

# Ambuja Cement

Registered A/D

ACL/EMD/F-28

Date: 25/05/2022

To,  
The Director  
Ministry of Environment, Forests & Climate Change  
Regional Office (Jaipur)  
A 209- 218, Aranya Bhawan, Mahatma Gandhi Road,  
Jhalana Institutional Area, Jaipur (Rajasthan)

**Sub:** Half-yearly Condition wise Compliance report of Environmental Clearance for expansion of Integrated Cement Project (Clinker from 2.4 MTPA to 2.9 MTPA), Captive Power Plant (From 33 MW to 53 MW) and new Limestone Mine RAS-I (ML Area:183.53 ha & 0.279 MTPA by Ambuja Cement Limited, Vill – Rabriyawas, Teh – Jaitaran, Distt – Pali (Rajasthan)

**Ref:** F. No. J-11011/54/2010-IA-II (I) dated 29<sup>th</sup> March' 2012

Dear Sir,

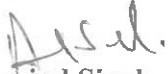
This has reference to the Environmental Clearance Letter No.: - J-11011/54/2010-IA-II (I) dated 29<sup>th</sup> March' 2012, we are submitting herewith the half-yearly compliance report of conditions stipulated in environment clearance letter along with analysis reports and supporting documents for period **October 2021 to March 2022.**

Hope you will find the same in order.

Kindly acknowledge the receipt.

Thanking you,

Yours faithfully  
**For Ambuja Cements Limited**  
**Unit: Rabriyawas**

  
**Arvind Singh**  
**Sr. Manager (Environment)**

Encl.: A/a & Soft copy

**CC:**

1. The Director (Non-Coal Mining) Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi 110003
2. The Zonal Incharge, Central Pollution Control Board, Zonal Office (Central), 3rd Floor, Sahakar Bhawan, North T.T. Nagar, Bhopal, 462 003.
3. The Member Secretary, Rajasthan State Pollution Control Board, 4th, Institutional Area, Jhalana Doongri, Jaipur 302 004
4. The Regional Officer, Rajasthan State Pollution Control Board, SA – 6, Mandia Road Industrial Area, Pali (Rajasthan)

**AMBUJA CEMENTS LIMITED**  
**UNIT – RABRIYAWAS**

Works: PO Rabriyawas, Tehsil – Jaitaran, Dist. – Pali (Raj.) 306 709

Tel: 02939 288011-18, Fax: 02939 288030

CIN: L26942GJ1981PLC004717 Website: www.ambujacement.com

(Registered Office: PO – Ambujanagar, Taluka – Kodinar, Dist. – Gir Somnath (Guj.) 362 715)

**Half-yearly Condition wise Compliance report of Environmental Clearance for  
expansion of Integrated Cement Project (Clinker from 2.4 MTPA to 2.9 MTPA),  
Captive Power Plant (From 33 MW to 53 MW) and new Limestone Mine RAS-I (ML  
Area:183.53 ha & 0.279 MTPA at Rabriyawas, Tehsil Jaitaran, District Pali in  
Rajasthan**

Period: October 2021 to March 2022

S.N.	Condition	Compliance Status
<b>A. Specific Conditions:</b>		
i.	Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Government shall be ensured and regular reports submitted to the Ministry's Regional Office at Lucknow/SPCB.	Noted; Agreed and complied. We are regularly submitting the compliance report of EC letter no. J-11011/189/2006-IA.II(I) dated 31.08.2006 & J-11015/148/2006-IA.II (M) dated 10.10.2007 for our Cement Plant, Captive Power Plant (CPP) & RAS-II Limestone Mines.
ii.	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the Rajasthan pollution Control Board. At no time, particulate emissions from the cement plant including Kiln, coal mill, cement mill, cooler and captive power plant (CPP) shall not exceed 50 mg/Nm <sup>3</sup>	The gaseous and particulate emission from various stack confirmed to the standard prescribed by MoEF&CC vide notification dated 10 <sup>th</sup> May 2016/RSPCB. We ensure that particulate emission from the cement plant including Kiln, Coal mill, Cement mill, Cooler and captive power plant is not exceeding with stipulated emission norms. Stack monitoring report (October 2021 to March 2022) is enclosed herewith as <b>Annexure-I</b> .
iii.	Continuous on-line monitors for particulate emissions shall be installed. 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.	Continuous online monitors (Opacity meter) have been installed in all major stacks like Kiln/Raw mill stack, Cooler ESP stack, Coal mill stacks, Cement mill stacks and CPP stack. Online continuous monitoring system has also been installed at Raw mill/Kiln stack to monitor the parameters like Dust, CO, CO <sub>2</sub> , HCL, SO <sub>2</sub> , NO <sub>x</sub> , VOC, NH <sub>3</sub> , O <sub>2</sub> , Temperature, Flow etc. Interlocking facilities have also been provided in Pollution Control Equipment so that in event of the pollution control equipment not working, the respective unit(s) is shutdown automatically.
iv.	Data on ambient air quality (PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> ) shall be regularly submitted to be Ministry including its Regional office located at Lucknow and the State Pollution Control Board once in six month. Further, quality of discharged water shall also be monitored [(TDS, DO, pH) and total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain.	Ambient Air Quality (PM, SO <sub>2</sub> , NO <sub>x</sub> & CO) is being regularly monitored and ambient air quality monitoring reports are being sent on regular basis to Regional Office of MoEF&CC, Jaipur and RSPCB once in six month. Please refer <b>Annexure-II</b> . Quality of discharged water is also being monitored (TDS, DO, pH and TSS). The monitored data is being uploaded on the website of Ambuja Cements Limited and displayed in display board near the main gate of the unit. Photographs/reports of the same are being enclosed as <b>Annexure-III</b> for your reference.
v.	The Company shall install low NO <sub>x</sub> burner with Kiln/calcliner for control of NO <sub>x</sub> emissions.	In compliance of MoEF&CC notification dated 10 May 2016, we have installed the low NO <sub>x</sub> burner with Kiln/Calcliner for control of NO <sub>x</sub> emission in Kiln stack to meet the emission norms. Apart from this, SNCR system is also installed for control of NO <sub>x</sub> emission.
vi.	Secondary fugitive emissions shall be controlled within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.	Secondary fugitive emission is being monitored at 10 locations within the plant premises and all the values are well below the prescribed limit. The copies of the latest monitored result are enclosed as <b>Annexure-IV</b> . (Monitored value/Green belt/Control Measures) Guidelines /Code of Practice issued by CPCB is being followed.
vii.	The National Ambient Air Quality Emissions Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 <sup>th</sup> November, 2009 shall	NAAQMS dated 16-11-2009, AAQ for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> & CO is being regularly monitored and the monitored data is regularly submitted to Environment

	be followed.	Regulatory Authorities within stipulated time. Please refer monitoring report is enclosed as <b>Annexure-II</b> .
viii.	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 material including fly ash shall be transported in the closed containers only and shall not be overloaded. Vehicular emissions should be regularly monitored.	Raw material and cement are being transported through trailer of capacity 25-39 Tons rather than conventional small trucks of capacity 09-23 Tons to reduce the no. of trips for transporting the same quantity of Raw material /Cement. Apart from this, we have also started rail transportation at Rabriyawas for inbound and outbound materials. This will also reduce the impact of transport on surrounding environment including agriculture land. Finished product is transferred pneumatically from source to storage area. As per company policy, overloaded vehicles are always avoided. Vehicular emissions are being regular monitored for prescribed parameters once in six month. Latest monitoring report (sample copy) is enclosed as <b>Annexure-V</b> .
ix.	Fly ash shall be utilized as per the provisions of Fly Ash Notification, 1999, subsequently in 2009. Fly ash shall be stored in ash silo and 100% used in the cement manufacturing.	Fly ash is being generated at CPP and same has been stored in Fly ash Silo. All the generated fly ash i.e. 100% fly ash is being utilised in the cement manufacturing.
x.	The company shall make the efforts to utilize the high calorific hazardous waste in the cement Kiln and necessary provisions shall be made accordingly. The company shall keep the record of the waste utilized and shall submit the details to Ministry's Regional Office at Lucknow, CPCB and SPCB.	We are co-processing high calorific hazardous waste in cement kiln and necessary provisions like storage, transportation, pre-processing etc. are made as per direction/guidelines issued by the environmental regulatory authorities. Different types of hazardous waste having high calorific co-processed in cement kiln. List of all types of hazardous waste co-processed in kiln is enclosed herewith as per Hazardous and Other Waste (Management, Handling & Transboundary) Rules, 2016 is enclosed as <b>Annexure-VI</b> .
xi.	Rainwater harvesting measures shall be adopted for the augmentation of ground water at cement plant, colony including check dams at mine site. The company must also collect rain water in mined out pits of captive lime stone mine and use the same water for the various activities of the project to conserve fresh water and reduce the water requirement from the ground water. An action plan shall be submitted to Ministry's Regional Office at Lucknow within 3 months form date of issue of this letter. Efforts should be made to use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	The Rain water harvesting measures like ground water re-charge structures, Rain water storage pond and check dams at RAS-I Mines, RAS-II Mines, Plant area and nearby areas have been developed. Please refer <b>Annexure-VII</b> , enclosed herewith. We are also planning to enhance the capacity of the rainwater storage pond in near future to meet the maximum water requirement.
xii.	Total water requirement after expansion shall not exceed 2400 m <sup>3</sup> /day. The water stored in the artificial reservoir made in the mine pit shall be used maximum to reduce ground water consumption. No effluent should be discharged from the mine to any water body or nearby river.	The average water consumption in the plant around 2000 m <sup>3</sup> /day. At no time total water requirement is not exceeding 2400 m <sup>3</sup> /day. Water stored in the rain water harvesting pond is being used. Wastewater from the mines workshop is being treated in Oil & Grease trapper and treated water is being utilized for dust suppression and plantation/Greenbelt development.

xiii	Top soil, if any, shall be stacked with proper slope at earmarked site(s) only with adequate measures shall be used for reclamation and rehabilitation of mined out areas.	There is no top soil and it is also mentioned in our approved Mining Plan.
xiv	The project proponent shall ensure that no natural water course shall be obstructed due to any mining and plant operations. The company shall make the plan for protection of the natural water course passing through the plant and mine area premises and submit to the Ministry's Regional Office at Lucknow.	Area is scarcity of rain fall therefore no perennial water course is available in the mining area.
xv	The inter burden and other waste generated shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The total height of the dumps shall not exceed 30 m in three terraces of 10 m each and the overall slope of the dump shall be maintained to 28°. The inter burden dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self – sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office, Lucknow on six monthly basis.	Inter burden is being handled as per mining plan and stacked at designated place as per approved mining plan..
xvi	The void left unfilled shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation to be done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.	Back filling is not being envisaged as mine is under operation through top slicing and it is as per approved mining plan. There is no water body present in our mining area.
xvii	Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, inter burden and mineral dumps to arrest flow of silt and sediment. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. the drains shall be regularly desilted, particularly after monsoon and maintained properly.	Catch drain constructed near mining area as under: 15m* 15m*2m 30m*30m*2
xviii	Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and inter burden dumps and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 year data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.	Garland drain & retaining wall made around the mining pit as under:  1 Garland drain : 15m*1m*1m 2 Retaining Wall : 40m*2m*1m
xix	Dimension of the retaining wall at the toe of inter burden dumps and inter burden benches within the mine to check run-off and siltation shall be based on the rain fall data.	As per point no xviii.
xx	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations by the project proponent in and around project area	Regular monitoring of groundwater quality and groundwater level is being done as per CGWA guidelines. Piezometer at DG#4 near the plant has been installed to monitor the regular monitoring of groundwater. As per latest monitoring report monitored

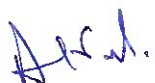
	in consultation with Regional Director, Central Ground Water Board. The frequency of monitoring shall be four times a year – pre-monsoon (April/May), monsoon (August), post – monsoon (November), and winter (January). Data thus collected shall be sent regular interval to Ministry of Environment and Forests and its Regional Office at Lucknow, Central Ground Water Authority and Central Ground Water Board.	data is enclosed as <b>Annexure-VIII</b> .
xxi	Wet drilling sequential and controlled blasting method and provision for the control air emissions during blasting using collectors etc. shall be used. The mitigative measure for control of ground vibrations and to arrest fly rocks and boulders shall be implemented.	Wet drilling is done & control blasting is done by using nonel. Blast Vibration is monitored through MINIMATE. To avoid secondary blasting we are using rock breaker for breaking boulders.
xxii	Bench height, width and slope for individual bench shall be properly assessed and implemented. Adequate measure should be adopted to stabilize the slope before abandonment. The fencing around the reservoir should be provided to prevent accidents.	Yes; as per approved mining plan.
xxiii	Action plan for the mining, management of over burden (removal, storage, disposal etc.) reclamation of the mined out area and mine closure should be submitted to the Ministry and its Regional Office at Lucknow.	Noted & Agreed Mining is being done as per approved mining plan.
xxiv	As proposed, green belt shall be developed in 33% of the plant and mine area as per the CPCB guidelines in consultation with DFO.	In the plant & colony, 33 % of the greenbelt has already been developed. As for as greenbelt development in RAS- I Mines is concern, during April 2020 – September 2020, 1810 nos. trees have been planted in RAS-Mines. Total 26218 nos. of trees have been planted in RAS-I Mines, covering area 19.7 Hectare land. Status of Greenbelt (Plantation) status as on 31.03.2022 is attached as <b>Annexure- IX</b> .
xxv	All the recommendation of the Corporate Responsibility or Environmental Protection (CREP) for the cement plants shall be strictly followed.	All the recommendation of CREP for the Cement Plant are being strictly followed. Copy of same is enclosed herewith as <b>Annexure-X</b> .
xxvi	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral.	Vehicular emission of the Mines HEMM is being monitored periodically and copy of the same is enclosed as <b>Annexure-XI</b> .
xxvii	Risk and Disaster Management Plan along with the mitigation measure should be prepared and a copy submitted to the Ministry's Regional Office at Lucknow, SPCB and CPCB within 3 months of issue of environment clearance letter.	On Site Emergency Plan of Ambuja Cements Limited, Unit: Rabriyawas is prepared and applicable. Copy of same has already submitted to Ministry's Regional Office at Lucknow, SPCB and CPCB.
xxviii	Final Mine closure plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure, for approval.	Noted & agreed.
xxix	The company shall comply with the commitments made during public hearing held on 29 <sup>th</sup> July, 2011 and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Lucknow.	As committed during public hearing; present status as on 31 March 2020 is being enclosed as <b>Annexure-XII</b> .
xxx	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public hearing	Noted, Agreed and Complied.

	issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Lucknow. Implementation of such program should be ensured accordingly in time bound manner	
xxxi	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structures to be removed after the completion of the project.	Complied.
xxxii.	The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standards operating process/ procedure to being into focus any infringement/ violation of environmental or forests norms/ conditions, (ii) Hierarchical system of Administrative order of the Company to deal with environment issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/ violation environment norms to the Board of Directors of the company and/ or stakeholders or shareholders.	Ambuja Cements Limited has well defined Corporate Environmental Policy as per MoEF circular J-11013/41/2006-IA.II(I) dated 18 May 2012, Copy of the same is enclosed as <b>Annexure XIII</b> .
	<b>B. General Conditions :</b>	
i	The project authority shall adhere to the stipulations made by Rajasthan State Pollution Control Board (RSPCB) and State Government.	Noted & being complied.
ii	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Noted please.
iii	The gaseous emissions from various process units shall conform to the load/ mass based standards notified by this Ministry on 19 <sup>th</sup> May, 1993 and standards prescribed from time to time. The RSPCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	Gaseous emission from kiln stack and CPP stack confirmed to the prescribed standard notified by MoEF&CC on 10 May 2016 and 07 December 2015.  <b>During October 2021 to March 2022</b> , at no time emission level went beyond the prescribed standard. Interlocking facilities has already been provided to process equipment.
iv.	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 viz. 75 dBA (day time) and 70 dBA (night time).	Necessary preventive measures have been taken to maintain the overall noise in and around the area kept well within the 85 db(A). Regular maintenance of plant machinery, enclosures, silencers etc. have already been provided on noise generation sources. Ambient Noise level at 27 locations are being regularly monitored and results are well below the prescribed limit i.e. 75 dB (A) day time and 70 dB(A) night time. Ambient noise and noise at work zone is being monitored and reports are enclosed as <b>Annexure-XIV</b> .

v	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Operational health surveillance of the worker is being done as per Factory Act.
vi	All the environment management measure given in the EIA/EMP shall be implemented and complied with.	Noted, being complied.
vii	The Company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The Rain water harvesting measures like ground water re-charge structures, Rain water storage pond and check dams at RAS-I Mines have been adopted. We are also planning to enhance the capacity of the rainwater storage pond in near future to meet the maximum water requirement.
viii	Proper housekeeping and adequate occupational health programmes shall be taken up as per the Factory Act.	The common procedure for Health & Safety is well defined under occupational health programmes.
ix	The company shall undertake eco-development measures including community welfare measures in the project area.	Ambuja Cement Foundation has organized various activities on eco-development & community welfare measures in nearby areas/villages. Please refer ACF report is enclosed as <b>Annexure-XV</b> .
x	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	A full-fledged Environment Management Cell has been set up with latest equipment. For detail, please refer <b>Annexure-XVI</b> .
xi	The requisite funds shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and used judiciously to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Noted, Agreed & Complied.
xii	The Project Authorities shall inform the Regional Office as well the Ministry, the date of financial closure and final approval of the project by the concerned authorities and date of commencing the land development work.	Noted, Agreed & Complied.
xiii	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	Copy of clearance letter sent to concerned Panchyat and others. The clearance letter was also uploaded on the website of Ambuja Cements Limited.
xiv.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall upload the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<p>Compliance of the stipulated environment clearance conditions including results of monitored data has been uploaded on the website of Ambuja Cements Limited the same has been sent to Regional Officer of Luknow, ZO, CPCB Bhopal and RSPCB, Jaipur.</p> <p>The criteria of pollutant levels of PM<sub>10</sub>, SO<sub>2</sub> &amp; NO<sub>x</sub> are being monitored regularly and the monitored data is being displayed and updated near the main gate of the Ambuja Cements Limited, Unit: Rabriyawas.</p>



xv	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environment conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Lucknow/CPCB/RSPCB shall monitor the stipulated conditions.	Being complied.
xvi	The Environmental Statement for each financial year ending 31 <sup>st</sup> March in Form – V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	<p>Environment Statement (Form-V) report for period April 2020- March 2021 submitted for plant &amp; mines and the same has been uploaded on the website of Ambuja Cements Limited.</p> <p>Hard copy of the same is also sent to Regional Office of MoEF, Jaipur through registered post.</p> <p>The Environmental Statement for the financial year 2020- 2021 is being enclosed as <b>Annexure-XVII</b>.</p>
xvii	The project proponent shall inform the public that the project has been accorded environment clearance by the Ministry and copies of the clearance letter are available with the RSPCB and may also be seen at the 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 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 at Lucknow.	Complied; Information advertised in newspapers on 12.04.2012 in Danik Bhaskar and Rajasthan Patrika.

  
Arvind Singh  
Sr. Manager (Environment)



**Ambuja Cements Limited  
Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : October '2021**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM in mg/Nm <sup>3</sup> (Avg.)	Norms PM In mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	23.86	30.0	
2	Clinker Cooler	ESP	20.54	30.0	
3	Coal Mill- I	JPF	18.09	30.0	
4	Coal Mill- II	JPF	16.99	30.0	
5	Cement Mill- I	JPF	13.79	30.0	
6	Cement Mill- II	JPF	10.88	30.0	
7	Roller Press	JPF	14.5	30.0	

**CEMS\*** Continuous Emission Monitoring System

*A.S.D.*

**Lab Incharge (Env.)**

**Ambuja Cements Limited**  
**Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : November '2021**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM in mg/Nm <sup>3</sup> (Avg.)	Norms PM in mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	29.00	30.0	
2	Clinker Cooler	ESP	14.88	30.0	
3	Coal Mill- I	JPF	3.45	30.0	
4	Coal Mill- II	JPF	16.14	30.0	
5	Cement Mill- I	JPF	11.14	30.0	
6	Cement Mill- II	JPF	3.72	30.0	
7	Roller Press	JPF	7.04	30.0	

**CEMS\* Continuous Emission Monitoring System**

*Atul*  
Lab Incharge (Env.)

**Ambuja Cements Limited**  
**Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : December '2021**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM in mg/Nm <sup>3</sup> (Avg.)	Norms PM in mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	16.07	30.0	
2	Clinker Cooler	ESP	10.99	30.0	
3	Coal Mill- I	JPF	3.61	30.0	
4	Coal Mill- II	JPF	9.68	30.0	
5	Cement Mill- I	JPF	13.37	30.0	
6	Cement Mill- II	JPF	2.61	30.0	
7	Roller Press	JPF	12.53	30.0	

**CEMS\* Continuous Emission Monitoring System**

*A. S. V.*  
+ Lab Incharge (Env.)

**Ambuja Cements Limited**  
**Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : January '2022**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM in mg/Nm <sup>3</sup> (Avg.)	Norms PM in mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	21.08	30.0	
2	Clinker Cooler	ESP	11.72	30.0	
3	Coal Mill- I	JPF	1.83	30.0	
4	Coal Mill- II	JPF	29.27	30.0	
5	Cement Mill- I	JPF	9.18	30.0	
6	Cement Mill- II	JPF	8.59	30.0	
7	Roller Press	JPF	6.13	30.0	

**CEMS\* Continuous Emission Monitoring System**

*[Signature]*  
Lab Incharge (Env.)

**Ambuja Cements Limited**  
**Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : February '2022**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM In mg/Nm <sup>3</sup> (Avg.)	Norms PM in mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	6.31	30.0	
2	Clinker Cooler	ESP	3.64	30.0	
3	Coal Mill- I	JPF	1.4	30.0	
4	Coal Mill- II	JPF	13.86	30.0	
5	Cement Mill- I	JPF	6.51	30.0	
6	Cement Mill- II	JPF	5.05	30.0	
7	Roller Press	JPF	7.16	30.0	

**CEMS\* Continous Emission Monitoring System**

*Asst.*  
f Lab Incharge (Env.)

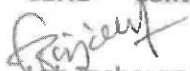
**Ambuja Cements Limited**  
**Unit - Rabriyawas**

**Cement Plant - Reading of Particulate Matter Emission From Point Source**

**Period : Mach - 2022**

Sr. No.	Name of Stack	PCM	Opacity Meter Reading PM in mg/Nm <sup>3</sup> (Avg.)	Norms PM in mg/Nm <sup>3</sup>	Remarks
1	Raw Mill/Kiln	JPF	20.9	30.0	
2	Clinker Cooler	ESP	20.29	30.0	
3	Coal Mill- I	JPF	14.23	30.0	
4	Coal Mill- II	JPF	17.13	30.0	
5	Cement Mill- I	JPF	16.69	30.0	
6	Cement Mill- II	JPF	15.67	30.0	
7	Roller Press	JPF	18.96	30.0	

CEMS\* *Continuous Emission Monitoring System*

  
Lab Incharge (Env.)

Ambient Air Quality Monitoring Results of Cement Plant

Period: Oct-21

Date of Sampling	At SWRP (C1)						Near Old Limestone Crusher (C2)						Old Weigh Bridge (C3)						SW End of CPP Boundary (Near Ballada Gate) (C4)							
	µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>							
	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	
01.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04.10.2021	59.00	39.50	7.00	13.00	NT	66.00	206.00	7.50	13.50	NT	67.00	210.00	7.50	14.00	NT	71.00	215.00	7.50	14.00	NT	71.00	215.00	7.50	14.00	NT	
05.10.2021	58.50	41.00	7.00	13.50	NT	68.00	207.00	7.50	14.00	NT	71.00	211.00	7.50	14.00	NT	72.00	214.00	7.50	14.00	NT	72.00	214.00	7.50	14.00	NT	
06.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.10.2021	60.00	40.00	7.00	13.50	NT	69.00	209.00	7.50	14.00	NT	72.00	210.00	7.50	14.00	NT	71.00	214.00	7.50	14.00	NT	71.00	214.00	7.50	14.00	NT	
12.10.2021	61.00	41.00	7.50	13.00	NT	71.00	210.00	7.50	14.00	NT	71.00	215.00	8.00	14.00	NT	73.00	220.00	7.50	14.00	NT	73.00	220.00	7.50	14.00	NT	
13.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.10.2021	60.00	41.00	7.00	13.00	NT	67.00	212.00	7.50	13.50	NT	69.00	214.00	7.50	14.00	NT	70.00	217.00	7.50	14.00	NT	70.00	217.00	7.50	14.00	NT	
19.10.2021	61.00	40.00	7.50	14.00	NT	69.00	213.00	7.50	14.00	NT	69.00	218.00	7.50	14.00	NT	71.00	223.00	7.50	14.00	NT	71.00	223.00	7.50	14.00	NT	
20.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.10.2021	62.00	41.00	7.00	13.50	NT	72.00	213.00	7.50	14.00	NT	72.00	215.00	7.50	14.00	NT	74.00	221.00	7.50	14.00	NT	74.00	221.00	7.50	14.00	NT	
26.10.2021	61.00	42.00	7.50	13.50	NT	70.00	216.00	7.50	14.00	NT	73.00	218.00	7.50	14.00	NT	72.00	220.00	8.00	14.00	NT	72.00	220.00	8.00	14.00	NT	
27.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.10.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	60.31	40.69	7.19	13.38	NT	69.00	216.75	7.50	13.88	NT	70.50	213.88	7.56	14.00	NT	71.75	217.63	7.56	14.00	NT	71.75	217.63	7.56	14.00	NT	

NT: - NOT TRACEABLE IN THE SAMPLE

Rainfall during the month- 1.25 mm

Lab. Incharge (Sig.)

F01/08-10/02



Ambient Air Quality Monitoring Results of Cement Plant

Nov-21

Period: Date of Sampling	At SWRP (C1)					Near Old Limestone Crusher (C2)					Old Weigh Bridge (C3)					SW End of CPP Boundary (Near Ballada Gate) (C4)				
	µg/m <sup>3</sup>					µg/m <sup>3</sup>					µg/m <sup>3</sup>					µg/m <sup>3</sup>				
	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO
01.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04.11.2021	58.50	39.00	7.00	13.00	NT	65.50	205.00	7.50	13.50	NT	65.50	209.00	7.50	14.00	NT	70.00	214.50	7.50	14.00	NT
05.11.2021	58.00	40.50	7.00	13.00	NT	67.00	208.50	7.50	14.00	NT	70.50	210.50	7.50	14.00	NT	71.50	213.00	7.50	14.00	NT
06.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.11.2021	58.50	39.50	7.00	13.50	NT	68.50	208.50	7.50	14.00	NT	71.50	209.50	7.50	14.00	NT	70.50	213.50	7.50	14.00	NT
12.11.2021	60.50	40.50	7.50	13.00	NT	70.50	208.50	7.50	14.00	NT	70.50	214.50	7.50	14.00	NT	72.50	219.50	7.50	14.00	NT
13.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.11.2021	58.50	40.50	7.00	13.00	NT	66.50	212.50	7.50	13.50	NT	68.50	213.50	7.50	14.00	NT	69.00	216.00	7.50	14.00	NT
19.11.2021	60.00	40.00	7.50	14.00	NT	68.00	212.00	7.50	14.00	NT	68.00	217.00	7.50	14.00	NT	70.00	219.00	7.50	14.00	NT
20.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.11.2021	61.50	40.50	7.00	13.50	NT	71.50	212.50	7.50	14.00	NT	71.50	214.50	7.50	14.00	NT	73.50	220.00	7.50	14.00	NT
26.11.2021	60.00	41.00	7.50	13.50	NT	70.00	215.00	7.50	14.00	NT	72.00	217.00	7.50	14.00	NT	71.00	218.00	8.00	14.00	NT
27.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.11.2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	58.69	40.19	7.19	13.31	NT	68.44	210.19	7.50	13.88	NT	69.68	213.19	7.50	14.00	NT	71.90	216.81	7.58	14.00	NT

NT - NOT TRACEABLE IN THE SAMPLE.

