control NO_x emissions. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xiii. 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 covered conveyor belts/railways as a mode of transport
- xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants

D. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs

recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

- iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- iv. Adhere to 'Zero Liquid Discharge'.
- v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
- vii. The project proponent shall practice rainwater harvesting to maximum possible extent.
- viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.
- ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

E. Noise monitoring and prevention

- i. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

F. Energy Conservation measures

- i. Waste heat recovery system shall be provided for kiln and cooler.
- ii. The project proponent make efforts to achieve power consumption less than 65 units/tonne for Portland Pozzolona Cement (PPC) and 85 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
- iv. Provide the project proponent for LED lights in their offices and residential areas.
- v. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

- vi. maximize utilization of alternate fuels and Co-processing to achieve best practice norms

G. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Kitchen waste shall be composted or converted to biogas for further use. *(to be decided on case to case basis depending on type and size of plant)*

H. Green Belt and EMP

- i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
- iii. The Capital cost Rs. 50.0crore and annual recurring cost Rs. 1.0 crore towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
- iv. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC

I. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The PP shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
- iii. 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, mobile STP, 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.
- iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- v. The commitment made by the project proponent to the issues raised during Public Hearing shall be implemented by the proponent

J. Corporate Environment Responsibility

- i. An amount of Rs14.17 proposed towards Corporate Social Responsibility (CER) shall be utilized as capital expenditure in project mode as per the

provisions of Office Memorandum vide F.No. 22-65/2017-IA.III dated 1st May 2018. The project shall be completed in concurrence with the implementation of the expansion and estimated on the basis of Scheduled Rates.

- ii. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.

This issues with the approval of Competent Authority.



(A.K.Agrawal)
Director

Copy to:-

1. **The Secretary**, Department of Environment, Government of Andhra Pradesh, Secretariat Hyderabad.
2. **The Additional Principal Chief Conservator of Forests(C)**, Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 600034
3. **The Member Secretary**, Central Ground Water Authority, 18/11, Jamnagar House, Man Singh Road, New Delhi-110011.
4. **The Chairman**, Andhra Pradesh State Pollution Control Board, D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
5. **The District Collector, Guntur** District, State Andhra Pradesh.
6. Guard File/Record File/Monitoring File.
7. MoEF&CC Website.



(A.K.Agrawal)
Director