Ambuja Cement

Registered A/D

ACL/EMD/F-24 / 2626 **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 Compliance report Condition stipulated in Environmental Clearance for Limestone production of 3.6 Million TPA from Ras-II Limestone Mines by Ambuja Cement Limited, Unit – Rabriyawas, Teh – Jaitaran, Distt – Pali (Rajasthan)

Ref: **MoEF&CC EC Letter No. J-11015/148/2006-IA.II (M) dated 10.10.2007**

Dear Sir,
This has reference to the Environmental Clearance Letter. We are submitting herewith the half-yearly compliances of conditions stipulated in EC letter with supporting documents for the period from **October 2021 to March 2022.**

Hope you will find the same in order.

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 Bhavan, 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)

Ambuja Cement

Continuation Sheet

AMBUJA CEMENTS LIMITED
UNIT – RABRIYAWAS

Compliance Report of Environmental Clearance *(No. J-11015/148/2006-IA.II (M) 10.10.2007)* for 3.6 MTPA Ras II Limestone Mines M/s Ambuja Cements Ltd., Unit: Rabriyawas, Pali, Rajasthan

Period: OCTOBER 2021 to MARCH 2022

Sr. No.	Condition	Compliance Status
A. Specific Conditions:		
(i)	Environmental Clearance is granted subject to final order of Hon'ble Supreme Court of India in Contempt Petition (C) 412/2004 in IA No. 833 in Writ Petition (C) No. 202 of 1995, as may be applicable to this project.	Noted.
(ii)	All the conditioned stipulated by the State Pollution Control Board in their NOC should be effectively implemented.	Noted & being Complied. Compliance report is being sent regularly to State Pollution Control Board and their Regional Offices
(iii)	Topsoil, if any, shall be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitate on of mined out areas.	As per Mine Plan. This Mining Plan has been approved Vide letter No.584(4)(3)(1547)/2014RCM-AJM Dt.28.12.15..under MCDR 1988/MCR1960.
(iv)	The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operation	There is no perennial water body passing through Mines.
(v)	The inter burden and other waste generated shall be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of dump shall not exceed 20m in two terraces of 10m each and the overall slope of the dump shall be maintained to 28^0. The backfilling shall start from the 10^{th} year onwards. The inter burden dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self –sustaining. Compliance status should be submitted to the Ministry of Environment & Forest and its Regional office, Lucknow on six monthly basis.	Noted and being complied as per mining plan. The dumping of overburden has been done in only specified area earmarked for dumping as per approved Mining plan as proved non mineralized zone. Well planned green cover strategy is being followed & full care is taken for proper growth of plantation on slopes. Six monthly compliance reports are being regularly submitted at MoEF&CC Regional Office, Lucknow, RPCB Head Office, Jaipur & Regional Office Pali with reference to Ministry letter No. F. No. J-11011/54/2010-IA-II (I) dated 29th March' 2012 for our Cement Plant, Captive Power Plant (15 & 18 MW CPP) & Limestone Mines (Ras-I & Ras-II) and J-11015/148/2006-IA.II (M) dated 10.10.2007 for Ras-II Limestone Mines.
(vi)	The void left unfilled in an area of 48.8 ha shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plant at on 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	The unit has constructed Anicuts and Bunds and converted into water body. Wherever suitable site is identified Anicuts and Bunds will be constructed further.

	carried out along the excavated area.	
(vii)	Catch drain and siltation ponds of appropriate size should be constructed for the working pit, inter burden and mineral dumps to arrest flow of silt and sediment. The water so collected should be utilized for watering the mine area, green belt development etc. The drains should be regularly desilted, particularly after monsoon, and maintained properly. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and inter burden dumps and sump capacity should be designed keeping 50 % safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sumps capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de – silted at regular intervals.	Noted, Retaining walls & Siltation ponds near overburden dumps have constructed as per detail:- Western Ridge (1) 500m x 1.0m x 1.0m & Siltation pond about 20m x 25m x 1.0m (2) Retaining wall – 100m x 1m x 1m, Siltation Pond – 30m x 10m x 1m (3) Retaining wall – 100m x 1m along the road, Siltation Pond – 15m x 5m x 3m (4) Retaining wall – 100m x 3m x 5m, Siltation Pond – 20m x 10m x 5m (5) Eastern Ridge counters along road side acting as retaining wall size – 50m x 3m.
(viii)	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 should be based on the rain fall data.	In and around we have made Garland drains connected to 17 nos. of siltation ponds. 10 nos. of retaining wall have made around the overburden dumps.
(ix)	Plantation shall be raised in area of 203.12 ha including a green belt of adequate width by planting the native species around ML area, over burden dumps, around water body, roads, etc. in consultation with the local DFO / Agriculture Department. At least 1500 trees per year shall be planted with a tree density of 2000 trees per ha.	Being Complied. 240907 Nos. of trees have been planted in the Ras-II mines and area covered 126.00 ha. Further an area of 52 ha. within the lease area has been earmarked for conservation of flora & fauna. 26218 Nos of tree have been planted in Ras-I mines covering 19.70 hectare land. 199687 nos of tree have been planted in the Plant & Township area so far covering 143.00 hectare of land. The different species planted are Cassia Siamea, Aquzsia, Neem, Pipal, Babool, Sisham, etc.(**Annexure IV**)
(x)	Regular monitoring ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometer at suitable locations by the project proponent in and around the project area in consultation with Regional Director, Central Ground water Board. The frequency of monitoring should be four times a year – pre-monsoon (April / May), monsoon (August), post-monsoon (November), and Winter (January). Data	Water level and quality monitoring has been done accordance with stipulated guidelines and reports are being submitted regularly. Water samples are being analyzed from open wells in and around core –zone. Ground water quality analysis report is enclosed. (**Annexure V**)