*[Signature]*  
Tish. Incharge (Env.)  
F01(09-10)/02

Ambuja Cements Limited  
Unit: Rabriyawas

Ambient Air Quality Monitoring Results of Cement Plant

Period:		Dec-21										SW End of CPP Boundary (Near Ballada Gate) (C4)									
Date of Sampling		At SWRP (C1)										Near Old Limestone Crusher (C2)									
		PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO
01.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04.12.2021		59.00	40.00	7.00	13.00	NT	66.00	204.00	7.50	13.90	NT	66.00	210.00	7.50	14.00	NT	69.00	213.00	7.50	14.00	NT
05.12.2021		59.50	41.00	7.00	13.00	NT	67.00	207.00	7.50	14.00	NT	70.00	209.50	7.50	14.00	NT	71.00	212.00	7.50	14.00	NT
06.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.12.2021		59.00	39.00	7.00	13.60	NT	68.00	206.00	7.50	14.00	NT	71.00	209.00	7.50	14.00	NT	70.00	213.00	7.50	14.00	NT
12.12.2021		60.00	40.00	7.50	13.00	NT	70.00	209.00	7.50	14.00	NT	70.00	214.00	7.50	14.00	NT	72.00	219.00	7.50	14.00	NT
13.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.12.2021		59.00	40.00	7.00	13.00	NT	66.00	212.00	7.50	13.50	NT	68.00	213.00	7.50	14.00	NT	69.50	217.00	7.50	14.00	NT
19.12.2021		59.50	40.50	7.50	14.00	NT	67.50	211.50	7.50	14.00	NT	67.50	216.50	7.50	14.00	NT	69.50	218.50	7.50	14.00	NT
20.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.12.2021		61.00	40.00	7.00	13.60	NT	71.00	212.00	7.50	14.00	NT	71.00	214.00	7.50	14.00	NT	73.00	219.50	7.50	14.00	NT
26.12.2021		59.50	40.50	7.50	13.50	NT	69.50	214.50	7.50	14.00	NT	71.50	216.50	7.50	14.00	NT	70.50	218.50	8.00	14.00	NT
27.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.12.2021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average		59.56	40.13	7.19	13.31	NT	68.13	209.75	7.50	13.88	NT	69.38	212.81	7.50	14.00	NT	70.58	216.31	7.56	14.00	NT

NT - NOT TRACEABLE IN THE SAMPLE.

*Desu*  
Lab. Incharge (Env.)  
F01(09-10)/02

Ambient Air Quality Monitoring Results of Cement Plant

Period: Jan-22

Date of Sampling	At SWRP (C1)						Near Old Limestone Crusher (C2)						Old Weigh Bridge (C3)						SW End of CPP Boundary (Near Ballada Gate) (C4)					
	µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>					
	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO		RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO		RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO		RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	
01.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04.01.2022	59.50	41.00	7.00	13.00	NT	-	66.50	205.00	7.50	13.50	NT	-	67.00	211.00	7.50	14.00	NT	-	70.00	214.00	7.50	14.00	NT	NT
05.01.2022	60.00	41.00	7.00	13.00	NT	-	67.50	207.00	7.50	14.00	NT	-	71.00	210.00	7.50	14.00	NT	-	71.50	214.00	7.50	14.50	14.00	NT
06.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.01.2022	60.00	40.00	7.00	13.50	NT	-	69.00	203.00	7.50	13.00	NT	-	72.00	210.00	7.50	14.00	NT	-	71.00	214.00	7.50	14.50	14.00	NT
12.01.2022	61.00	41.00	7.50	13.50	NT	-	71.00	210.00	7.50	14.00	NT	-	71.00	215.00	7.50	14.00	NT	-	73.00	220.00	7.50	14.00	14.00	NT
13.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.01.2022	60.00	41.00	7.00	13.00	NT	-	67.00	213.00	7.50	13.50	NT	-	69.00	214.00	7.50	14.00	NT	-	70.00	218.00	7.50	14.00	14.00	NT
19.01.2022	61.00	41.00	7.50	14.00	NT	-	68.00	212.00	7.50	14.00	NT	-	68.00	217.00	7.50	14.00	NT	-	70.00	219.00	7.50	14.00	14.00	NT
20.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.01.2022	61.00	40.00	7.00	13.50	NT	-	72.00	213.00	7.50	14.00	NT	-	72.00	213.00	7.50	14.00	NT	-	72.00	219.00	7.50	14.00	14.00	NT
26.01.2022	60.00	40.50	7.50	13.50	NT	-	70.00	216.00	7.50	14.00	NT	-	71.50	217.00	7.50	14.00	NT	-	71.00	220.00	8.00	14.00	14.00	NT
27.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31.01.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	60.31	40.86	7.19	13.38	NT	-	69.98	210.60	7.50	13.75	NT	-	70.19	213.38	7.50	14.00	NT	-	71.06	217.31	7.55	14.08	14.08	NT

NT - NOT TRACKABLE IN THE SAMPLE.

Lab. Incharge (Sig.)  
F01(09-10)02

Ambient Air Quality Monitoring Results of Cement Plant

Period: Feb-22

Date of Sampling	At SWRP (C1)						Near Old Limestone Crusher (C2)						Old Weigh Bridge (C3)						SW End of CPP Boundary (Near Ballada Gate) (C4)								
	µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>								
	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO		RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	
01.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04.02.2022	60.00	41.50	7.00	13.00	NT	-	67.00	206.00	7.00	13.50	NT	67.50	212.00	7.50	13.50	NT	70.50	215.00	7.50	14.00	NT	70.50	215.00	7.50	14.00	NT	
05.02.2022	60.50	41.00	7.00	13.00	NT	-	65.00	209.00	7.00	14.00	NT	71.50	211.00	7.50	14.00	NT	71.00	215.00	7.50	14.00	NT	71.00	215.00	7.50	14.00	NT	
06.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.02.2022	61.00	41.00	7.00	13.00	NT	-	68.00	210.00	7.50	13.00	NT	72.50	213.00	7.50	14.00	NT	72.00	216.00	7.50	14.00	NT	72.00	216.00	7.50	14.00	NT	NT
12.02.2022	61.50	41.00	7.50	13.50	NT	-	70.00	213.00	7.50	14.00	NT	72.00	216.00	7.50	14.00	NT	72.50	221.00	7.50	14.00	NT	72.50	221.00	7.50	14.00	NT	NT
13.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.02.2022	61.50	42.00	7.00	13.00	NT	-	66.00	215.00	7.50	13.50	NT	70.00	215.00	7.50	14.00	NT	71.00	219.00	7.50	14.00	NT	71.00	219.00	7.50	14.00	NT	NT
19.02.2022	62.00	42.50	7.50	14.00	NT	-	69.00	218.00	7.50	14.00	NT	70.00	220.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	NT
20.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.02.2022	62.50	41.50	7.00	13.50	NT	-	72.50	220.00	7.50	14.00	NT	73.00	216.00	7.50	14.00	NT	73.50	220.00	7.50	14.00	NT	73.50	220.00	7.50	14.00	NT	NT
26.02.2022	61.50	41.50	7.50	13.50	NT	-	71.50	217.00	7.50	14.00	NT	72.00	220.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	NT
27.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.02.2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	61.31	41.60	7.19	13.31	NT	-	68.68	213.50	7.38	13.75	NT	71.06	215.38	7.50	13.94	NT	71.81	218.50	7.50	14.06	NT	71.81	218.50	7.50	14.06	NT	NT

NT:- NOT TRACEABLE IN THE SAMPLE.

Lab. Incharge (Env.)  
F01(09-10)/02

Ambient Air Quality Monitoring Results of Cement Plant

Period: *March-2022*

Date of Sampling	AL SWRP (C1)						Near Old Limestone Crusher (C2)						Old Weigh Bridge (C3)						SW End of CPP Boundary (Near Ballade Ghee) (C4)							
	µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>						µg/m <sup>3</sup>							
	PM10	PM2.5	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	RPM	SPM	SO <sub>2</sub>	NO <sub>2</sub>	CO	
01-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
04-03-2022	57.00	39.50	8.50	14.40	NT	52.00	191.00	9.20	14.20	NT	60.20	193.00	8.10	16.30	NT	53.00	184.00	8.3	15.40	NT	53.00	184.00	8.3	15.40	NT	
05-03-2022	54.00	40.00	7.90	15.20	NT	54.40	177.00	8.80	15.90	NT	71.50	213.00	8.20	14.20	NT	74.00	167.00	7.70	14.20	NT	74.00	167.00	7.70	14.20	NT	
06-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11-03-2022	82.00	36.00	7.80	15.90	NT	58.40	187.00	8.30	14.30	NT	69.50	179.00	8.20	13.40	NT	55.00	180.00	8.10	13.40	NT	55.00	180.00	8.10	13.40	NT	
12-03-2022	57.00	35.00	8.20	14.70	NT	52.60	155.00	7.90	15.20	NT	71.40	198.00	9.30	14.30	NT	67.00	191.00	8.90	12.90	NT	67.00	191.00	8.90	12.90	NT	
13-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18-03-2022	59.80	37.10	8.40	14.20	NT	60.00	185.00	7.50	13.50	NT	70.00	215.00	7.50	14.00	NT	71.00	219.00	7.50	14.00	NT	71.00	219.00	7.50	14.00	NT	
19-03-2022	55.70	34.80	7.60	13.80	NT	56.00	163.70	7.50	14.30	NT	70.00	220.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	72.00	221.00	7.50	14.00	NT	
20-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-03-2022	60.80	40.70	8.90	15.60	NT	62.70	174.00	7.20	12.90	NT	61.30	176.00	6.80	15.20	NT	64.50	155.00	8.30	13.90	NT	64.50	155.00	8.30	13.90	NT	
26-03-2022	62.40	43.10	7.20	12.60	NT	43.00	168.00	7.90	13.50	NT	66.00	185.00	8.10	13.50	NT	66.20	195.00	7.70	12.20	NT	66.20	195.00	7.70	12.20	NT	
27-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31-03-2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	58.56	38.66	7.74	14.51	NT	56.26	174.84	8.04	14.14	NT	67.45	197.38	8.19	14.38	NT	69.71	185.00	7.96	13.75	NT	69.71	185.00	7.96	13.75	NT	

NT: NOT TRACEABLE IN THIS SAMPLE

Lab. Incharge (Envr)  
FO1(09-10)/02

*[Signature]*

AMBUJA CEMENTS LIMITED  
UNIT - RABRIYAWAS

SWRP ANALYSIS REPORT FOR THE MONTH OF OCTOBER '2021

S. No.	Parameters	Result
1.	pH	7.70
2.	BOD, at 27°C, 3 days	18.50
3.	COD	76.00
4.	TSS	65.00
5.	Oil & Grease	<2.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.05

All parameters in mg/l except pH.

*A. Sub.*  
Lab Incharge (Env.)

**AMBUJA CEMENTS LIMITED**  
**UNIT – RABRIYAWAS**

**SWRP ANALYSIS REPORT FOR THE MONTH OF NOVEMBER '2021**

S. No.	Parameters	Result
1.	pH	7.75
2.	BOD, at 27°C, 3 days	18.00
3.	COD	75.00
4.	TSS	60.00
5.	Oil & Grease	<2.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.05

All parameters in mg/l except pH.

*f. Asul -*  
**Lab Incharge (Env.)**



**AMBUJA CEMENTS LIMITED**  
**UNIT – RABRIYAWAS**

**SWRP ANALYSIS REPORT FOR THE MONTH OF DECEMBER '2021**

<b>S. No.</b>	<b>Parameters</b>	<b>Result</b>
1.	pH	7.80
2.	BOD, at 27°C, 3 days	19.00
3.	COD	76.00
4.	TSS	61.00
5.	Oil & Grease	<2.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.05

All parameters in mg/l except pH.

*Asul.*  
+ **Lab Incharge (Env.)**

AMBUJA CEMENTS LIMITED

UNIT - RABRIYAWAS

SWRP ANALYSIS REPORT FOR THE MONTH OF JANUARY '2022

S. No.	Parameters	Result
1.	pH	7.70
2.	BOD, at 27°C, 3 days	18.00
3.	COD	75.00
4.	TSS	63.00
5.	Oil & Grease	<2.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.05

All parameters in mg/l except pH.

*A. S. S.*  
Lab Incharge (Env.)

**AMBUJA CEMENTS LIMITED**  
**UNIT – RABRIYAWAS**

**SWRP ANALYSIS REPORT FOR THE MONTH OF FEBRUARY '2022**

S. No.	Parameters	Result
1.	pH	7.60
2.	BOD, at 27°C, 3 days	17.00
3.	COD	77.00
4.	TSS	66.00
5.	Oil & Grease	<2.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.05

All parameters in mg/l except pH.

*A. Sul.*  
f Lab Incharge (Env.)

**AMBUJA CEMENTS LIMITED**  
**UNIT - RABRIYAWAS**

**SWRP ANALYSIS REPORT FOR THE MONTH OF MARCH - 2022**

S. No.	Parameters	Result
1.	pH	7.86
2.	BOD, at 27°C, 3 days	10.33
3.	COD	81.6
4.	TSS	25
5.	Oil & Grease	4.0
6.	Ammonical Nitrogen (as N)	<2
7.	Sulphide (as S)	<0.01

All parameters in mg/l except pH.



**Lab Incharge (Env.)**



# TEAM TEST HOUSE

(Unit of Team Institute of Science & Technology Pvt. Ltd.)



Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

RSPCB

ISO 9001:2015,

ISO 14001:2015,

ISO 45001:2018 (OH&S)

JDA/UDH

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Email : director@teamtesthouse.com,  
Email : marketinglab@teamtesthouse.com

## TEST REPORT

Report No./ULR No. :	TC502522400000612	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	07-03-2022
Point of Collection :	Cement Mill Office	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	445.46	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	129.91	IS 5182 (Part 23)-2006 RA 2017

**Notes :-**

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*Puran Mal Yogi*  
**Puran Mal Yogi**  
Senior Analyst

*Rajesh Maheshwan*  
**Rajesh Maheshwan**  
Authorized Signatory  
(Report No: TC502522400000612 )



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## TEST REPORT

Report No./ULR No. :	TC502522400000613	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	09-03-2022
Point of Collection :	Roller Press Area	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram Jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	447.45	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	89.97	IS 5182 (Part 23)-2006 RA 2017

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**Puran Mal Yogi**  
Senior Analyst

**Rajesh Maneshwan**  
Authorized Signatory  
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## TEST REPORT

Report No./ULR No. :	TC502522400000614	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan).	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	09-03-2022
Point of Collection :	Loading Area 3 & 4	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	445.16	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	124.46	IS 5182 (Part 23)-2006 RA 2017

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Puran Mal Yogi  
Senior Analyst

Rajesh Maheshwari  
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## TEST REPORT

Report No./ULR No. :	TC502522400000615	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	09-03-2022
Point of Collection :	Loading Area 2 & 3	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram Jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	511.92	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	133.46	IS 5182 (Part 23)-2006 RA 2017

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Puran Mal Yogi  
Senior Analyst

Rajesh Maheshwan  
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Email : marketinglab@teamtesthouse.com

## TEST REPORT

Report No./ULR No. :	TC502522400000616	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	10-03-2022
Point of Collection :	Loading Area 1 & 2	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	492.11	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	105.4	IS 5182 (Part 23)-2006 RA 2017

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**Puran Mal Yogi**  
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**Rajesh Maheshwan**  
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## TEST REPORT

Report No./ULR No. :	TC502522400000617	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	08-03-2022
Point of Collection :	Carbon Black Feeding Area	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	465.54	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	98.57	IS 5182 (Part 23)-2006 RA 2017

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**Puran Mal Yogi**  
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**Rajesh Maheshwan**  
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## TEST REPORT

Report No./ULR No. :	TC502522400000618	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	08-03-2022
Point of Collection :	AFR Shed Area	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m <sup>3</sup> ]	434.6	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m <sup>3</sup> ]	105.21	IS 5182 (Part 23)-2006 RA 2017

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**Puran Mal Yogi**  
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**Rajesh Maheshwari**  
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## TEST REPORT

Report No./ULR No. :	TC502522400000619	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	11-03-2022
Point of Collection :	Near Synthetic Gypsum Plant	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	383.9	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	96.15	IS 5182 (Part 23)-2006 RA 2017

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Senior Analyst

Rajesh Maheshwan  
Authorized Signatory  
(Report No: TC502522400000619)



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## TEST REPORT

Report No./ULR No. :	TC502522400000620	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	07-03-2022
Point of Collection :	Near Raw Mill Area	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram Jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	456.56	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	129.76	IS 5182 (Part 23)-2006 RA 2017

### Notes :-

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Puran Mar Yogi  
Senior Analyst

Rajesh Maheshwan  
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(Report No: TC502522400000620 )



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Email : marketinglab@teamtesthouse.com

## TEST REPORT

Report No./JLR No. :	TC502522400000621	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	08-03-2022
Point of Collection :	Near Coal Tippler at CPP	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	494.28	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	111.09	IS 5182 (Part 23)-2006 RA 2017

### Notes :-

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**Puran Mal Yogi**  
Senior Analyst

**Rajesh Maheshwar**  
Authorized Signatory  
(Report No: TC502522400000621 )





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## TEST REPORT

Report No./ULR No. :	TC502522400000622	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	08-03-2022
Point of Collection :	Packing Plant (I,II,III,IV)	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	546.21	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	144.86	IS 5182 (Part 23)-2006 RA 2017

**Notes :-**

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Senior Analyst

**Rajesh Maheshwan**  
Authorized Signatory  
(Report No: TC502522400000622 )



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## TEST REPORT

Report No./ULR No. :	TC502522400000623	Date :	02-04-2022
Issued To :	M/S Ambuja Cements Limited (Unit-Rabriyawas) P.O.-Rabriyawas, Tehsil-Jaitaran, District-Pali, Pali (Rajasthan),	Type of Unit :	Cement Plant
Type of Sample :	Fugitive Emission Quality Monitoring	Date of Sample Collection/Monitoring :	07-03-2022
Point of Collection :	Near Raw Mill Area	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 02-04-2022	Sampling Plan :	IS 5182:2000(Part 14)RA 2014
Quantity of Sample :	-	Sample Collected By :	Sitaram jangid
Unit's representative :	Mr. Arvind Singh	Condition of Sample :	Fit for testing

## RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Suspended Particulate Matter [microgram/m3]	470.82	IS 5182 (Part 4) : 1999 RA 2019
2	Respirable Suspended Particulate Matter [microgram/m3]	133.62	None

**Notes :-**

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**Puran Mal Yogi**  
Senior Analyst

**Rajesh Maheshwan**  
Authorized Signatory  
(Report No: TC502522400000623 )

Pucc No :	D47RJ19114202
Vehicle No :	RJ22GB3412
Customer Name :	AMBUJA
Customer Mobile :	9929163917
Year of Regn :	01-01-2014
Type of Vehicle :	TRUCK
Make :	AMW
Model :	TRUCK
Test Date :	12-03-2022
Time :	02:57:54 PM
Valid UpTo :	11-09-2022
Center Name :	Veer teja Mob PUC Center
Center Address :	Sangariya, Jodhpur
Licence No :	RJ19-48/47
Test Result :	Pass

## Flushing Cycle

Avg	RPM Min	RPM Max	Temp
692		2174	0

Sr. No.	RPM Min	RPM Max	Km	HSU%	Temp
1	642	2137	0.691	25.7	000.0
2	642	2182	0.738	27.2	000.0
3	642	2103	0.790	28.8	000.0
Mean			0.740	27.2	

## VALID IN ALL INDIA

Photo of Vehicle



Prescribed Limit for Diesel vehicle	1/m(Light Absorption Co-efficient)	Hartridge Units (HSU)%
Free Acceleration BS II & III	2.45	65
Free Acceleration BS IV	1.62	50
Free Acceleration BS VI 4/3 wheelers	0.7 / 1.5	26 / 48

Validity Six Months for Bharat Stage III or below and one year for Bharat Stage IV/VI vehicles.

Certificate price: ₹ 100

Get Certificate renewed within the expiry date.

Seal of Testing Station	Testing Station Code D47RJ19	Authorised Signatory
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CERTIFICATE IS ONLY VALID IF SMS RECEIVED FROM REILTRANSPORT DEPT. KINDLY DESTROY THE INVALID CERTIFICATE.

Transport Dept. Govt. of Rajasthan

Transport Dept. Govt. of Rajasthan



Veh Reg No : RJ22GB3412  
PUC No. : D47RJ19114202  
Valid up to : 11-09-2022  
Scan QR Code to Validate



Veh Reg No : RJ22GB3412  
PUC No. : D47RJ19114202  
Valid up to : 11-09-2022  
Scan QR Code to Validate

Pucc No :	D47RJ19114210
Vehicle No :	RJ22GA2913
Customer Name :	A.C.L.
Customer Mobile :	9929163917
Year of Regn :	01-01-1998
Type of Vehicle :	TRUCK
Make :	Tata Motors
Model :	TRUCK
Test Date :	12-03-2022
Time :	03:41:45 PM
Valid UpTo :	11-09-2022
Center Name :	Veer teja Mob PUC Center
Center Address :	Sangariya, Jodhpur
Licence No :	RJ19-48/47
Test Result :	Pass

**Flushing Cycle**

Avg	RPM Min	RPM Max	Temp
	893	2621	0

Sr. No.	RPM Min	RPM Max	Km	HSU%	Temp
1	884	2624	1.115	38.1	000.0
2	884	2545	0.977	34.3	000.0
3	884	2519	1.067	36.8	000.0
Mean			1.053	36.4	

**VALID IN ALL INDIA**

Photo of Vehicle



Prescribed Limit for Diesel vehicle	1/m(Light Absorption Co-efficient)	Hartridge Units (HSU)%
Free Acceleration BS II & III	2.45	65
Free Acceleration BS IV	1.62	50
Free Acceleration BS VI 4/3 wheelers	0.7 / 1.5	26 / 48

Validity Six Months for Bharat Stage III or below and one year for Bharat Stage IV/VI vehicles.

Certificate price: ₹ 100

Get Certificate renewed within the expiry date.

Seal of Testing Station	Testing Station Code D47RJ19	Authorised Signatory
-------------------------	---------------------------------	----------------------

CERTIFICATE IS ONLY VALID IF SMS RECEIVED FROM REHATransport DEPT. KINDLY DESTROY THE INVALID CERTIFICATE.

Transport Dept. Govt. of Rajasthan

Transport Dept. Govt. of Rajasthan



Veh Reg No : RJ22GA2913  
PUC No. : D47RJ19114210  
Valid up to : **11-09-2022**  
Scan QR Code to Validate



Veh Reg No : RJ22GA2913  
PUC No. : D47RJ19114210  
Valid up to : **11-09-2022**  
Scan QR Code to Validate



Pucc No :	D47RJ19114213
Vehicle No :	RJ22GA9213
Customer Name :	A.C.L
Customer Mobile :	9929163917
Year of Regn :	21-07-2016
Type of Vehicle :	TRUCK
Make :	Tata Motors
Model :	TRUCK
Test Date :	12-03-2022
Time :	03:53:57 PM
Valid UpTo :	11-09-2022
Center Name :	Veer teja Mob PUC Center
Center Address :	Sangariya, Jodhpur
Licence No :	RJ19-48/47
Test Result :	Pass

## Flushing Cycle

Avg	RPM Min	RPM Max	Temp
680		1927	0

Sr. No.	RPM Min	RPM Max	Km	HSU%	Temp
1	653	1963	0.528	20.3	000.0
2	653	1842	0.563	21.5	000.0
3	653	2009	0.575	21.9	000.0
Mean			0.555	21.2	

## VALID IN ALL INDIA

Photo of Vehicle



Prescribed Limit for Diesel vehicle	1/m(Light Absorption Co-efficient)	Hartridge Units (HSU)%
Free Acceleration BS II & III	2.45	65
Free Acceleration BS IV	1.62	50
Free Acceleration BS VI 4/3 wheelers	0.7 / 1.5	26 / 48

Validity Six Months for Bharat Stage III or below and one year for Bharat Stage IV/VI vehicles.

Certificate price: ₹ 100

Get Certificate renewed within the expiry date.

Seal of Testing Station	Testing Station Code D47RJ19	Authorised Signatory
-------------------------	---------------------------------	----------------------

CERTIFICATE IS ONLY VALID IF SMS RECEIVED FROM REIL/TRANSPORT DEPT. KINDLY DESTROY THE INVALID CERTIFICATE.

Transport Dept. Govt. of Rajasthan

Transport Dept. Govt. of Rajasthan



Veh Reg No : RJ22GA9213  
PUC No. : D47RJ19114213  
Valid up to : **11-09-2022**  
Scan QR Code to Validate

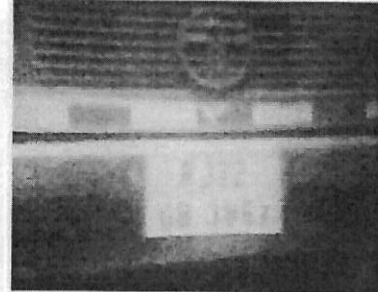


Veh Reg No : RJ22GA9213  
PUC No. : D47RJ19114213  
Valid up to : **11-09-2022**  
Scan QR Code to Validate

Pucc No :	D47RJ19112527
Vehicle No :	RJ22GB3867
Customer Name :	AMBUJA CEMENT
Customer Mobile :	9929163917
Year of Regn :	05-03-1998
Type of Vehicle :	TRUCK
Make :	Tata Motors
Model :	709 E Turbo
Test Date :	14-12-2021
Time :	11:23:24 AM
Valid UpTo :	13-06-2022
Center Name :	Veer teja Mob PUC Center
Center Address :	Sangariya, Jodhpur
Licence No :	RJ19-48/47
Test Result :	Pass

**VALID IN ALL INDIA**

Photo of Vehicle



**Flushing Cycle**

Avg	RPM Min	RPM Max	Temp
855		2599	0

Sr. No.	RPM Min	RPM Max	Km	HSU%	Temp
1	819	2570	1.119	38.2	000.0
2	819	2605	1.023	35.6	000.0
3	819	2577	1.005	35.1	000.0
Mean			1.049	36.3	

Prescribed Limit for Diesel vehicle	1/m(Light Absorption Co-efficient)	Hartridge Units (HSU)%
Free Acceleration BS II & III	2.45	65
Free Acceleration BS IV	1.62	50
Free Acceleration BS VI 4/3 wheelers	0.7 / 1.5	26 / 48

Validity Six Months for Bharat Stage III or below and one year for Bharat Stage IV/VI vehicles.

**Certificate price: ₹ 100**

**Get Certificate renewed within the expiry date.**

<b>Seal of Testing Station</b>	<b>Testing Station Code</b> D47RJ19	<b>Authorised Signatory</b>
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**CERTIFICATE IS ONLY VALID IF SMS RECEIVED FROM REIL/TRANSPORT DEPT. KINDLY DESTROY THE INVALID CERTIFICATE.**

Transport Dept. Govt. of Rajasthan

Transport Dept. Govt. of Rajasthan



Veh Reg No : RJ22GB3867  
PUC No. : D47RJ19112527  
Valid up to : **13-06-2022**  
Scan QR Code to Validate



Veh Reg No : RJ22GB3867  
PUC No. : D47RJ19112527  
Valid up to : **13-06-2022**  
Scan QR Code to Validate

Pucc No :	D47RJ19112527
Vehicle No :	RJ22GB3867
Customer Name :	AMBUJA CEMENT
Customer Mobile :	9929163917
Year of Regn :	05-03-1998
Type of Vehicle :	TRUCK
Make :	Tata Motors
Model :	709 E Turbo
Test Date :	14-12-2021
Time :	11:23:24 AM
Valid UpTo :	13-06-2022
Center Name :	Veer teja Mob PUC Center
Center Address :	Sangariya, Jodhpur
Licence No :	RJ19-48/47
Test Result :	Pass

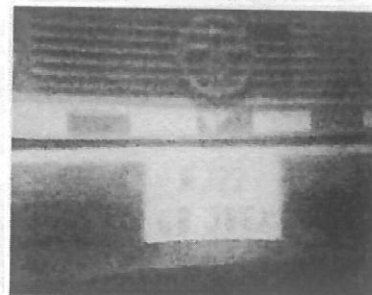
#### Flushing Cycle

Avg	RPM Min	RPM Max	Temp
855		2599	0

Sr. No.	RPM Min	RPM Max	Km	HSU%	Temp
1	819	2570	1.119	38.2	000.0
2	819	2605	1.023	35.6	000.0
3	819	2577	1.005	35.1	000.0
Mean			1.049	36.3	

**VALID IN ALL INDIA**

Photo of Vehicle



Prescribed Limit for Diesel vehicle	1/m(Light Absorption Co-efficient)	Hartridge Units (HSU)%
Free Acceleration BS II & III	2.45	65
Free Acceleration BS IV	1.62	50
Free Acceleration BS VI 4/3 wheelers	0.7 / 1.5	26 / 48

Validity Six Months for Bharat Stage III or below and one year for Bharat Stage IV/VI vehicles.

