Ambuja Cement

MCW / EMD /12 / 2022/ 396

May 28, 2022

To,
Ministry of Environment & Forest & CC
Regional Office (WCZ), Ground Floor
East Wing, New Secretariat Building,
Civil Line, Nagpur-440001

Kind Attn: - **Additional Director**

Sub : Submission of Half yearly monitoring report for the period of **October 2021 to March 2022** of M/s Ambuja Cements Ltd. (Unit: Maratha Cement Works, Upparwahi), Chandrapur (Maharashtra)

Ref: **EC No. J-11016/11/2004 – IA – II (M), Dtd. 06.01.2005**

Dear Sir,

This has with reference to the above referred EC & the subject matter; we are submitting herewith six monthly compliance report (for the Period of October 2021 to March 2022) for the various conditions stipulated vide above referred EC for our Captive Limestone Mine (ML- III)

We hope that you will find this information in order please.

For, Ambuja Cements Ltd.
(Unit- Maratha Cement Works)

Krishna Mohan
Unit Head

Encl :- a/a

CC: 1. Central Pollution Control Board
Survey No. 110,
Dhankude Multipurpose Hall (PMC),
Near Fab India, Baner Road,
Baner, Pune - 411 045

2. The Member Secretary
Maharashtra Pollution Control Board
Kalpataru Points, 4th Floor,
Matunga Scheme, Road No.8
Opp. Sion Circle, Sion East
Mumbai – 400 022

3. Regional Officer,
Maharashtra Pollution Control Board,
Udyog Bhawan, 1st Floor
Railway Station Road,
Chandrapur – 442401 (M.S.)

Table of Content (ML- III)

COMPLIANCE STATUS OF MoEFCC EC CONDITIONS OF 0.5 MILLION TON / ANNUM LIME STONE MINES (ML- III)

Period from 01.10.2021 to 31.03.2022

(EC No. J-11016/11/2004 – IA – I I (M), 06.01.2005)

Sr. No.	Condition	Status/Report
A.	**Special Condition**	
(i)	Top soil shall be concurrently used for green belt development.	**Complied.** Stacked top soil is being used for greenbe development and overburden stabilizatior **Annexure – 1.**
(ii)	Peripheral bunds, check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from the mining operations. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained. Garland drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	**Complied.** The Photographs are attached a **Annexure – 2.** Peripheral bunds Checkdams and siltation ponds c appropriate size have been constructed t arrest silt & sediment flow from minin operations. The drains are desilted prior t the monsoon. The details of Periphera bunds, Check dams, Siltation ponds & Garland drains are enclosed as **Annexure - 3.**
(iii)	Drills should be wet operated or with dust extractors and controlled blasting should be practiced.	**Complied.** We have 3 nos of Atlas Copco dri machines which are fitted not only with we drilling system but dust extractor also. W are doing controlled blasting by using none as Down the Hole as well as trunk line dela connectors. Photographs are attached as a **Annexure -2.**
(iv)	Crusher should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, haulage roads, transfer points, etc	**Complied.** The existing crusher is having hig efficiency bag filter and automatic dus suppression system at dump hopper. Th details are enclosed as **Annexure – 13.** Th details of Bag filters enclosed as **Annexur – 14.**
(v)	Plantation should also be raised along the roads, dump sites, etc covering an area of 10.90 ha. This includes a wide green belt along the periphery of the ML area, non mineralized area and along road side within the lease area by planting native plant species in consultation with local DFO / Agriculture	**Complied.** Limestone mine is surrounded with othe existing mining leases. Till date Aroun 385336 trees have been planted in the tota mining lease area. The density of plantatio is 2544 plant/Ha. The details are enclose as **Annexure – 4, 1 & 2.**

	Department. At least 2500 plant species/ha should be planted.	
(vi)	The excavated pit of an area of 17.73 ha shall be converted into an artificial water reservoir. Water harvesting measures shall commence from the 11th year of mining operations. The higher benches of the void shall be terraced and plantation done to stabilize the slopes. Peripherals fencing shall be done along the excavated area.	**Complied.** The excavated pit of an area of 17.73 ha shall be converted into an artificial water reservoir as per the conceptual plan at the end of mine life. The details of rain water harvesting enclosed as **Annexure – 5** & details of CSR work carried out by ACF enclosed as **Annexure – 6.**
(vii)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new peizometers at suitable locations in project area. The frequency of monitoring should be minimum four times a year – January, pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) seasons for ground water level and in May for quality. Data generated from ground water regime monitoring will be submitted to CGWB, Regional Office on an annual basis.	**Complied.** Groundwater level and quality is regularly monitored and report submitted to CGWB and MoEFCC. A copy of latest report submitted enclosed as **Annexure – 7.**
(viii)	A detailed mine closure plan should be submitted to MOEF five years in advance for approval.	**Noted and will be Complied off.**
(ix)	A Consent to operate should be obtained from the SPCB before commencing production	**Complied.** Consent to Operate obtained from MPCB Vide letter No. Format 1.0/CC/UAN No. 0000108216/CR 2202000737, dated 11.02.2022 Valid upto 31.03.2023.
B.	**General Condition**	
(i)	No change in technology and scope of working should be made without prior approval of the Ministry of Environment &Forests.	**Agreed.**
(ii)	No change in the calendar plan including excavation, quantum of limestone, waste/OB dumps should be made.	**Noted and being Complied.**
(iii)	Four ambient air quality monitoring stations should be established in the core zone as well as buffer zone for SPM, RPM, NOX and SO2. Location of the ambient air quality stations should be decided based on meteorological data, topographical features and environmentally and ecologically sensitive targets and the frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	**Complied.** AAQMS established in the core zone and regular monitoring being done. The details are enclosed as **Annexure – 9.**

(iv)	Data on environmental quality should be regularly submitted to the Ministry including its Regional office at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.	**Complied.** The details are enclosed as **Annexure – 1 9 and 12.** Last report submitted 27.11.2021.
(v)	Adequate measures for control of fugitive emissions should be undertaken such as water spraying arrangements on haul roads, loading and unloading points and transportation of minerals, etc. Fugitive dust emissions from all sources should be regularly monitored and data recorded properly.	**Complied.** To control fugitive emissions we are usi Drill machine with inbuilt dust extracti system. Regular water spraying on ha roads and crusher hopper to control t fugitive dust. We have also provid permanent water sprinklers on mines roac The details are enclosed as **Annexure – & 10.** The fugitive emission monitori report is enclosed as **Annexure – 11.**
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations. Operation of HEMM, etc. should be provided with ear plugs / muffs.	**Complied.** We have done massive plantation arou the Mine areas. The details are enclosed **Annexure – 4 & 2.** Regular checking a maintenance carried out for all the hea mines machineries. We have adopted sta of the art blasting technology to contr ground level vibration & noise. Necessa PPE's e.g ear plug/muffs have bee provided to the persons working in the are The ambient noise monitoring repo enclosed as **Annexure – 12.**
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from the Workshop.	**Complied.** Only small quantity of water is generate from mine workshop which is recycled bac again in the system after treatment in th ETP. No discharge from the syster Photographs are enclosed as **Annexure 8.**
(viii)	Personnel 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. Occupational health surveillance programme of the workers should be undertaken periodically and corrective measures taken, if required.	**Complied.** Safety & Environment departments a imparting training program on regular bas to all the workers for the appropriate use PPE's. PPE's have been provided to a workmen. Occupational health surveillanc programme of the workers are undertake periodically and corrective measure taken as per requirement.

