

Ref: ACL/BYT/ENV/2022-23/ 124

Date: 29.11.2022

To,  
Regional Officer,  
Integrated Regional office,  
Ministry of Environment, Forest & Climate Change, Aranya Bhawan, North Block,  
Sector-19, Naya Raipur, Atal Nagar, Chhattisgarh 492002.

Sub: Submission of Half Yearly Environment Clearance Compliance Report along with Environmental Monitoring Report for the period April 2022 to September 2022 for Cement Plant Complex of Ambuja Cements Ltd (Unit-Bhatapara), Chhattisgarh.

Ref: 1. EC letter no. J-11011/289/2005-IA II (I) dated 6<sup>th</sup> January 2006.  
2. EC letter no. J-11011/355/2005-IA II (I) dated 13<sup>th</sup> April 2007.  
3. EC letter no. J-11011/539/2008-IA II (I) dated 23<sup>rd</sup> December 2008.  
4. EC letter no. J-11011/72/2009-IA II (I) dated 15<sup>th</sup> May 2009.  
5. EC letter no. J-11011/72/2009-IA II (I) dated 13<sup>th</sup> May 2011.  
6. EC letter no. J-11011/355/2005-IA II (I) dated 25<sup>th</sup> Jan 2016.

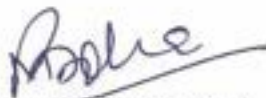
Dear Sir,

Please find the enclosed herewith the six monthly Environment Clearance compliance report along with Monthly Environmental Monitoring report from April 2022 to September 2022, for Cement Plant Complex of Ambuja Cements Ltd (Unit-Bhatapara), at Village & Post office-Rawan, Distt. Balodabazar, Chhattisgarh.

This is for your kind information and record.

Thanking you.

Yours Sincerely,  
For Ambuja Cements Limited  
(Unit: Bhatapara)



( Mahaveer Singh Bolia )  
Chief Operations Manager

Encl.: Six Monthly Environment Clearance compliance report along with Environment Monitoring report.

Copy to:

1. Central Pollution Control Board, Zonal Office, Sahkar Bhawan, North T.T. Nagar, Bhopal -462003.
2. The Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar (C.G.) 490099.
3. The Regional Officer, CECB, Kabir Nagar Commercial Complex, Chhattisgarh Housing Board Colony, Kabir Nagar, Raipur (C.G.)

## AMBUJA CEMENTS LIMITED

(Unit - Bhatapara)

Vill & PO. : Rawan, Tehsil Balodabazar, Dist.: Baloda, Bazar-Bhatapara, Chhattisgarh- 493 331

Ph.: 07727-220010 to 15, Fax: 077277220004

CIN: L2694GJ1981PL004717, Website: www.ambujacement.com

Regd. Office: PO: Ambuja Nagar, Taluka: Kodinar, District: Gir Somnath., Gujarat, 362715

# **ENVIRONMENT CLEARANCE HALF YEARLY COMPLIANCE REPORT FOR THE PERIOD**

**(APRIL 2022 – SEPTEMBER 2022)**

**OF**



**M/S AMBUJA CEMENTS LTD.  
(UNIT-BHATAPARA )**

**P.O.: RAWAN, TEHSIL& DIST.: BALODA BAZAR -  
BHATAPARA  
CHHATTISGARH - 493331**

1. EC letter no.J-11011/289/2005-IA II (I) dated 6<sup>th</sup> January, 2006.
2. EC letter no.J-11011/355/2005-IA II (I) dated 13<sup>th</sup> April, 2007.
3. EC letter no.J-11011/539/2008-IA II (I) dated 23<sup>rd</sup> December, 2008.
4. EC letter no.J-11011/72/2009-IA II (I) dated 15<sup>th</sup> May, 2009.
5. EC letter no.J-11011/72/2009-IA-II (I) dated 13<sup>th</sup> May, 2011.
6. EC letter no.J-11011/355/2005-IA II (I) dated 25<sup>th</sup> January, 2016.

Compliance of the conditions stipulated in the environmental clearance accorded by MOEFCC for production enhancement from 1.2 MTPA TO 1.8 MTPA cement production.

Ref. No. J-11011/289/2005-IA II (I), Date: 6th January 2006

Sr. No.	EC Conditions	Compliance Status as on 10 May 2022
<b>A. Specific Conditions</b>		
	<p>The gaseous and particulate matter emissions from various units should conform to the standards prescribed by the State Pollution Control Board. At no time the particulate emissions from the cement plant and captive power plant (CPP) shall exceed 50 mg/Nm<sup>3</sup>. Regular lime injection at Circulating Fluidized Bed Combustion (CFBC) boiler must be ensured to reduce SO<sub>2</sub> emissions. NOX burners should be installed to control NOX emissions. Continuous on-line monitors for particulate emissions will be installed. Interlocking facility should be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit (s) is shut down automatically.</p>	<p><b>Complied.</b> Cement Plant and Captive Power Plant are equipped with pollution control equipment (i.e. Bag filters, Glass Bag House &amp; ESP) of adequate capacity to achieve Particulate Matter emission as per the new Notification dated 10<sup>th</sup> May, 2016.Regular lime injection at boiler to reduce SO<sub>2</sub> emissions as per the new Notification dated 10<sup>th</sup> May, 2016 at Captive TPP. Our APC are having adequate capacity and the particulate emissions from the cement plant and captive power plant (CPP) are maintained below 50 mg/Nm<sup>3</sup>. Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off. CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCBportal, New Delhi and CECB Atal Nagar, Naya Raipur. Interlocking system is provided in pollution control equipments. CEMS data of Cement Plant Line-I&amp;II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and CEMS data of CPP can be seen on URL -<a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Photographs of Pollution control equipments are Shown in <b>Annexure I</b>. Cement plant stacks monitoring report enclosed as <b>Annexure II</b> (Page No7-18)</p>



ii.	Ambient air quality including ambient noise levels must not exceed the Stipulated under EPA or by the State authorities. Monitoring of ambient air quality and stack emissions shall be carried out regularly in consultation with CECB and report submitted to the Board quarterly and to the Ministry's Regional Office at Bhopal half-yearly. Continuous stack monitoring system should be installed.	<p><b>Complied</b></p> <p>Four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and result can be seen on URL-<a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a>. CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur.</p> <p>CEMS has been installed in all the stacks (Nos.) and its connectivity given to CPCB and CECB portal.</p> <p>Six monthly compliances submitted to MoEFCC, Raipur office regularly. Manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone. Monitoring data is submitted quarterly to CECB and six monthly to MoEF&amp;CC RO office, Raipur.</p> <p>Manual AAQM&amp; Noise monitoring reports enclosed as <b>Annexure II (Page No 1- 5, 37-38)</b>.</p> <p>The 3<sup>rd</sup> party monitoring is undertaken through QCI-NABET MoEF&amp;CC approved laboratory.</p>
iii.	The company shall install adequate dust collection and extraction systems to control fugitive dust emissions at various transfer points. Glass bag house in raw mill and kiln, ESP in cooler and cement mill and bag filter at all the transfer points shall be installed. Coal and clinker storage will be in the form of stockpiles. The dust collected from the pollution control equipment shall be recycled back into the process. Storage of raw material shall be in closed roof sheds. Water sprinkling arrangement shall be made in the raw material stock yard and cement bag loading areas.	<p><b>Complied</b></p> <p>Dust collection and extraction system are installed at various transfer points to control fugitive dust.</p> <p>Glass bag house in raw mill and kiln, ESP in cooler &amp; cement mills are installed. Bag filters at all the transfer points are installed. Coal and clinker storage are in the form of stockpile under covered shed. The dust collected from the pollution control equipment is recycled into the process. Storage of raw material is in closed roof sheds. We are in the process to install three new shed for CPP and Lime stone stock pile for line 1 &amp; 2. The Purchase order copy is attached as <b>Annexure XII</b></p> <p>Regular water sprinkling at various locationis being done in the raw material stock yard and loading area. Mobile water sprinkling system has been deployed to control the fugitive dust emissions. Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>
iv.	All the recommendations of the Corporate Responsibility for Environmental Protection (CREP) shall be followed and existing ESP in cement mill I and II and bag filters in raw mill and kiln, and crusher area shall be modified to achieve 99.95% efficiency and particulate emission levels less than 50 mg/Nm <sup>3</sup> .	<p><b>Complied.</b></p> <p>CREP guidelines are being followed. Cement Plant and Captive Power Plant are well equipped with dust extraction system (Bag filters, Glass Bag House &amp; ESP) of adequate capacity to achieve particulate matter emission as per the new Notification dated 10<sup>th</sup> May, 2016. Air pollution control systems are upgraded to achieve 99.95 % efficiency and particulate emissions are maintained below 30 mg/Nm<sup>3</sup>.</p> <p>CEMS data of Cement Plant Line-I&amp;II can be seen on URL- <a href="http://rdms.cpcb.gov.in/industry-login">http://rdms.cpcb.gov.in/industry-login</a> and CEMS data of CPP can be seen on URL - <a href="http://rdms.cpcb.gov.in/industry-login">http://rdms.cpcb.gov.in/industry-login</a></p> <p>Photographs of control equipment's are shown in <b>Annexure I</b>.</p> <p>Cement and CPP manual stacks Monitoring results for the period of <b>April 2022 to September 2022</b> are given in <b>Annexure-II</b></p>

v.	No effluent shall be discharged from the process outside the premises and all the treated effluent from CPP and STP shall be utilized for green belt development and other plant related activities.	<b>Complied.</b> In cement plant there is no question of process effluents as the cement manufacturing process adopted is a dry. Cooling tower COC is maintained 8-9 cycles, and discharged TDS is around 900-1100 mg/lit and this water is used for dust suppression. We have adapted Zero liquid Discharge is maintained all the time, No process effluent are discharged outside the plant premises. No effluent is generated from cement plant. Treated effluent from CPP and treated Waste water from STP is further used for other plant activities, including dust suppression & green belt development within the plant area.
vi.	The company must harvest the rainwater from the roof tops and storm water drains to recharge the ground water. The company must also collect rain water in the mined out pits of captive lime stone mine and use the same water for the various activities of the project to conserve fresh water.	<b>Complied.</b> Rain water harvesting system (2Nos.) has been constructed in colony and in nearby villages. Roof tops rain water and storm water drains are used to recharge the ground water. Rain water that gets collected in the mined out pit is used for various activities after proper settling and treatment. Collected rain water is used for process and fresh water is conserved. As per CGWB regional map our area is covered in safe zone. Also we have installed Roof top Building Rain water recharge Structure (Nos. 7) in the plant and colony in 2022. The photographs of same is attached as <b>Annexure XV</b>
vii.	Green belt shall be developed in 33% of the plant area. Central Pollution Control Board guidelines must be followed in planning and developing green belt and selection of species etc.	<b>Complied.</b> We have developed more than 33% green belt is developed within the plant premises. Total plant area as per EC 238.97 Green belt area 83.00 Hec, no of existing plants 201484.... Photographs of Plantation & Certificate shown in <b>Annexure III</b> .
viii.	Solid waste generated in the form of fly ash and slag shall be 100% recycled in the process itself.	<b>Complied.</b> Fly ash generated from CPP is 100% utilized in cement manufacturing (PPC and Composite cement) as per BIS standard. Whereas fly ash and blast furnace slag (bought from outside) from other industries are also being used for making cement. Thus solid waste generated within the plant is utilized 100 %.
ix.	The company shall undertake eco-development measures including community welfare measures in the project area.	<b>Complied.</b> Ambuja Cement Foundation (ACF) is taking care of implementation of all CSR activities regularly as per rules. These activities are regularly undertaken in consultation with community and local administration and implemented within study area. CSR funds are utilized for Community welfare activities Ref. <b>Annexure IV</b> for details of activities and budget.
<b>B. General Conditions</b>		
i.	The project authority must adhere to the stipulations made by Chhattisgarh Environment Conservation Board (CECB) and State Government.	During operation phase the project authorities are complying all the conditions of EC and CTO issued by CECB i.e. Chhattisgarh Environment Conservation Board (CECB) and State Government. Hence Complied.
ii.	No further expansion or modification of the plant should be carried out without prior approval of this ministry.	Prior EC will be obtained in case of change/enhancement in production capacity.



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 SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the CECB. Data on ambient air quality and stack emissions should be regularly submitted to this Ministry including its Regional Office at Bhopal and CECB /CPCB once in six months.	<b>Complied</b> In order to monitor SPM, SO <sub>2</sub> , NO <sub>x</sub> four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and the monitored data is automatically transmitted regularly on the portal CECB as well as CPCB URL- <a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a> . Six monthly reports are filed to RO MOEF office, Raipur as desired. Manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone through MoEFCC approved, NABL accredited lab as a part of compliance of EC and CTO. <b>Annexure 1( Page 1-5 , )</b>
iv.	Industrial waste water should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater should be utilized for plantation purpose.	<b>Complied.</b> Industrial waste water is properly collected, treated as per the CTO discharge standards. The treated waste water is used for the purpose of dust suppression within the plant area and also recycled in TPP process. Latest Monitoring results of water quality enclosed as <b>Annexure II (Page 19 -22).</b>
v.	The overall noise levels in and around the plant area should 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 Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA(day time) and 70 dBA (night time).	<b>Complied.</b> Noise control measures including acoustic hoods, silencers, enclosures etc. are provided at various noise generating sources within Power and cement plant. The ambient noise levels are maintained below 85 dBA in the plant area, and ambient levels are maintained 75 dBA (day time) and 70 dBA (night time). Noise monitoring carried out in core and buffer zone, report is enclosed as <b>Annexure II ( Page 37-38)</b>
vi.	Proper housekeeping and adequate occupational health programmes must be taken up. Occupational Health Surveillance programme should be done on a regular basis and records maintained. The programme must include lung function and sputum analysis tests once in six months.	<b>Complied.</b> Regular housekeeping is being carried out regularly. Occupational health and safety awareness program and mock drills are conducted regularly in order to sensitize workers. Pre-employment and periodic medical check-up of each employee is being performed, which includes lung function test and sputum analysis tests once in six months. Records are maintained at Occupational Health Centre (OHC) which is serviced by permanent doctors and health staff. EC six monthly returns are filed covering above data.
vii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the Environmental Impact Assessment/Environmental Management Plan.	<b>Noted and Agreed.</b> Environmental protection measures suggested in the EIA/EMP report are duly implemented in the plant on regularly basis.
viii.	A separate environmental management cell with full-fledged laboratory facilities to carry out various management and monitoring functions should be set up under the control of Senior Executive.	<b>Complied</b> Environmental Management Cell has been established under supervision of Environmental Head with laboratory facilities. Environmental monitoring is being carried out through MoEF&CC& NABL accredited laboratories. Head of Environment is directly reporting to the Unit Head. The hierarchy chart and function of EMD is mentioned in the attached <b>Annexure – IX</b>

ix.	The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.	<b>Agreed and being complied.</b> State of the art environmental protection measures have been implemented in the plant facilities. Necessary funds are allocated for implementation and maintenance of the environmental protection measures to control pollution within permissible limits. Details of fund utilized in different heads are depicted in <b>Annexure-V</b>
x.	The Regional Office of this Ministry at Bhopal / CPCB / CECB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation should be submitted to them regularly.	<b>Complied.</b> As per EC and CTO as a part of compliance pointwise compliances are filed regularly as per the frequency mentioned. Environment monitoring data is interpreted by MoEF&CC/NABET accredited experts and included in returns. Regular six-monthly compliance report and monitoring data is submitted to MoEF&CC, CECB & CPCB. Last EC compliance report was submitted by mail Copy is enclosed <b>Annexure-VI</b> .
xi.	The Project Authorities should 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.	<b>Noted and complied.</b> These issues are covered in subsequent six-monthly reports.
xii.	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the CECB / Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should 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.	<b>Complied.</b>  Advertisement for obtaining EC for change in capacity is filed in subsequent Six- monthly returns.
3.	The Ministry or any competent, authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions will be monitored by the Regional Office of this Ministry located at Bhopal.	<b>Noted</b>
4.	The Ministry may revoke or suspend the clearance if implementation of any of the above mentioned conditions is not satisfactory.	<b>Noted</b>
5.	Any other conditions or alteration in the above conditions will have to be implemented by the project authorities in a time bound manner.	<b>Noted</b>
6.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	<b>Noted</b>

Compliance of the conditions stipulated in the environmental clearance given by ministry of environment and forests for 2.72 MTPA new clinker production unit (2.72MTPA) along with thermal power plant (15 mw) and captive power plant(33 mw).Ref. No. J-11011/355/2005-ia ii (i), date: 02th September April 2007.