	thus collected should be sent at regular intervals to the Ministry of Environment & Forest and its Regional office, Lucknow, Central Ground water Authority and Central Ground water Board, Western Region, Jaipur.	
(xi)	Suitable conservation measures to augment groundwater resources in the area shall be planted and implemented in consultation with Regional Director, Central Ground water Board.	Being complied, Two no. of the cemented dam have been constructed in the mine lease area and several check dams, kadins also constructed in the surrounding buffer area with help of Ambuja Cement Foundations for rainwater harvesting as well as ground water recharges. (please refer **Annexure III)**
(xii)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground water Board.	Two no. of the cemented dam have been constructed in the mine lease area and several check dams, kadins also constructed in the surrounding buffer area with help of Ambuja Cement Foundations for rainwater harvesting as well as ground water recharges. The detail of catchment's area as well as storage capacity @ of rainfall is 390 mm. (**Annexure III**)
(xiii)	The project proponent shall take appropriate mitigative measures to prevent pollution of Lilri River in consultation with State Pollution Control Board.	No effluent generated from operation of mines and domestic effluent is being disposed in septic tank soap pit. Hence there is no any effluent discharge to any main water course.
(xiv)	Permission from the competent authority should be obtained for withdrawal ground water required for the project.	Complied. Our average water consumption in the plant is around 2,000 m^3/day. Permission from CGWA, New Delhi @ 2400 KLD has been obtained vide letter No. 21-4(5)/WR/CGWA/2005-1188 dated 15/10/2008 and now open ended permission has been given by CGWA vide letter no. 21-4(5) WR / CGWA / 2005 - 627, dated 24.05.2011 with implementation of compliance conditions. Renewal of the same has already been applied vide application no. 15.10.2015
(xv)	Blasting operation should be carried out only during daytime. Controlled should be practiced. The mitigative measures for control of ground vibration and to arrest fly rocks and boulders should be implemented.	Complied Blasting operation carried out only daytime. The peak particle velocity and air blast are well within the safe limits of prescribed standards as laid down in the Circular issued by the Directorate General of Mines Safety, Govt. of India. To control ground vibration, air blast & fly rock, blasting is carried out by NONEL (non electric detonating) system. Ground vibration monitoring is being carried out.
(xvi)	Drills shall either be operated with dust extractors with water injection system.	Being complied, drilling is being done by wet process.

(xvii)	Vehicular emission should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.	Complied. Vehicular emission monitoring of Mines HEM is being periodically carried out and emissions are under control.
(xviii)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment & Forest and its Regional office, Lucknow.	Digital Processing of the entire lease area was done in 2018.
(xix)	Regular water sprinkling should be carried out in critical areas prone to air pollution and having high level of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It should be ensured that the Ambient Air quality parameters confirm to the norms prescribed by the Central Pollution Control Board in this regards.	Regular water sprinkling is done on the mine haul roads as well as near the faces in order to suppress the fugitive emissions generated due to the movements of vehicles. Effective water sprinkling system has been provided in crusher hopper and screening hopper. Regular ambient air quality monitoring is being done and results are well within the stipulated norms. The check the ambient air quality status third party (MoEF approved laboratory) has been engaged.
(xx)	Crusher should be operated with high efficiency bag filters. The screening plant and all transfer and loading & unloading points should be provided with water spraying system and equipped with dust collector / extraction system.	Bag filters has been provided at all the transfer point including crusher hopper and screening hopper and effective water sprinkling system has been provided.
(xxi)	Sewage treatment plant should be installed for colony. ETP should also be provided for workshop and mineral separation plant wastewater.	STP of 160 and 200 m^3/day capacity operating in Colony. Workshop waste water being collected into oil skimming pit and further reused. However if surplus water is present it will be utilized for green belt development.
(xxii)	Consent to operate should be obtained from SPCB before starting enhanced production from the mine.	Noted. The RPCB has granted Consent to operate vide letter No. F(Mines)/Pali/(Jaitaran)/82(1)/2016-2017/299-303 dated 27.05.2021 with validity 01.12.2018 to 30.11.2023.
(xxiii)	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forest 5 years in advanced of final mine closure, for approval.	Noted.

B. General Conditions		
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.	Noted.
(ii)	No change in the calendar plan including	Noted.