<table>
<tr><td>(ix)</td><td>The data on environmental quality should be collected and analyzed either through an in-house environmental laboratory established with adequate number and type of pollution monitoring and analysis equipment or got analyzed through an approved laboratory under the Environment (Protection) Rules, 1986 in consultation with the State Pollution Control Board.</td><td>Complied.
We have deployed competent team for monitoring and sampling of data and analysis reports are submitted to MPCB/MoEFCC regularly. Also we have deployed MoEFCC NABL accredited 3rd party to carry out the monitoring regularly.</td></tr>
<tr><td>(x)</td><td>A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the Organization.</td><td>Complied.
We have established Environment Management Department (EMD) having multi-disciplinary team of professionals and technical staff with vast experience headed Senior Executive who reports directly to the Plant head.</td></tr>
<tr><td>(xi)</td><td>The funds earmarked for environmental protection measures should be kept in separate account and not diverted for any other purpose. Year wise expenditure shall be reported to the Ministry of Environment & Forests.</td><td>Complied.
The year- wise expenses for last 3 years are as follows:
<table><tr><th>Year</th><th>Expenses (Rs. Lacs.)</th></tr><tr><td>2019-20</td><td>3792.07</td></tr><tr><td>2020-21</td><td>1275.17</td></tr><tr><td>2021-22</td><td>1140.68*</td></tr></table>Expenses inclusive of Cement Plant, CPP & Mines
*Recurring Environmental Expenditure of Plant & CPP was 760.84 Lacs.
Recurring Environmental Expenditure of Mines was 77.86 Lacs.
& Capital Expenditure was 301.99 Lacs.</td></tr>
<tr><td>(xii)</td><td>The project authorities should inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.</td><td>Complied.
The project has been financed through the internal accruals and the same has been approved on April 2004.</td></tr>
<tr><td>(xiii)</td><td>The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated environmental conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.</td><td>Noted.</td></tr>
<tr><td>(xiv)</td><td>A copy of the clearance letter should be marked to concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.</td><td>Complied.</td></tr>
<tr><td>(xv)</td><td>The State Pollution Control Board should display a copy of the clearance letter at the Regional office,</td><td>Noted.</td></tr>
</table>

	District Industry Centre and the Collector's /Tehsildar's Office for 30 days.	
(xvi)	The project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned, within 7 days of issuance 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 may also be seen at web site of the Ministry of Environment and Forests at http://envfor.nic.in.	**Complied.** The advertisement was given in two lo newspapers i.e Mahavidarbha & Lokr on 25.01.2005 & 28.01.2005 respectiv and the copy of the same was submitt The details enclosed as **Annexure -16.**
3.	The Ministry or any other competent authority may stipulate any further additional condition for environmental protection.	**Noted.**
4.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance.	**Noted.**
5.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	**Noted.**

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure 1

Top soil Conservation And Over burden dump site stabilization

Top soil of mine out area collected stacked for further utilization of topsoil for slope stabilization.

Special Initiatives has been taken for top soil conservation and over burden dump stabilization. Overburden dump of limestone mines has been vegetated by covering with topsoil and tree plantation. The overburden dump has been covered with coconut fibre blanket which helps to bind the soil for plantation.

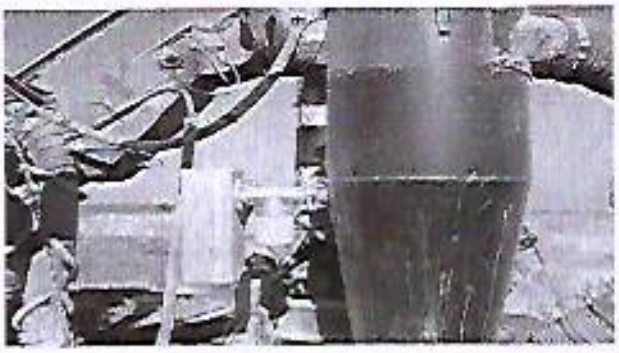
Dump Stabilization activity under process

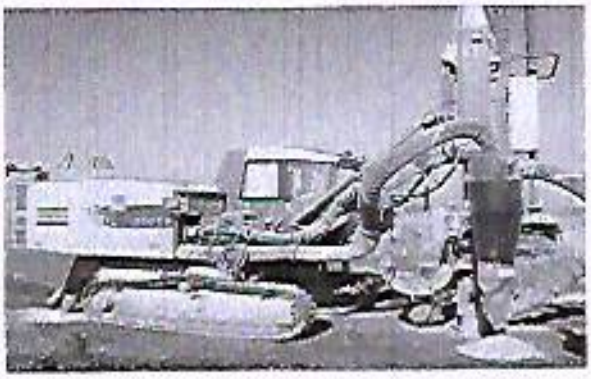
Stabilized Dump slope

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure 2

MCW is having ROC F9 drill machine which has inbuilt dust extractor system





Drilling machine with in built Dust extraction system

Garland drain constructed around dumps

Plantation around ML area

Annexure - 3

Details of Peripheral bunds, Check dams, Siltation ponds & Garland drains

As on 31st March 2022

ML - I (Capacity - 1.5 MTPA Limestone) 579.91Ha.			
Bund(Berm)	6253.00M		
	Garland drain in meter	Siltation tank	
		L*W*H	
South Teenguda side	208		
Top soil Dump Dewara	818	30*10*2.50	300.00 sq.meter, 750.00 cub meter
Teenguda dump	2024	70*25*4.50	2569.00 sq. meter, 11560.50 cub. Meter
Top soilNear teenguda dump	719	25*20*2.00	500.00 sq. meter, 1000.00 cub. Meter
Total	**3769**		
Construction of retaining wall	40.00 meter	40*1*1	

ML - II (Capacity - 2.0 MTPA Limestone & 0.2 MTPA Shale) 880.31Ha.			
Bund(Berm)	7865.00M		
	Garland drain in meter	Siltation tank	
Lakhmapur	930		
Near crusher dump	651		
Near ANFO top soil	440	20*15*2.00	300.00 sq.meter, 600.00 cub. Meter
Near ANFO Waste dump	497	24*15*1.80	360.00 sq. meter, 648.00 cub. Meter
Waste dump towards north side	1035	28*13*2.00	364.00 sq. meter, 728.00 cub. Meter
		20*10*2.00	200.00 sq. meter, 400.00 cub. meter
Sub grade dump north side	1016	20*12*2.00	240.00 sq.meter, 480.00 cub. meter
Total	**4569**		
Construction of retaining wall	100.00 meter	100*1*1	

ML - III (Capacity 0.56 MTPA Limestone) 49.00Ha.			
Bund(Berm)	1243.00M		
	Garland drain in meter	Siltation tank	
Waste side adjoining area of Dewara	722	29*17*2.46	493.00 sq.meter, 1212.78 cub. Meter
		26*17*2.83	442.00 sq.meter, 1250.86 cub. Meter
Total	**722**		

Combined details of three lease as on 30th September 2021

Bund(Berm)	15361.00 meter
Siltation tank	10 Nos.
Garland drain	9060.00 meter
Construction of retaining wall	140.00 meter

