

**F. No. J-11011/173/2008-IA.II(I)**  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Impact Assessment Division)

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Dated: 28.04.2020

To

Sr Vice President,  
Ambuja Cements Ltd (Unit Nalagarh),  
Village Navagraon, P.O.Jajhra,  
Tehsil Nalagarh, Dist. Solan,  
Himachal Pradesh – 174 101.

**Subject:** Expansion of cement plant by enhancing the cement production capacity (1.5 to 2.2 MTPA) in the existing standalone grinding unit by process optimization by M/s. **Ambuja Cement Limited** located at village Navagraon, P.O.Jajra, Tehsil Nalagarh, District Solan, **Himachal Pradesh– Environment Clearance – regarding.**

Sir,

This has reference to your online application vide proposal no. J-11011/173/2008-IA.II(I) dated 29.01.2020 in the prescribed Form 2 along with EIA report and other documents for seeking Environmental Clearance (EC) as per the EIA Notification, 2006. The proposed project activity is listed at Sl. No. 3(b) Cement Plants under Category "B" in EIA Notification, 2006. However, due to the applicability of general condition i.e., interstate boundary of Himachal Pradesh and Punjab, the project appraised at the Central level.

2. The Expansion Project of M/s Ambuja Cements Ltd. (Unit: Nalagarh) located in Village Navagraon, P.O: Jajhra, Tehsil Nalagarh, District Solan State Himachal Pradesh was initially received in the ministry on 24<sup>th</sup> Nov 2016 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 14<sup>th</sup> meeting held on 23<sup>rd</sup> Dec, 2016 and prescribed ToRs to the project for undertaking detailed EIA study. Accordingly, the ministry of Environment, Forest and climate Change had prescribed ToRs to the project on 27<sup>th</sup> March 2017 *vide* letter no. J-11011/173/2008-IA.II (I)&further amended on 23<sup>rd</sup> May, 2017.
3. Based on the ToRs Prescribed to the project, the project proponent submitted an application for EC to the Ministry online on 21<sup>st</sup> Jan., 2020 *vide* Online Application IA/HP/IND/136337/2008.

**Details Submitted by the Project Proponent**

4. The project of M/s Ambuja Cements Limited (unit: Nalagarh) located in Village: Navagraon, P.O.: Jajhra, Tehsil: Nalagarh, District: Solan (Himachal Pradesh) is for expansion in Cement Production Capacity from 1.5 MTPA to 2.2 MTPA. The existing project was accorded environment clearance *vide* letter no. J-11011/173/2008-IA-II (I) dated 22<sup>nd</sup> Aug., 2008.

5. The status of compliance of earlier EC was obtained from Regional Office, Dehradun *vide* letter no. 6-93/2008-RO (NZ)/1964 dated 06<sup>th</sup> Dec., 2019. No non-compliances were reported by Regional officer. The proposed capacity for the different products as below:

S. No.	Particular	Existing Capacity (MTPA)	Additional Capacity (MTPA)	Total Capacity after expansion (MTPA)
1.	Cement (PPC/OPC)	1.5	0.7	2.2

6. Total land area of existing stand-alone Grinding unit is 29.09 ha; which is already industrial and expansion will be carried out within the existing plant premises. No forest land is involved. The entire land is totally under the possession of M/s Ambuja Cements Limited (unit: Nalagarh). The Satluj River (6.0 km in WSW direction) and SirsaNadi (7.0 km in SW direction), are present in 10 km radius of study area. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.
7. The topography of the area is flat and reported to lies between 31<sup>o</sup> 06' 39.21" (N) to 31<sup>o</sup> 07' 3.72" (N) Latitude and 76<sup>o</sup> 38' 20.19" (E) to 76<sup>o</sup> 38' 50.63" (E) Longitude in Survey of India topo sheet No. 53A/12 at any elevation of 375 m AMSL. The ground water table reported to ranges between 18.90 to 21.10 below the land surface during the post - monsoon season and 22.30 to 23.50 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 173 m. Further, the stage of groundwater development is reported to be 56% and 13.25% in core and buffer zone respectively and thereby these are designated as Safe areas.
8. No National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve etc. are reported to be located in the study area. The authenticated list of flora and fauna provided through the primary survey reporting presence of two species of Schedule-I fauna [i.e. Indian Peafowl (*Pavo Cristatus*) and Indian monitor lizard (*Varanus bengalensis*)] in the study area.
9. Major rawmaterials required for cement production are Clinker, Gypsum, (Indian & Imported Mineral, Chemical and Synthetic) & Fly ash.
10. Major steps involved in the process of Clinker Grinding Unit are given as below:
- o Clinker Storage & Handling
  - o Fly ash Storage & Handling
  - o Gypsum Storage & Handling
  - o Cement Production and Storage
  - o Hot Air Generator
  - o Cement Packing and Dispatch

No waste will be generated during Cement manufacturing process.