	excavation, quantum of limestone and waste should be made.	
(iii)	Conservation measures for protection of flora and fauna in the core & buffer zone should be drawn up in consultation with the local forest and wildlife department.	Implementation status as per the suggestion given by Dy. Conservator of Forest, Pali. Further, we have been conducted bio-diversity study by M/s Vikram University, Ujjain and their recommendation is being implemented.
(iv)	Four ambient air quality - monitoring stations should be established in the core zone as well as buffer zone for RPM, SPM, SO_2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Data on ambient air quality (RPM, SPM, SO_2 and NOx) should be regularly submitted to the Ministry including its Regional Office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board once in six month.	Noted and complied. Ambient air quality – monitoring report is enclosed (**Annexure- I**) In respect to comply of new National Ambient Air Quality Standards Continuous Ambient Air Quality Monitor station have installed at SWRP location, Near Mines Office & Near HR Office at Plant Gate. One CAAQM Station has been installed at Ras-I mines. Data on ambient air quality (RPM, SPM, SO_2 and NOx) is being regularly submitted to the Ministry including its Regional Office located at Lucknow and the State Pollution Control Board / Central Pollution Control Board on monthly/quarterly/six monthly basis. Online data of Ambient Air Quality is being also sent to RSPCB & CPCB website.
(v)	Fugitive dust emissions from all the source should be controlled regularly. Water spraying arrangements on haul roads, loading & unloading and at transfer points should be provided and properly maintained.	Noted and complied. Water is sprinkled continuously in the mine haul roads as well as near the faces in order to suppress the fugitive emissions generated due to the movements of vehicles. Effective water sprinkling system has been provided in crusher hopper and screening hopper.
(vi)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operation of HEMM etc. should be provided with ear plugs/ muffs.	Regular monitoring is in progress. Air and noise monitored in and around core zone. The noise levels are well within the limits, however ear plugs / ear muffs have been provided to operators. Mines HEM noise level report is enclosed (**Annexure II**).
(vii)	Industrial wastewater (workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Being collected into oil skimming pit and further reused. However if surplus water is present it will be utilized for green belt development Please refer analysis report as enclosed as in **Annexure I**
(viii)	Personal working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	PPEs provided. Health checkup of employees of ACL, Rabriyawas is carried out in Ambuja

	Occupational Health Surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Hospital. In this exercise a comprehensive general physical and systematic examination is carried out for staff, workers and contractor employees. The general and occupational health of the examined persons was found satisfactory.
(ix)	The project authorities should inform to the Regional Office located at Lucknow regarding date of financially closures and final approval of the project by the concerned authorities and the date of start of land development work.	Noted
(x)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Lucknow.	Noted.
(xi)	The Regional Office of this Ministry located at Lucknow shall monitor compliance of stipulated conditioned. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Noted
(xii)	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment & Forest, its Regional office, Lucknow, Central State Pollution Control Board and State Pollution Control Board.	Noted & complied A six monthly compliance report is being submitted regularly to concern authorities in stipulated time frame.
(xiii)	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, was received while processing the proposal.	Noted
(xiv)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar's office for 30 days.	-
(xv)	The Project authorities should be advertised at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the date of issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment and Forests	Complied and published in newspapers on 17.10.07 in Danik Bhaskar and Rajasthan Patrika.

	at http:/envfor.nic.in. and a copy of the same should be forwarded to the Regional office of this Ministry located at Lucknow.	

Arvind Singh
Sr. Manager (Environment)

Annexure-1

Statement Showing Quarterly Report on Monitoring of Mine Workshop Treated Waste Water & Other Environmental Parameters for the Quarter Ending December 2021

Ajmer Region

Oct-21

S. No	Name of Mine & Mineral	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m^3)			Gases (µg / m^3)			Water quality Parameters observed (mg/l except pH)		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	40.0	186.5	226.5	7.0	13.5	NT	pH	7.6	
2					Ridge (M2)	62.5	192.0	254.5	7.5	13.7	NT	TSS	66.0	
3					Ridge (M3)	64.5	201.0	265.5	7.5	13.6	NT	COD	74.0	
4					Screening CCR (M4)	49.0	199.0	248.0	7.5	13.9	NT	BOD	17.5	
5												Oil & Grease	<2.0	

Nov-21

S. No	Name of Mine & Mineral	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m^3)			Gases (µg / m^3)			Water quality Parameters observed (mg/l except pH)		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	39.8	183.0	222.8	7.1	13.5	NT	pH	7.8	
2					Ridge (M2)	62.4	189.0	251.4	7.2	13.6	NT	TSS	69.0	
3					Ridge (M3)	66.0	201.0	267.0	7.3	13.7	NT	COD	70.0	
4					Screening CCR (M4)	52.0	205.0	257.0	7.3	13.8	NT	BOD	16.6	
5												Oil & Grease	<2.0	

Dec-21

S. No	Name of Mine & Mineral	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m^3)			Gases (µg / m^3)			Water quality Parameters observed (mg/l except pH)		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	42.0	157.0	199.0	8.3	13.8	NT	pH	7.6	
2					Ridge (M2)	66.0	170.0	236.0	7.7	14.2	NT	TSS	77.0	
3					Ridge (M3)	59.0	210.0	269.0	7.9	13.6	NT	COD	42.0	
4					Screening CCR (M4)	52.0	196.0	248.0	7.3	14.0	NT	BOD	14.6	
5												Oil & Grease	<2.0	

Section Incharge (Env.)