Annexure - 4

Tree Plantation details as on March 2022

Sr. No.	Location	YEAR OF PLANTATION								Total plantation	Area in Ha.
		upto 2014	2015	2016	2017	2018	2019	2020	2021		
1	Plant	47597	0	0	0	0	0	0	0	47597	16.25
	Infilling	676	316		673	0	0	0	0	1665	
2	Colony	49898	242	0	0	0	0	0	0	50140	19.076
	Infilling	1270								1270	
3	Mines	300304	9000	6500	15632	18100	15000	6800	5000	376336	
	Infilling	21500	800		400	2000	4000			28700	151.49
	Jatropha plantation	7000								7000	
4	App. Road / transportnagar	3565			63	570				4198	7 km
		0								0	
5	Avenue plantation	6570		0	0	0	0	0	0	6570	5 KM
	Infilling	450								450	
6	Other plantation in villages	41832	302	9500	2575	2300	0	0	3939	60448	21.57
	Total plantation Nos.	480662	10,660	16,000	19,343	22,970	19,000	8,800	8,939	586374	

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure 5

Rainwater Harvesting

We are using excavated mines pit for rainwater storage. We have increased our rainwater harvesting capacity around 714838 m^3, which is being used in plant for various purposes. We have made rainwater harvesting pits in plant premises and in colony area having capacity of 36000 and 27840 m^3 respectively. We have also done rooftop water harvesting in colony area having rainwater harvesting potential around 1550 m^3.

Annexure 6

Ambuja Cement Foundation, Chandrapur
A Brief report of CSR (Oct. 21 To March 22)

Introduction

ACF A social arms of Ambuja Cement Ltd., working for sustainable Livelihood and social development for surrounding communities. ACF provides a set of community development services through the Health and Sanitation, School support program, Agro base livelihood, women empowerment, Water resource & Infrastructure development and skill Entrepreneurship development program (SEDI) etc.
The thrust area of ACF Chandrapur is integrated development carried out through various intervention. The programs in the community are spearheaded by Sakhis, Field Facilitators and Volunteers, who are trained and competent to provide livelihood services for empowering to the community.
ACF Chandrapur is operating in 2 Districts namely Chandrapur and Nagpur. At Chandrapur covering 4 blocks like Jiwti, Rajura, Korpana and Warora and In Nagpur covering Hingna block. Working 639 villages over 65000 population. Including 16 core villages of company surrounding area.
The thrust area of ACF Chandrapur is integrated development. The programs in the community are spearheaded by Sakhis, Field Facilitators and Volunteers, who are trained and competent to provide livelihood services for empowering to the community.

Water Resource Management

In this year water resource management program done for mainly increasing ground water table and irrigation purpose. Various types of water recharge structure work under this program like Repairing of existing check dam, De-silting of existing check dam, Construction of farm pond, Terrace farming, Drinking water facility etc. Total 215 People benefited from this program.

(a) Drinking water facility

To ensure the drinking water facility to core village farmers and community we provide 4 Water filter at Ranjiguda, Mangi, Khairguda & Saleguda village. Total 216 villagers are benefited from the water filter installation.

(b) **Farm Pond**

We completed 1 farm pond in this year. Farm pond are small water bodies either formed either by the construction of a small dam or embankment across a watershed or by excavating dug out. The water is usually harvested from a small catchment area and then used for irrigation during prolonged periods. It collects excess runoff during rainy period, stored water can be used for supplemental irrigation to crops, it is useful as drinking water for cattle's during drought situation, it can be used for spraying pesticide. It Conserve soil and moisture. As per our completed farm pond we conserve and harvest the 3600 cum water in one farm pond.

(c) **Terrace Farming**

We promote the terrace farming at Jiwati area and completed 25 ha land under the terrace farming. This new initiative is very good for farmers because they get the farm land which is not in used. The agriculture land is undulated with the 15 to 20% gradient because of hilly terrain. They have facing lot of problems because of this sloppy land like soil reduces, fertilizers loses, minimum yield, providing irrigation, No any storage of water for irrigation etc.

Hence, we promote the terrace farming for the good practices of farming. Last year we promote this activity hence farmers get the benefited like reduces of soils, increase crop yield by water and soil conservation. Thus, it reduces soil erosion in terrace farming. Terrace farming restricts the wash away of nutrients from the fertile soil by the rain water which cause to good and healthy crop and higher production. Terracing also helps in preventing the washing away of plants because of heavy flows of rain water. Sometimes, in the hilly area, rain water washed away the complete crops, cause to low crop production. Terracing is far the easy to cultivate as compared to sloppy area. It also transforms the infertile land area to productive and fertile land hence farmer will be benefited to other crops growing.

Agro based livelihood program (ABLP)

ACF is working extensively in the area of agro-based livelihood generation among rural communities in Chandrapur & Nagpur district of Maharashtra. Our work bridges the gap between technology and farming, empowering farmers to adopt practices that are both sustainable and profitable in the long run. During Oct-March 22, we have continued work on our usual esteemed projects Better Cotton and livestock development also worked on Wadi, low-cost Shade-Net and integrated crop management projects

Better Cotton Project:

ACF, Chandrapur is implementing Better cotton project since 2009 in adjoining villages of Maratha Cement Work and the expansion of the BCI project started in the year 2012. Today ACF-BCI Chandrapur is working with more than 65000 farmers from 639 villages in Rajura, Jiwati, Korpana.

Bhadravati, Chimur, Chandrapur, Warora blocks of Chandrapur district and Hingna, Nagpur Grameen, Kalmeshwar, blocks of Nagpur district. This project is solely focused on cotton farming where cotton farmers get trained in sustainable farming practices and are licensed to grow Better Cotton. From season 2022-23 we are expanding project area towards Umred & Saoner Block of Nagpur District. During Oct21-March 22 period we have also worked on the new inventions such as Oxygen Park & village resource center.

Village resource center:

The Village Agricultural Resource Center is a knowledge & information center for the Farmers. It provides opportunity to farmers to learn advance technic of farming and adopt it for betterment of their family. Space for farmers to come together and share their experiences through healthy discussion in meetings. We started village resource center (VRC) at Mangi village earlier this season. Due to good response & demand from farmers, we have multiplicated this center in our project area. At present we have VRC center in total 26 BCI villages of Chandrapur location.

One Billion tree plantation:

Considering the importance of Mother Nature and BCI's mission to help cotton communities survive and thrive, while protecting and restoring the environment, ACF Chandrapur has taken an initiative with a big challenge for enhancing biodiversity in its core & BCI project villages. Achieving the same, we have targeted for "A million Plantation drive in our 648 Project villages of 15 PU's and about 65,000 farmers with whom we have implemented this plantation drive successfully".

Wadi Project

Wadi in Marathi means an orchard. The main objective of the Wadi project is an economic upliftment of the farmers through sustainable agriculture and improvement in quality of life of farmers. The wadi project was started in the year 2020-21 to enable the farmers to cultivate orchards along with cotton and other crops and get the best quality fruits and sell them in the local market. So far 15 farmers have been selected and fruit plants like mango, chiku, guava, citrus, orange, locust and lemon etc. have been planted in one acre farm of each farmer.