Sr. No.	EC Conditions	Compliance Status
<b>A. Specific Conditions</b>		
i.	<p>The gaseous and particulate matter emission from various units shall conform to the standards prescribed by the Chhattisgarh Environment Conservation Board (CECB). At no time, the particulate emission from the cement plant shall exceed 50 mg/Nm<sup>3</sup>. The emission from CPP shall be less than 100 mg/Nm<sup>3</sup>. Continuous online stack monitoring facilities for all the stacks and adequate air pollution control system shall be provided to keep emission levels below 50 mg/Nm<sup>3</sup> and on-line data shall be submitted to the CECB and CPCB regularly. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.</p>	<p><b>Complied.</b></p> <p>Cement Plant and Captive Power Plant are equipped with pollution control equipment (i.e. Bag filters, Glass Bag House &amp; ESP) of adequate capacity to achieve Particulate Matter emission as per the new Notification dated 10<sup>th</sup> May, 2016. Our APC are having adequate capacity and the particulate emissions from the cement plant and captive power plant (CPP) are maintained below 50 mg/Nm<sup>3</sup> and 100 mg/Nm<sup>3</sup> respectively. Interlocking facilities are also installed, in case of failure of APCE the respective unit gets automatically shut off.</p> <p>CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur. Interlocking system is provided in pollution control equipments. CEMS data of Cement Plant Line-I&amp;II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and CEMS data of CPP can be seen on URL -<a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a></p> <p>Photographs of Pollution control equipments are shown in <b>Annexure I.</b></p> <p>Cement plant stacks monitoring report enclosed as <b>Annexure II (Page No 7-18)</b></p>



ii.	Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities Monitoring of ambient air quality and stack emissions shall be carried out regularly in consultation with CECB and report submitted to CECB quarterly and to the Ministry's Regional Office at Bhopal half-yearly. One ambient air quality monitoring station shall be installed in downwind direction.	<p><b>Complied</b></p> <p>Four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and result can be seen on URL-<a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a>.</p> <p>CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur.</p> <p>CEMS has been installed in all the major stacks and its connectivity given to CPCB and CECB portal.</p> <p>Six monthly compliances submitted to MoEFCC, Raipur office regularly. Manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone. Monitoring data is submitted quarterly to CECB and six monthly to MoEF&amp;CC RO office, Raipur.</p> <p>Manual AAQM &amp; Noise monitoring reports enclosed as <b>Annexure II (Page No 1-5, 37-38)</b> The 3<sup>rd</sup> party monitoring is undertaken through QCI-NABET MoEF&amp;CC approved laboratory.</p>
iii.	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. ESP to AFBC boilers, clinker cooler and glass bag house to the raw mill/kiln system shall be provided to control air emission less than 50 mg/Nm <sup>3</sup> from all the sources except CPP where 100 mg/Nm <sup>3</sup> norms shall be achieved. Bag filters shall be provided to crushing plant, raw mill hopper, blending silo/kiln feed clinker storage, coal mill system, transfer points and vesting of auxiliaries. The dust collected from the pollution control equipment's shall be recycled back in to the process. Storage of raw material shall be in closed roof shed.	<p><b>Complied</b></p> <p>Dust collection and extraction system are installed at various transfer points to control fugitive dust.</p> <p>Glass bag house in raw mill and kiln, ESP in cooler &amp; cement mills are installed. Bag filters at all the transfer points are installed. Coal and clinker storage are in the form of stockpile under covered shed. The dust collected from the pollution control equipment is recycled into the process. Storage of raw material is in closed roof sheds.</p> <p>Regular water sprinkling at (No. of locations 6) is being done in the raw material stock yard and loading area. Mobile water sprinkling system is recently ordered to strengthen the existing dust suppressions systems. Expected delivery and operations Sept'2021. Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>
iv.	Asphalting/concreting of roads and water spray all around the coal stockpiles shall be carried out to control fugitive emissions.	<p><b>Complied</b></p> <p>For controlling fugitive emission all roads are concreted inside the plant premises and Regular water sprinkling at (No. of locations 6) is being done around the raw material storage facilities. Also, ample greenery development has been undertaken.</p>
v.	Secondary fugitive emissions should 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.	<p><b>Complied</b></p> <p>Cement Plant and Captive Power Plant are well equipped with dust extraction system. Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>

vi.	Total water requirement shall be met from the mine pits only and no surface/ground water shall be used. No process wastewater shall be discharged due to use of all the treated wastewater for ash conditioning, dust suppression, green belt development and other plant related activities etc. No effluent shall be discharged outside the factory premises and 'zero' discharge shall be adopted. Domestic effluent shall be used after treated in Sewage Treatment Plant (STP) for green belt development within the plant and colony area.	<b>Complied.</b> In cement plant there is no question of process effluents as the cement manufacturing process adopted is a dry. Cooling tower COC is maintained 8-9 cycles, and discharged TDS is around 900-1100 mg/lit and this water is used for dust suppression. We have adapted Zero liquid Discharge is maintained all the time, No process effluent are discharged outside the plant premises. No effluent is generated from cement plant. Treated effluent from CPP and treated Waste water from STP is further used for other plant activities, including dust suppression & green belt development within the plant area.
vii.	The entire water requirement shall be met from the artificial reservoir made in mine pit only and no water from surface and ground water sources shall be used for any purpose.	<b>Complied</b> The entire water requirement (6044 KLD) is being met from artificial reservoir made in mine pit. For usages of only mining water in the plant we have already proposed the Capex for water treatment plant in plant capacity 500 KLD and colony 600 KLD. Water Treatment Plant (WTP) purchase order has been released expected delivery of the same before end of March 2023. We will ensure that total water requirement shall be met from the mine pits only after installation of water treatment plant in plant and colony
viii.	The company must harvest the rainwater from the roof tops and storm water drains to recharge the ground water. The company must also collect rain water in the mined out pits and use the same water for the various activities of the project to conserve fresh water.	<b>Complied.</b> Rain water harvesting system (2 Nos. ref. photograph Annexure No.) has been constructed in colony and in nearby villages. Roof tops rain water and storm water drains are used to recharge the ground water. Rain water that gets collected in the mined out pit is used for various activities after proper settling and treatment. Collected rain water is used for process and fresh water is conserved. As per CGWB regional map our area is covered in safe zone. Also we have installed Roof top Building Rain water recharge Structure (Nos. 7) in the plant and colony in 2022. The photographs of same is attached as <b>Annexure XV</b>
ix.	As proposed in EIA/EMP, out of total 238.97 ha. Green belt shall be developed in 75 ha. (30%) in consultation with the local DFO as per the CPCB guidelines.	<b>Complied.</b> We have developed more than 33% green belt is developed within the plant premises. Total plant area as per EC ...238.97. Green belt area 83.00. Hec, no of existing plants 201484.... Photographs of Plantation & Application for green belt certification to Local DFO Submitted as shown in <b>Annexure III.</b>

x.	All the cement dust collected from pollution control devices shall be recycled and reutilized in the process. The entire fly ash generated from the power plant shall be pneumatically conveyed to the cement plant and used for manufacturing of Pozollana Portland Cement (PPC) Boiler ash shall be used for land filling Sludge from the sewage treatment plant shall be used as manure Hazardous waste viz. Spent oil from gear boxes and automatic batteries etc. shall be properly stored in a designated area and sold to authorized recyclers / re-processors.	<b>Complied.</b> All the dust collected from pollution control equipment's is reused in processes. Fly ash generated from the CPP power plant is handled pneumatically and 100% utilized in cement manufacturing (PPC and Composite cement) as per BIS standard. Sludge generated from the sewage treatment plant (STP) is used as manure for greenbelt development.  Hazardous waste (Used Oil, Waste Oil etc.) and batteries are properly stored in confined area and sold to authorize recycler only.
xi.	Efforts shall be made to make use of high calorific hazardous waste as fuel in kiln. Accordingly, provision shall be made in the kiln and inform to the Ministry.	<b>Complied.</b> High calorific hazardous waste is used as alternative fuel in kiln.
xii.	The company shall undertake eco-development measures including community welfare measures in the project area.	<b>Complied.</b> Ambuja Cement Foundation (ACF) is taking care of implementation of all CSR activities regularly as per rules. These activities are regularly undertaken in consultation with community and local administration and implemented within study area. CSR funds are utilized for Community welfare activities Ref. <b>Annexure IV</b> for details of activities and budget.
xiii.	All the recommendations of the CREP guidelines shall be strictly followed.	<b>Noted and Complied.</b>
<b>B. General Conditions</b>		
i.	The project authorities must strictly adhere to the stipulations made by the Chhattisgarh Environment Conservation Board (CECB) and the State Government.	During operation phase the project authorities are complying all the conditions of EC and CTO issued by CECB i.e. Chhattisgarh Environment Conservation Board (CECB) and State Government. Hence Complied.
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	<b>Noted</b> Prior EC will be obtained in case of change/enhancement in production capacity.
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 SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the CECB Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhopal and the CECB/CPCB once in six months.	<b>Complied</b> In order to monitor SPM, SO <sub>2</sub> , NO <sub>x</sub> four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and the monitored data is automatically transmitted regularly on the portal CECB as well as CPCB URL- <a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a> . Six monthly reports are filed to RO MOEF office, Raipur as desired. Manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone thru MoEF&CC approved, NABL accredited lab as a part of compliance of EC and CTO. The test records are attached as <b>Annexure II ( Page 1-5)</b>



iv.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<b>Complied.</b> Industrial waste water is properly collected, treated as per the CTO discharge standards. The treated wastewater is used for the purpose of dust suppression within the plant area and also recycled in TPP process. Latest Monitoring results of water quality enclosed as <b>Annexure II (Page 19-22)</b> .
v.	The overall noise level in and around the plant area shall be kept well within the standards (85dBA) 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).	<b>Complied.</b> Noise control measures including acoustic hoods, silencers, enclosures etc. are provided at various noise generating sources within Power and cement plant. The ambient noise levels are maintained below 85 dBA in the plant area, and ambient levels are maintained 75 dBA(day time) and 70 dBA (night time). Noise monitoring carried out in core and buffer zone, report is enclosed as <b>Annexure II ( Page 37-38)</b>
vi.	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.	<b>Noted and Agreed.</b> Environmental protection measures suggested in the EIA/EMP report are duly implemented in the plant on regularly basis.  Various socio-economic development programs are being implemented in surrounding community through Ambuja Cement Foundation (ACF) as per rule. These activities are regularly undertaken in consultation with community and local administration and implemented within study area. CSR funds are utilized for Community welfare activities Ref. <b>Annexure IV</b> for details of activities and budget.
vii.	The project authorities shall provide Rs. 40.00 Crores and Rs. 5.00 Crores/annum towards capital and recurring cost/annum for environmental protection measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government and an implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bhopal. The funds so provided shall not be diverted for any other purpose.	<b>Agreed and being complied.</b> State of the art environmental protection measures have been implemented in the plant facilities. Annual funds are allocated for implementation and maintenance of the environmental protection measures to control pollution within permissible limits. Details of fund utilized in different heads are depicted in <b>Annexure-V</b>
viii.	The Regional Office of this ministry at Bhopal / CPCB / CECB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<b>Complied.</b> As per EC and CTO as a part of compliance point wise compliances are filed regularly as per the frequency mentioned. Environment monitoring data is interpreted by MoEFCC/NABET accredited experts and included in returns. Regular six monthly compliance report and monitoring data is submitted to MoEFCC, CECB & CPCB. Last EC compliance report was submitted by mail Copy is enclosed <b>Annexure-VI</b> .

ix.	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 CECB/Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven day 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 Bhopal.	<b>Complied.</b> Advertisement for obtaining EC for change in capacity is filed in subsequent six monthly returns. Copy of information to the public is enclosed as <b>Annexure-VII</b> .
x.	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.	<b>Noted and Complied.</b> These details are covered in subsequent sixmonthly reports. • Environmental Clearance date:13.04.2007 • Financial closures is on 31 <sup>st</sup> December, 2007
3.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	<b>Noted</b>
4.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.	<b>Noted</b>
5.	The above conditions will 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 and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	<b>Noted</b>



Compliance of the conditions stipulated in the environmental clearance given by ministry of environment and forests for the expansion project from 1.8 MTPA to 2.4 MTPA cement production, Ref. No. J-11011/539/2008-IA II (I), Date: 23rd December 2008