"We are Environmentally and Socially Responsible "

Statement Showing Quarterly Report on Monitoring of Mine Workshop Treated Waste Water & Other Environmental Parameters for the Quarter Ending March 2022
Ajmer Region

Jan-22

S. No	Name of Mine &	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m³)			Gases (µg / m³)			Water quality Parameters		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	38.0	145.0	183.0	7.4	13.9	NT	pH	7.3	
2					North end of Eastern Ridge (M2)	56.0	176.0	232.0	8.2	14.3	NT	TSS	85.0	
3					South end of Western Ridge (M3)	55.0	144.0	199.0	8.4	15.2	NT	COD	82.0	
4					At L/S Crushing & Screening CCR (M4)	45.0	184.0	229.0	7.7	12.5	NT	BOD	13.6	
5												Oil & Grease	<2.0	

Feb-22

S. No	Name of Mine &	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m³)			Gases (µg / m³)			Water quality Parameters		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	33.0	166.0	199.0	7.2	12.4	NT	pH	7.3	
2					North end of Eastern Ridge (M2)	61.0	159.0	220.0	7.4	13.7	NT	TSS	56.0	
3					South end of Western Ridge (M3)	53.0	153.0	206.0	7.9	14.1	NT	COD	88.0	
4					At L/S Crushing & Screening CCR (M4)	47.0	168.0	215.0	7.4	14.2	NT	BOD	11.4	
5												Oil & Grease	<2.0	

Mar-22

S. No	Name of Mine &	Name of Owner	District /State	Taluka/ Village	Location	SPM (µg / m³)			Gases (µg / m³)			Water quality Parameters		Remarks
						<10 µ	>10 µ	TPM	SO_2	NO_2	CO			
1	Limestone Mines Ras-II	Mr. Neeraj Akhoury	Pali, Rajasthan	Jaitaran, Rabriyawas	Mines Office (M1)	40.0	193.0	233.0	7.0	13.5	NT	pH	7.7	
2					North end of Eastern Ridge (M2)	68.0	223.0	291.0	7.5	14.0	NT	TSS	65.0	
3					South end of Western Ridge (M3)	67.0	239.8	306.8	7.5	13.5	NT	COD	56.0	
4					At L/S Crushing & Screening CCR (M4)	56.0	214.0	270.0	7.3	13.5	NT	BOD	18.0	
5												Oil & Grease	<2.0	

Section Incharge (Env.)

"We are Environmentally and Socially Responsible"

Annexure-II

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTHS OF OCTOBER '2021

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	18.10.2021	53	50
2	North End of Eastern Ridge	18.10.2021	68	56
3	South End of Western Ridge	18.10.2021	70	55
4	At L/S Crushing & Screening CCR	18.10.2021	67	56

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	19.10.2021	L&T CK-300 With Rock breaker	Idle with engine 'ON'	48	72
2	19.10.2021	Drill Machine Atlas copco D-40	-do-	-	71
3	19.10.2021	Drill Machine IR CM-341	-do-	-	69
4	19.10.2021	Soil Compactor L&T 1107D	-do-	50	67
5	19.10.2021	CAT 374FL Excavator	-do-	56	70
6	19.10.2021	CAT 772G Dumper	-do-	53	70
7	19.10.2021	Crusher	Running	-	70

Lab. Incharge (Env.)
F05 (09-10)/03

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTHS OF NOVEMBER '2021

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	22.11.2021	53	49
2	North End of Eastern Ridge	22.11.2021	67	54
3	South End of Western Ridge	22.11.2021	66	54
4	At L/S Crushing & Screening CCR	22.11.2021	64	53

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	23.11.2021	L&T CK-300 With Rock breaker	Idle with engine 'ON'	49	71
2	23.11.2021	Drill Machine Atlas copco D-40	-do-	-	69
3	23.11.2021	Drill Machine IR CM-341	-do-	-	70
4	23.11.2021	Soil Compactor L&T 1107D	-do-	51	70
5	23.11.2021	CAT 374FL Excavator	-do-	52	69
6	23.11.2021	CAT 772G Dumper	-do-	56	71
7	23.11.2021	Crusher	Running	-	70

Lab. Incharge (Env.)
F05 (09-10)/03

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTH OF DECEMBER '2021

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	24.12.2021	54	50
2	North End of Eastern Ridge	24.12.2021	68	54
3	South End of Western Ridge	24.12.2021	68	52
4	At L/S Crushing & Screening CCR	24.12.2021	62	52

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	25.12.2021	L&T CK-300 With Rock breaker	Idle with engine 'ON'	49	70
2	25.12.2021	Drill Machine Atlas copco D-40	-do-	-	68
3	25.12.2021	Drill Machine IR CM-341	-do-	-	69
4	25.12.2021	Soil Compactor L&T 1107D	-do-	51	70
5	25.12.2021	CAT 374FL Excavator	-do-	52	69
6	25.12.2021	CAT 772G Dumper	-do-	52	69
7	25.12.2021	Crusher	Running	-	70

Lab. Incharge (Env.)
F05 (09-10)/03

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTHS OF JANUARY - 2022

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	19.01.2022	55	51
2	North End of Eastern Ridge	19.01.2022	66	59
3	South End of Western Ridge	19.01.2022	72	54
4	At L/S Crushing & Screening CCR	19.01.2022	69	57

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	20.01.2022	L&T CK-300 With Rock breaker	Idle with engine 'ON'	51	73
2	20.01.2022	Drill Machine Atlas copco D-40	-do-	-	74
3	20.01.2022	Drill Machine IR CM-341	-do-	-	71
4	20.01.2022	Soil Compactor L&T 1107D	-do-	53	68
5	20.01.2022	CAT 374FL Excavator	-do-	59	73
6	20.01.2022	CAT 772G Dumper	-do-	53	73
7	20.01.2022	Crusher	Running	-	71

Lab. Incharge (Env.)
F05 (09-10)/03

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTHS OF FEBRUARY - 2022

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	14.02.2022	55	50
2	North End of Eastern Ridge	14.02.2022	68	58
3	South End of Western Ridge	14.02.2022	63	54
4	At L/S Crushing & Screening CCR	14.02.2022	68	56