Sr.	Farmer Name	Village Name	Year
1	Sanjay Dhavale	HardonaKh	20-21
2	VithobaPanghate	Upparwahi	20-21
3	EaknathTajne	Kukudsath	20-21
4	MahadevChavale	Kukdsath	20-21
5	Santosh Salam	Bhendvi	20 21
6	ShamraoKotnake	Bhendvi	20-21
7	RamkrishanaDhande	MangiKh	20-21
8	RamkrushanMusale	Upparwahi	20 21
9	GosaiBodhe	Yekodi	21-22
10	VittalBodhe	Yekodi	21-22
11	RavindraBodhe	Yekodi	21-22
12	Pandurang Thipe	Lakhamapur	21-22
13	KisanRandive	Thutra	21-22
14	Gangubaimeshram	MangiKh	21-22
15	MarotiRaut	Kawtala	21-22

At village Kukudsath& Upparwahi

Low Cost Shade-Net Project

Shade-Net house is mainly used for growing seasonal and non-seasonal crops, high value vegetable crops and flower production. In Shade-Net House you can control temperature, humidity and carbon-dioxide levels to some extent. In this season total 17 farmers have been benefited from this project.

Sr.	Farmer Name	Village Name	Year
1	Pandurang Thipe	Lakhamapur	20-21
2	VithobaWararkar	Kawtala	20-21
3	TulshiramBodhale	Pimpalgaon	20-21
4	SandipChoudhari	Nandgaon	20-21
5	PravinBodhale	Pimpalgaon	20-21
6	DevraoBodhale	Pimpalgaon	20-21
7	Prashant Badkhal	Kawtala	21-22
8	VasantBadkhal	Kawtala	21-22
9	KalidasWararkar	Pimpalgaon	21-22
10	RamchandraThipe	Lakhamapur	21-22
11	PravinWeladi	Kargaon Bk	21-22
12	AnandraoMeshram	Hirapur	21-22
13	KishorGhate	Upparwahi	21-22
14	GondirajPimpalshende	Bhoygaon	21-22
15	SunghaAtram	Warzadi	21-22
16	Shankar Bodhe	Bhoygaon	21-22
17	BanduChoudhari	Bhoygaon	21-22

Village- Pimpalgoan

Village-Lakhamapur

Village-Kawtala

Integrated crop management project.

In 16 villages of Chandrapur location we are working with farmer who grow soybean, wheat, gram and linseed. This project provides guidance to farmers on improved variety selection, seed treatment, intercrop and whole packages of practices. The main objective of this project is to increase the incomesource by cultivating the above crop in kharif and rugby and improve soil using crop rotation method.

Sr.	Crop Name	No. of Demo	Season	Subject	Remarks
1	Soybean	17	Kharip	Intercropping with soybean & seed treatment	Completed
2	Wheat	16	Rabbi	Improved verity for extra yield with seed treatment	Completed
3	Gram	16	Rabbi	Improved verity for extra yield with seed treatment	Completed
4	Linseed	30	Rabbi	Provide linseed for demonstration	Completed

Livestock Development (LSD):-

ACF, Chandrapur is implementing Livestock Management program since 2018-19. Today ABLP-Livestock Management Program, Chandrapur is working with 15000 farmers & landless male & women families from Rajura, Korpana & Jiwati block in District Chandrapur. Under the program 42 Pashu Swatha Sevikas are involved. They are providing door stapes services to Pashupalak. Under the program we have covered total 7o villages from three blocks. The main objective of this program is to build the capacity of farmers and increase farm based alien business as like Goatey, Poultry and Milk dairy. In the livestock Management Program we covered needy and poor families for increase their financial & social status.

The following door step services are providing by Pashusakhi to Pashupalak:

1) Health Checkup camp
2) Basic treatment to Goat, Bucks, Poultry birds & chicks, Cow and Bulks.
3) Deworming and Vaccination camp
4) Mega Health Check-up camp with Government Veterinary department.
5) Management, Treatment and linkages with government schemes.
6) Promotion of livelihood opportunities.
7) Awareness sessions for Pashupalak.
8) Provide the ACF project benefits from different projects.
9) Organize the coordination meeting with government doctors for regular vaccinations and treatment.

Health Program

At present Health program operates in 70 villages across the 3 blocks namely Korpana, Rajura and Jiwati. Keeping approach of Integrated Health Program. At present no. of 67 Sakhis associated with us and reaching out to 8881 house-holds by covering population 41359.
ACF has established total 9 clinics in program area, in old two clinics at Sonurli and Wadgaon villages, new seven clinics in Hardona khurd, Upparwahi, Bhendvi, Pimpalgoan, Kusal, Thutra and Isapur villages. Covered total no. **1024** of patients from reporting period and collect community contribution from medicine and other cost is Rs. **82561** this is good achievements. This is sustainable model for the community and ACF. We had organized 12 specialty camps two eye check-up & **10** camps of adolescent anemic collaboration with the government health department there were total **411** cases had treated, also organize some ANC, PNC checkup camps. Organize nutrition demonstration for anemic cases, motivate the for Covid-19 vaccination because people don't aware about Covid-19 vaccination.

Under MCH program we are done 03 ANC Check-up Camps with treated 47 pregnant mothers, 04

Paediatric Camps with treated 144 Children, in this period 45 deliveries out of that 43 Institutional Deliveries. The major emphasis is on community awareness and education, facilitating screening early diagnosis and treatment, and improving utilization of Non-Communicable Disease services. Under Communicable Disease project we are organized awareness session on Malaria, Tuberculosis & HIV/AIDS. Total session is 657 & 10274 people participated. Total 33 NCD Screening and treatment camp had organized there were 2525 people has Screened. Under Total Sanitation project following activities had done

1	Awareness Session with Community	116
2	Community Participate in session	1685
3	Soak Pit Construct	69
4	Toilet Construction and maintain	46

APEKSHA program we have trained 95 PLLR Educators and conducted 4 APF trainings in surrounding villages. Under Anemia Control program we have conducted 52 session for student and covered 634 Student. Under the MHM (Menstrual Hygiene Management) Project has started. Under this project organized awareness sessions is 42 and 478 participants adolescent girls and women they are link with government health department and other sources for sanitary napkin total 572 are benefitted.
Under Malnutrition program we has painted 6 Anganwadies Hardona khurd, Nandgaon surya, Bhoyegaon, Gereguda, Hirapur & Kukudsath villages.
COVID-19 Vaccination Project: The Covid-19 Vaccination was most important for the community because Covid-19 disease has not gone, so government has focus on Covid-19 vaccination but they are facing some problems. ACT has planned one project for support to vaccination drive through the financially support by Global India Fund in 635 villages.

Total Vaccinated: 26576

1	Community members	26109
2	ACT Employee	230
3	Truckers	130
4	Third Party	107

Women Empowerment Programme

Our women empowerment is one of the key initiatives of our women empowerment program. Empowering women through financial independence, growth of women education, growth of economic, Women and sanitation, Safe & scare life, Social & political level is the major objective of our program. As per our objective we are working with 243 women SHGs and covered 2763 women members. Our objective of the women empowerment program is increase the economic, social & political status. With the women SHG we have organized 22 trainings for to build the capacity of members. Organized financial literacy, bank linkages and Gender equality sessions for SHG members. Completed the 11 EDP sessions for entrepreneur women members. In the period total received bank loaning amount was Rs.2.44 Corer and total received JLG loaning was Rs.2.16 Corer. The women empowerment program objective is sustainable development through the way of financial and social development. Women are fully involve in village development activities, setup of income generating activities, handling the social issues, participating in women gramsabha & village meetings. Under the WEP program we covered total 65 from Rajura, Korpana & Jiwati block in District Chandrapur.