Sr. No.	EC Conditions	Compliance Status
<b>A. Specific Conditions</b>		
i.	Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, limit of SPM shall be controlled within 50mg/Nm <sup>3</sup> by installing adequate air pollution control system viz. glass bag house to kiln mill, bag filters to coal mill etc. As proposed, existing electrostatic precipitators (ESPs) provided to kiln/ shall be replaced by glass bag house. Data on ambient air, fugitive and stack emissions shall be submitted to the Ministry's Regional Office at Bhopal, CECB and CPCB regularly. Efforts shall also be made to reduce SO <sub>2</sub> and NO <sub>x</sub> emissions. Stack emission monitoring reports shall be submitted to the Ministry's Regional Office at Bhopal, CECB and CPCB regularly.	<p><b>Complied</b></p> <p>Cement Plant and Captive Power Plant are equipped with pollution control equipment (i.e. Bag filters, Glass Bag House &amp; ESP) of adequate capacity to achieve Particulate Matter emission as per the new Notification dated 10<sup>th</sup> May, 2016. Regular lime injection at boiler to reduce SO<sub>2</sub> emissions as per the new Notification dated 10<sup>th</sup> May, 2016 at Captive TPP.</p> <p>ESP is installed at AFBC boiler whereas Glass Bag House is installed at Raw Mill &amp; Kiln exit to control air emission below 50 mg/Nm<sup>3</sup> at CPP.</p> <p>Our APC are having adequate capacity and the particulate emissions from the cement plant and captive power plant (CPP) are maintained below 50 mg/Nm<sup>3</sup>. Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off.</p> <p>CEMS (for PM, SO<sub>2</sub>&amp;NO<sub>x</sub>) have been installed in cement plant and Power Plant and connectivity provided to CPCBportal, New Delhi and CECB Atal Nagar, Naya Raipur. Interlocking system is provided in pollution control equipments. CEMS data of Cement Plant Line-I&amp;II can be seen on</p> <p>URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and Id- environment.bhatapara-ind@ambujacement.com</p> <p>CEMS data of CPP can be seen on</p> <p>URL -<a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Id- environment.tppbhatapara-ind@ambujacement.com</p> <p>(Photographs of control equipment's are shown in <b>Annexure I</b>. Latest Cement and CPP manual stacks Monitoring results for the given in <b>Annexure II (Page No 7-18)</b>)</p>
ii.	Secondary fugitive emissions shall be controlled and should be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.	<p><b>Complied</b></p> <p>Cement Plant and Captive Power Plant are well equipped with dust extraction system. Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b>.</p>
iii.	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.	<p><b>Complied.</b></p> <p>Raw material and end products transport is being carried out in tarpaulin covered trucks. Fly ash is transported in closed bulkers. Transport roads are regularly sprinkled with water and are periodically maintained. Overloading is strictly prohibited. Air quality monitoring is carried out in nearby villages to ensure efficacy of air pollution control measures adopted in the plant.</p> <p>Photographs of material transport shown in <b>Annexure - VIII</b></p>



iv.	<p>The company shall install adequate dust collection and extraction system to control fugitive dust emissions from different sources viz. raw material storage yards, loading and unloading operations, transfer points, crusher, coal mill and packing plant. Bag filters and water sprinkling arrangements shall be made in raw material stock yards and cement bag loading areas etc. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided. Cement and fly ash shall be stored in silos. Dust suppression system shall be provided at transfer points and coal/lignite handling area to control fugitive emissions. Automatic dust cleaning system for removing dust from floors, concrete/tar topped roads inside the plant to avoid dispersion of dust and good housekeeping shall be adopted to control fugitive emissions.</p>	<p><b>Complied</b></p> <ol style="list-style-type: none"> <li>1. Plant cleaning in Mill section and other area has been done and same will be maintained. The bag of bag filter has been replaced costing more than 3.0 Crore.</li> <li>2. Leakage has been arrested by Maintenance team regularly. All bag filter inspection done on periodically basis</li> <li>3. Clinker silo sheeting work completed.</li> <li>4. The material lying in the open has been covered with tarpaulin.</li> <li>5. Road sweeping machine has been deployed for road cleaning regularly.</li> <li>6. Water tankers have been deployed regularly.</li> <li>7. Two new sweeping machines procured at a cost of Rs 70 Lakh for road cleaning and control of Fugitive emissions in the plant.</li> <li>8. Two Mobile dust suppression systems already procured &amp; same is in operation in coal yard, limestone piling area and other areas for fugitive dust control. The Photographs of same is attached as <b>Annexure XIII</b></li> <li>9. Line 1 Raw mill Bag house Filter maintenance done and all the new bags installed.</li> <li>10. Repair and cleaning of roads done for proper movement of sweeping machines.</li> <li>11. The fly ash generated from Captive Power Plant is being fully utilized for manufacturing of Cement.</li> <li>12. We have done various good practices like walk by inspections on routine basis resulting our Housekeeping has been improved.</li> </ol>
v.	<p>Asphalting/concreting of roads and water spray all around the stockyard and loading/ unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.</p>	<p><b>Complied.</b></p> <p>For controlling fugitive emission the roads are black topped/concreted inside the plant premises and Regular water sprinkling at is being done in the raw material stock yard and loading area. Mobile water sprinkling system has been deputed to strengthen the existing dust suppressions systems. Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>

vi.	<p>Ambient air quality including ambient noise levels shall be monitored at different locations including fence of the sanctuary and must not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality, fugitive and stack emissions shall be carried out regularly in consultation with CECB and reports submitted to the to the Ministry's Regional Office at Bhopal, CECB and CPCB regularly.</p>	<p><b>Complied</b></p> <p>Four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and result can be seen on URL-<a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a>. CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur.</p> <p>CEMS has been installed in all the major sstacks and its connectivity given to CPCB and CECB portal.</p> <p>Six monthly compliances submitted to MoEFCC, Raipur office regularly. Manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone. Monitoring data is submitted quarterly to CECB and six monthly to MoEFCC RO office, Raipur.</p> <p>Manual AAQM &amp; Noise monitoring reports enclosed as <b>Annexure II (Page No 1-5,37-38)</b> The 3<sup>rd</sup> party monitoring is undertaken through QCI-NABET MoEF&amp;CC approved laboratory.</p>
vii.	<p>As proposed, total water requirement for cement plant (50m<sup>3</sup>/day) shall be met from mine pit only and no surface or ground water shall be used. No liquid effluent shall be generated from the cement plant. All the other treated wastewater shall be recycled and reused in the process for cooling and/or for ash quenching, dust suppression, 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. All the sewage water shall be treated in Sewage Water Reclamation Plant (SWRP) and treated wastewater shall be used for green belt development.</p>	<p><b>Complied</b></p> <p>In cement plant there is no question of process effluents as the cement manufacturing process adopted is a dry. Cooling tower COC is maintained 8-9 cycles, and discharged TDS is around 900-1100 mg/lit and this water is used for dust suppression. We have adapted Zero liquid Discharge is maintained all the time, No process effluent are discharged outside the plant premises. No effluent is generated from cement plant. Treated effluent from CPP and treated Waste water from STP is further used for other plant activities, including dust suppression &amp; green belt development within the plant area.</p> <p>For usages of only mining water in the plant we have already released the purchase order for water treatment plant for mine pit water treatment in plant capacity 500 KLD and colony 600 KLD. Water Treatment Plant (WTP) expected deliver in the month of March 2023 .The installation of WTP will be completed before April 2023.The PO Copy of WTP is attached as <b>Annexure XIV</b></p> <p>We will ensure that total water requirement shall be met from the mine pits only after installation of water treatment plant in plant and colony.</p>
viii.	<p>Sewage Water Reclamation Plant (SWRP) shall be used for the treatment of sewage from the colony and treated domestic effluent shall be used for green belt development within the plant premises. Domestic waste from colony and SWRP shall be segregated into biodegradable and non-biodegradable. Biodegradable waste shall be composted and non-biodegradable waste should be land filled at identified sites. Effluent treatment plant (ETP) shall also be provided for workshop.</p>	<p><b>Complied</b></p> <p>No effluent is discharged from the process outside the premises. Treated effluent from Sewage Water Reclamation Plant (SWRP) / STP is used for green belt development. Treated effluent from CPP is used in process and dust suppression and recycled in the CPP process through RO.</p> <p>Biodegradable domestic waste from the colony is used for composting and green belt development.</p>

ix.	All the bag filter dust, raw meal 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. All the solid waste generated from colony and Sewage Water Reclamation Plant (SWRP) shall be disposed after segregating the waste into biodegradable and non-degradable. Treated SWRP sludge shall be used as manure for green belt development. The waste oil and scrapped automobile batteries etc. shall be properly disposed off as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments and shall be sold to authorized recyclers / re-processors only.	<b>Complied</b> All the dust collected from pollution control equipment's is reused in processes. Fly ash generated from the CPP power plant is handled pneumatically and 100% utilized in cement manufacturing (PPC and Composite cement) as per BIS standard.  All the solid waste generated from colony and STP are disposed after segregating the waste into biodegradable and non-degradable. Treated STP sludge & biodegradable domestic is used as manure/composting for green belt development.  Hazardous waste (Used Oil, Waste Oil etc.) and batteries are properly stored in confined area and sold to authorize recycler only.
x.	An effort shall be made to use high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.	<b>Complied.</b> High calorific hazardous waste is being pre-processed and co-processed in kiln. CECB Atal Nagar, Naya Raipur has granted the permission for utilization of HW. Authorization vide letter No. 6718/HSMD/HO/CECB/2019 Raipur, Date 06/11/2019 as enclosed in <b>Annexure – X</b>
xi.	Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.	<b>Being complied.</b> Low grade limestone, Fly ash and other solid wastes are being used as alternative raw material for cement manufacturing.
xii.	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 maximum in making Pozzolana Portland Cement (PPC).	<b>Complied.</b> Fly ash generated from CPP is 100% utilized in cement manufacturing (PPC and Composite cement) as per BIS standard. Whereas fly ash and blast furnace slag (bought from outside) from other industries are also being used for making cement. Thus solid waste generated within the plant is utilized 100 %.
xiii.	As proposed, green belt shall be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	<b>Complied.</b> We have developed more than 33% green belt is developed within the plant premises. Total plant area as per EC 238.97.... Green belt area 83.00. Hec, no of existing plants 201484. Photographs of Plantation & application submitted to local DFO for green belt certification is attached as <b>Annexure III</b> .
xiv.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement Plants shall be implemented.	<b>Complied.</b> CREP guidelines are being followed. Cement Plant and Captive Power Plant are well equipped with dust extraction system (Bag filters, Glass Bag House & ESP) of adequate capacity to achieve particulate matter emission as per the new Notification dated 10 <sup>th</sup> May, 2016.
xv.	The company shall provide housing for construction labor 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.	<b>Noted &amp; Complied.</b>



<b>B. General Conditions</b>		
i.	The project authority must adhere to the stipulations made by Chhattisgarh Environment Conservation Board (CECB) and State Government.	During operation phase the project authorities are complying all the conditions of EC and CTO issued by CECB i.e. Chhattisgarh Environment Conservation Board (CECB) and State Government. Hence Complied.
ii.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	<b>Noted.</b> Prior EC will be obtained in case of change/enhancement in production capacity.
iii.	The gaseous (SO <sub>2</sub> , NO <sub>x</sub> , CO) and particulate matter emissions from various units shall conform to the standards prescribed by the Chhattisgarh Environment Conservation Board. Inter-locking facility shall be provided between pollution control equipment and the process operation so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	<b>Complied</b> Cement Plant and Captive Power Plant are equipped with pollution control equipments (i.e. Bag filters, Glass Bag House & ESP) of adequate capacity to achieve Particulate Matter emission as per the new Notification dated 10 <sup>th</sup> May, 2016. Regular lime injection at boiler to reduce SO <sub>2</sub> emissions and Low NO <sub>x</sub> burner has been installed to reduce NO <sub>x</sub> emission as per the new Notification dated 10 <sup>th</sup> May, 2016. CEMS (for PM, SO <sub>2</sub> & NO <sub>x</sub> ) has been installed in cement plant and Power Plant and connectivity provided to CPCB, New Delhi and CECB Atal Nagar. Interlocking system is provided in pollution control equipments. CEMS data of Cement Plant Line-I&II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and Id- environment.bhatapara-ind@ambujacement.com CEMS data of CPP can be seen on URL - <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Id- environment.bhatapara-ind@ambujacement.com (Photographs of control equipment's are shown in <b>Annexure I</b> . Cement and CPP manual stacks monitoring results for the period of April 2022 to September 2022 are given in <b>Annexure II (Page 7-18)</b> ).
iv.	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<b>Complied.</b> Industrial waste water is properly collected, treated as per the CTO discharge standards. The treated waste water is used for the purpose of dust suppression within the plant area and also recycled in TPP process. Latest Monitoring results of water quality enclosed as <b>Annexure II( Page 19-22)</b> .
v.	The company shall harvest surface as well as rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	<b>Complied.</b> Rain water harvesting system has been constructed in colony and in nearby villages. Roof tops rain water and storm water drains are used to recharge the ground water. Rain water that gets collected in the mined out pit is used for various activities after proper settling and treatment. Collected rain water is used for process and fresh water is conserved. As per CGWB regional map our area is covered in safe zone. Also we have installed Roof top Building Rain water recharge Structure (Nos. 7) in the plant and colony in 2022. The photographs of same is attached as <b>Annexure XV</b>

vi.	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 shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time). Compliance to all the standards for DG sets for noise shall be ensured and acoustic enclosures around DG sets shall be provided.	<b>Complied.</b> Noise control measures including acoustic hoods, silencers, enclosures etc. are provided at various noise generating sources within Power and cement plant. The ambient noise levels are maintained below 85 dBA in the plant area, and ambient levels are maintained 75 dBA (day time) and 70 dBA (night time). Noise monitoring carried out in core and buffer zone, report is enclosed as <b>Annexure II ( Page 37-38 )</b>
vii.	Proper housekeeping and adequate occupational health programmes must be taken up. All the persons working in the sensitive areas shall wear protective covers. Occupational Health Surveillance programme shall be done on a regular basis and records maintained. The programme must include lung function and sputum analysis tests once in six months.	<b>Complied.</b> Regular housekeeping is being carried out regularly. Occupational health and safety awareness program and mock drills are conducted regularly in order to sensitize workers. Pre-employment and periodic medical check-up of each employee is being performed, which includes lung function test and sputum analysis tests once in six months. Records are maintained at Occupational Health Centre (OHC) which is serviced by permanent doctors and health staff. EC six monthly returns are filed covering above data.
viii.	The company shall undertake eco-development measures including community welfare measures in the project area.	<b>Complied.</b> Ambuja Cement Foundation (ACF) is taking care of implementation of all CSR activities regularly as per rules. These activities are regularly undertaken in consultation with community and local administration and implemented within study area. CSR funds are utilized for Community welfare activities Ref. <b>Annexure IV</b> for details of activities and budget.
ix.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the Rapid and Comprehensive EIA/EMP.	<b>Complied.</b> Environmental protection measures recommended in the EIA/EMP report are duly implemented in the plant on regularly basis.
x.	A separate environmental management cell with full-fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of the Senior Executive.	<b>Complied</b> Environmental Management Cell has been established under supervision of Environmental Head with laboratory facilities. Environmental monitoring is being carried out through MoEF&CC & NABL accredited laboratories. Head of Environment is directly reporting to the Unit Head. The copy of Environment Cell formulated, and their functions is attached as <b>Annexure-IX</b>
xi.	As proposed, Rs. 2.02 Crores and Rs. 0.20 Crores shall be earmarked towards capital cost and recurring cost/annum for environmental pollution control measures shall be used exclusively to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound action plan along with the implementation schedule for all the conditions stipulated herein shall be submitted to the Ministry, CECB and CPCB. The funds so provided shall not be diverted for any other purposes.	<b>Complied.</b> <b>Agreed and being complied.</b> State of the art environmental protection measures have been implemented in the plant facilities. Annual funds are allocated for implementation and maintenance of the environmental protection measures to control pollution within permissible limits. Details of fund utilized in different heads are depicted in <b>Annexure-V</b>

xii.	The Regional Office of this Ministry at Bhopal/CPCB/CECB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	<b>Complied.</b> As per EC and CTO as a part of compliance point wise compliances are filed regularly as per the frequency mentioned. Environment monitoring data is interpreted by MoEF&CC /NABET accredited experts and included in returns. Regular six monthly compliance report and monitoring data is submitted to MoEF&CC, CECB & CPCB. Last EC compliance report was submitted by mail Copy is enclosed <b>Annexure-VI</b>
xiii.	The 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.	<b>Noted and Complied.</b> These issues are covered in subsequent six monthly reports. Environmental clearance granted on 23 <sup>rd</sup> December 2008. Annual Financial Closure is on 31 <sup>st</sup> December.
xiv.	The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the CECB and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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 shall be forwarded to the Regional office.	<b>Complied.</b> Advertisement for obtaining EC for change in capacity is filed in subsequent six monthly returns. The advertisement of grant of environmental clearance was published in local widely circulated newspapers. Copy of information to the public is enclosed As <b>Annexure-VII.</b>
7.	The Ministry or any competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry located at Bhopal.	<b>Noted</b>
8.	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	<b>Noted</b>
9.	Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.	<b>Noted</b>
10.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.	<b>Noted</b>
11.	The above conditions will be enforced, inter-alia under the provisions of the Water(Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 Along with their amendments and rules.	<b>Noted</b>



Compliance of the conditions stipulated in the environmental clearance given by ministry of environment and forests for the expansion project from 2.4 MTPA TO 3.5 MTPA, Ref.no. J-11011/72/2009-IA II (I), Date: 10th SeptemberMay 2009.