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	15.02.2022	L&T CK-300 With Rock breaker	Idle with engine 'ON'	55	72
2	15.02.2022	Drill Machine Atlas copco D-40	-do-	-	71
3	15.02.2022	Drill Machine IR CM-341	-do-	-	68
4	15.02.2022	Soil Compactor L&T 1107D	-do-	53	72
5	15.02.2022	CAT 374FL Excavator	-do-	57	69
6	15.02.2022	CAT 772G Dumper	-do-	53	73
7	15.02.2022	Crusher	Running	-	74

Lab. Incharge (Env.)
F05 (09-10)/03

Ambuja Cement

AMBIENT & HEM NOISE MONITORING OF MINES MACHINERY (RAS-II) FOR THE MONTH OF MARCH - 2022

1. Ambient Noise Level Monitoring:

S. No.	Location	Date of Monitoring	Noise Level in dB	
			Day	Night
1	At Mines Office	20.03.2022	57	52
2	North End of Eastern Ridge	20.03.2022	64	58
3	South End of Western Ridge	20.03.2022	69	55
4	At L/S Crushing & Screening CCR	20.03.2022	61	54

2. Noise Monitoring Report of Mines Machinery:

S. No	Date	Machine	Condition	Noise (in dB)	
				Inside	Outside
1	20.03.2022	L&T CK-300 With Rock breaker	Idle with engine 'ON'	58	72
2	20.03.2022	Drill Machine Atlas copco D-40	-do-	-	69
3	20.03.2022	Drill Machine IR CM-341	-do-	-	71
4	20.03.2022	Soil Compactor L&T 1107D	-do-	56	72
5	20.03.2022	CAT 374FL Excavator	-do-	60	67
6	20.03.2022	CAT 772G Dumper	-do-	63	74
7	20.03.2022	Crusher	Running	-	71

Lab. Incharge (Env.)
F05 (09-10)/03

Annexure - III

SOCIAL BENEFITS:

Proposed expansion project will result in growth of the surrounding areas by increased direct and indirect employment opportunities in the region including ancillary development and supporting infrastructure. Beside this, Royalty and other taxes are/ would be additional benefitand it is being/ will be utilized by local administration for the development of socio-economic infrastructure and wellbeing of the local population.The various activities proposed through CER (Corporate Environment Responsibility) would help in upgradation of basic infrastructure, amenities. Details of various CSR/ESC Activities carried out are given below:

Table 1.1

SL	Particular	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1.	Water resource Management	157.88	159.07	176.65	175.30	189.37	184.10	180.31	117.88	82.81	48.50	96.06
2.	Agricultural development	23.89	28.26	28.50	22.80	31.04	31.12	28.28	33.29	40.04	36.01	65.37
3.	Health, Sanitation, and women Empowerment	32.81	33.30	30.60	21.15	23.20	22.94	11.57	11.79	10.26	9.01	14.41
4.	Rural Infrastructure	82.16	138.84	144.0	116.30	134.03	122.24	179.75	161.71	149.53	120.00	172.47
5.	Skill Development	20.40	26.70	32.04	31.77	34.79	42.10	50.63	54.14	46.78	39.35	80.12
6.	Overheads	43.50	58.10	64.90	54.30	60.40	68.45	80.10	80.44	77.00	75.00	83.67
	Total	360.64	444.27	476.69	421.62	472.83	470.95	530.64	459.29	406.52	327.87	512.1

CSR/ESC Expenditure of Past Five Years (Rs. In Lakhs)

Rabriyawas location is surrounded by hills and sand all around the place and comes in semi-arid region of western Rajasthan. With highly uncertain rainfall in this area, people are majorly dependent of the ground water for their daily use. Sometimes drought and sometimes flood make this area highly risky for crops and people as well. This leads to this that people having water sources available like tube well or dig well can cultivate the Kharif season crops easily, rest others are majorly dependent on the Rabi season crops only. Community is majorly dependent on agriculture and allied activities for their livelihood and most of the land is rain fed, so community facesmany problems like drinking water, health issues, irrigation, and low agricultural productivity.

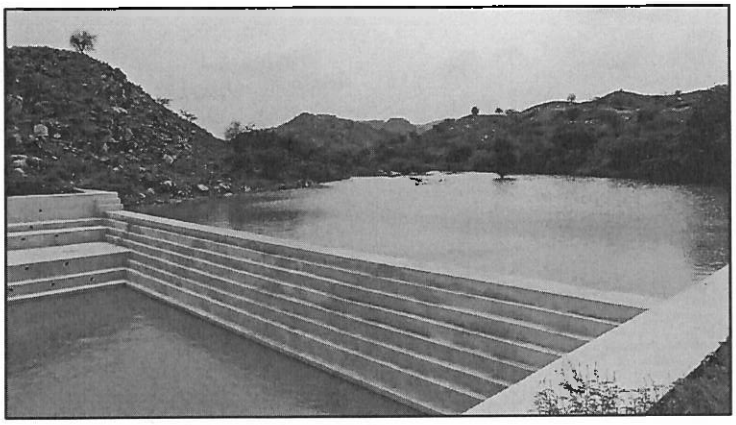
Water Resource Management

Management of water resource is the major concern in this area. The average rainfall in western Rajasthan is just 300-350 mm per year. Ground water in some part of the area is also affected by higher concentration of dissolved salts and fluoride. Famines are frequent, often causing mass migration of populations. The soil condition is extremely poor and mainly characterized by sandy and sandy loam. This has an adverse impact on drinking water security and water for irrigation in the area.Traditionally, the community in theregion has always depended on village ponds and open dug wells for their drinking water; and agriculture is mainly seasonal and rain fed. When rainfall is less, it is even difficult for the farmers to save their Kharif (monsoon) crops too. There is no facility to provide support irrigation.