In this period formed total 9 new SHGs and covered 188 members. Encompassing 2763 women in 60 villages with a collective saving base of Rs.172.23 complementing and supplementing the family incomes substantially. In the month of Sept. 2021 to March 2022 our 1849 SHG members are involve in their own business as like Goat & Poultry rearing, Grocery shop, Cloth selling business, Vegetable growing and selling with their own shop etc.
Under the Women Empowerment program we are implementing the following projects through the NABARD, Bank and MAVIM:

1) Digitalization of SHG under the Eshakti project with 127 SHGs.
2) Joint Liability Group (JLG) by VKGB & NABARD
3) Entrepreneurship Development Program (EDP) for Poultry rearing and Desi eggs business.
4) Bank Loaning and Financial Literacy through the Bank of India & VKGB

Ekata Women Federation:

Safalya Transport Nagar Food Canteen has started by Ekata Women Federation and Sunahari Sanitary Pad unit established at Piparda.

Safalya Mahila Farmer Producer Organization has registered Company. In the FPO total 12 Directors are working and they covered 60 villages. In the food canteen total 3 women members are working and in Sunahari Sanitary napkin unit total 6 women are involve.

Achievements:

1) End of March 2022, total share members are 500 & their share capital is 4.50 Lakh
2) Goat selling business through the FPO
3) Organized farmer awareness session
4) Provide farm based services & government schemes

EDUCATION PROGRAMME

Education is the most important tool for social and economic transformation and a key instrument for building an equitable society. A well-educated population, equipped with the

relevant knowledge, attitudes, and skills are essential for economic and social development in the twenty first century. Education also acts as an integrative force in society, imparting values that foster social cohesion and national identity.

Based on the National Education Policy 2020, ACF believes in holistic development of students and to convert their energy into action, and increase their stamina and concentration, Hence ACF shifted the focus of the program from quality education to promotion of physical literacy, promotion of reading and behaviour change components under WASH program. This will help the child to develop a good habits, which will be added value in their personality from childhood and he/she may become healthy and sensible future citizen.

Outreach of Education Program

The outreach of Education program is in 30 schools of Korpana, Rajura and Jiwti block of Chandrapur. Below table describe the blocks wise outreach of schools.

Focus Program	*Reach of Schools*	*Reach of Blocks*
Reading Promotion	**16** (Upper Primary-5 & Primary-11)	Rajura-12, Korpana-2 & Jiwti-2
Sport Promotion	**13** (Upper Primary-11 & Primary-2)	Korpana-9 & Rajura 4
WASH Promotion	**16** (Upper Primary-11 & Primary-5)	Korpana-9 & Rajura-7

Program wise Activities and Achievements

Reading Promotion Program

The objective of Reading Promotion Program is to build a capacity of teachers/volunteer to recognize the understanding of word meaning of students by set up library for easy access of age specifics books to expresses themselves freely and improve pronunciation to remove the hesitation among students.

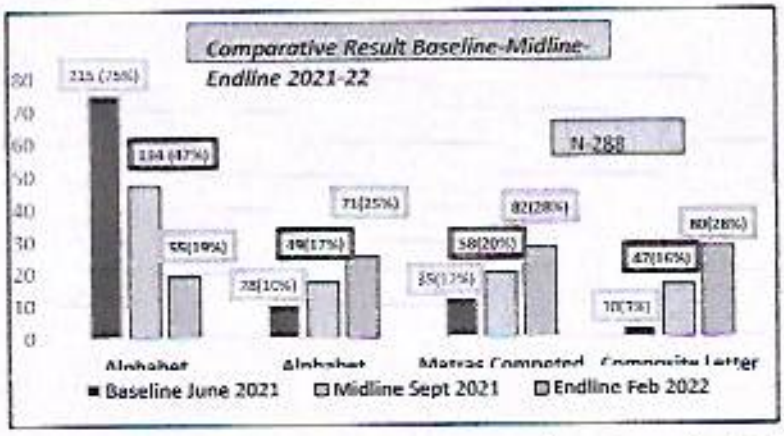
Under the Reading Promotion focused on four parameters such as Alphabet incomplete, Alphabet completed, Matras completed and composite letters with 288 students in no. of 8 ZP schools. DSS (Door Steps Schools) Pune providing technical guidance and training support to run the program effectively. The team of 8 volunteers conducting the regular classes of primary students with the help of stakeholders, teachers and parents at village level.

Activities carried out:

Sr. No.	Activities	Numbers

1	Midline and End line assessment of students on four parameters	8 schools
1	No. of teachers/volunteers trained on Reading Promotion	17
2	No. of schools having age specifics books	16
3	No. of reading sessions conducted by volunteers	832
4	No. of reading Competitions held	14
5	No. of students participated in reading competitions	233
6	No. of parents participated in reading competitions	728
7	No. of students shows increase in literacy	232

- 25% progress is seen in the children who can now read Composite letter level.
- It is also noteworthy that 75% of the children who were in 'Alphabets incomplete' level have progressed to other levels in 3 and 9 months accordingly. The trend shows that it is increased by 56% accordingly.
- 19% children who are still in Alphabets incomplete level, 15% children have an attendance of only 15 and 25 days or less.
- 15% more students increased in alphabet completed level.
- Matras category category increased by 16%.



- Overall 81% students can read and write, which we considered as their academic progress in Marathi language.
- We added mathematics along with language from January 2022.
- Created a cadre of 15 volunteers from our SEDI to teach the students on the base of "Shikshan Dan" Initatives taken by CEO of ZP chandrapur. They taught no. of 144 students for 3 months.

Sport Promotion (Physical Literacy)

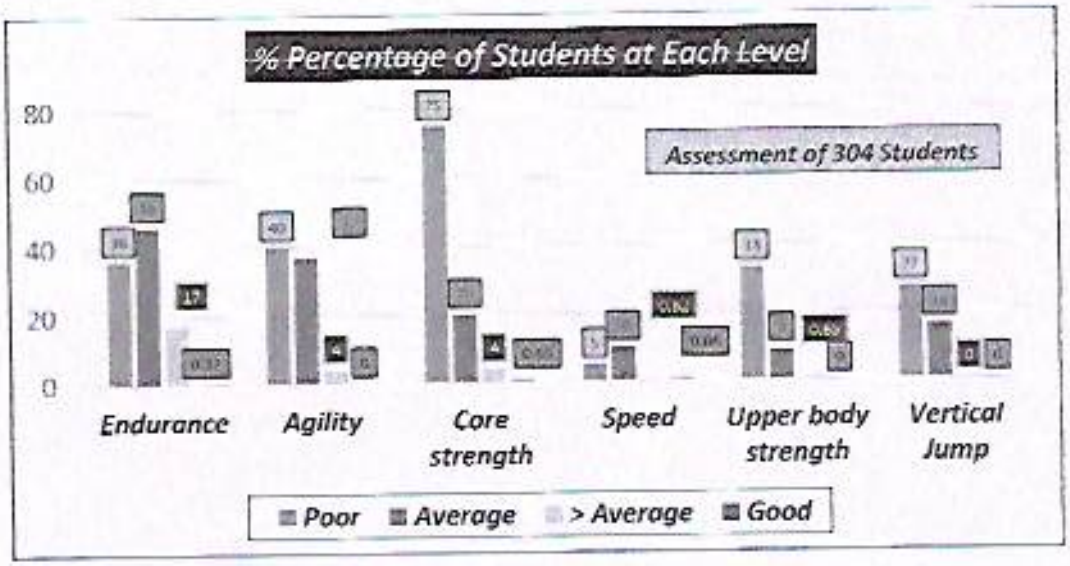
The objective of Sport Promotion is to develop of fundamental movement skills and confidence to participate in Physical activities to achieve the physical and academic excellence by overcoming the mental stress and ensuring gender inclusion through Endurance, Agility, core Speed and Strength.