Sr. No.	EC Conditions	Compliance Status
<b>A. Specific Conditions.</b>		
i.	The company shall comply with the stipulation made in the environmental clearance granted to the existing plant by the Ministry of Environment and Forests vide letter No. J-11011/539/2008 dated 23rd December, 2008.	<p><b>Noted and complied.</b></p> <p>During operation phase the project authorities are complying all the conditions of EC and CTO issued by CECB i.e. Chhattisgarh Environment Conservation Board (CECB) and State Government.</p>
ii.	The particulate matter emissions from various sources shall not exceed 50 mg/Nm <sup>3</sup> . Bag house/ filters shall be provided to control air emissions to achieve the prescribed standards. The fugitive emissions during loading and unloading shall be suitably controlled.	<p><b>Complied</b></p> <p>Cement Plant and Captive Power Plant are equipped with pollution control equipment's (i.e. Bag filters, Glass Bag House &amp; ESP) of adequate capacity to achieve Particulate Matter emission as per the new Notification dated 10<sup>th</sup> May, 2016. Regular lime injection at boiler to reduce SO<sub>2</sub> emissions and Low NO<sub>x</sub> burner has been installed to reduce NO<sub>x</sub> emission as per the new Notification dated 10<sup>th</sup> May, 2016 at Captive Power Plant.</p> <p>Our APC are having adequate capacity and the particulate emissions from the cement plant and captive power plant (CPP) are maintained below 50 mg/Nm<sup>3</sup>. Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off.</p> <p>CEMS (for PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB, New Delhi and CECB Atal Nagar. Interlocking system is provided in pollution control equipment's. CEMS data of Cement Plant Line-I&amp;II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and Id- environment.bhatapara-ind@ambujacement.com</p> <p>CEMS data of CPP can be seen on URL -<a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Id- environment.tppbhatapara-ind@ambujacement.com</p> <p>(Photographs of control equipment's are shown in <b>Annexure I</b>.</p> <p>Regular water sprinkling at (No. of locations 6) is being done in loading and unloading area.</p> <p>Stack emission monitoring and Fugitive dust emission monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>

iii.	The locations of ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with Chhattisgarh Environment Conservation Board (CECB) and additional stations shall be installed, if required, in the downwind direction as well as where maximum ground level concentrations are anticipated.	<b>Complied</b> Four (4) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and result can be seen on URL- <a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a> .  Regular manual ambient air quality monitoring as per CPCB is being done in the core and buffer zone (at ten locations). Manual AAQM results by undertaken through QCI-NABET MoEF&CC approved laboratory are enclosed as <b>Annexure II (Page 7-18)</b>
iv.	Data on ambient air quality stack emission and fugitive emissions shall be uploaded on the company's website and also regularly submitted online to the Ministry's Regional Office at Bhopal, Chhattisgarh Environment Conservation Board and Central Pollution Control Board 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 prominently outside the premises at the appropriate place for the general public.	<b>Complied.</b> Data on ambient air quality, stack emission is regularly submitted to MOEFCC, CECB & CPCB. Same is uploaded on the company's website. Website link. <a href="http://www.ambujacement.com/sustainable-development/environment/">http://www.ambujacement.com/sustainable-development/environment/</a>  CEMS has been installed in all the major stacks and its connectivity given to CPCB and CECB portal. Six monthly compliances submitted to MoEFCC, Raipur office regularly  Data on SPM, SO <sub>2</sub> and NO <sub>x</sub> is also displayed at the main gate of the plant premises.
v.	The Company shall submit a water conservation and management plan to meet the requirement of 150 m <sup>3</sup> /day from the existing water sources and no ground water shall be drawn for the plant. The copy of the water conservation and management plan shall be submitted to the Ministry and its Regional Office at Bhopal within three months from date of issue of this letter.	<b>Complied</b> Rainwater accumulated in Rawan Mines pit is being used for plant operation. The total water requirement for plant operation is 6044..KLD. Rainwater harvesting measures are implemented in the plant & colony. Treated effluent from STP in the colony is used for dust suppression and plantation in mines and plant area. The rain water is collected in the plant area and further stored in Badarapali Pond to Recharge and utilization
vi.	Green belt shall be developed at least in 33% of plant area to mitigate the effect of fugitive emissions all around the plant as per the guidelines of Central Pollution Control Board.	<b>Complied.</b> We have developed more than 33% green belt is developed within the plant premises. Total plant area as per EC 238.97.... Green belt area 83.00.... Hec, no of existing plants 201484.... Photographs of Plantation & Certificate shown in <b>Annexure III</b> .
vii.	The project authorities shall transport the raw materials and cement in covered means to avoid fugitive emission during transport.	<b>Complied.</b> Raw material and cement are transported in fully covered/closed manner. Fly ash is transported in closed bulkers. Transport roads are regularly sprinkled with water and are periodically maintained. A photograph of material transport is enclosed as <b>Annexure VIII</b>
viii.	The clinker requirement shall be met from the existing unit and no additional clinker manufacturing facility shall be installed by the company for this grinding unit.	<b>Noted and Agreed.</b>

ix.	All the recommendations mentioned in the CREP guidelines for the cement plants shall be followed and compiled.	<b>Complied.</b> CREP guidelines are being followed. Cement Plant and Captive Power Plant are well equipped with dust extraction system (Bag filters, Glass Bag House & ESP) of adequate capacity to achieve particulate matter emission as per the new Notification dated 10 <sup>th</sup> May, 2016.
x.	Provision shall be made for the housing of construction labor 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.	<b>Noted and Complied.</b>
<b>B. General Conditions</b>		
i.	The project authorities shall strictly adhere to the stipulations of the SPCB/state government or any statutory body.	<b>Noted and complied.</b> During operation phase the project authorities are complying all the conditions of EC and CTO issued by CECB i.e. Chhattisgarh Environment Conservation Board (CECB) and State Government.
ii.	All other necessary statutory clearances from the concern Departments including 'No Objection Certificate' from the State Pollution Control Board shall be obtained prior to commencement of construction and/or operation.	<b>Complied.</b>
iii.	No further expansion or modification of the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to add additional environmental protection measures required, if any.	<b>Noted and agreed.</b>  Prior EC will be obtained in case of change/enhancement in production capacity.
iv.	At no time, the emissions shall exceed the prescribed limits. In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	<b>Noted and being complied.</b> Our APC are having adequate capacity and the particulate emissions from the cement plant and captive power plant (CPP) are maintained below 50 mg/Nm <sup>3</sup> . Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off.



v.	<p>The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>) and particulate matter along with RSPM levels from various process units shall conform to the standards prescribed by the concerned authorities from time to time.</p>	<p>Compiled.</p> <p>CEMS (PM, SO<sub>2</sub> &amp; NO<sub>x</sub>) has been installed in cement plant and Power Plant and connectivity provided to CPCB, New Delhi and CECB Atal Nagar, Naya Raipur. Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off.</p> <p>Regular lime injection at boiler to reduce SO<sub>2</sub> emissions and Low NO<sub>x</sub> burner has been installed to reduce NO<sub>x</sub> emission as per the new Notification dated 10<sup>th</sup> May, 2016.</p> <p>CEMS data of Cement Plant Line-I&amp;II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and Id- <a href="mailto:environment.bhatapara-ind@ambujacement.com">environment.bhatapara-ind@ambujacement.com</a></p> <p>CEMS data of CPP can be seen on URL -<a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Id- <a href="mailto:environment.tppbhatapara-ind@ambujacement.com">environment.tppbhatapara-ind@ambujacement.com</a></p> <p>(Photographs of control equipment's are shown in <b>Annexure I</b>.</p> <p>Cement and CPP manual stacks Monitoring results for the period of April 2022 to September 2022 are given in <b>Annexure II</b></p>
vi.	<p>The company shall undertake following Waste Minimization measures.</p> <ul style="list-style-type: none"> <li>● Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</li> <li>● Use of "Closed pneumatic" system for transport of fine material.</li> <li>● All venting systems shall be connected with dust arresting equipment.</li> <li>● Dust collected in pollution control equipment shall be reused.</li> </ul>	<p><b>Compiled.</b></p> <p>Fly ash generated from captive power plant is fully utilized for making PPC grade cement.</p> <p>Fly ash generated from the power plant is handled by a closed pneumatic system.</p> <p>All venting and transfer points are connected with bag filters for arresting the dust.</p> <p>Dust collected in pollution control equipment is reused in the process.</p>
vii.	<p>Fugitive emissions in the work zone environment, product, and raw materials storage area shall be regularly monitored. The emissions shall conform to the limits imposed by the State Pollution Control Boards/Central Pollution Control Board.</p>	<p><b>Compiled.</b></p> <p>Regular water sprinkling at (No. of locations) is being done in the raw material storage area and loading and unloading area. Mobile water sprinkling system is recently ordered to strengthen the existing dust suppressions systems. Expected delivery and operations Sept'2021.</p> <p>Fugitive dust monitoring undertaken through QCI-NABET MoEF&amp;CC approved laboratory is enclosed as <b>Annexure-II (Page No 6)</b></p>
viii.	<p>The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).</p>	<p><b>Compiled.</b></p> <p>Noise control measures including acoustic hoods, silencers, enclosures etc. are provided at various noise generating sources within Power and cement plant. The ambient noise levels are maintained below 85 dBA in the plant area, and ambient levels are maintained 75 dBA(day time) and 70 dBA (night time). Noise monitoring carried out in core and buffer zone, report is enclosed as <b>Annexure II ( Page 37-38)</b></p>

ix.	The company shall develop rain water harvesting structures to harvest the run-off water for recharge of ground water.	<b>Complied.</b> Rain water is being harvested in mined out pits. The water requirement of plant and Mines is fulfilled by the harvested water stored in mined out pits. Roof tops rain water and storm water drains are used to recharge the ground water. Collected rain water is used for process and fresh water is conserved. As per CGWB regional map our area is covered in safe zone. Also we have installed Roof top Building Rain water recharge Structure (Nos. 7) in the plant and colony in 2022. The photographs of same is attached as <b>Annexure XV</b>
x.	Occupational health and safety measures shall be undertaken. Periodic monitoring for exposure to dust on the workers should be conducted and records maintained including health records of the workers. The company shall engage a doctor who is trained in occupational health.	<b>Complied.</b> Occupational health and safety awareness program and mock drills are conducted regularly in order to sensitize workers. Pre-employment and periodic medical check-up of each employee is being performed, which includes lung function test and sputum analysis test. Records are maintained at Occupational Health Centre (OHC) which is serviced by permanent doctors and health staff. EC six monthly returns are filed covering above data. The Company has engaged doctors and health staff having in depth knowledge of occupational health.
xi.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan should be submitted to the SPCB within three months of receipt of this letter for approval.	<b>Complied.</b> Ambuja Cement Foundation (ACF) is taking care of implementation of all CSR activities regularly as per rules. These activities are regularly undertaken in consultation with community and local administration and implemented within study area. CSR funds are utilized for Community welfare activities Ref. <b>Annexure IV</b> for details of activities and budget.
xii.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	<b>Complied</b> The Environmental Management Cell has been established under supervision of the Environmental Head with laboratory facilities. Environmental monitoring is being carried out through MOEFCC & NABL accredited laboratories. The Head of Environment is directly reporting to the Unit Head.
xiii.	The project authorities shall earmark adequate funds to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for all the conditions stipulated herein shall be submitted to the Ministry's Regional Office. The funds so provided shall not be diverted for any other purpose.	<b>Agreed and being complied.</b> State of the art environmental protection measures have been implemented in the plant facilities. Necessary funds are allocated for implementation and maintenance of the environmental protection measures to control pollution within permissible limits. Details of fund utilized in different heads are depicted in <b>Annexure-V</b> .
xiv.	The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned Regional Office of the Ministry/SPCB/CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the Company.	<b>Complied.</b> Six monthly compliance reports are regularly submitted to MoEF&CC, CPCB & CECB and are uploaded on the website of the company.

xv.	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 at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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 shall be forwarded to the concerned Regional office of the Ministry.	<b>Compiled.</b>  Advertisement for obtaining EC for change in capacity is filed in subsequent six monthly returns.
xvi.	The 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 start of the project.	<b>Compiled.</b> These issues are covered in subsequent six monthly reports. ● Environmental Clearance date:15.05.2009 ● Financial Closure is on 31 <sup>st</sup> December 2021
6.	The ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	<b>Noted.</b>
7.	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner shall implement these conditions.	<b>Noted.</b>
8.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.	<b>Noted.</b>
9.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986, Hazardous waste (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	<b>Noted.</b>



**COMPLIANCE OF THE CONDITIONS STIPULATED IN THE ENVIRONMENTAL CLEARANCE (AMENDED) GIVEN BY MINISTRY OF ENVIRONMENT AND FORESTS FOR THE INTERMEDIATE CEMENT CAPACITY EXPANSION FROM 1.8 MTPA TO 2.9 MTPA, Ref. No. J-11011/72/2009-IA-II (I), Dated: 13.05.2011.**

This has reference to letter no. ACL: BH: ENV: 25: 2010/7216 dated 6.12.2010 seeking permission for expansion of intermediate capacity of cement production from 1.8 MTPA to 2.9 MTPA by installing 1.1 MTPA cement grinding mill. It is noted that intermediate cement capacity expansion for Stage I would be from 1.8 MTPA to 2.9 MTPA by installing a ball mill and then cement capacity expansion for Stage II would be from 2.9 MTPA to 3.5 MTPA by installing a VRPM.