Certificate price: ₹ 100

Get Certificate renewed within the expiry date.

Seal of Testing Station	Testing Station Code D47RJ19	Authorised Signatory
-------------------------	---------------------------------	----------------------

CERTIFICATE IS ONLY VALID IF SMS RECEIVED FROM REIL/TRANSPORT DEPT. KINDLY DESTROY THE INVALID CERTIFICATE.

Transport Dept. Govt. of Rajasthan

Transport Dept. Govt. of Rajasthan



Veh Reg No : RJ22GB3867  
PUC No. : D47RJ19112527  
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Veh Reg No : RJ22GB3867  
PUC No. : D47RJ19112527  
Valid up to : **13-06-2022**  
Scan QR Code to Validate





**Ambuja Cement Limited, Rabriyawas**  
**Co-processed Quantity of Hazardous Waste**  
 From April-2021 to Mar-2022

S. No.	Waste Name	Category No.	Category	Co-Processed (MT)
1	Paint Sludge	21.1	Hz	2832.205
2	Grinding Sludge	5.2	Hz	425.328
3	ETP Sludge	35.3	Hz	1715.455
4	Mix solid Waste	Sech.I	Hz	138.428
5	Waste residue Containing oil	5.2	Hz	41.44
6	Spent Carbon	Sech.I	Hz	517.969
7	WTP Sludge	Sech.I	Hz	195.585
8	Oily Rags	5.2	Hz	659.983
9	Phosphate Sludge	12.5	Hz	62.425
10	Incineration Ash	28.1	Hz	0.54
11	Oily Sludge	1.3	Hz	86.59
12	Spent Clay	4.5	Hz	333.72
13	Sealant	5.2	Hz	15.96
14	Process residue	28.1	Hz	10
<b>Total HW Qty. (in MT)</b>				<b>7035.628</b>

15	Off specification Raw material	Sech-III	Non-Hz	35.04
16	Trade Reject	Sech-III	Non-Hz	2270.13
17	PET waste	Sech-III	Non-Hz	27.12
18	FRP waste	Sech-III	Non-Hz	44.74
19	MLP Waste	Sech-III	Non-Hz	3.03
20	Laminated plastic	Sech-III	Non-Hz	54.14
21	EPR	Sech-III	Non-Hz	2649.91
22	RDF plastic	Sech-III	Non-Hz	3162.36
23	Polyurethane	Sech-III	Non-Hz	223.67
24	CBAM	—	Non-Hz	172.02
25	Carbon Black	Sech-III,B 3040	Non-Hz	1016.265
26	Bio Sludge	—	Non-Hz	42.42
27	Mustard	Sech-III,B 3060	Non-Hz	6540
28	Juliflora	Sech-III,B 3060	Non-Hz	11834.845
29	Cumin Husk	Sech-III,B 3060	Non-Hz	920.8
30	Cotton Stalk	Sech-III,B 3060	Non-Hz	1665
31	Charcoal Dust	—	Non-Hz	629.37
32	Mahendi Husk	Sech-III,B 3060	Non-Hz	652.4
<b>Total Non-HW Qty. (in MT)</b>				<b>31943.26</b>

<b>Total AFR used Qty. (in MT)</b>				<b>38978.89</b>
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## Water Harvesting and Recharging Data

Structure Created By ACF (out fence)	Recharge (CuM)	Harvest (CuM)
Dyke	2678748	0
Pond	1371375	1371375
Khadin	1244618	1244618
Check Dam	863823	863823
RRWHS/WST	0	12247
Farm Pond	0	248949
Farm Bund	0	384959
Total	6158564	4125970
Total ACF (Cum)	10284533.67	
Micro Irrigation (Water Saving )		879812

Structure Created By ACL (within fence)	Recharge (CuM)	Harvest (CuM)
Check Dam & Mines Pond	28930	28930
Total	28930	28930
Total ACL (Cum)	57859.35	



Ambuja Cements Ltd. Unit - Rabriyawas																				
MONITORING OF WATER TABLE (Piezometer)																				
		Tube Well 10																		
(m.b.g.l)		Year																		
Location		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
T.W. Site	Pre Monsoon	45.8	46.1	45.6	46.2	48.1	50.1	50.2	50.3	48.5	50.9	49.4	51.1	52.7	52.9	48.8	48.69	49.2	51.1	
	Post monsoon	45.2	45.4	45.5	45.0	47.3	48.2	47.9	44.7	46.9	45.1	48.6	42.4	40.6	42.8	38.0	43.68	42.5	43.9	

  
 Lab. Incharge (Env.)





**Ambuja Cements Limited, Unit: Rabriyawas**  
**Vill - Rabriyawas, Teh - Jaitaran, Distt - Pali (Rajasthan)**  
**Plantation & Greenbelt Development :: As on 31.03.2021**

**Plant & Colony:**

**Date :01.04.2022**

S. No.	Year of Plantation*	Number of Plant Planted	Number of Plant Survived	Survival Rate (Avg) (%)**	Area Covered in Plantation (Hectare)
1	1996-2000	33909	5526	16.3	16.00
2	2000-2001	12338	7488	60.69	15.25
3	2001-2002	11713	9364	79.94	13.50
4	2002-2003	6249	5122	81.96	7.25
5	2003-2004	7270	6058	83.33	7.50
6	2004-2005	5516	4728	85.71	3.00
7	2005-2006	5774	4814	83.37	1.50
8	2006-2007	6951	6121	88.06	4.00
9	2007-2008	5740	5007	87.23	5.00
10	2008-2009	13757	12352	89.79	7.00
11	2009-2010	9430	8678	92.02	6.00
12	2010-2011	7708	7560	95.74	5.00
13	2011-2012	13028	11752	90.21	10.00
14	2012-2013	7819	7220	92.34	5.00
15	2013-2014	9667	8556	85.86	5.00
16	2014-2015	12110	10753	88.79	9.25
17	2015-2016	11513	10157	88.22	8.75
18	2016-2017	2000	1810	90.5	1.50
19	2017-2018	5000	4800	96	4.00
20	2018-2019	5000	4853	97	3.50
21	2019-2020	3500	3395	97	2.50
22	2020-2021	3695	3621	98	2.50
23	2021-2022	2500	GAP PPLANTATION FOR DENSITY ENHANSMENT		
<b>Total</b>		<b>202187</b>	<b>149735</b>	<b>84.91</b>	<b>143.00</b>

\* Year of plantation considered **July to June**.

\*\* Calculated as average of all above years (%)





<b>Ambuja Cement</b> <b>Ambuja Cements Limited, Unit: Rabriyawas</b> <b>Development (Plantation) As on 31.03.2021</b> <b>RAS - 1 Limestone Mine</b> <b>Date :01.04.2022</b>					
S. No.	Year of Plantation *	Number of Plant Planted	Number of Plant Survived	Survival Rate** (Avg) (%)	Area Covered in Plantation (Hectare)
1	2013-14	4908	587	11.96	3.25
2	2014-15	5100	3430	67.25	5.50
3	2015-16	6000	3685	61.42	4.35
4	2016-17	1200	1012	84.33	1.00
5	2017-18	2500	2410	96.40	1.60
6	2018-19	1700	1683	99.00	1.00
7	2019-20	3000	2940	98.00	2.00
8	2020-21	1810	1773	98.00	1.00
9	2021-22	7500	6800	90.67	3.70
<b>Total</b>		<b>26218</b>	<b>17520</b>	<b>74.05</b>	<b>19.70</b>

\* Year of plantation considered **July to June**.

\*\* Calculated as average of all above years (%)

<b>Ambuja Cement</b> <b>Ambuja Cements Limited, Unit: Rabriyawas</b> <b>Development (Plantation) As on 31.03.2021</b> <b>RAS - 2 Limestone Mine</b> <b>Date :01.04.2022</b>					
S. No.	Year of Plantation *	Number of Plant Planted	Number of Plant Survived	Survival Rate** (Avg) (%)	Area Covered in Plantation (Hectare)
1	1996 To 2000	10385	510	4.91	11
2	2000-2010	113089	49477	43.75	64.45
3	2010-2011	10522	6915	65.72	3.5
4	2011-2012	13513	9500	70.3	4
5	2012-2013	10515	7818	74.35	3.5
6	2013-2014	9648	7130	73.9	4
7	2014-2015	16200	12117	74.8	5
8	2015-2016	7500	6146	81.95	4.8
9	2016-2017	6000	5197	86.62	4
10	2017-2018	10500	9392	89.45	5.25
11	2018-2019	11800	11210	95	6
12	2019-2020	13000	12740	98	6
13	2020-2021	8235	8070	98	4.5
14	2021-2022	9395	8175	87	4.8
<b>Total</b>		<b>250302</b>	<b>154397</b>	<b>74.55</b>	<b>130.8</b>

\* Year of plantation considered **July to June**.

\*\* Calculated as average of all above years (%)



## COMPLIANCE REPORT OF CHARTER ON CORPORATE RESPONSIBILITY FOR ENVIRONMENTAL PROTECTION (CREP) FOR CEMENT PLANT AND CAPTIVE POWER PLANT

### Cement Plant

S. No.	Condition	Compliance status
1.	Cement Plants, which are not complying with notified standards, shall do the following to meet the standards. 1. Augmentation of existing Air pollution control device. 2. Replacement of existing Air pollution control device.	Complying with notified standards given by RPCB & MoEF&CC.
2.	Cement Plants located in critically polluted or urban areas (including 5 kms. Distance outside urban boundary) will meet 100 mg/Nm <sup>3</sup> limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm <sup>3</sup> .	Complying with existing emission standard stipulated by MoEF&CC & RPCB i.e. 30 mg/Nm <sup>3</sup>
3.	The new cement kilns to be accorded NOC / Environmental Clearance w.e.f. 01.04.2003 will meet the limit of 50 mg/Nm <sup>3</sup> for particulate matter emission.	Noted. We are complying with 30 mg/Nm <sup>3</sup>
4.	CPCB will evolve load-based standards by December 2003.	Noted.
5.	CPCB and NCBM will evolve SO <sub>2</sub> and NO <sub>x</sub> emission standards by June 2004.	Noted.
6.	The cement industries will control fugitive emission from all the raw material and products storage and transfer points by December 2003. *However, the feasibility for the control of fugitive emission from limestone and coal storage areas will be decided by the National task Force (NTF). The NTF shall submit its recommendations within three months	JPF are installed at all raw material /product storage and transfer points. Dust suppression by water sprinkling system installed at limestone crusher hopper, coal tippler hopper & additive hopper, which are working efficiently. * Noted.
7.	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in Cement Kiln by July 2003.	Noted.
8.	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/ sections for installation of continuous monitoring system (CMS) by December 2003.	We have already installed continuous monitoring equipment at all stacks on Opacity Meters at raw mill / Kiln Bag House, Clinker cooler ESP, Cement Mills, Coal Mills & CPP ESP stacks.

### AMBUJA CEMENTS LIMITED UNIT – RABRIYAWAS

Works: PO Rabriyawas, Tehsil – Jaitaran, Dist. – Pali (Raj.) 306 709

Tel: 02939 288011-18, Fax: 02939 288030

CIN: L26942GJ1981PLC004717 Website: www.ambujacement.com

(Registered Office: PO – Ambujanagar, Taluka – Kodinar, Dist. – Gir Somnath (Guj.) 362 715)



# Ambuja Cement

9.	Tripping in Kiln ESP to be minimized by July 2003 as per the recommendation of NTF.	Not Applicable. Reverse air bag house is installed in place of ESP at Raw mill & Kiln.
10.	Industries will submit the target date to enhance the utilization of waste material by April 2003.	Fly ash generated from CPP is fully utilized for PPC manufacturing. Domestic wastewater (Raw sewage) is treated at SWRP and treated water is utilized for plantation. Co-processing of hazardous/non-hazardous/other waste is being done as per Authorization obtained from RSPCB.
11.	NCBM will carry out a study on Hazardous waste utilization in cement kiln by December 2003.	Noted.
12.	Cement Industries will carry out feasibility study and submit target dated to CPCB for cogeneration of power by July 2003.	7.5 MW capacity WHR (Waste Heat Recovery) Systems has been installed.

## Captive Power Plant

1.	Implementation of Environmental Standards (emission & effluent) in non-compliant* Power Plants (31 & 27) -Submission of action plan : June 30, 2003 - Placement of order for - Pollution of control equipment : September, 2003 - Installation & commission : December 31, 2005	Being complied with notified standards given by RSPCB & MoEF&CC i.e. 50 mg/NM3.
2.	For existing thermal power plants, a feasibility study shall be carried out by Central Electricity Authority (CEA) to examine possibility to reduce the particulate matter emissions to 100 mg/Nm3. The studies shall also suggest the road map to meet 100 mg/Nm3. The studies shall also suggest the road map to meet 100 mg/Nm3 wherever found feasible. CEA shall submit the report by March 2004.	Noted. Complying with existing emission standard stipulated by MoEF&CC & RSPCB.
3.	New / expansion power projects to be accorded environmental clearance on or after 4.1.2003 shall meet the limit of 100 mg/Nm3 for particulate matter.	Being complied. Complying with notified standards given by RSPCB & MoEF&CC i.e. 50 mg/NM3.
4.	Development of SO2 & NOx emission standards for coal based plants by December 2003. - New/ expansion power projects shall meet the limit of SO2 & NOx w.e.f. 1.1.2005. - Existing power plants shall meet the limit of SO2 & NOX w.e.f. 1.1.2006.	Noted, Complying with notified standards given by RSPCB & MoEF&CC.