Under the Sport promotion focused to improve the physical strength of students, which will helpful to support to increase concentration in study as well as enhancing the sports skills. This program covering 13 schools of core villages and no. of 471 students. ELMS Foundation, Mumbai providing technical support and training to develop the skill of running, kicking, jumping, catching, Dynamic balance, Beep test and Agility through the assessment and guidance.

Activities carried out:

S.N.	Activities	No.
1	No. of PE teachers selected and trained	7
1	No. of Schools covered with Sport materials	13
2	No. of school level sports competitions held	13
3	No. of students participated in sports competitions	641

Done the assessment of students under Sport Promotion of beep test, agility, plank, core speed, strength and vertical jump.



Key inferences-

- Maximum number of students that is 55.46% is at poor and 39.38% is at average level.
- Core strength, Push up and Vertical jump are most difficult skill for the students.
- 5% students are at above average level which is good sign for future.
- Speed and Endurance are the easiest and natural skill amongst all tested. To develop a proper understanding of the skill takes some time to develop.

WASH (Water Sanitation and Hygiene)

The objective of WASH program to ensure clean, safe and functioning water facilities along with toiles at school by generating knowledge of good hygiene behaviour, and manage their menstrual cycles in safety and dignity. Clean environment both involves behaviour and facilities.

Under the WASH promotion focused to make available portable drinking water facilities, Clean and sufficient Sanitation facilities for both boys and girls, Hand washing station with soap and running water and aspect of behaviour change through peer training on personal and menstrual hygiene. WASH cover 16 core schools of ZP.

Activities carried out:

Sr. No.	Activities	Numbers
1	No. of Hand washing sessions and demonstration	159
1	No. of students participated in demonstration and hand washing	1106

2	No. of schools supported for basic amenities and infrastructural development	2
3	Received contribution from government, community and NGO for BaLa painting and infrastructure	1.33 lakh
4	No. of trainings conducts on personal and menstrual hygiene	2
5	No. of participants on trainings conducts on personal and menstrual hygiene.	98

Other activities carried out to strengthen the Education program:

- Initiated spoken English training for two schools, participated 75 students.
- Done BaLa painting in 5 schools to create a joyful learning environment for the students.
- Conducted no. of 4 winter camps, there participated 417 students and created best from waste.

Outcomes of programme:

- 81% academic progress of reading classes.
- Analyse physical strength of 304 students out of 417 and inputs provided according to it.
- Proper utilization of infrastructural facilities created at school level.
- Trained SMC's to get involve in monitoring and supporting the schools.
- Created learning aids through the BaLa painting
- Teachers and SMC's consistently working for academic progress and engagement of students in study, sports and skill base activities.
- Collaboration and coordination with government education department and NGO.

Skill Development Program

Skill & Entrepreneurship Development Institute (SEDI) started in 2008 for imparting employable skill to the local youth under Skill & Entrepreneurship Development Institute (SEDI) initiative of Ambuja Cement Foundation. Our main objective is to impart skills to the rural youths to generate sustainable livelihood. ATC is having courses for two years duration like Fitter and Electrician and one year course welder affiliated with NCVT. The certificate courses like Electrical Assistance and Carpenter are affiliated with State Council of Vocation Training. SEDI catering short duration courses like Assistant Electrician, General Duty Assistant (GDA), Fitter Fabrication, Printed Circuit Board Assembly Operator (PCB), Manual Metal Arc Welding (MMAW), Assistant Mason, CNC Machine Operator, Unarmed Security Guard, Entrepreneurship Development Program (EDP) and Soft Skill.

Coverage Area: Our coverage area of ACF location are basically Gadchandur, Rajura, Korpana, Jiwati, Gondpipri & Chandrapur block. This is the area where rural community faces major challenges related to land alienation, poverty & indebtedness, health & Nutrition, education, poor infrastructure and Vocational Training.

Process:

Pre-training -	During Training -	Post Training -
Ensuring placement linkages Need assessment Community mobilization Counselling of candidates & their parents.	Networking for Guest lectures, Ensuring quality training and Soft skill and Basic computer is Main aspects. Counselling & Parents meeting of trainees. Exposure Visits. On Job Training (OJT)	Hand holding support for two years for Placement Tracking and Carrier Progression of each trainee for two years

Short Duration courses:

- Assistant Electrician Duration - 3 Months
- Manual Metal Arc welding (MMAW) - Duration - 3 Months
- GDA (Basic Nursing) – Duration - 6 Months
- Printed Circuit Board Assembly Operator (PCB) Duration - 3 Months
- Fitter Fabrication Duration – 4 Months
- Assistant Mason Duration – 3 Months
- Computer Numerical Control (CNC)Machine Operator/Programmer – Duration 4 Months
- Entrepreneurship Development Program (EDP) Duration – 15 Days
- Unarmed Security Guard – Duration 2 Months

Courses in ITI mode:

- Fitter- Duration-24 Months
- Electrician- Duration-24 Months
- Welder- Duration-12 Months

Highlights of the SEDI:

- SEDI is first institute in Maharashtra that has been approved for Dual System Training Module (DST).
- SEDI has done MoU with Ambuja Cements Ltd. Maratha Cements Works for DST module.
- This Year SEDI was nominated for Best ITI award in Maharashtra and stood 4th position.
- MoUs are done with various placement partners & Knowledge partners for enhancing the strength of SEDI.
- SEDI started Sub-Center at Jiwati block for Assistant Mason course, there till date 20 candidates has been successfully trained.
- SEDI has developed own online cloud software were trainees database is maintain also developed the Internal Assessment software were each batch internal assessment is carried out every month smoothly.
- Now SEDI is running & carrying out physical training in full phase after double dose vaccination of all staff & trainees.
- Various Campus drive and Placement partners meet were arranged SEDI trainees, Many of them are successfully placed.
- As every year, various activities, Sports and Annual Day function was organized to enhance the skill, communication, confidence & strength of trainees.
- SEDI discovering spark of entrepreneurship in trainees & motivating till date 30% of the trainees are self-employed.
- Institute catering Industrial demand driven Long Duration Vocational Training as well as Short Duration Certificate courses.
- Compulsory Life Skills Training, Spoken English as well as Computer Education for all Trainees and main focus on OH and safety.
- Focus on Quality with value added Education.
- Institute developing skills with facilitating placement & 69 % is cumulative placement.
- Specially concentrating overall Personality Development through various extracurricular activities.
- Developing leadership for ownership of the institute in Trainees through Trainee Leaders through involvement in various administrative committees.
- Encouraging girls for male dominated courses and male for female dominant courses.
- Reaching to poorest of the poor families by generating funds for skill development training to sustain their livelihood.