Sr. No.	EC Conditions	Compliance Status
	<b>Additional conditions</b>	
i.	The Stage I and Stage II cement expansion should be within the maximum capacity for which environmental clearance has been obtained i.e. 3.5 MTPA.	<b>Complied</b> The Stage I and Stage II cement expansion is within the maximum capacity of 3.5 MTPA for which environmental clearance has been obtained.
ii.	There shall not be any change in process technology or any other process parameters, or air pollution control system.	<b>Noted and Agreed</b> There is no change in process technology, or any other process parameters, or air pollution control system.
iii.	Continuous on-line monitors for the particulate emissions shall be installed. Interlocking facilities shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	<b>Complied.</b> CEMS (PM, SO <sub>2</sub> & NO <sub>x</sub> ) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur. CEMS has been installed in all the stacks (... Nos.) and its connectivity given to CPCB and CECB portal. Interlocking facilities are also installed, in case of failure of APC the respective unit gets automatically shut off. CEMS data of Cement Plant Line-I&II can be seen on URL- <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> and Id- environment.bhatapara-ind@ambujacement.com CEMS data of CPP can be seen on URL - <a href="http://rtdms.cpcb.gov.in/industry-login">http://rtdms.cpcb.gov.in/industry-login</a> Id- environment.tppbhatapara-ind@ambujacement.com (Photographs of control equipment's are shown in <b>Annexure I</b> .  Manual stack emission monitoring results for the period of April 2022 to September 2022 are given in <b>Annexure II</b>

iv.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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 up on the website of the company by the proponent.	<b>Compiled.</b>  Copy of information to the public is enclosed as <b>Annexure- VII</b> . EC Letter can be seen on company website: <a href="http://www.ambujacement.com">www.ambujacement.com</a>
v.	The environment statement for each financial year ending 31st 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 clearance conditions and shall also be sent to the respective regional Office of the MoEF&CC by email	<b>Complied</b> Environmental statement is submitted annually to CECB. Compliance of environment clearance conditions is regularly submitted to MoEF&CC regional office on six monthly basis, the same is also uploaded on the company's website. Copy of Environment statements submitted to MoEF&CC is enclosed as <b>Annexure-XI</b> .
5.	In case of change in the scope of the project, the company shall obtain fresh environmental clearance.	<b>Noted.</b>

**Compliance of the conditions stipulated in the Environmental Clearance (amended) given by ministry of Environment and Forests for expansion in clinker production capacity (4.42 to 4.8 MTPA) by process optimization F NO. J-11011/355/2005-IA-II (I), Dated: 25.01.2016**

This has reference to letter no. ACL/Bhatapara/Line-II/01 dated 13.08.2015 regarding amendment in Environment Clearance under clause 7(ii) of EIA notification 2006, for the project mentioned above.

The project was earlier accorded Environment Clearance by the Ministry vide letter No. J-11011/355/2005-IA-II (I) dated 02<sup>nd</sup> September April, 2007, for Clinker production capacity of 4.42 MTPA (Line I-1.70 MTPA and Line-II 2.72 MTPA) cement production capacity of 3.5 MTPA; CPP of 63 MW ( 2 \* 15 MW & 1\* 33 MW) capacity & DG set having 14 MW. The proponent intends to optimize the clinker production capacity of existing Line-II (i.e. 2.72 MTPA) by process optimization.

Sr. No.	EC Conditions	Compliance Status
	<b>Additional conditions</b>	
3.	There is no additional land requirement for the proposed expansion project, as the same will be done within the existing plant premises by optimization. No additional manpower requirement is envisaged. No additional capital cost is required for proposed expansion. The proponent has mentioned that the existing Air Pollution Control Equipments(APCEs) have adequate potential for proposed marginal expansion capacity.	<b>Complied.</b> No additional land was required during expansion. Expansion was done within the plant with process optimization. No additional capital cost was incurred. There is no change in process technology, or any other process parameters, or air pollution control system.
4	The proposal was considered by the expert Appraisal Committee ( Industry) during its meetings held on 02 <sup>th</sup> September-14 <sup>th</sup> November'2015 (27 <sup>th</sup> Meeting) and 3 <sup>rd</sup> -4 <sup>th</sup> September, 2015 (47 <sup>th</sup> Meeting) and recommended the project for Environment Clearance subject to stipulation of following additional specific conditions: (i) The Project proponent should install 24 * 7 air devices to monitor air emission, as provided by CPCB and submit reports to the Ministry and its Regional Office. (ii) The expansion project shall comply with the new MOEFCC standards vide GSR 612(E) dated 25.08.2014 with respect to particulate matter, SO <sub>2</sub> , NO <sub>x</sub> for Cement Sector.	<b>Complied</b> Four (4 Nos.) real-time CAAQMS has been installed with consultation of CECB and result can be seen on URL- <a href="http://www.envsaindia.com/cpcb/industry.php#">http://www.envsaindia.com/cpcb/industry.php#</a> . Regular ambient air quality monitoring at six locations is being done. CEMS (PM, SO <sub>2</sub> & NO <sub>x</sub> ) has been installed in cement plant and Power Plant and connectivity provided to CPCB portal, New Delhi and CECB Atal Nagar, Naya Raipur. CEMS has been installed in all the major stacks and its connectivity given to CPCB and CECB portal Continuous manual Stack Emission, Ambient Air Quality Monitoring (AAQM), Noise monitoring, water quality and soil quality reports enclosed as <b>Annexure II</b> . The 3 <sup>rd</sup> party monitoring is undertaken through QCI-NABET MoEF&CC approved laboratory.



5.	The Ministry had considered the recommendations of Expert appraisal Committee (Industry) and hereby decided to accord Environment Clearance for Expansion in clinker production capacity from 4.42 MTPA to 4.8 MTPA by Process Optimization in line-2 of the existing clinker capacity from 2.72 MTPA to 3.1 MTPA of M/S Ambuja Cement Ltd. Under clause 7(ii) of EIA Notification, 2006 subject to strict compliance of the following additional specific conditions:	<b>Noted and being compiled.</b>
<b>A: SPECIFIC CONDITION :</b>		
(i)	The project proponent should install 24 * 7 air devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional office	<b>Complied</b> Four (4 Nos.) Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed in consultation with CECB and result can be seen on URL- <a href="http://www.envsaindia.com/cpcb/industry.php">http://www.envsaindia.com/cpcb/industry.php</a> .  CEMS has been installed in all the major stacks and its connectivity given to CPCB and CECB portal.  Monitoring data is submitted six monthly to MoEF&CC RO office, Raipur.
(ii)	The expansion project shall comply with the new MOEFCC standards vide GSR 612(E) dated 25.08.2014 with respect to particulate matter, SO <sub>2</sub> , NO <sub>x</sub> for Cement Sector	<b>Noted and being compiled.</b>
6.	The project proponent shall comply with all the environmental safeguards stipulated in the environmental clearance letter of even No. dated 02 <sup>nd</sup> September April, 2007	<b>Noted and compiled.</b> Environmental protection measures suggested in the EIA/EMP report are duly implemented in the plant on regularly basis. Compliance report of the same is annexed herewith.
7.	The company shall obtain fresh Environment Clearance in case of any change in the scope of the project.	<b>Noted</b>
8.	This issues with the approval of Competent Authority.	<b>Noted</b>

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## ANNEXURE-1



ESP at TTP 15 MW



ESP at Cooler



Bag Filter at Crusher Stack



Hybrid Filter at Cement Mill



ESP at Old TTP 15 MW



Bag House at Klin Stack



Bag House at Klin Stack



ESP at Cooler



<b>Ambuja Cement</b> <b>Ambuja Cements Limited</b> ( Unit: BHATAPARA ) Address : P. O. Bazar, Tekail Salinda Bazar Dist Raipur Chhattisgarh, PIN 491131. PAN No : AAAC00043P GSTN No. : 22AAAC00043P128 TEC Code : 13480000137 Cost. Person: Tel. No. : Fax No. : E-Mail :		Vendor Code : 913001410 KUNDO ENGINEERING WORKS INTERNATIONAL ENGINEERING CO LTD, NO 5 JIMKOTE SE VEDAS KUNDOVA END TECHNOLOGICAL DEVELOPMENT ZONE, BILGAJI, Dist: BILGAJI, PIN: 221004 GSTN No: PAN No : NA-19PC001 Tel No : 913771576434 FAX No : E-Mail : kundoengineering@gmail.com Contact: 98890 21885		<b>Purchase Order</b> PO No/Date: 2800000000/0020 PO Date : 11.06.2022 PO Type : CMT0001211 Issuing Authority : MD Sharma & Legale Vendor's Ref/Qty No : Created by: Vishwanath Tekail Please Quote the GSTN Number, PO No., Line Item No. Name of the Works / Unit and the Contact Person in all correspondence (including the Delivery Challan/Invoice)	
--	--	---	--	---	--

With reference to your quotation and subsequent negotiations, we are pleased to place this Purchase Order on you for the supply of following items/services SUBJECT to terms and conditions stated below and printed overleaf/attached with this purchase order

PO Item No / PN No /Dept	Item Code	Description & Specification	Delivery Date	QTY	UOM	Price in USD	Total Discount	Amount in USD
00001/ 1330000795/ TECHNICAL		Supply of CPP Coal Shed CPP Exported Structural material for Coal shed (Weight: 1792.19 MT with sheets & accessories)  Size of shed : Clear inside width 90 Mtr and total length 215 Mtr (L/C)  a Gross Price in USD 2,411,600.00 Total in USD 2,411,600.00	31.01.2023	1,000	LOT	2,411,600.00 USD 1 LOT	USD 0.00	2,411,600.00
<b>Total in USD</b> Twenty Four Lakh Eleven Thousand Six Hundred Only								2,411,600.00

**Header Information :**  
 This PO is made with reference to the best and final price submitted by M/s KUNDO ENGINEERING against rfq\_60574 & rfq\_60574\_1 for the job of "Design, supply, and supply of CPP Coal Shed (1 no.), Line stone Shed Line 12 no.1 & Line 2 (1 no.)" at BCL Bhatapara.  
 The scope of work remains as shared during the RFQ stage.  
**Important Note:**  
 Dispatch Intimation/Transportation: KUNDO Please share report related communication strictly to following email ids (KUNDO@BCL)  
 Mr. Anil Balia (Mobile No: +91- 7738300149) or  
 Mr. Shaleeh Ghazet (Mobile No : +91-7738300158)  
 E-mail ids: kuo-goschadising@bhatapara.com/anil.balia@bcl.co.in/  
 shaleeh.ghazet@bcl.co.in

### Purchase ordered Copy of Coal Shed for TPP



<b>Ambuja Cement</b> <b>Ambuja Cements Limited</b> Address : P. O. Kumbhari Bazar, Dist. Jaipur Rajasthan, PIN 304311, India PAN No : IAAJ0001000 GSTN No. : IAAJ0001000100 IEC Code : 1240000000 Cont. Person: Tbl. No. : Fax No. : E-Mail :		Vendor Code : 00000000 KUMHARI BAZAR INTERNATIONAL DEVELOPMENT CO. LTD., NO. 9 JANGHAR ROAD, JANGHAR DIST. THIRUVARUR, TAMILNADU-605001, INDIA GSTN No. : PAN No. : IAAJ0001000100 Tel. No. : 04377000000 FAX No. : E-Mail : kumhari@idc.com Contact: 0437 7000000		<b>Purchase Order (Import)</b> PO No. : 000000000000 PO Date : 01/07/2020 PO Type : Issuing Authority : Mr. Kumbhari Bazar Header's Ref No. : Created by: Kumbhari Bazar Please Quote the GST Number, PO No., Line Item No., Name of the Works / Unit and the Contact Person for all correspondence (including the Delivery Challan/Invoice)			
With reference to your quotation and subsequent negotiations, we are pleased to place this purchase order on you for the supply of following stone/structure material to terms and conditions stated below and printed herein/attached with this purchase order.							
Sl. No. / Item No. / Particulars	Item Code	Description & Specification	Quantity	Unit	Price in INR	Total Amount	Amount in INR
000000000000 100000000000 100000000000		Supply of lime stone shed liner: 2mm Imported structural material for 2 mm of lime stone shed liner (Weight: 600kg per sqm) and concrete for each shed.  Size of shed: Clear inside width 15.5 Mts (linear to later shed) and total length 200 Mts (200) x 2 nos  a Gross Price in INR : 1,721,200.00 Net Price in INR : 1,721,200.00	2,000	SQM	861,600.00 P&A : 1.00	700 5.00	1,721,200.00
<b>Total in INR</b>						1,721,200.00	
<b>Header Information :</b> This PO is made with reference to the best and final price submitted by the Bidders against the GSTN & the PO of "Design, supply, supply of the shed liner to the lime stone shed liner to the Bidders" at Ambuja Cement.							
The scope of work remains as stated during the Bidding stage.							
<b>Important Note:</b> Please refer to the terms and conditions of the Bidding document and the following mail for 000000000000.							
Mr. Kumbhari Bazar (Contact No. : 0437 7000000) or Mr. Kumbhari Bazar (Contact No. : 0437 7000000) Email : kumhari@idc.com/kumhari@idc.com							

## Purchase order Copy of Limestone Covered Shed 2



## कार्यालय वनमण्डलाधिकारी बलौदाबाजार वनमण्डल, बलौदाबाजार

Email :- dfo\_balodebazar@rediffmail.com, ☎ 07727-296526

क्रमांक/तकनीकी/विविध/1613  
प्रति,

बलौदाबाजार, दिनांक 7/06/2022

✓ मे. अम्बुजा सीमेंट लिमि.  
(युनिट-भाटापारा)

ग्राम व पोस्ट रवान, तह. बलौदाबाजार  
जिला बलौदाबाजार-भाटापारा (छ.ग.)

विषय :- Submission of physical verification report of plantation and greenbelt development at Ambuja Cements Limited (Bhatapara Unit), Rawan Limestone mines & Maldi Mopar Limestone mines.

संदर्भ :- आपका पत्र क्रमांक/ACL/BYT/ENV/2021-22/160 दिनांक 30.12.2021.