The overall impact of lack of water reflected on all aspects of people's lives. ACF began its intervention in WRM in the region in the year 2006 through a participatory approach and supported the active revival of traditional water conservation methods to raise the water level and build access to quality water throughout the year.

ACF is applying following approach for water availability in Area for drinking purpose as well agriculture purpose.

A. Construction of water harvesting structure for development of water Resource-



ACF used a multi-pronged approach to address the issue of WRM in the region; undertaking various activities based on the village needs, and geographical conditions. Our activities included a revival of traditional water harvesting systems, as well as integrating innovative water management systems to enhance water bodies in the region. With the regular discussion with community and then further assessing how to promote new technologies to address the water for irrigation in the arid region with sandy bed rivers and Nalas. We have tested two new soil and water conservation structures in the area - the innovative SubsurfaceDykes and Khadin Cultivation, a traditional Runoff Farming System.

Given the limited and very scare rainfall in the area, there is need to harvest the runoff/ surface water as much as possible through construction of series of Check dams in the streams and rivers. ACF has already implemented pilots in the project area and analyzed the impact, results in terms of surface water storage as well as recharging the nearby wells for the drinking purpose.

Long dry spells in the area have always resulted in huge quantity of crop losses. To address this issue, ACF has replicated the model of farm pond on the farmer`s land.

Name of Structure	No. of Structures developed	Water harvesting Capacity Created
No. of Check Dams	44	60.59MCFT
No. of Dykes	22	184.17 MCFT
No. of Khadins	35	92.67MCFT
No. of Pond Deepening	191	85.00 MCFT
Farm Bunding	875	1725.15 Ha.
Farm Ponds	56	5.19 MCFT
Total no. of Structures	**1223**	**427.62 MCFT**

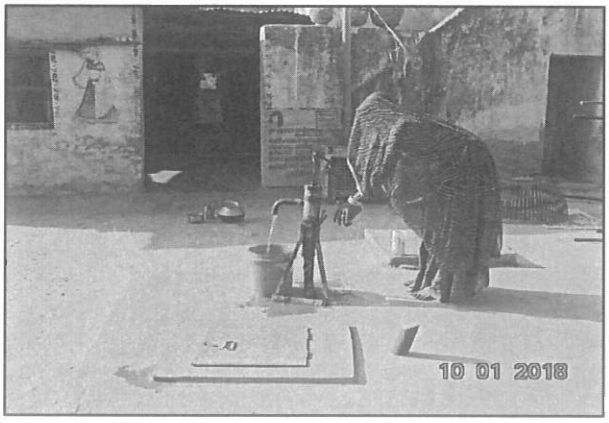
		&1725.15 Ha.

Drinking Water Security

For availability of safe and potable drinking water ACF has taken many initiatives in Rajasthan some of the key initiatives are as follows-

- Roof top Water Harvesting Structures (RRWHS)
- Drinking Water Distribution System (DWDS)
- Drinking Water Sources -Ponds/ wells/Hand pumps

Roof Rainwater Harvesting System-



The poor families whose livelihood mainly depends on daily wages or agriculture labor are not in position to construct RRWHS in their houses because of high initial cost which is about Rs 3.5/liter. In our operational area 12-15 % families in each village do not have RRWHS due to poor economic condition.

In that situation to cover marginal and small families provided technical & financial support by ACF and rest expenses they can contribute like labor and mason. For a family of 4-5-person, 12,000-liter capacity RRWHS is sufficient for drinking purpose and it needs about 40 sqm catchment area to fill.

Ambuja Cement Foundation Rabriyawas Promoted 2099 RRWHS in Project villages for marginal & small farmer families.

Drinking Water Distribution System-

Ambuja Cement Foundation is committed for drinking water availability to each Household within range of 200M. This is the part of our water security mission for this we have installed drinking water distribution system owned by community.

This program is piloted from two villages of Rabriyawas location to be scaled up in coming years. At present all families of Patan and Kesarpura villages are having water availability within 200M they have taken the responsibility to maintain and sustain it further.

Six DWDS Installed in two villages and benefitting more than 2000 peoples and their cattle's.

Drinking water sources –Ponds/wells/Hand pumps

Traditionally community of Rural Rajasthan drink water directly from ponds or digging wells inside the pond. For this purpose, ACF is continuously engaged in creating, revival and deepening of village pond to ensure water availability for all. These ponds also help in ground water recharging which create positive impact on availability of water in nearby wells, tube wells and hand pumps. ACF also supports community in repairing and maintaining the hand pumps and has also revived many wells in project villages of Rajasthan.