Placement process:

- High Demand in Market- Placement Opportunities
- General duty assistant (GDA) are in high demand in private Hospitals, Nursing Homes, Clinics & Dispensaries
- Establishing strategy
- Screening and searching
- Evaluation

Glimpse of SEDI:

Annexure - 7

Ambuja Cement

MCW/EMD/19/2021/ 347

December 29, 2021

To,

Ministry of Environment & Forest &CC
Regional Office (WCZ), Ground Floor
East Wing, New Secretariat Building,
Civil Line, Nagpur-440001

Sub: Submission of Ground Water Level & Quality report

Ref: As per specific Condition of the following EC

1. **EC NO J-11015/399/2006-IA II(M) dtd 29.06.2007**
2. **EC NO J-11015/400/2006-IA II(M) dtd 29.06.2007**
3. **EC NO J-11016/11/2004-IA II(M) dtd 06.01.2005**

Dear Sir,

Please find enclosed herewith the Post monsoon season (NOV 2021) Ground Water Level & Quality data of surrounding area of Maratha Lime stone mines. This is as per the specific condition no (x) of above referred EC no 1 & 2 & (vii) of EC no 3.

We hope that you will find this information in order please.

For, **Ambuja Cements Ltd.**
(Unit: Maratha Cement Works.)

M. Sanjeeva Rao
Vice President - Commercial

CC: Member Secretary,
Central Ground Water Authority,
West Block 2, Wing 3 (Ground Floor),
R K Puram, Sector 1,
New Delhi 110066

Regional Director
Central Ground Water Board
N.S. Building, Civil Lines,
Nagpur-440001 (Maharashtra)

Ground water Level Measurement Report

NOV 2021 (Post-monsoon)

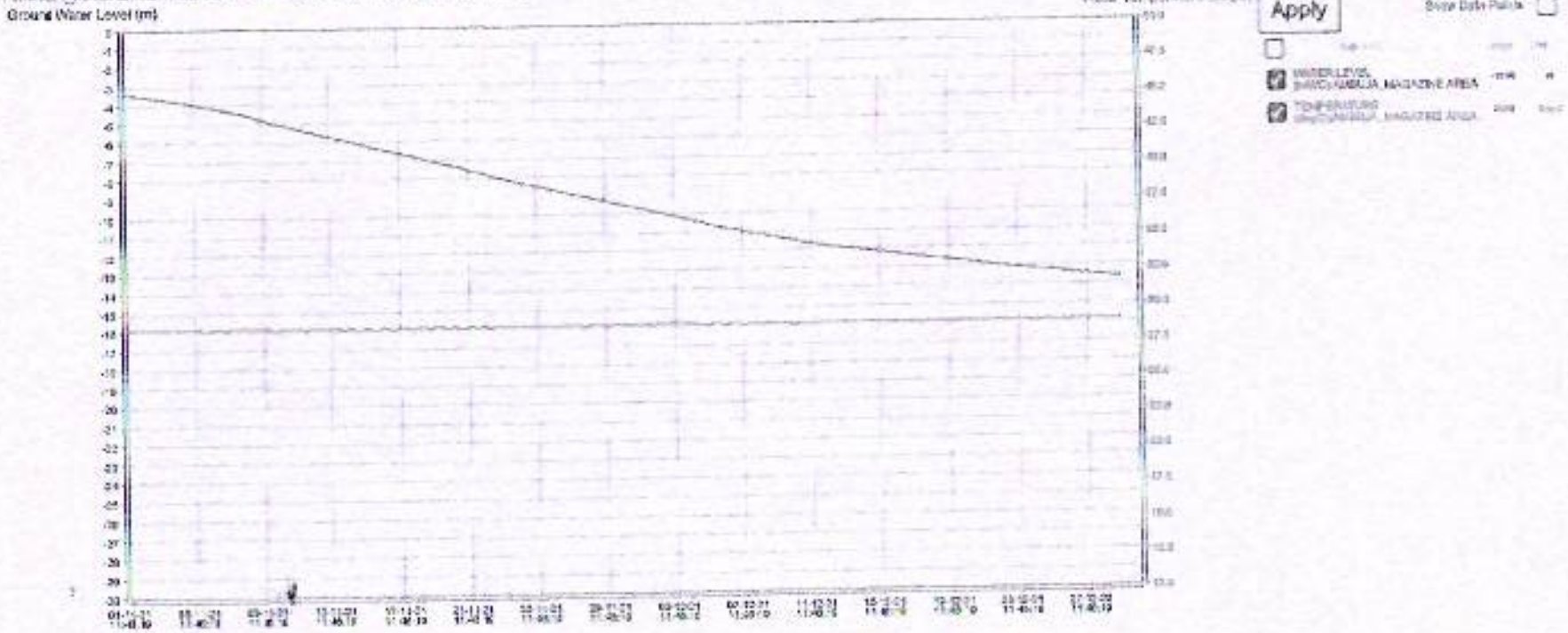
Sr. No.	Name of village	Location / Landmark of well	Location Code	Water Level (In Meter)
1	Panchgaon	Near Barikrao Atram House (Common Well)	VDW1	-0.7
2	Bhendwi (Gereguda)	Sheikh Rajjak agricultural land (Personal well)	VDW2	-1.9
3	Hirapur	Near Jaltu Meshram House (Common Well)	VDW3	-2.0
4	Sonapur	Near Gram Panchayat (Common Well)	VDW4	4.6
5	Pandharpaoni	Near Laxshman Pendorer House (Common Well)	VDW5	-8.6
6	Chandanwahi	Near Nanji Darekar House (Common Well)	VDW6	-3.9
7	Pimpalgaon	Near Wasant Lohe (Private Well)	VDW7	-4.6
8	Thutra	Near Bobade's House (Private Well)	VDW8	-3.9
9	Upparwahi	Near Santosh Hanumante House (Common Well)	VDW9	-4.0
10	Mangi (Big)	Near Mata Temple (Common Well)	VDW10	-4.5
11	Mangi	Sawkar Well	VDW11	-4.1
12	Hardona (Khurd)	Near Ramesh Zade house	VDW12	-5.6
13	Gadchandur	Near Premchand Borkar House (Common Well)	VDW13	-6.5

Ambuja Cements Limited
(Unit :- Maratha Cement Works)