### **AMBUJA CEMENTS LIMITED UNIT – RABRIYAWAS**

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(Registered Office: PO – Ambujanagar, Taluka – Kodinar, Dist. – Gir Somnath (Guj.) 362 715)



# Ambuja Cement

5.	Install/activate opacity meters/ continuous monitoring system in all the units by December 31, 2004 with proper calibration system.	Complied, Opacity Meter and Online NOx & SOx analyzer installed at the stack attached with Captive Power Plant.
6.	Development of guidelines/ standards for mercury and other toxic heavy metals emissions by December 2003.	Noted and spot measurement is being done by NABL/MoEF&CC approved lab on annual basis for the stipulated parameters.
7.	Review of stack height requirement and guidelines for power plants based on micro meteorological data by June 2003.	Complied
8.	Implementation of use of beneficiated coal as per GOI Notification: Power plants will sign fuel supply agreement (FSA) to meet the requirement as per the matrix prepared by CEA for compliance of the notification as short term measure. Options/mechanism for setting up of coal washeries as a long term measure * Coal India will up its own washery * State Electricity Board to set up its own washery * Coal India to ask private entrepreneurs to set up washeries for CIL and taking washing charges * SEBs to select a private entrepreneur to set up a washery near pit- head installation of coal beneficiation plant	Noted
9.	Power plants will indicate their requirement of abandoned coal mines for ash disposal & Coal India/ MOC shall provide the list of abandoned mines by June 2003 to CEA.	100 % Fly ash generated in CPP is being consumed in-house in cement manufacturing.
10.	Power plants will provide dry ash to the users outside the premises or uninterrupted access to the users within six months	100 % Fly ash generated in CPP is being consumed in-house in cement manufacturing.
11.	Power Plants should provide dry flyash free of cost to the users.	Used in own cement manufacturing plant.
12.	State P.W.Ds/ construction & development agencies shall also adhere to the specifications/Schedules of CPWD for ash based products utilization MoEF will take up the matter with State Governments.	Noted

## AMBUJA CEMENTS LIMITED UNIT – RABRIYAWAS

Works: PO Rabriyawas, Tehsil – Jaitaran, Dist. – Pali (Raj.) 306 709

Tel: 02939 288011-18, Fax: 02939 288030

CIN: L26942GJ1981PLC004717 Website: [www.ambujacement.com](http://www.ambujacement.com)

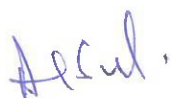
(Registered Office: PO – Ambujanagar, Taluka – Kodinar, Dist. – Gir Somnath (Guj.) 362 715)





# Ambuja Cement

13.	New plants to be accorded environmental clearance on or after 1.04.2003 shall adopt dry flyash extraction or dry disposal system or Medium (35-40%) ash concentration slurry disposal system or Lean phase with hundred percent ash waste re-circulation system depending upon site specific environmental situation. (ii) Existing plants shall adopt any of the systems mentioned in 13 (i) by December 2004.	Noted
14.	Fly Ash Mission shall prepare guidelines/manuals for flyash utilization by March 2004.	Noted
15.	New plants shall promote adoption of clean coal and clean power generation technologies.	Noted



Arvind Singh

Sr. Manager – Environment

**AMBUJA CEMENTS LIMITED**  
**UNIT – RABRIYAWAS**

Works: PO Rabriyawas, Tehsil – Jaitaran, Dist. – Pali (Raj.) 306 709

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## Ambuja Cements Limited, Unit: Rabriyawas

Status of last Public Hearing Issues as on 31.03.2022		
SN	Public Hearing Issue	Implementation Status
1	Opportunities for employment of local people due to Integrated Cement Project	Implemented.
2	Planning for Roof-Top-Rain water harvesting and water conservation	We already carried out detailed study of Roof Top Rain Water Harvesting Potential in Colony & Plant area, according to the recommendations in the report; storm water drainage system has been developed to cover the roof top as well as paved surface run-off water. Further storage / ground water recharge structure are being developed in phased manner.
3	Problem of water scarcity is being faced by villagers now-a-days	We supply drinking water as per need of surrounding villagers by tankers during water scarcity.
4	Pollution while transportation of Limestone extracted from Ras I Mine	Limestone coming out of Ras-I mine is being transported in covered trucks. Water sprinkling is being done on roads to control air pollution.
5	Pollution impact of this expansion project on Agriculture and environment	ACL is maintaining all emission standards within the limits prescribed by CPCB/SPCB.
		No waste water is generated from the cement plant & mine and ACL is maintain "zero discharge".
		Solid waste generated from Ras I Mine as inter-burden is dumped in the non – mineralized zone of the ML area with proper terracing, which is stabilized by plantation.
		Green belt is being developed all around the ML area.
		Thus, there is no impact of expansion project on agriculture
6	Management of Over- burden in Ras I Mine	No over burden is generated from Ras – I Mine except small quantity of inter burden generation.
7	Provisions made for blasting in proposed mining project in Kotidiya and for the damage that may be posed to the properties of villagers.	Noted
8	Planning about Women employment and Social- Development plans and participation of women in rural development under taken by Ambuja Cement Ltd.	Expansion of rural developmental projects/ Programmes are being done and the participation of women's for the rural development is promoted and the development of women is being ensured.



### Framework

The Ambuja Cements Limited's Environmental policy is an integral part of the Ambuja Cement policy landscape. This policy should be read in close conjunction with the Ambuja Cement policies and directives listed in Annex 2.

### The Environmental policy comprises:

- Scope
- Environment Policy
- Annex 1: Responsibilities
- Annex 2: Ambuja Cement policies and directives related to the Environmental policy

#### 1. Scope

The scope of the Ambuja Cement Environmental Policy covers Ambuja Cements Ltd. and all its operations ("Ambuja Cement").

#### 2. Environment Policy

Concern and consciousness towards environment are embedded in our Environmental Policy which covers all our functions & operations. The structure, process and monitoring have been significantly reshaped in past few years, keeping in view the need of the time and the Company's objectives towards Corporate Sustainability. The effective execution and adherence to the policy principles are accorded high importance in the agenda of the Board of the Company. We commit to:

- Adopt environmentally safe mining and process technologies along with best operating practices for prevention & control of risks and adverse effects of the release of our pollutants to the environment (air, water, and soil) so as to protect health and safety of our employees, contract employees, and community.
- Appropriately rehabilitate/restore/reclaim mines or disturbed areas for overall benefit to community and biodiversity. Quarry rehabilitation plan will be in place for all extraction sites. A Biodiversity Management Plan will be prepared for all extraction sites according to the level of management needed based on the risks and opportunities.

- Optimise use of key resources including minerals, energy, and water.
- Conduct environmental and social impact assessment in selection of greenfield sites or major modifications in the existing sites.
- Conduct analysis of impacts our products and solutions through the Life Cycle Assessment.
- Reduce our impact on climate change by developing, manufacturing or promoting sustainable products and solutions, undertaking energy efficiency and recovery, use of renewable and non-conventional sources of energy, and utilising alternative raw materials and fuels.
- Comply with applicable legal and other requirements including environment and forest clearances, consents, permits, licenses, standards, and leading industry initiatives.
- Implement and maintain environment management systems all across our operations along with monitoring, reporting and continually improving our environmental performance.
- Be reliable provider of sound waste management solutions by co-processing qualified wastes as alternative fuels and alternative raw materials from other industries and waste service providers.
- Promote sustainable water management practices, including efficient water consumption, recycling, treatment and zero wastewater discharge, across all our operations, along with rainwater harvesting to minimize freshwater withdrawal.
- Assess the environmental practices and policies of our critical suppliers as part of selection process and expect them to respect and comply with our environmental policies and procedures.
- Develop and propagate environmental awareness amongst employees and other stakeholders including surrounding communities.

- Set corporate objectives and targets, and monitor our environmental performance.
- Conduct environmental due diligence of all new acquisitions.
- Be open, transparent, and accountable to our stakeholders regarding our environmental performance and periodic reporting. This policy will be communicated to all persons working for or on behalf of the company and will also be made available on the website of the company.

This Policy was approved by Executive Committee of the Company on 20th March 2017 and will come into force on 21st March 2017.

Original Date:	Revision Date:
00th March 2017	
Version dated:	
20th March 2017	
Responsible Executive Committee Members:	
Vilas Deshmukh, Chief Manufacturing Officer	
Responsible Person Name/ Title: Sandeep Srivastava, Head	
Corp. Environment and Sustainability	

## **Annex 1: Responsibilities**

### **1. Organisational structure, roles and responsibilities**

#### **1.1. Ambuja Cement Executive Committee:**

- The Executive Committee approves creating, changing or suspending this Environmental Policy.
- The Chief Manufacturing Officer is the Executive Committee member responsible for Sustainable Development who submits the creation, changes or suspension of this Environmental Policy to the Executive Committee for approval.

#### **1.2. Corporate Function – Environment and Sustainability:**

- Proposes amendments to this Policy and associated procedures / guidelines where and when necessary.
- Assists Units (Plants/Operational Sites) in understanding and applying the Environmental Policy and Directives.
- Supports training on the Environmental Policy and Directives.
- Assists Units in solving serious environmental compliance issues and other significant environmental issues.
- Collects feedback from Units with regard to amendments of the Environmental Policy and Directives
- Head (Corp Environment and Sustainability), reporting to the Chief Manufacturing Officer, is responsible for all the activities and to oversee fulfilment of requirements for compliance, co-ordination with environment managers and Unit Heads at respective sites of operation who are directly responsible for ensuring compliance at their respective sites.

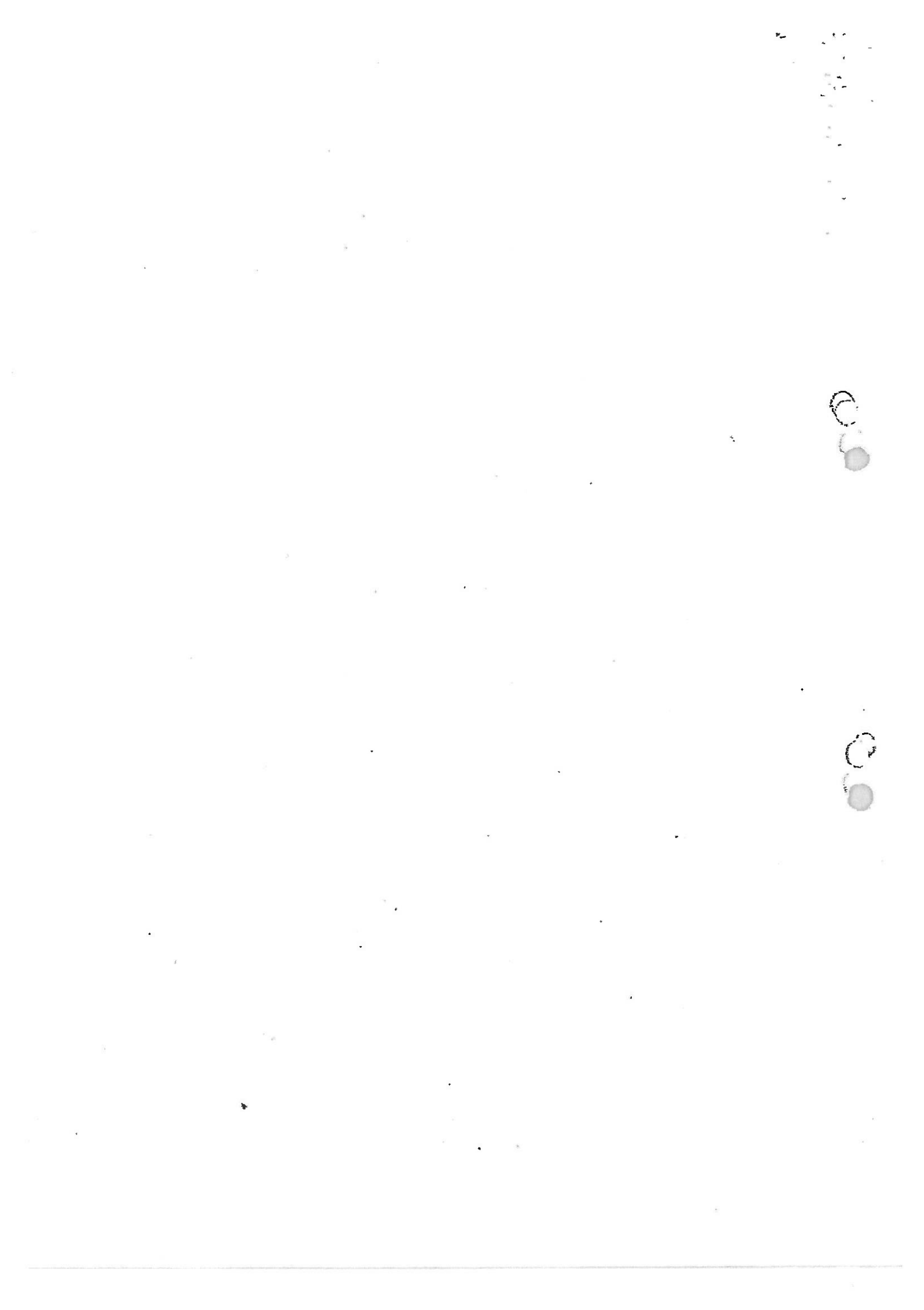
#### **1.3. Corporate Sustainability Steering Committee (CSSC):**

The Corporate Sustainability Steering Committee reviews the overall sustainability performance and initiatives as well as any potential amendments to the Policy and associated Directives proposed by the Corporate Environment and Sustainability/ other function before submission to the CMO/ Executive Committee.