ACF has revived/created 191 village ponds having water storage capacity of 85.00 MCFT

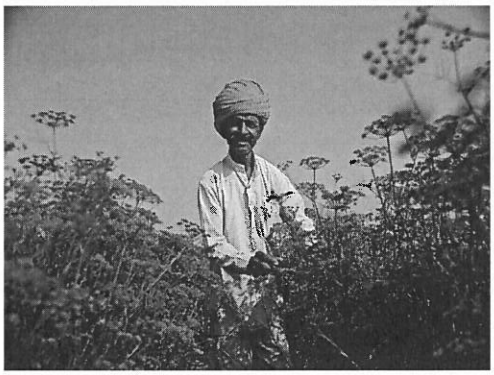
A. Water use Efficiency

In the scarcity of water use of water in efficient way is equally important to water harvesting and storage works. To promote effective utilization of available water in agriculture micro-irrigation system i.e.-Drip irrigation system and sprinkler system is being promoted by Ambuja Cement Foundation.

By using Micro-Irrigation System cultivation area is increased and better production can be gained. Drip Irrigation system uses seven times lesser water than other irrigation techniques.

ACF Promoted Micro-Irrigation system in1436.46 Ha with 636 Farmers

Agricultural Development



ACF's Vision for Agriculture Program in Rajasthan- "Ensuring 12 months food sufficiency to farmer & doubling their income by 2020"

- Promoting Vegetable cultivation Program with 457 farmers in 617.08 Acre in Project Area
- Promoting Wadi Development Program with 74 farmers in 153.76 Acre in Project Area

- Promoting Improved Crop Management Program with 3244farmers in 29424 Acre in Project Area
- Capacity building program are being organized in Animal Husbandry Program with 2641 Households.
- Organized veterinary camps in project village
- Promoting Farmer groups and farmer producer organization in villages for sustainable development.
- One more initiative taken by ACF to promote the Balaji Farmer Produce company which is engaged in Biomass supply business and as of now has supplied **117993** MT biomass to Ambuja Cement Ltd. Around 2600 farmers are engaged in Balaji farmer producer company.

Women Empowerment

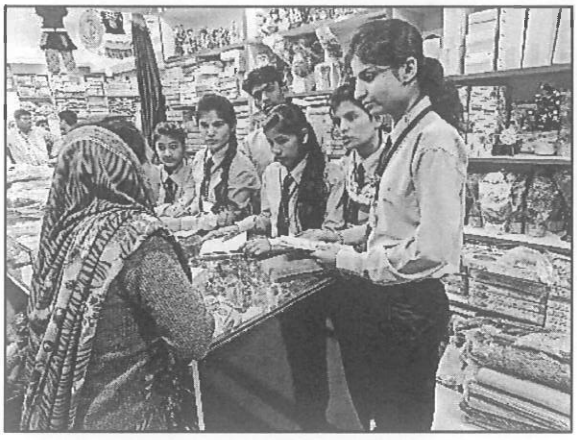
Women's empowerment is crucial to sustain various community development programmes. It is a proven fact that attitudinal changes on the part of women have an impact on the attitudes of their families and communities.

- Strengthening Economic and Social status of women by Promoting Self Help Groups
- Establishing sustainable apex institution of women led SHGs
- Promoting Income Generation Activities with SHGs to improve their livelihood and their daily earnings.

ACF supports over 54 self-help groups with 587 women members across three locations in Rabriyawas with cumulative corpus of over Rs.34.00 lakh. Today, these groups have gone beyond their simple monthly savings, and built linkages with banks providing technical support to start their own entrepreneurship leading to sustainable livelihoods. These SHGs are now participating in the social activities of the villages, be it the proposal for the revival of ponds, improving the health facilities in the villages.

Skill Development (SEDI)

SEDI is a functional structure to promote productive employment and micro-enterprise. SEDI offers short, intensive courses in various trades that aim to achieve sustainable livelihood by strengthening youth's technical and functional skills.
The emphasis of a skill training program is on the unemployed youth to provide them with an opportunity of education in a skill that would ensure



adequate livelihood opportunity. The target age group of the program is between 18-30 years, ranging from the high school drop-out and unemployed youth to the ones already working aspiring to upgrade their skills. A strong belief is in coalesce of skill training backed by life skills which will enable the participants live a healthy and productive life.

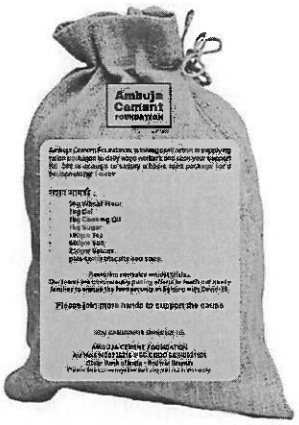
Objective-

- To bridge the gap of skills required in an economy by enabling an access to skill training opportunities
- To encourage the entrepreneurial spirit among the local youth by way of hand holding & facilitating in setting up of an enterprise
- To promote holistic growth of the participants with life skills to support improved quality of life

Trained 6985 youth in SEDI Jaitaran with 74% placement. Trainees are successfully placed in different sectors like-Retail and sales, office assistant, Microfinance, Beautician etc. Female participation is 32.21% in trained youths.

Health & Sanitation:

ACF comprehensive health care programme emphasizes on an integrated approach to health, wherein development issues like water, sanitation, roads, livelihood, nutrition and education which determine village health, are given equal attention.