11. The targeted production capacity of the cement is (1.5 to 2.2 MTPA). Clinker will be sourced from the Ambuja's Rauri / Darlaghat Clinkerisation Unit; Himachal Pradesh transported through road. Gypsum will be sourced from Dabwali transported through road. Fly ash will be sourced from Guru Govind Singh Thermal Power Plant, Ropar / Rajpura / Bathinda / Hissar / Talwandi Sabo through road.
12. The water requirement of the project is 400 m<sup>3</sup>/day. The permission for drawl of ground water is obtained from CGWA *vide* letter no. 21-4(12)/CGWA/NHR/2009-/535 dated 29.01.2010.

13. Total Power requirement of the project is 9.31 MW: which will be sourced from HPSEBL (Himachal Pradesh State Electricity Board Limited) & D.G. Set (for back-up).
14. Baseline Environmental Study was conducted during Post- Monsoon Season i.e. from Oct., to Dec., 2017. Ambient air quality monitoring was carried out at eight locations and the data indicated: PM<sub>10</sub> (61.8 to 92.4 µg/m<sup>3</sup>), PM<sub>2.5</sub> (22.7 to 41.9 µg/m<sup>3</sup>), SO<sub>2</sub> (5.4 to 14.3 µg/m<sup>3</sup>) and NO<sub>2</sub> (7.6 to 23.2 µg/m<sup>3</sup>). The results of the modeling study indicates that the maximum increase of GLC for the proposed expansion project is 0.65 µg/m<sup>3</sup> with respect to the PM, There will be no significant threat to the gaseous pollutants of the ambient air quality.
15. Ground water quality has been monitored in eight locations in the study area and analyzed. pH: 7.19 to 7.61, Total Hardness: 156 to 356 mg/l, Chlorides: 11.74 to 111.57 mg/l, Fluoride: 0.23 to 0.84 mg/l. Heavy metals are within limits. Surface water samples were analyzed from seven locations. pH: 7.73 to 8.17; DO: 5.20 to 5.90 mg/l and BOD: from 1.10 mg/l to 15.38. COD from 4.08 to 50.80 mg/l.
16. Noise level are in range of 49.1 to 61.4 dB(A) for daytime and 40.3 to 52.7 dB(A) for night time.
17. No R&R is involved in the expansion project.
18. No solid waste will be generated in the cement manufacturing process. Dust collected from various air pollution control equipment will be totally recycled back into the process. STP Sludge will be utilized as manure for greenbelt development within the plant premises. Used oil & grease will be generated from plant machinery, will be sold out to the CPCB authorized recycler.
19. It has been reported that renewed Consent to operate issued by HPSPCB vide letter no. HPSPCB/PCB-ID 14049 20132-34 dated 03<sup>rd</sup> Oct., 2018 for existing capacity which is valid up to 31<sup>st</sup> March., 2020.
20. Public hearing of the project was held on 22<sup>nd</sup> Dec., 2018 at Panchayat Bhawan, village Navagraon, P.O.: Jajhra, Dist.- Solan (Himachal Pradesh) under the Chairmanship of Shri. Vivek Chandel, Additional District Magistrate, Solan (Himachal Pradesh) for Expansion of production capacity of existing Cement plant from 1.5 to 2.2 MTPA. The major issues raised during public hearing are related to employment, environment & pollution and CSR activities. An amount of Rs 44.0 Lakhs has been earmarked for Corporate Environment Responsibility (CER) based on Public hearing issues and Social Impact Assessment Survey.
21. No additional cost is required for the proposed expansion and the capital cost for environment protection measures is also Nil (Present pollution control equipments are capable of handling the pollution load).
22. Total employment generation due to the proposed expansion will be for 213 nos. of people through direct employment.
23. Green belt has already been developed in 10.3 ha which is about 33 % of the total acquired area. A 100 m wide greenbelt, consisting of at least three tiers around plant boundary has been developed as greenbelt as per CPCB / MoEFCC, New Delhi guidelines. Local native species has been planted with a density of 4000 trees / ha. Total number of saplings 41455 has been planted.
24. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