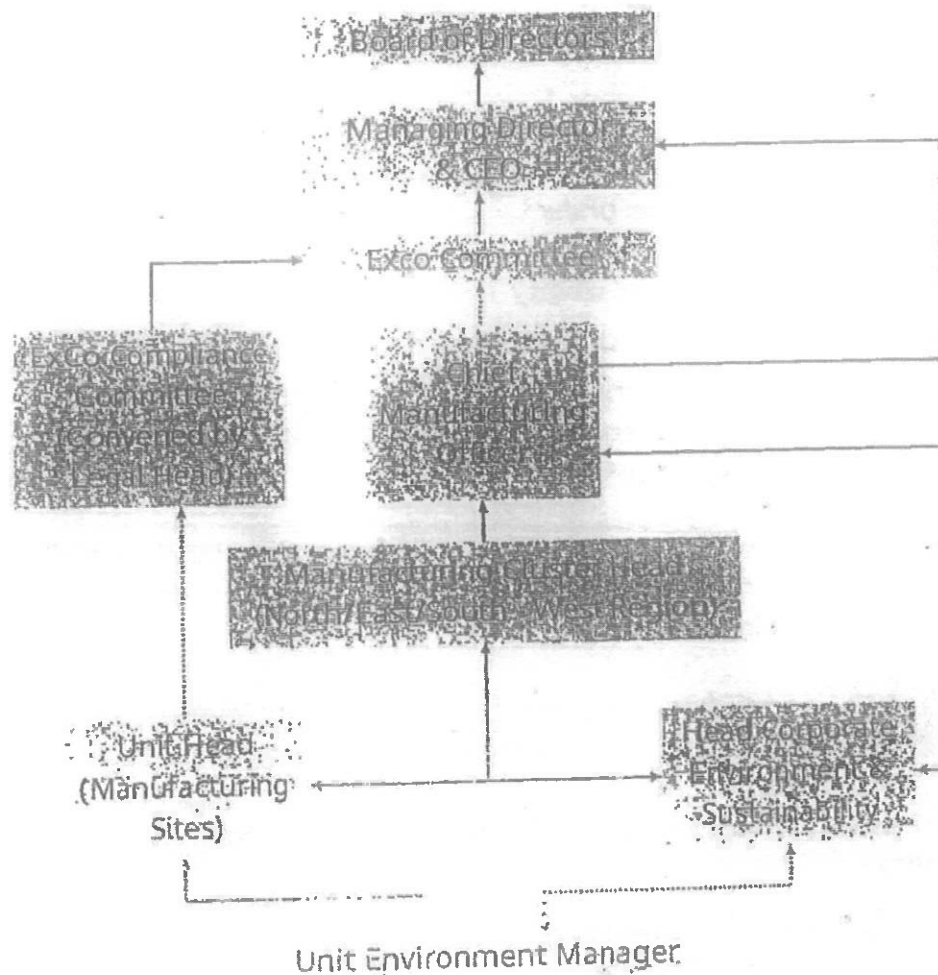
Annex 2b: Ambuja Cement Directives related to the Environmental policy

Link to The Environmental Policy	Directive
All LH /ACL Directives	LH Cement Environment Directive LH Water Directive LH Quarry Rehabilitation and Biodiversity Directive



#### 1.4. Unit / Plant Management:

Unit or plant environmental managers support training on and implementation of the Environmental Policy, Legislation and Directives at the respective unit or sites. They share good practices within their units and promote environmental success stories at Company level. Unit head (UH) ensures that Environment Policy is implemented as per the planned procedure. UH provides all resources to environmental function so that the system of compliance is operated efficiently. UH reports to respective Manufacturing Cluster Head of the organisation who in turn reports to the Chief Manufacturing Officer (CMO), on all important environmental issues including Compliance of Environment/ Forest/ Wildlife and Clearances.



### **1.5. Other Functions:**

Implementing the Environmental Policy requires cooperation with the following functions in particular: Manufacturing (including Cluster Heads at regional level), Legal/Compliance, Internal Audit, Procurement, Finance, Marketing, Risk Management, Health and Safety, Techport, Geocycle, Corporate Affairs, CSR, and Communications.

Exco level Compliance Committee takes a stock of compliance confirmation/ non-compliances regarding all the legal requirements applicable to ACL (including environmental). Head-legal on a quarterly basis presents compliance confirmation to the Board level Compliance Committee headed by an independent Director.

The organisation structure for implementation of Corporate Environmental Policy is as under:

## **2. Company Level Responsibility**

### **2.1. Company MD and CEO**

MD and CEO, at the helm of affairs, is responsible for making sure that Company Environmental Policy fully integrates the principles of the LafargeHolcim Environmental Policy.

He / she delegates responsibilities for implementing initiatives and programs pertaining to this Policy to the concerned functions / persons within the Company.

The MD and CEO is ultimately responsible for implementation of Environmental Policy and for ensuring the conformity.

### **Annex 2a: Ambuja Cement Policies related to the Environmental policy**

<b>Link with Policy</b>	<b>Sustainability Policy</b>
	<b>CSR Policy</b>
	<b>Climate Change Policy</b>
	<b>Green Procurement Policy</b>
	<b>Health &amp; Safety Policy</b>

**LABORATORY EQUIPMENT AVAILABLE WITH ENVIRONMENTAL  
MANAGEMENT DIVISION – ACL, RABRIYAWAS**

Sr. No.	EQUIPMENT NAME	MODEL	Nos.	MAKE
01.	CAQM station along with weather monitoring kit	Sonimix 3022 EN Series	01	Environment-SA
02.	CEMS	OMD41, MCS100E HW	01	Dust Monitor: Sick Maihak Gas Analyzer-Chemtrol
03.	RDS (Respirable dust sampler)	APM 460 & DX APM-460 BL	06	Envirotech Instruments Pvt. Ltd.
04.	Fine particulate sampler (Combo PM 10 & PM 2.5 sampler)	Ecotech AAS 271	02	Envirotech Instruments Pvt. Ltd.
05.	HVS (High Volume Sampler)	APM-415	01	Envirotech Instruments Pvt. Ltd.
06.	Stack Monitoring Kit	APM-620	02	Envirotech Instruments Pvt. Ltd.
07.	Stack Velocity Monitor	APM-602	01	Envirotech Instruments Pvt. Ltd.
08.	Handy Sampler	APM-821	01	Envirotech Instruments Pvt. Ltd.
09.	Personal Sampler	APM-800	02	Envirotech Instruments Pvt. Ltd.
10.	Sound Level Meter (SLM 100)	30-DTI-2008	01	EPIL
11.	Flue Gas Analyzer	KM-9106	01	Kane International
12.	Diesel Smoke Meter	Opax 2000 II/ DX 200 P	01	Neptune Equipment Pvt. Ltd.
13.	Infrared Exhaust Gas Analyzer	TD 240/ EGA 200	01	Neptune Equipment Pvt. Ltd.



No.: ACL/EMD/F-25

10<sup>th</sup> September, 2021

Registered A/D

To,  
The Member Secretary,  
Rajasthan State Pollution Control Board,  
4<sup>th</sup>, Institutional Area, Jhalana Doongri,  
Jaipur - 302 004 (Rajasthan)

**Sub:** Submission of Environmental Statement Report (Form V) for our 3.6 MTPA Cement Plant including Waste Heat Recovery System (WHRS), 1000 TPD Synthetic Gypsum Plant, Alternative Fuel Resource (AFR) Storage and Pre processing plant and Ambuja Township Plant for period April 2020- March 2021.

- Ref:** 1. F(CPM)/Pali(Jaitaran)/2682(1)/2016-2017/9988-9990 dated 14/03/2018  
2. F(Tech)/Pali(Jaitaran)/2682(1)/2016-2017/5600-5602 dated 15/09/2017  
3. F(CPM)/Pali(Jaitaran)/2682(1)/2016-2017/3967-3969 dated 27/01/2020  
4. F(CPM)/Pali(Jaitaran)/2684(1)/2020-2021/3469-3471 dated 05/11/2020.

Dear Sir,

Please find enclosed herewith the Environmental Statement Report for the period ending March 2021 in Form V for our 3.6 MTPA Cement Plant including Waste Heat Recovery System, 1000 TPD Synthetic Gypsum Plant, Alternative Fuel Resource (AFR) Storage and Preprocessing plant and Ambuja Township Plant.

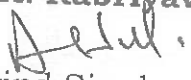
Trust the above is in order.

Thanking you,

Yours faithfully,

For **Ambuja Cements Limited**

Unit: **Rabriyawas**

  
Arvind Singh

Sr. Manager (Environment)

**Copy to:** The Regional Officer, RSPCB, SA- 6, Mandia Road Industrial Area, Pali, Rajasthan

**AMBUJA CEMENTS LIMITED**

**UNIT - RABRIYAWAS**

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**FORM – V**

**Environmental Statement for the financial year ending the 31<sup>st</sup> March 2021 for our 3.6 MTPA Cement Plant**

**PART – A**

- (i) Name and address of the owner / : Sh. Rishi Kumar Joshi  
 occupier of the industry operation or Unit Head  
 process Ambuja Cements Limited  
 Post & Village:- Rabriyawas-306 709  
 Tehsil: Jaitaran, Distt.: Pali (Raj)
- (ii) Production capacity – Units - : 3.6 MTPA Cement, WHRS, 1000 TPD  
 Synthetic Gypsum & AFR Storage,  
 Preprocessing Plant and Ambuja  
 Township
- (iii) Year of establishment : 1996, 2011 & 2015 respectively
- (iv) Date of last environmental statement : 21/09/2020  
 submitted

**PART – B**

**WATER AND RAW MATERIAL CONSUMPTION:**

**1. Water consumption m<sup>3</sup>/d (Process, Cooling & others)**

Process: } : 229544 m<sup>3</sup> / Year  $\cong$  665.34 m<sup>3</sup>/day (based on 345 days operation)

Cooling: }

Domestic : 140635 m<sup>3</sup> / Year  $\cong$  385.30 m<sup>3</sup>/day (Township consumption water)

Name of products	Process water consumption per unit of product output	
	During the previous financial year	During the current financial year
(1) Cement	0.1044 m <sup>3</sup> /MT	0.1010 m <sup>3</sup> /MT

**2. Raw material consumption:**

	Name of raw materials	Name of products	Consumption of raw material per unit of output	
			During the previous financial year (2019-2020)	During the current financial year (2020-2021)
1.	Limestone	Raw Meal	86.00	92.69
2.	Purchase limestone		12.23	6.70
3.	Silica sand		0.69	0.12
4.	Red ochre		0.00	0.04
5.	China Clay		0.08	0.00
6.	Iron dust & Iron ore		0.98	0.34
7.	Bed material		0.00	0.00
8.	Laterite		0.00	0.00
9.	Iron Sludge		0.03	0.11
10.	Marble Slurry		0.00	0.00
11.	Coal	Clinker	4.64	8.35
12.	Lignite, Pet Coke, Cow Dung, Tyre Chips, Paint Sludge		Petcoke: 6.64 AFR: 1.68	Petcoke: 3.56 AFR: 1.90
13.	Fly ash	Cement PPC	30.89	27.99
14.	Gypsum		8.57	9.96
15.	Clinker		60.54	62.05



### PART - C

#### Pollution discharged to environment / units of output

(Parameter as specified in the consent issued)

(1)	Pollutants	Name of source	Quantity of pollutants discharged (Kg. / day)	Concentrations of pollutants in discharged (mg / Nm <sup>3</sup> )	Percentage of Variation from prescribed standards with reasons
(a)	Water (Industrial)	Not Applicable since no waste water is generated from the process			NA
	Water (Domestic)	Domestic sewage treatment plant in colony			No Variation. All parameters are within the prescribed limits stipulated by the concerned regulatory authorities.
		Parameter	Prescribed Std. mg/l	Observed Value mg/l (Annual Avg.)	
		pH	6.5-8.5	7.76	
		TSS	100	65.55	
		BOD	30	18.31	
		COD	250	71.82	
		Oil & Grease	10	< 2.0	
		Nitrate Nitrogen	10	< 0.45	
		Sulphide (as S)	2	< 0.05	
	Pollutants	Name of source	Quantity of pollutants discharged (Kg. / day)	Concentrations of pollutants in discharged (mg / Nm <sup>3</sup> ) (Annual Avg.)	Percentage of Variation from prescribed standards with reasons
(b)	Air	Kiln/Raw mill BH	180.49	21.88	Within Prescribed Limits
		Coal mill - I	34.64	16.35	
		Coal mill - II	11.05	7.19	
		Kiln cooler ESP	269.26	27.10	
		Cement mill - I	23.32	16.16	
		Cement mill - II	32.45	24.97	
		Roller Press	32.34	24.16	
		SG Plant Stack	Not run	Not run	

### PART - D

#### HAZARDOUS WASTES

(As specified under Hazardous Wasted / Management and Handling Rule 1989)

Hazardous Waste	Total quantity (Kg)		
		During the previous financial year	During the current financial year
1.From Process	1. Used Oil & Used Grease	30340	28682
2.From pollution control facilities	2. FO Sludge	0.00	0.00
	NA	NA	NA
	<b>Total</b>	30340	28682

**PART – E**  
**SOLID WASTES**

	Total quantity (Kg)	
	During the previous financial year	During the current financial year
a) From Process	NA	NA
b) From pollution control facilities	NA	NA
c) (1) Quantity recycled or re Utilized within the unit.	NA	NA
(2) Sold	NA	NA
(3) Disposed	NA	NA

**PART – F**

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

- a) The types of hazardous waste being handling belong to the category 5.1 only.
- b) The above hazardous waste is being sold to authorized parties.

**PART – G**

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

**1. Recycling of raw material: -**

Due to efficient working of air pollution control equipment (APCE) like ESP/ Bag house/Jet pulse Filter in the different sections like Raw mill, Cooler house, Cement mill, etc., the dust generated (raw material, Clinker, Cement) is recycled and used in the process. This results in prevention of loss of material, which directly affects the cost of production.

**2. Energy Conservation: -**

The total energy consumption has been minimized due to the use of the different pollution control equipments. In pollution free environment the different machineries run in an efficient manner resulting in less consumption of energy. This minimizes the cost of production.

**3. Control of Fugitive Emission: -**

The plant is equipped with state of art Air Pollution Control devices such as ESP, Jet Pulse Filters etc designed to control the emission (SPM) levels below 30 mg/Nm<sup>3</sup> from any of the stacks installed at our plant. In addition of the above, we are successfully managing the ambient SPM levels to below the prescribed levels by way of putting up Jet Pulse Filters at each of transfer points, fully mechanized system for fly ash handling, covered conveyors, water sprinklings of raw materials & coal conveyors and mostly paved surfaces for vehicular movement inside the plant premises.