=== : 00 : ===

उपरोक्त विषयांतर्गत संदर्भित पत्र के तात्पर्य में आपके द्वारा प्रस्तुत प्रतिवेदन अनुसार संयंत्र एवं माईन्स क्षेत्र का M/s Anacon Laboratories Pvt. Ltd. Nagpur (QCI-NABET Accredited EIA Consultant) द्वारा तैयार किए ग्रीनबेल्ट/प्लानटेशन प्रतिवेदन का भौतिक सत्यापन उपवनमण्डलाधिकारी बलौदाबाजार द्वारा किए जाने पर हरिफ्टी एवं वृक्षारोपण की स्थिति 33% से अधिक पाया गया है।

—वनमण्डलाधिकारी

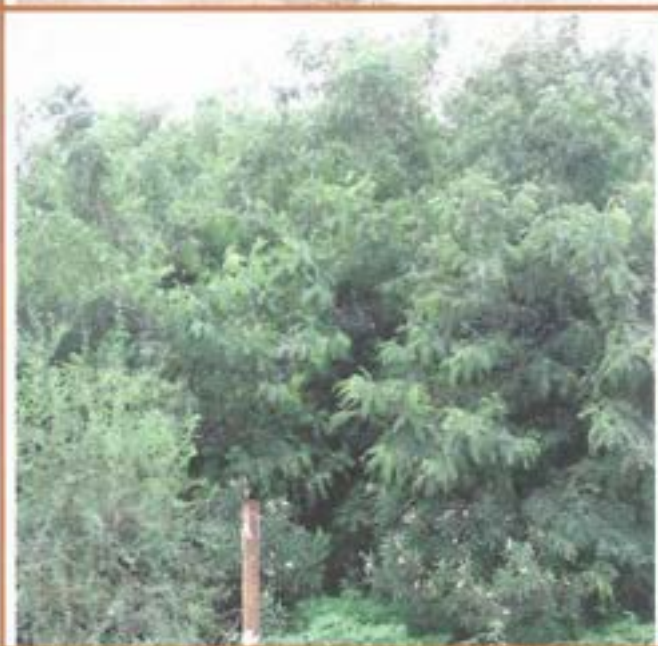
बलौदाबाजार वनमण्डल, बलौदाबाजार

1: GREEN BELT PHOTOGRAPHS

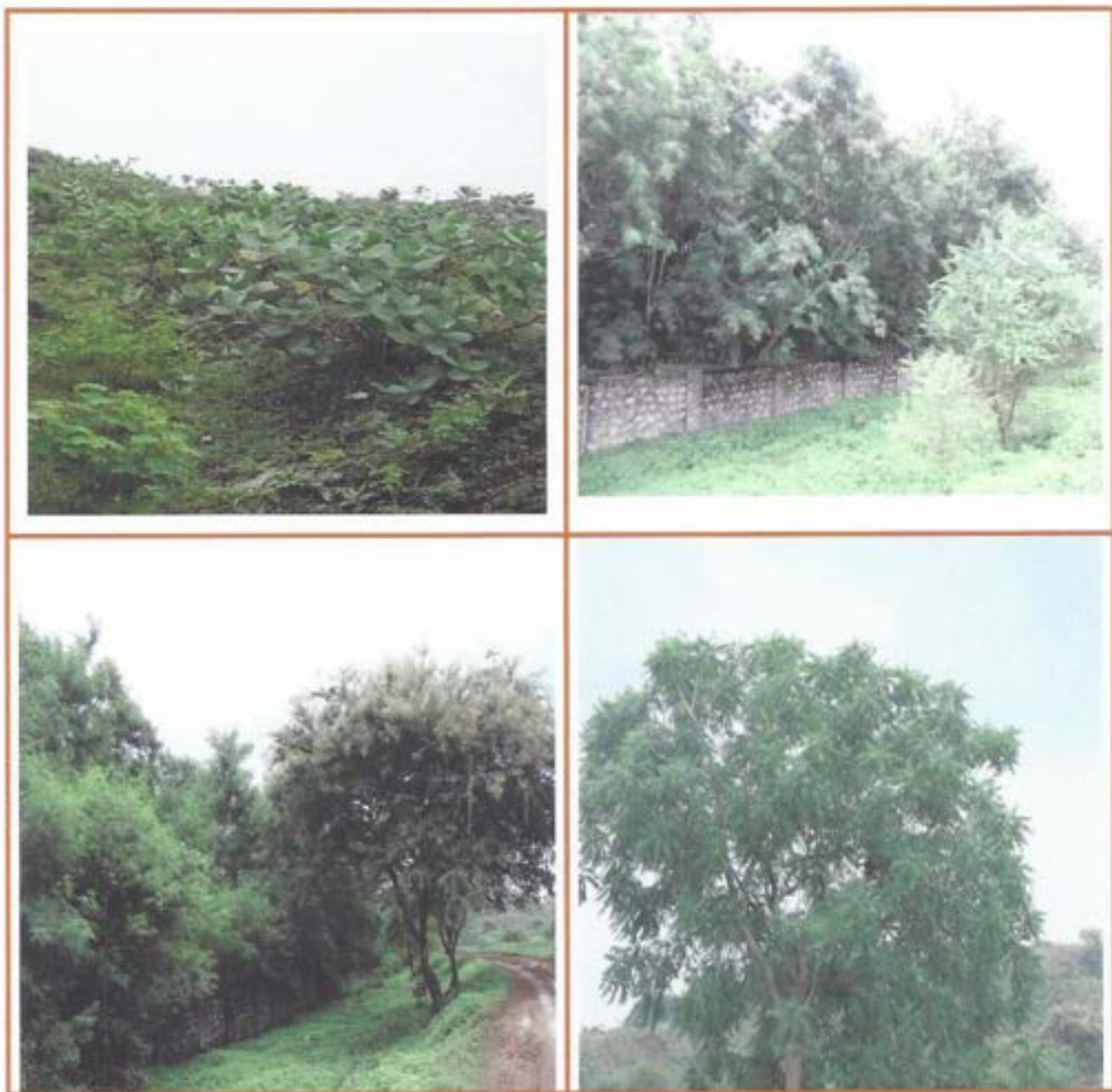


























## Annexure IV

Sl.No.	THEMATIC WISE ACF BUDGET EXPENDITURE FOR FOUR FINANCIAL YEARS					
	Program/Activity	Amount in Rs.	Amount in Rs.	Amount in Rs.	Amount in Rs.	Total
		F.Y.18-19	F.Y. 19-20	F.Y. 20-21	F.Y.21-22	
1	water Resource Development /Portable water facilities and drinking water	70,51,021	34,02,340	19,35,604	41,18,822	1,65,07,787
2	Education Development	10,77,402	18,92,266	8,29,219	19,47,288	57,46,175
3	Integrated Rural development Expenses	1,12,81,428	1,33,42,865	90,32,943	1,00,20,503	4,36,77,739
4	Health & Sanitation Development	17,54,908	38,75,718	52,13,775	87,45,743	1,95,90,144
5	Vocational Training Expenses	36,52,621	48,45,082	41,19,771	57,26,950	1,83,44,424
6	Agriculture development	33,51,396	36,79,360	40,09,319	53,37,507	1,63,77,582
7	Non conventional energy	7,70,000		6,26,500		13,96,500
8	Women Development	13,43,967	11,64,310	14,19,954	15,99,904	55,28,135
	Total	3,02,82,743	3,22,01,941	2,71,87,085	3,74,96,717	12,71,68,486

## Annexure –V

### Environmental Expenditure for the Period (April 2022- September 2022)

S.No.	Particulars	Cost (in Lacs)
1	Environment Monitoring	16.13
2	Annual maintenance Charge of Environment Monitoring Equipments.	19
3	Garland Drain Cleaning and Maintenance Charges	4
4	CEMS Annual Maintenance Charge	9.2
5	Rain water Roof Top Recharge Structure	20
6	Sweeping Machine Charge (Recurring Cost)	11
7	ETP AMC Charges	17.1
8	Bag Filter & ESP Maintaence Cost	16.4
9	Environmental & Horticulture Expenses	32.65
<b>Total</b>		<b>145.48</b>



Environment Bhatapara &lt;environment.bhatapara-ind@ambujacement.com&gt;

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**EC Half yearly Compliance Report (Oct 2021 to Mar 2022)**

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Environment Bhatapara &lt;environment.bhatapara-ind@ambujacement.com&gt;

Sat, May 28, 2022 at 7:23 PM

To: IRO Raipur &lt;iro.raipur-mefcc@gov.in&gt;

Cc: CPCB RD Bhopal &lt;cpcb.bhopal@gmail.com&gt;, Head Office CECB &lt;hocecb@gmail.com&gt;, Regional Officer &lt;rocecbraipur2014@gmail.com&gt;, ecompliance-cg@gov.in

Dear Sir,

Please find enclosed herewith Half yearly EC Compliance Report of stipulated conditions along with Monthly Environmental Monitoring Report for the period (Oct 2021 to Mar 2022) of Cement plant and Maldi Mopar Mine and Rawan Mine of Ambuja cements Ltd. Bhatapara integrated Cement plant. Copy of same will uploaded on the company & MOEFCC website shortly.

This is for your kind information and record please.

With Best Regards

Subhash Awasthi,

Head Environment (DGM)

Ambuja Cement Ltd (Bhatapara Unit),

Rawan Village, Baloda Bazar Dist.,

Chhattisgarh-493331,

Office: 8982073666.

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**3 attachments**Bhatapara\_EC 6.31 MTPA \_Rawan Limestone Mine Compliance Report ( OCT 2021- MAR 2022 ).pdf  
2675KBhatapara\_EC 4.8 MTPA \_Cement Plant Compliance Report ( OCT 2021- MAR 2022 ).pdf  
4753KBhatapara\_EC 2.0 MTPA \_Maldimopar Limestone Mine Compliance Report ( OCT 2021- MAR 2022 ).pdf  
8584K

# Ambuja Cement

प्रति,

- 1- अध्यक्ष,  
जिला पंचायत रायपुर
- 2- अध्यक्ष,  
नगरपालिका परिषद बलीदाबाजार
- 3- सरपंच,  
ग्राम पंचायत रवान, भद्रापाली, पीसरी, कुकुरदीह भरसेली  
तहसील बलीदाबाजार जिला रायपुर छोगा

माननीय महोदय,

अम्बुजा सीमेंट लिमिटेड रवान के अभ्यावेदन पर भारत शासन पर्यावरण एवं वन मंत्रालय नई दिल्ली ने अपने पत्र दिनांक 13 मई 2011 द्वारा सिमेंट संयंत्र के विस्तारीकरण के फलस्वरूप उत्पादन क्षमता 1.8 एम0टी0पी0ए0 में वृद्धि करते हुए 3.5 एम0टी0पी0ए0 बढ़ाने की अनुमति प्रदान की है कि नियमानुसार कम्पनी द्वारा पर्यावरण से संबंधित निर्देशों का पालन किया जावेगा।

इस संदर्भ में निर्देशानुसार भारत शासन पर्यावरण एवं वन मंत्रालय के आदेश की प्रतिलिपि इस पत्र के साथ आपकी जानकारी के लिए संलग्न है।

दिनांक - 18/5/2011

संलग्न - पर्यावरण एवं वन मंत्रालय भारत

शासन का पत्र दिनांक 13/5/2011

की छायाप्रति

यास्तै

अम्बुजा सिमेंट लिमिटेड

रमेश मिश्रा

प्रबंधक (जन सम्पर्क)

राधा लक्ष्मी  
सरपंच  
ग्राम पंचायत रवान  
वि.ख.बलीदाबाजार (छ.ग.)  
18/5/2011

राजकुमार २६६  
सरपंच  
ग्राम पंचायत, भरसेली  
18/5/2011

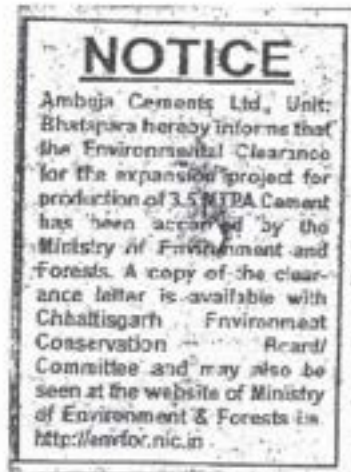
डिजेस्टिबल  
सरपंच  
ग्राम पंचायत पीसरी  
वि.ख.बलीदाबाजार (छ.ग.)

## AMBUJA CEMENTS LIMITED

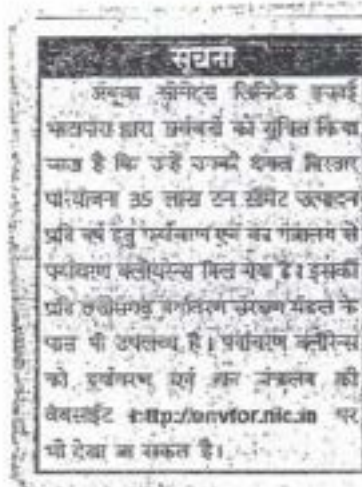
(UNIT - BHATAPARA)

WORKS : P.O. : Rawan, Tahsil : Baloda Bazar, Dist. : Raipur (Chhattisgarh) 493 331, Phone : 07727-220010-15, Fax : 07727-220004  
RAIPUR OFFICE : "Muli Chhaya", Ravi Nagar, Raipur-492 001 (C.G.) Ph. : 0771-2422039, 2424362, 2426311, Fax : 0771-4010030  
REGD. OFFICE : P.O. : Ambuja Nagar, Taluka : Koderma, Dist. : Jharkhand-362 715

Central Chronicle Date- 05-06-2009



Haribhumi Date - 05-06-2009







Raw materials are transported in covered

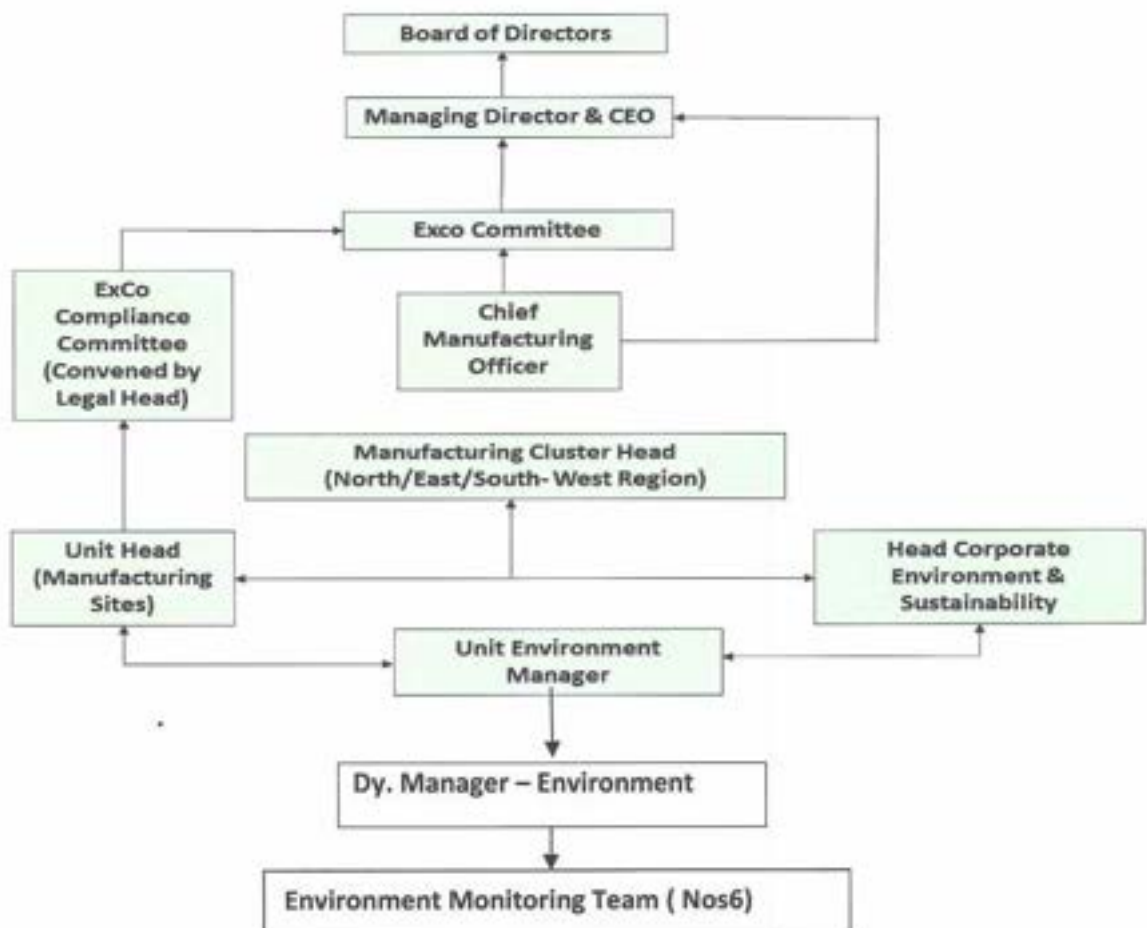
## Annexure - IX

### ENVIRONMENTAL MANAGEMENT CELL (EMC)

In order to maintain the environmental quality within the standards, regular monitoring of various environmental components is necessary. M/s.Ambuja Cements Ltd. Is maintaining/ will maintain a full-fledged Environmental Management Cell (EMC) for environmental monitoring and management. The EMC team is responsible for pollution monitoring aspects and implementation of control measures in the plant .A group of qualified and efficient engineers with technicians has been deputed for maintenance, up keeping and monitoring of the pollution control equipment, to keep them in working at the best of their efficiencies.