- ACF provide primary care through mobile health dispensary in seven neighboring project villages.
- From past 2 months ACF is practicing tele-medicines in the 2 villages and has covered around 105 patients till date.
- During the COVID pandemic ACF has distributed 16000 masks, 500 sanitizer, ration packets to 1500 poor., awareness campaigning through jeep announcements, SMS, images, and videos through online platforms like whatsapp and 20 wall painting in 5 villages.
- ACF Organize medical health camps General/special in twelve core project villages.
- HIV/AIDS awareness program with RSACS for employee as well as community and with the truckers and allied transporters.
- Supporting & Strengthening AAA model to improve MCH services in 56 Anaganwadis with 12693 HHS.
- Covered 78% HHs in our project area for sanitation facility with proper utilization of toilets. Under Swatch Bharat Mission. Now all five-gram panchayats declared ODF by

Government. Presently we are re-surveying the core villages for the use and availability of toilets under Swachh Bharat Mission II phase.

- We are improving the government infrastructure like development of Anganwadi, support in PHC & CHC of our core villages.

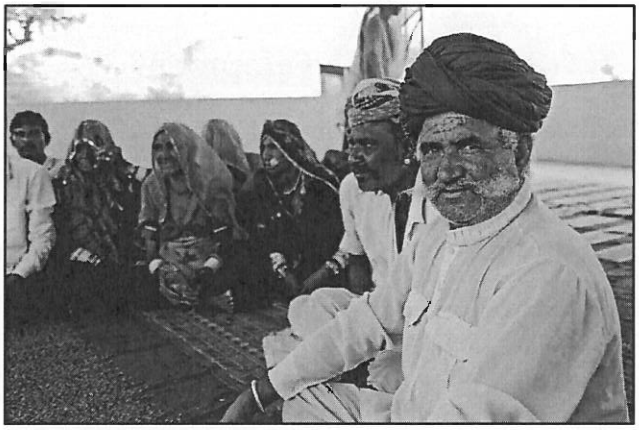
Infrastructure Development

For the development of village ACF is also providing following infrastructure support in community in project villages.Construction of Cement Concrete/Gravel Roads.

- Repair & Development of community halls.
- Village electrification work by providing street lights and Installing High Mast Lights on the main cross roads of the villages.
- Securing the villages with installation of WiFi and IP enabled CCTV surveillance system.
- Modification and development of Anganwadi Centers by providing the TLM material and educational paintings at 6 AWC till March 2021.
- Modification and Development of Balada PHC with IEC painting for the staff and patients and community members so as to aware about different health related schemes and precautionary measures to be taken to avoid getting sick.
- Repair & Goshala Development and construction of cattle drinking water points.
- ACF has been working on promoting clean and renewable energy sources through its initiatives in Rabriyawas.
- Support for cultural program in the community.

Community Based Event

- **Community Advisory Panel (CAP) -**Involving **community leaders** and **Key departments heads** to discussion on Key Issues i.e. -Impact and feedback of CSR initiative, Future needs and convergence between Govt. scheme and ACF program under the **Community Advisory Panel**(CAP) meeting



- **Social Engagement Scorecard (SES)** - Involving **Opinion Leaders andACLdepartments** through **Social Engagement Score Card** Exercise to get the community feedback.
- **Unit Sustainable Steering Committee (USSC)** - Involving **various departments** for discussion on the various plant sustainability issues under the **USSC** meeting.
- Volunteer Activities-Involving **Company Employees and community** for safety awareness through **Volunteerism** programme.
- **Village Development Committee-** Formed village development committee for raising development issue of village and for sustainable development of village.
- **Workshops-** Organize workshops on different issues of development like-Water, Skill, and Agriculture, Health etc. at state and national level.

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	

Annexure-IV

Ambuja Cement

Ambuja Cements Limited, Unit: Rabriyawas
Development (Plantation) As on 31.03.2021
RAS - 2 Limestone Mine
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 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
	Total	**250302**	**154397**	**74.55**	**130.8**

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

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

TEAM TEST HOUSE
(Unit of Team Institute of Science & Technology Pvt. Ltd.)
TC-5025
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. :	TC502522100000407	Date :	30-03-2022
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 :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	11-03-2022
Point of Collection :	Borewell No.10 DG-4 Mines Open Well	Date of Receipt :	12-03-2022
Date of Test/Analysis :	12-03-2022 to 29-03-2022	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	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	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
2	pH	8.01	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
3	Hardness (total) [mg/l]	135.92	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
4	Chloride [mg/l]	55.93	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
5	Total Dissolved Solids [mg/l]	453	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
6	Calcium [mg/l]	35.73	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
7	Magnesium [mg/l]	11.32	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
8	Fluoride [mg/l]	1.37	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50

Note:

Continue to next page...

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Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Alkalinity - T [mg/l]	243.04	IS 3025 (Part 23) : 1986 RA 2019	200.00	600.00
10	Calcium Hardness [mg/l]	89.31	IS 3025 (Part 40) : 1991 RA 2019	-	-
11	Sodium [mg/l]	95	IS 3025 (Part 45) : 1993 RA 2019	-	-
12	Potassium [mg/l]	2.2	IS 3025 (Part 45) : 1993 RA 2019	-	-

Notes :-

The results listed refer only to the tested sample (s) & parameters (s). Endorsement of products is neither inferred nor implied.

This report is not to be reproduced wholly or in part and can not be used evidence in the court of law and should not be used in any advertising media without our special permission in writing.

The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.

Balram
R. Agarwal
Senior Analyst

K.N. MUKHOPADHYAY
Authorized Signatory
(Report No: TC5025221000000407)