All these system have proved to be very effective in arresting and putting back the recovered material into the production line thus preventing the precious raw material, fuel, intermediates & finished products from getting lost in the atmosphere.

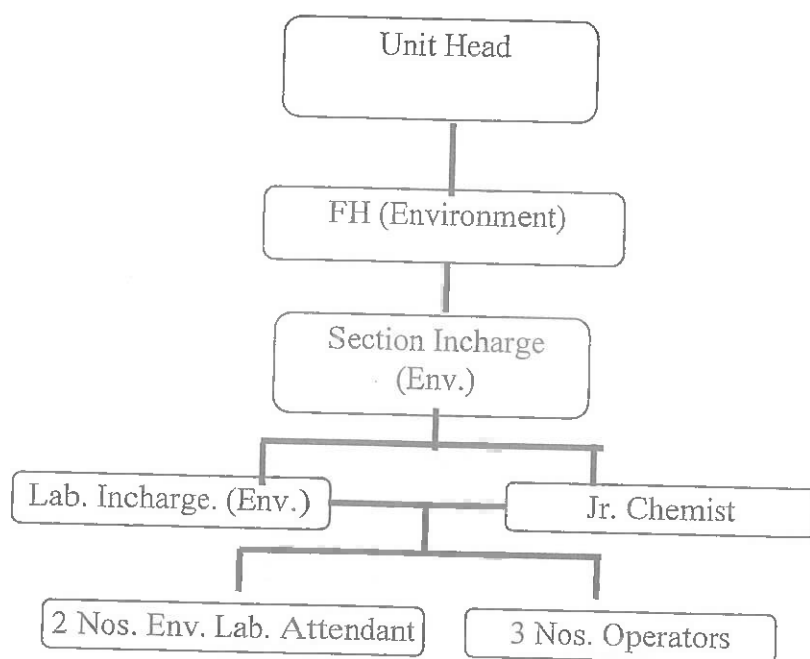
Additionally, over the years, the company has undertaken various energy efficiency improvement measures & process modifications which helped to significantly reduce the overall energy consumption to enable us to achieve our ultimate goal of GHG emission reduction and positive contribution towards reversing the effects of Climate Change.

Thus, the pollution abatement & other energy conservation practices adopted by us save the precious raw material/products and greatly help in conserving the valuable Natural Resources.

#### 4. Environmental Management Division: -

The Environmental Management Division (EMD) of Ambuja Cements Limited (ACL) has experts in the field of environmental management from different disciplines. This division is also supported by sufficient qualified staff for maintenance of pollution control equipment from civil, Mechanical, Automation & Control and Electrical Depts. Company has full-fledged Horticulture department with staff qualified on forestry and horticulture.

#### Organization Structure for Environment Management Division



## 5. Environmental Laboratory:

Full fledged Environmental Laboratory with modern sophisticated equipments for collection and analysis of Air, Water & Waste water samples under the supervision of the Environmental Management Division. A list of laboratory equipments is as follows:

S. No.	Name of Equipment	Make	Model No.	Quantity
1	CAAQM Station along with Weather Monitoring Kit	Environment – SA	Sonimix 3022 EN Series	03
2	CEMS	Dust Monitor : Sick Maihak Gas Analyzer: Chemtrol	OMD41, MCS100E HW	01
3	RDS (Respirable dust Sampler)	Envirotech Instruments Pvt. Ltd.	APM 460 & DX APM –460 BL	06
4	Fine Particulate Sampler (Combo PM10 & PM2.5 Sampler)	Eco Tech Instruments Pvt Ltd	Ecotech AAS 271	02
5	HVS (High Volume Sampler)	Envirotech Instruments Pvt. Ltd.	APM –415	01
6	Stack Monitoring Kit	Envirotech Instruments Pvt. Ltd.	APM –620	02
7	Stack Velocity Monitor	Envirotech Instruments Pvt. Ltd.	APM –602	01
8	Handy Sampler	Envirotech Instruments P Ltd	APM –821	01
9	Personal Sampler	Envirotech Instruments P Ltd	APM –800	02
10	Sound Level meter (SLM 100)	EPIL	30-DTI-2008	01
11	Flue Gas Analyzer	Kane international	KM – 9106	01
12	Diesel Smoke meter	Neptune Equipment Pvt. Ltd	Opax 2000 II/DX 200 P	01
13	Infrared Exhaust Gas Analyzer	Neptune Equipment Pvt. Ltd	TD 240/EGA 200	01
14	Weather Monitoring Instrument	Envirotech Instruments Pvt. Ltd.	WM271	01
15	On line Opacity Meter	Sick	OMD/41 – 02	07
16	Spectrophotometer	Spectronic Instruments	Spectronic 20 Genesys	01
17	Pressure manometer	Comark	C – 9553	01
18	Refrigerator 165 lit.	Godrej	Classic Del.	1
19	Hot Air Oven	Ambassador	BPI 9&10	1
20	BOD Incubator	Ambassador	BPI 34	1
21	COD Reflex Apparatus	Ambassador		1
22	Muffle Furnace	Ambassador		1
23	Water Bath	Ambassador	BPI 22	1
24	Balance 0.1mg	Precisa	Series XB	1
25	pH Meter	Systronics	335	1
26	TDS –Conductivity Meter	Systronics	308	1
27	Hot Plates	Ambassador		6
28	Separating Funnel	Borosil		2
29	CO Sampler (Ambient)	Pollution Protection System	GaZguard TX	1
30	Monitoring Van	Mahindra & Mahindra	Bolero LX	1

## Monitoring of Air & Water Pollution:

### **5.1 Ambient Air Monitoring: -**

Air is the major shareholder of environment and gets affected immediately by each activity. So keeping in view of this, an air surveillance program has been designed to monitor the air quality in and around plant in four fixed monitoring stations as per the RSPCB guidelines. Also we are monitoring the dust concentration at different work places. **Please refer annexure # I**

### **5.2 Water Monitoring: -**

There is no perennial source of surface water in the vicinity. Ground water is the major source and the entire requirement of water is met through ground water resource like open wells and tube wells. 02 nos. Piezometers have been installed to monitor the groundwater level in the premises.

So keeping in view of this, quarterly monitoring is being carried out at core zone villages.

### **5.3 Noise Monitoring: -**

Noise is considered to be one of the dimensions of pollution, which leads to degradation of the environment and also poses health and communication hazards. Although Noise levels are within prescribed limits, for better protection protective equipments such as earplug/earmuff are being provided in specific areas.

So keeping in view of this, monthly monitoring is being carried out at different locations.

**Please refer annexure # II**

### **6. Minimization of Health Hazards: -**

As a result of different pollution abatement measures being adopted, the health hazards to the workers have been minimized. This has indirectly reduced the cost of production.

### **7. On Line Stack Monitoring Equipments: -**

In order to monitor the stack emission continuously eight-opacity meter has been installed which are working efficiently. The stacks provided with on-line monitoring system are given below:

- Stack attached with Raw/Kiln – **Dust Concentration Monitor FW100:** The FW 100 Series form SICK AG and in operation from onward 14<sup>th</sup> July 2010.
- Stack attached cooler ESP & operational since 28.06.2001.
- Stack attached with CPP boiler operational since 31.07.2001. (15 MW)
- Stack attached with CPP duct operation since 31.07.2012. (18 MW)
- Stack attached with Coal Mill - I JPF operational since 19.12.2006.
- Stack attached with Coal Mill - II JPF operational since 29.01.2009.
- Stack attached with Cement Mill ESP - I operational since 14.12.2006.
- Stack attached with Cement Mill ESP - II operational since 14.12.2006.

#### 8. Plantation: -

At Ambuja Cements Ltd. plantation is an integral part of our activities for environmental protection and balancing the ecosystem. This also helps us in providing an additional aesthetic look in and around our works including our residential areas. We have started plantation in various areas since the installation of the plant. In the financial year 2020-2021, 3695 Nos. of saplings have been planted in the Plant & Colony. The survival rate is 98.0% considering our plant situated in desert of Rajasthan and also scanty rainfall the survival rate is quite satisfactory

#### **Greenbelt Development (Plantation) As on 31.03.2021**

##### **Plant & Colony:**

S. No.	Year of Plantation	Number of Plant Planted	Number of Plant Survived	Survival Rate (%)	Area Covered in Plantation (Hectare)
1	1996-2000	33909	5526	16.30	16.00
2	2000-2001	12338	7488	60.69	15.25
3	2001-2002	11713	9364	79.94	13.50
4	2002-2003	6249	5122	81.96	7.25
5	2003-2004	7270	6058	83.33	7.50
6	2004-2005	5516	4728	85.71	3.00
7	2005-2006	5774	4814	83.37	1.50
8	2006-2007	6951	6121	88.06	4.00
9	2007-2008	5740	5007	87.23	5.00
10	2008-2009	13757	12352	89.79	7.00
11.	2009-2010	9430	8678	92.02	6.00
12.	2010-2011	7708	7560	95.74	5.00
13.	2011-2012	13028	11752	90.21	10.00
14.	2012-2013	7819	7220	92.34	5.00
15	2013 -2014	9675	8451	87.34	5.00
16	2014-2015	12005	11448	95.36	9.25
17	2015-2016	11513	10753	88.22	8.75
18	2016-2017	2000	1810	90.50	1.5
19	2017-2018	5000	4800	96.00	4.0
20	2018-2019	5000	4853	97.00	3.5
21	2019-2020	3500	3395	97.00	2.5
22	2020-2021	3695	3621	98.00	2.5
	<b>Total</b>	<b>199687</b>	<b>149735</b>	<b>&gt; 84.00</b>	<b>143.00</b>

#### 9. Sewage Water Reclamation Plant (SWRP):

We have installed 160 m<sup>3</sup>/day & 200 m<sup>3</sup>/day capacity Sewage Water Reclamation Plant for treatment of domestic sewage generated from colony. The treated water is utilized for greenbelt development and dust suppression purposes. During monsoon when the treated water is not required for plantation and dust suppression the same is being channelised to water harvesting pond.

The average quality parameters for the year of 2020-21 are tabulated below.

Sr. No.	Parameters	Treated Water (Outlet)
1	pH	7.76
2	TSS, mg/L	65.55
3	BOD, mg/L	18.31
4	COD, mg/L	71.82
5	Oil & Grease, mg/L	< 2.0
6	Nitrate Nitrogen	<0.45
7	Sulphide (as S)	<0.05

### 10. Water Harvesting:

The plant site falls in semi-arid zone with the average rainfall of 450 mm/yr. There are number of seasonal nallas and streams which originate in between the valleys of the hills and traverse through the area. As a measure of social commitment a number of bunds/anicut have been constructed on the seasonal nallas to check the flow of water which has resulted in increasing the water table considerably in spite of repeated failure of monsoon. Moreover, the water is also used by the villagers for their daily need. Due to efforts on rainwater harvesting structures, water table of existing wells has increased. Because of ACFs training and awareness programmes, farmers are adopting less water requiring and high yielding horticulture crops to sustain agriculture practices.

#### **Achievements of Water harvesting efforts: -**

- i) After construction of the above structures the level of ground water during last two years has shown a rising trend. This has been observed in the adjoining villages.
- ii) It has been revealed that the actions initiated by the company for ground water recharge have aided in maintaining the water level in the area.

#### **PART – H**

Additional measures / investment proposal for environmental protection including abatement of pollution prevention.

These are the following investment proposal will be proposed in phased manner for conservation of natural resources, environmental protection and pollution abatement as below;

#### **Continuous Ambient Air Quality Monitoring System**

The Continuous Ambient Air Quality Monitoring System has been installed at SWRP site, Plant site & Mines site duly approved by State Pollution Control Board. This instrument has been monitored parameters of ambient air quality like PM10, PM2.5, NO, NO2, NOx, SO2, CO, and Weather parameters like Wind Direction, Wind Speed, Temperature, Relative Humidity, Rain Fall, Solar Radiation Influx, Atmospheric Pressure etc.

#### **Continuous Emission Monitoring System**

The CEMS has been installed and in operation from onward 14<sup>th</sup> July 2010. The details description of instrument as below;

**Dust Concentration Monitor FW100:** The FW 100 Series from SICK AG is designed to conduct continuous measurement of very low (0.1 mg/m<sup>3</sup>) to medium (200 mg/m<sup>3</sup> and higher) dust concentration in gases.

**MCS100E HW:** The MCS100E HW is an analyzer system for extractive measurement of up to 8 IR-active gas compounds. It can be supplemented with oxygen and total hydrocarbon analyzers. From sampling probe to cell, all components that are in contact with the sample gas are heated above dew point and thus protected from corrosion. This hot measurement technique allows the measurement of water soluble components HCl and NH<sub>3</sub>.

S. No.	Expenses for Environmental Improvements 2020-21	Expenses (Rs.)
1	Horticulture Expenses including Gardening	9572942
2	Environment Protection Expenses	1724688
3.	Construction of covered coal storage shed at Cement Plant	160000000
	<b>Total</b>	<b>171297630</b>

## PART – I

Any other particulars for improving the quality of the environment.

### 1. World Environment Day: -

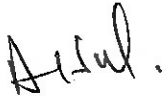
The "World Environment Day" is celebrated on 5<sup>th</sup> June of every year with full enthusiasm by involving of our all workers & staff. On this occasion environmental awareness programs are conducted like plantation, oath ceremony by ladies and school children, plantation by executives & workmen, environmental quiz, environment exhibition, display of video film, essay writing, slogan competition, poster competition and section wise house keeping competition etc. Winners are awarded suitability but due to covid 19 situation, the celebration of World Environment Day is restricted to minimum participation and gathering and this year, we have organized only plantation program at our premises.

### 2. Rural Development and Socio – Economic Environment: -

The company has set up Ambuja Cement Foundation (ACF), a non-government organization registered with the government and its efforts are directed towards the up-liftment of economically backward population of the area as well as the conservation of environment. ACF in course of its activities collaborates with local government agencies like the district Rural Development Agency (DRDA), PHED, Gram Panchayat, Health Department and other social beneficiary bodies created by the government. Detailed report of socio-economic development for the financial year ending 2020- 2021 is enclosed as **Annexure # III**.

For Ambuja Cements Limited

Unit: Rabriyawas



Arvind Singh

Sr. Manager - Environment