### Structure of EMC

Structure of Environment Management Cell at M/s. Ambuja Cements Ltd.



Structure of EMC at M/s. Ambuja Cements Ltd.

### Responsibilities of EMC

The EMC looks after and implement the various functions to ensure that environmental status of the area remains within the statutory standard of MOEFCC and SPCB. The responsibilities of the EMC include the following:

- Procurement and commissioning of Pollution Control/Monitoring Equipment.
- Environmental monitoring of the core and buffer zone and evaluation of results. Keeping of records to track the surrounding environment quality status.
- Timely Calibration of Pollution Control Equipment and facilities.
- Specification and regulation of maintenance schedules for Pollution Control Equipment.
- Ensuring that prescribed standards are maintained.
- Implementation of the mitigation measures as suggested in EIA/EMP Report.
- Ensuring greenbelt development/plantation & its maintenance.
- Compliance with guidelines and statutory requirements.
- Coordination with statutory bodies, functional groups of the unit, Corporate Project / Environment & Engineering department etc.
- Organizing meetings of the Environmental Management Committee.
- Interaction with engineering & operation team for implementation of any modification programmes intended to improve the availability / efficiency of pollution control devices / systems.
- Carry out proactive environmental studies and observe all precautions necessary to avert disasters and emergencies in the mining observations as well as nearby areas.
- Regular environmental review and performance appraisal (Internal) and organizing Environmental / Energy and Water Audits by independent agencies/ 3<sup>rd</sup> party agencies.
- Coordination with the vendors dealing in waste supplies and disposal.
- Ensuring that the waste handling and disposal is carried out as per prescribed conditions.
- Conducting regular training programmes on various environmental requirements especially sustainable development, climate change, environmental monitoring etc.
- Reporting of compliances and non-compliances (if any) to management and other stakeholders.





## CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

PARYAVAS BHAWAN, NORTH BLOCK, SECTOR -19,

NAVA RAIPUR ATAL NAGAR, RAIPUR (C.G.) 492002

E-mail : hocecb@gmail.com, Ph. No. 0771-2512220

No. 6718/HSMD/HO/CECB/2019

Raipur, Date 06/11/2019

To,

**M/s Ambuja Cements Ltd.,  
Village - Rawan, Tehsil- Balodabazar,  
Distt. - Balodabazar Bhatapara (C.G.)**

Sub:- Renewal of authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.

Ref:- Your Online application no. 2834984 dated 27/04/2019 & Subsequent Correspondence ending dated 15/05/2019.

---00---

The authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 is hereby renewed for the period of **Five Years** i.e. from **14/08/2019 to 13/08/2024**. The details of authorization along with terms & conditions are given as per below:-

### **FORM 2** **[See rule 6 (2)]**

**GRANT OF AMENDMENT AND SUBSEQUENT RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES**

1. Number of authorization **275/HO/HSMD/CECB/ATAL NAGAR, RAIPUR.**
2. Reference of Online application no. **2834984 dated 27/04/2019 & Subsequent Correspondence ending dated 15/05/2019.**
3. The operator of facility i.e. occupier **M/s Ambuja Cements Ltd., (Lime Stone Mines), Village - Rawan, Tehsil- Balodabazar, Distt. - Balodabazar Bhatapara (C.G.)** is hereby granted an authorization based on the signed inspection report from RO for collection, storage, transport, reception & coprocessing of hazardous wastes in the premises situated at **Village - Rawan, Tehsil- Balodabazar, Distt. - Balodabazar Bhatapara (C.G.).**

### Detail of Authorisation

SLNo.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilization or co-processing etc.	Quantity (Tonnes/Annum)
1.	Scrap PTA, PTA contaminated liners, Oily rags, process sludge and ETP sludge	co-processing	8000 MT/Year
2.	Waste Mix (ETP sludge pesticide residue, off specification pesticides)	-----do-----	19000 MT/Year
3.	As Characterized by CPCB, Waste mix (process organic residue & distillation bottom residue, spent carbon, ETP sludge, FE salt/mixed salt, insulation waste, thermocoal waste & used PPE) from Dr. Reddy's Laboratories Ltd., Srikakulam	-----do-----	10301 MT/Year
4.	ETP Sludge (BASF India Ltd, Mangalore)/Similar industries/ Sectors	-----do-----	10 T/Day
5.	Toluene Di Isocyanate Tar and TDI Tar (M/s Narmada Chematur Petrochemicals Ltd., Bharuch) Aniline Plant/TDI Plant/Similar industries/ Sectors,	-----do-----	20 T/Day
6.	Paint Sludge (Automobile Sector),	-----do-----	30 T/Day
7.	Refinery Sludge (M/s Chennai Petrochemicals Company Ltd, Chennai)/Similar industries/Sectors	-----do-----	30 T/Day
8.	Phosphate Sludge (Ford India Ltd, Chennai) (Automobile Sector)/Similar industries/Sectors	-----do-----	11 T/Day
9.	N Butanol Salt (M/s Jubilant Organosys Ltd, Mysore) (Pharmaceutical industry)/ Similar industries/Sectors	-----do-----	12 T/Day
10.	Spent Carbon (Hindustan Coca Cola Beverages Pvt Ltd, Bangalore)/Similar industries/ Sectors	-----do-----	23 T/Day
11.	ETP Bio Solid (Hindustan Coca Cola Beverages Pvt Ltd, Bangalore)/Similar industries/Sectors	-----do-----	25 T/Day
12.	WTP Sludge (Hindustan Coca Cola Beverages Pvt Ltd, Bangalore)/Similar industries/Sectors	-----do-----	22 T/Day
13.	Solar Evaporation Pond Sludge Salt (M/s Jubilant Organosys Ltd, Mysore)/Similar industries/Sectors	-----do-----	12 T/Day
14.	Oily Rags (Ford India Ltd, Chennai)(Automobile Sector)/Similar industries/Sectors	-----do-----	3 T/Day

15.	Grinding dust (SKF India Ltd., Bangalore) Automobile Bearings/Similar industries/ Sectors	-----do-----	9 T/Day
16.	Liquid Organic Solvent (Pharma industry)/Similar industries/ Sectors	-----do-----	15 T/Day
17.	Solid Organic Solvent (Pharmaceutical industry)/Similar industries/Sectors	-----do-----	15 T/Day
18.	ETP Sludge (Automobile Industry)/Similar industries/ Sectors	-----do-----	20 T/Day
19.	Spent Catalyst (IOCL, Barauni) Oil Refinery/Similar industries/ Sectors	-----do-----	33 T/Day
20.	Organic Residue (Reprocessing of used oil)/Similar industries/ Sectors	-----do-----	13 T/Day
21.	Spent clay (Reprocessing of used oil)/Similar industries/ Sectors	-----do-----	13 T/Day
22.	Acid Tar Sludge (M/s Bhilai Steel Plant, Durg)/Similar industries/Sectors	-----do-----	25 T/Day
23.	ETP Sludge (KEC International Ltd) infrastructure Engineering, Procurement and Construction (EPC)/Similar industries/Sectors	-----do-----	25 T/Day
24.	Contaminated plastic waste (Board and Paper industries, Vapi, Gujarat)/Similar industries/Sectors	-----do-----	10 T/Day
25.	Liquid Organic Spent Solvent (Pharma Industries)	-----do-----	10 T/Day
26.	Incineration Ash (Tata Motors, Jamshedpur) Automobile sector/Similar industries/ Sectors	-----do-----	5 T/Day
27.	Waste/residue containing oil (National Engineering Industry) Bearings manufacturing/Similar industries/ Sectors	-----do-----	1.68 T/Day
28.	Process waste/residue (M/s Cheminova India Ltd.) Pesticide industry/Similar industries/ Sectors	-----do-----	15 T/Day
29.	Dismantled Lube/Fuel oil filter (M/s Diesel Loco Shed, Itarsi)/Similar industries/ Sectors	-----do-----	19 T/Day
30.	Mixed waste (distillation residue, residue and waste, spent catalyst and spent carbon and date expired medicine and off specification drugs) pharma Industry/Similar industries/ Sectors	-----do-----	25 T/Day
31.	Process/distillation residue and wastes pharma industries/ Similar industries/Sectors	-----do-----	20 T/Day
32.	ETP Sludge and other Process sludge (M/s Lanxes India Pvt Ltd.) Ion exchange resin chemicals manufacturing/Similar industries/ Sectors	-----do-----	20 T/Day



33.	Grinding muck (M/s Bosch Ltd) Mechanical and electronic diesel control pumps manufacturing/ Similar industries/Sectors	-----do-----	20 T/Day
34.	Plastic waste (hazardous waste) N R Agarwal Industries Ltd paper manufacturing from waste paper/ Similar industries/Sectors	-----do-----	15 T/Day
35.	Distillation residue (both liquid and solid) and spent carbon (pharma industry)/ Similar industries/Sectors	-----do-----	20 T/Day
36.	ETP sludge of M/s Tata Steel Ltd, Tube Div, Jamshedpur and M/s Indian Steel and Wire Products Ltd, Jharkhand Steel and Wire Products/ Similar industries/Sectors	-----do-----	20 T/Day
37.	Spent pot lining from M/s BALCO, Korba Aluminium Smelter Plant/Similar industries/Sectors	-----do-----	12 T/Day
38.	Chemical ETP Sludge from M/s Merck Ltd., Goa pharma company/Similar industries/ Sectors	-----do-----	25 T/Day
39.	Boiler carbon from M/s Syngenta India Ltd. Goa Pesticide/Agro chemical industrie/Similar industries/Sectors	-----do-----	15 T/Day
40.	Off specification products and ETP sludge from M/s Lupin Ltd, Goa Pharma Company/Similar industries/Sectors	-----do-----	15 T/Day
41.	Date expired medicines and off specification drugs Torrent Pharma Ltd, kadi, Gujarat/Similar industries/Sectors	-----do-----	15 T/Day

- (1) The authorization shall be valid for the period of **Five Years** i.e. from **14/08/2019 to 13/08/2024**.  
(2) The authorization is subject to the following conditions:

### **TERMS & CONDITIONS OF AUTHORIZATION**

1. The authorization shall comply with the provisions of Environment (protection) Act, 1986 and the rules made there-under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Chhattisgarh Environment Conservation Board.
3. The person authorized shall not rent, lend, sell transfer or otherwise transport the hazardous wastes without obtaining prior permission of the Chhattisgarh Environment Conservation Board.
4. Any unauthorized change in personnel, equipment, or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".

7. It is the duty of the authorized person to take prior permission of the Chhattisgarh Environment Conservation Board to close down the facility.
8. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.
9. Industry shall prepare emergency response plan (ERP) and ensure implementation the same at the event of any accident occurs due to handling and transporting of hazardous waste as per CPCB guideline.
10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per standard operating procedures/guidelines issued by CPCB from time to time.
11. An application for the renewal of an authorisation shall be made three months before the expiry of authorization as laid down in the Rules.
12. Annual return in form IV shall be filed by June 30th for the period ending 31st March of the last financial year.
13. The wastes shall be collected and stored properly with adequate safety measures as per rule.
14. Authorized person shall comply with the provisions of rule 17, 18 and 19 for packing, labeling and transport of Hazardous Waste.
15. The authorized person should maintain the record of Hazardous Waste as per Form-3 of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
16. The occupier shall follow the guidelines (if any) issued by Central Pollution Control Board or MoEF & CC for management of Hazardous waste from time to time.
17. The industry shall display data outside factory gate on quantity and nature of hazardous chemicals and wastes being used in the plant, water and air emissions and solid wastes generated within the factory premises.
18. Industry shall ensure disposal of hazardous waste generated during the production process through authorized recycler/Co-processing in cement plant/captive disposal facility/arrangement for sharing of authorized disposal facility/common TSDF as per rule. Failing which this authorization shall be treated as cancelled and appropriate action would be initiated against the industry.
19. Industry shall comply all the provision incorporated in the guideline for pre-processing and co-processing of Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 published on 07 July 2017.
20. At a time only one type/category of hazardous waste shall be Co-processed in the cement kiln. A log book of the waste Co-processed shall be maintained including emission monitoring result during Co-processing.
21. Industry shall comply the stack emission norms prescribed in the notification G.S.R. 497 (E) dated 10 May 2016 issued by MoEF & CC for cement industry.
22. Industry shall give priority for co-processing of hazardous waste generated within the Chhattisgarh State as mentioned in the authorization.
23. Industry shall create new website for Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 and upload all the information above the waste in the website.
24. The waste must be given thermal/biological/physico-chemical treatment; the waste should be completely dewatered, detoxified, and proper conditioned and any possible recovery is made before their disposal.
25. The industry should constitute a hazardous waste management cell to take care of the management aspect to the hazardous waste generated in the plant.

26. An on-site storage of the hazardous wastes for a maximum period of 90 days should be provided and it shall be ensured that there is no leakage or seepage from the surrounding walls or bottom. The site should be covered and properly protected to prevent the entry of rain water in storage area.
27. At least four nos. of peizometric points should be provided around the storage site of H.W. to monitor the leaching of the waste and monitoring report shall be submitted to the board in every six months. Each type of waste shall be stored in a separate storage cell.
28. The discarded containers of Hazardous waste and chemical shall not be used for storage of food grade products. At the storage site "Hazardous waste storage site & danger signboard" shall be provided with all safety devices.
29. In the event of any accident due to handling of hazardous waste the authorized person must inform immediately to the Concerned Regional Office and H.O., Atal Nagar, Raipur of the Board by fax/telephone or by E-mail about the incident and details report be sent in form no. 11 [see rule 22].
30. The authorization obtained by the Chhattisgarh Environment Conservation Board should be prominently displayed.
31. Used batteries shall be disposed of as per the Batteries (Management & Handling) Rules, 2001.
32. Board reserves the right to cancel/amend the above condition and add new conditions as and when deemed necessary.

**Member Secretary**

C.G. Environment Conservation Board  
Nava Raipur Atal Nagar, Raipur (C.G.)

Endt. No. 6719/H.O./HSMD/CECB/2019

Atal Nagar, Raipur, Date 06/11/2019

Copy to :- Regional Officer, Regional office, Chhattisgarh Environment Conservation Board, Raipur (C.G.) please ensure compliance and report, if any condition/conditions are violated by the industry.

Sd/-

**Member Secretary**

C.G. Environment Conservation Board  
Nava Raipur Atal Nagar, Raipur (C.G.)

Digitally Signed by :R P Tiwari  
MS

Date: 2019.11.15 19:31:18 IST



## Annexure XI

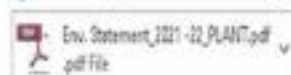
### Environmental Statement Report 2021-2022 Cement Plant



Environment Bhatapara

To: Regional Officer (rocecbhatapara2014@gmail.com); Head Office CECB (hrocecb@gmail.com)

If there are problems with how this message is displayed, click here to view it in a web browser.