25. The proposal was considered in the EAC (Industry-1) meeting held during 24-25<sup>th</sup> February 2020.

**Observations of the Committee**

26. The committee pointed out to the high concentrations of NO<sub>x</sub> and PM<sub>10</sub> in the ambient air quality in the study area. The reasons for which were not furnished in the EIA report.
27. Air Quality prediction was carried out considering flat terrain of the study area. Therefore, the Project Proponent submitted the revised Air Quality prediction modeling details vide letter dated Ref No. ACL/NKL/EMD/02-20/48 dated 24.02.2020.

**Recommendations of the Committee**

28. In view of the foregoing, and after detailed deliberations, the committee recommended the proposal for Environmental Clearance with the following specific conditions in addition to the general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018.
- i. Bio-digester for canteen waste shall be installed to generate bio-gas.
  - ii. A detailed rainwater harvesting plan shall be prepared considering the rainfall, percolation etc. at site and identified locations in the study area for use of water by the community, and the same implemented. Compliance report shall be submitted to Regional Office of the Ministry.
  - iii. Project Proponent shall make alternate arrangement progressively to completely abolish the dependence on ground water within five years.
  - iv. Green Belt development shall be varied out in 33% of the plant area.
  - v. Emission levels of particulate matter from stacks shall be limited at less than 20 mg/Nm<sup>3</sup>.
  - vi. Besides paving of roads inside the plant, an industrial vacuum cleaner shall also be deployed to mitigate the generation of fugitive dust.
  - vii. Project Proponent shall adhere to Zero Liquid Discharge.

**Decision of MoEF&CC**

29. The Ministry considered the recommendation of EAC and here by decided to accord Environmental Clearance to M/s Ambuja Cements Ltd for 'expansion of cement production from 1.5 to 2.2 MTPA in the existing cement plant' located at village Navagraon, P.O.Jajra, Tehsil Nalagarh, District Solan, Himachal Pradesh along with aforementioned specific conditions at para 28 above and following sector specific general conditions.

**I. Statutory compliance**

- i. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report.
- ii. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water

(Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

- iii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
- iv. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

## **II. 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 vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9<sup>th</sup> May, 2016 (Cement) 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 Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission, and SO<sub>2</sub> and NO<sub>x</sub> in reference to SO<sub>2</sub> and NO<sub>x</sub> 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. Ensurecovered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
- x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xi. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xii. 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

- xiii. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, cement bagging plants

### **III. Water quality monitoring and preservation**

- i. The project proponent shall install effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25<sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9<sup>th</sup> May, 2016 (Cement) 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 cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

### **IV. Noise monitoring and prevention**

- i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. 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

### **V. Energy Conservation measures**

- i. 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.
- ii. Provide the project proponent for LED lights in their offices and residential areas.
- iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

## **VI. Waste management**

- i. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
- ii. Kitchen waste shall be composted or converted to biogas for further use.

## **VII. Green Belt**

- 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.

## **VIII. 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 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.

## **IX. Corporate Environment Responsibility**

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

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

**X. Miscellaneous**

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. 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 on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level 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 and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. 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.
- vii. 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, commencing the land development work and start of production operation by the project.
- viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- x. 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).
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.




- xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xv. 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 and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

This issues with the approval of Competent Authority.

  
(A.K. Agrawal)  
Director

**Copy to:-**

1. **Secretary**, Department of Environment, Government of Himachal Pradesh, Secretariat Shimla.
2. **Deputy Director General of Forests(C)**, Ministry of Environment, Forest and Climate Change, Regional Office (NCZ), Pearson Road, P.O. New Forest, Forest Research Institute (FRI) campus, Dehradun - 248006.
3. **Chairman**, Central Pollution Control Board, PariveshBhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-110032.
4. **Member Secretary**, Central Ground Water Authority, 18/11, Jamnagar House, Man Singh Road, New Delhi-110011.
5. **Chairman**, Himachal Pradesh State Pollution Control Board, ParyavaranBhavan, Phase-III, New Shimla - 171 009.
6. **District Collector**, Solan District, Himachal Pradesh.
7. Guard File/Record File/Monitoring File.
8. MoEF&CC Website.

  
(A.K. Agrawal)  
Director