Fri 30-09-2022 20:23

Dear Sir,

Please find here with Environmental Statement report for the year 2021-2022 of the Cement plant for your kind information further record please.

Regards

SUBHASH AWASTHI

Deputy General Manager (Environment & Sustainability)

| Ambuja Cement Limited | Rawan Village | Balodabazar District |

| Chhattisgarh | Pin - 493331 |

| Mobile- +91-8982073666 | Email - [subhash.awasthi@adani.com](mailto:subhash.awasthi@adani.com) | [www.adani.com](http://www.adani.com) |



Growth  
with  
Goodness

Our Values: Courage | Trust | Commitment



AdaniOnline

<b>Ambuja Cement</b> <b>Ambuja Cements Limited</b> <b>Address :</b> J. O. Rawan Baloda Bazar, Dist Raipur Bhatapara, PIN -493331,  <b>PAN No :</b> AAACD9469P <b>GSTN No. :</b> 21AAACD9469P1ZK  <b>Cont. Person:</b> <b>Tel. No. :</b> <b>Fax No. :</b> <b>E-Mail :</b>	<b>Vendor Code :</b> 918045593 <b>WOOLIVER,</b> PLOT NO 154 EPIP-1 JHARWADEI BAZAR , SOLAN, PIN:173205 Himachal Pradesh, India  <b>GSTN No:</b> 03AAAPW9416H1S3 <b>PAN No :</b> AAAPW9416H <b>Tel No :</b> 0172-2746321 <b>FAX No :</b> <b>E-Mail :</b> wooliver@gmail.com <b>Contact:</b> SAVITA JAMMAL	<b>Purchase Order</b> <b>SAP PO No/Plant :</b> 2800904114/MM06 <b>PO Date :</b> 08.07.2022 <b>PO Type :</b> CAP(Capital) <b>Issuing Authority :</b> HD Engineering Serv <b>Vendor's Ref/Pr No :</b>  <b>Created by:</b> Sonam Khairnar  <b>Please Quote the GSTN Number, PO No., Line Item No.,</b> <b>Name of the Works / Unit and the Contact Person in all correspondences (including the Delivery Challan/Invoice )</b>
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With reference to your quotation and subsequent negotiations, we are pleased to place this Purchase Order on you for the supply of following items/services subject to terms and conditions stated below and printed overleaf/attached with this purchase order

PO Item No / PR No / Desc	Item Code	Description & Specification	Delivery Date	Taxes/Duties Value	Qty	UOM	Price in INR	Total Discount	Amount in INR
00001/ 1000661888 / SAFETY&ENV		Water Treatment Plant 600 KLD FOR Colony HDN Code:047112100 Supply sump: Installation Water Treatment Plant Capacity 600 KLD for Colony # No. 1  Scope of Work 1. Water treatment plant ( WTP ) designing based on the Limestone Mine Pit Water Only and Treated water should be suitable for Drinking Purpose ( Confirm IS : 10500 : 2021 ). 2. Scope of Work:Water Treatment plant fully automatic: forPlant Capacity 600 KLD: 2# KLD /#Having the provision of both Pneumatic Valve and Manual Valve. 3. Water TreatmentFor Colony Capacity 600 KLD: 3# KLD /#Having the provision of both Pneumatic Valve and Manual Valve.	12.01.2023	Integrated GST 18%	1.000	LOT	3,709,000.00 PER 1 LOT	18% 0.00	3,709,000.00

## Annexure XII

<b>Ambuja Cement</b>		<b>Ambuja Cements Limited</b>		Vendor Code : 918045693 MOCK OLIVER, PLOT NO 144 SPID-1 CHAMPAKARI BAZAR , SOLAN, PIN:171306 Himachal Pradesh, India			<b>Purchase Order</b> SAP PO No/Plant 2800061124/WH06 PO Date : 06.07.2022 PO Type : CRP(Capital) Issuing Authority : HD Engineering Serv Vendor's Ref/Qty No :		
PO Item No / PB No / Sect	Item Code	Description & Specification	Delivery Date	Taxes/Duties Value	Qty	UOM	Price in INR	Total Discount	Amount in INR
00002/ 10000612890 / SAPFUTLWHV		11. All Pneumatic and valve and other Accessories should be Standard Make. 12. Plant has to run initially one month by the Supplier deputed Engineer before handover to M/s Ambuja Cements Ltd and performance evaluation. 13. P/L Supply should be standard Make and copy of License has to supply by the supplier and same should be compatible for plant operation. 14. Supply of Pump: 1 Drawing and Civil Drawing for Filter foundation and other equipment installation. 15. Supply of Soft and Hard Copy of all Drawing and WTP Manual (Nos. 3).  Water Treatment Plant 500 KLD FOR Plant HEN Code:84212100 Supply and: Installation Water Treatment Plant Capacity 500 KLD for Plant # Nos. 1. Scope of Work 1. Water treatment plant ( WTP ) Designing based on the Limestone Mine Pit Water Only and Treated water should be suitable for Drinking Purpose ( Confirm 18 - 1988 - 2020).	11.07.2022	Integrated GST 18%	1.000	LOT	3,268,000.00 INR 1 LOT	INR 0.00	3,268,000.00



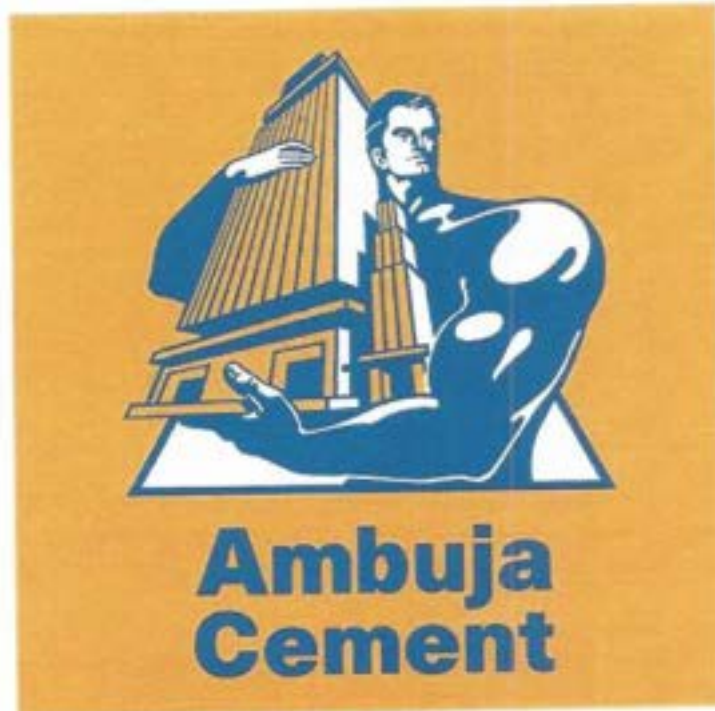


**Typical view of Mobile dust suppression system installed at TPP &  
Limestone pile**



Typically view of cover storage yard civil work under progress

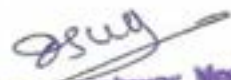
**A COMPREHENSIVE HYDROGEOLOGICAL  
REPORT ON ASSESSMENT OF  
RAIN WATER HARVESTING POTENTIAL  
AT**



**Ambuja Cements Limited  
P. O. Rawan, Tehsil Bhatapara, Dist - Baloda Bazar,  
PIN: - 493331, Chhattisgarh, India**

**Prepare By**

Mr. Dhaneshwar Verma  
Reg. Hydrogeologist  
M.Sc. Geology, M.Sc. Ecology & Environment  
Shop No.-517, 5<sup>th</sup> Flore, Usha Pride, Mowa,  
Raipur, (C.G.) Mo.: 9617007000, 9302610009

  
**Dhaneshwar Verma**  
Reg. Hydrogeologist  
Mob. 9302610009





## 1. INTRODUCTION

Ambuja Cements Ltd in Rawan, Raipur - Chhattisgarh is known to satisfactorily cater to the demands of its customer base. The business came into existence in 1986 and has, since then, been a known name in its field. It stands located at Baloda Bazar, Bhatapara, Rawan-493331.

## 2. OBJECTIVE

The broad objectives of the study are:

- To observe Hydro geological conditions and availability of ground water of in the area.
- To work out scope of Rooftop & Storm water harvesting within the premises and suitable rainwater Harvesting systems.
- To study more recharge possibilities in and around the plant.

## 3. METHODOLOGY

On the basis of regional levels marked with the help of spot level shown in latest Google Image, site visit, GPS survey etc., physiographic conditions of the plant & its surrounding was studied which helps in determining physiographic gradient.

In Hydrogeological studies, observations were made about geology and types of aquifers, surface water bodies, drainage pattern, yields, quality and hydraulic parameters governing the ground water regime of the area.

Scope of Rainwater Harvesting from Rooftops, Road paved area, green belt, open area etc. was studied depending upon average annual rainfall & its intensity as per recharge capacity of the aquifers determined & the calculations of recharge capacity of each recharge structures has been given accordingly.

## 4. LOCATION

Table 1: Salient Feature of the Plant

S.No	Particulars	Details
1	District and State	Baloda Bazar and Chhattisgarh
2	Tehsil / Taluka	Bhatapara
3	Village/Town	Rawan
4	Toposheet Number	64 K/02
5	Latitude & Longitude	21.674143° & 82.084938°
6	Nearest Railway Station	Bhatapara Railway Station
7	Nearest Airport	Swami Vivekananda International Airport, Raipur



A Comprehensive Hydrogeological Report On Assessment of Rain Water Harvesting Potential At Ambuja Cements Limited, Rawan, Dist Baloda Bazar, C.G., India



Fig:1 Satellite Image Showing Location of Ambuja Cement Ltd Rawan Baloda Bazar C.G.



## 5. CLIMATE AND RAINFALL

The entire Baloda Bazar district falls in sub-tropical zone having extreme climate. The winter season starts in November and extends up to middle of March. The weather is usually cold. During December-January, the area experiences severe cold when minimum temperature goes down to 8°C. The summer season extends from end of March to end of June. Hot waves are common during summer. The area experiences severe heat during May when the highest temperature is around 47°C.

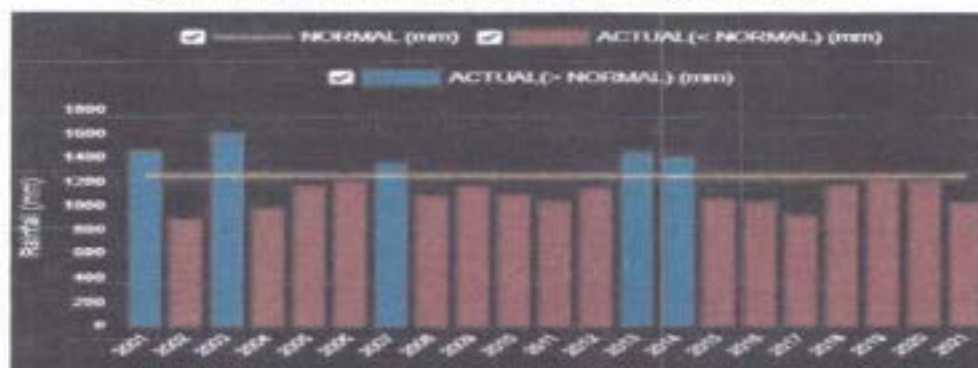
The rainy season starts in early July and continues up to September. The relative humidity is highest during the month of July which goes up to 99%. The district receives about 90% of its annual rainfall during the south-west monsoon period between July and September. Occasional rainfall in winter during December to March is noticed. The rainfall is generally erratic in aerial distribution and intensity of rain varies from place to place and also from year to year. The maximum and minimum relative humidity is observed to be between 99% and 20%. The annual average rainfall in the region is around 1130 mm (average of last twenty years rainfall data from 2001-2021) varying from minimum 885 mm in 2002 to maximum 1600 mm in 2003 (Table 1.1)

Table 2: Rainfall Statistics of Balodabazar District

Source:- <https://indiawris.gov.in/wris>

Year	ACTUAL (mm)	Year	ACTUAL (mm)	Year	ACTUAL (mm)	Year	ACTUAL (mm)
2001	1451.02	2006	1202.86	2011	1035.42	2016	1027.91
2002	885.06	2007	1343.99	2012	1143.66	2017	913.1
2003	1600.36	2008	1079.62	2013	1444.07	2018	1172.11
2004	971.94	2009	1163.62	2014	1400.42	2019	1224.7
2005	1161.84	2010	1088.45	2015	1056.24	2020	1207.77
						2021	1025.53

Graphical Presentation of Yearly Rainfall Data of Baloda Bazar District







Average surface run-off coefficients considered for different surfaces as per CGBW norms are given below in table 3:

S.No.	Details	Values
1	Runoff coefficient for roof top	0.85
2	Runoff coefficient for yard & paved area	0.65
3	Runoff coefficient for green belt	0.15
4	Runoff coefficient for open area	0.20

#### 10.1 RECHARGE POTENTIAL AND AREA DETAIL OF THE BUILDING PREMISES:

However, in order to augment groundwater resources of surrounding area and for betterment of groundwater regime, Plant shall implement groundwater recharge measures within the lease area and in the nearby areas.

The total Area in the project site, covering 3589.00 sq. m. square meters with an annual average rainfall of 1130 m. The water harvesting potential is the total amount of water that is received in the form of rainfall over an area, out of this, the amount that can be effectively harvested i.e.

Water Harvesting potential = Average Annual Rainfall (m.) \* Collection Efficiency

Collection Efficiency = Area of the Catchment (m sq.) \* Run Off coefficient

Area and runoff Co-efficient;

Table 04: Land Use of Building Premises

S.No.	Details	Values
1.	Guest House	(Roof Area 1700SqM)
2.	Mines Office	(Roof Area 237.5 SqM)
3.	HRM Office	(Roof Area 254.5 SqM)
4.	CCR Office	(Roof Area 1376 SqM)
5.	USS – 15	(Roof Area 1136 SqM)
6.	Ambuja Vidya Peeth	(Roof Area 3300 SqM)
7.	Club House	(Roof Area 2000 SqM)
	Total Area of The Building (m <sup>2</sup> )	10004.00 sq m



**Photographs of Rainwater Harvesting Structures Constructed on Building premises**

**RWH Structure HRM Office**



Location of Structure: 21.671961N, 82.085823E

Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth



**RWH Structure Guest House**



Location of Structure: 21.68145N, 82.092474E

Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth





**RWH Structure USS-15**



**Location of Structure: 21.672639N, 82.08209E**

**Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth**



**RWH Structure CCR Office**



Location of Structure: 21.672738N, 82.082661E

Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth



**RWH Structure Mines Office**



Location of Structure: 21.672363N, 82.092049E

Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth

\*\*\*\*\*





**RWH Structure Ambuja Vidya Peeth**



Location of Structure: 21.68377 N, 82.077516 E

Dimension: 1.5 m dia. 2 m depth with injection well of 50 m depth



**RWH Structure Club House**



Location of Structure: 21.681669 N, 82.073656 E

Dimension: 1.5 m dia, 2 m depth with injection well of 50 m depth