Summary of Drinking Water Analysis Report of Surrounding Village
Nov-21

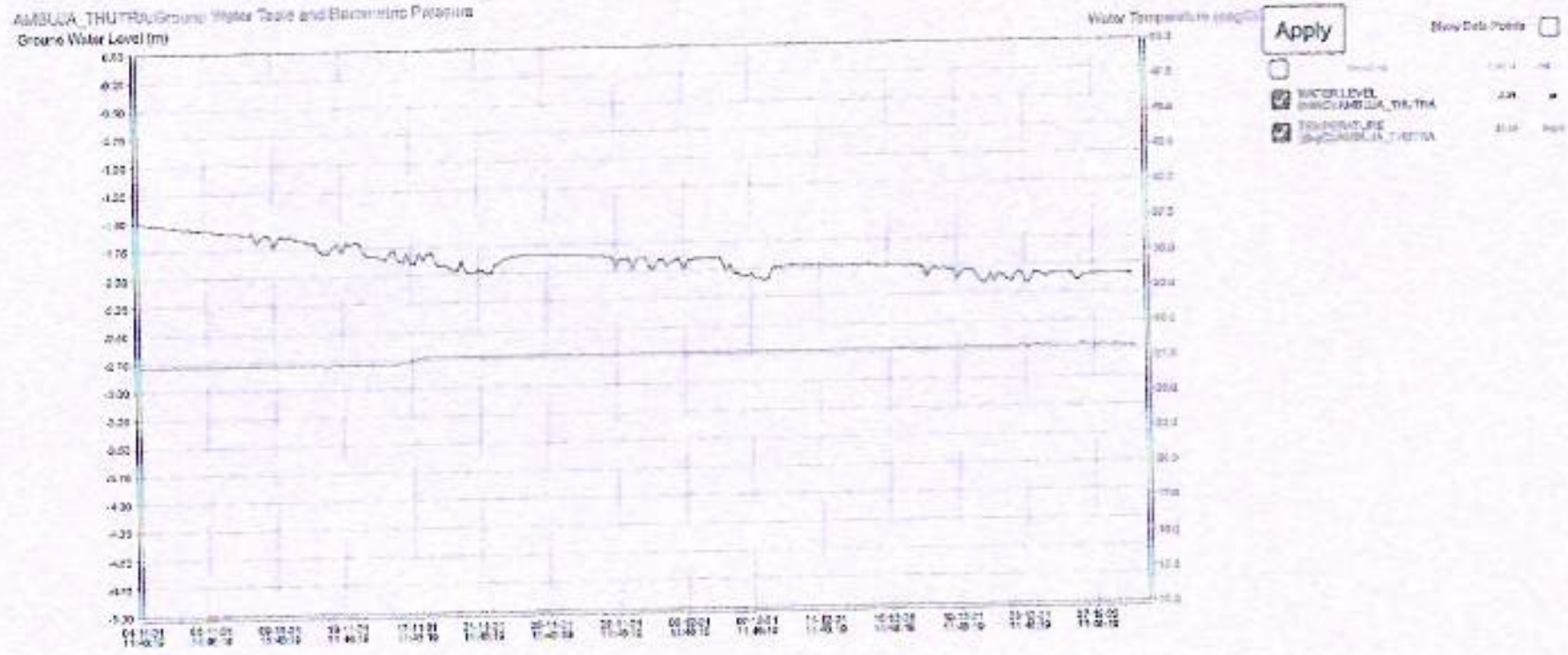
Sr. No	Parameter	Unit	Panchgaon	Bhendwi (Gerugade)	Hirapur	Sonapur	Pandharpaoni	Chandanwahi	Pimpalgaon	Thutra	Upperwahi	Mangi (Big)	Mangi	Hardona (Dhurdi)	Gadchandur
1	pH		7.60	7.91	7.76	7.63	7.04	7.54	7.26	7.25	8.11	7.61	7.20	7.60	7.28
2	Total Dissolved solid	mg/lt	936.00	436.00	662.00	697.00	1226.00	794.00	531.00	641.00	407.00	1560.00	796.00	751.00	670.00
3	Total Alkalinity	mg/lt	263.60	173.90	263.60	246.30	231.60	202.80	196.60	260.80	130.40	259.60	159.40	231.60	155.40
4	Iron	mg/lt	0.06	0.08	0.07	0.06	0.07	0.06	0.06	0.07	0.06	0.09	0.08	0.07	0.06
5	Fluoride	mg/lt	0.87	1.17	0.96	0.72	1.06	0.83	0.66	0.69	0.85	1.20	0.94	0.97	0.84
6	Chloride	mg/lt	148.40	17.30	34.60	128.60	173.20	69.20	27.20	35.10	15.30	222.70	138.50	71.70	118.70
7	Total Hardness	mg/lt	342.50	244.00	316.90	492.10	543.30	507.60	305.10	378.90	240.10	590.50	440.90	440.90	377.90
8	Sulphate	mg/lt	81.70	22.50	57.10	101.80	134.70	80.60	51.40	87.90	77.80	160.50	55.50	76.50	92.40

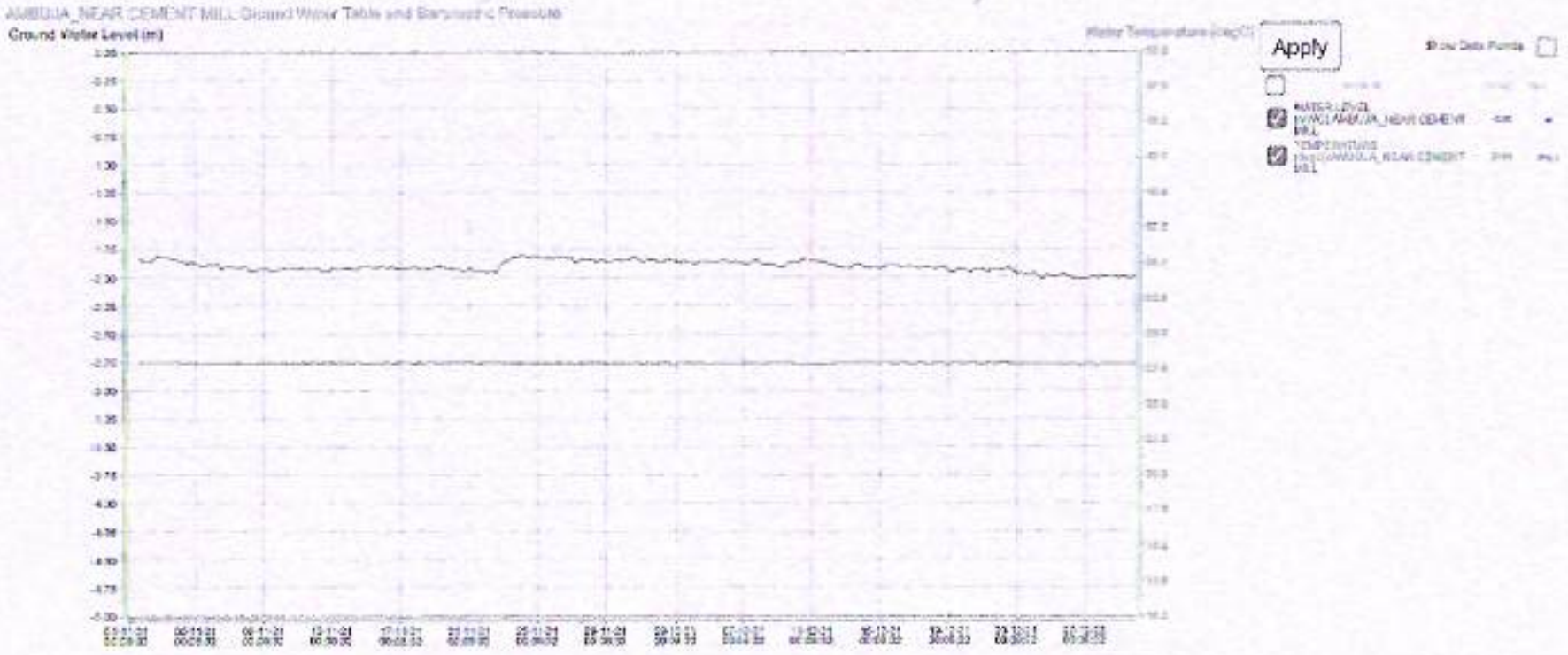
AMBUJA_MAGAZINE AREA:Ground Water Table and Barometric Pressure




Ground Water Level (m)
Apply

Encardio Rite Drishti Graph Print




AMBUJA_NEAR CEMENT MILL Ground Water Table and Barometric Pressure
Ground Water Level (m)
Apply

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure 8

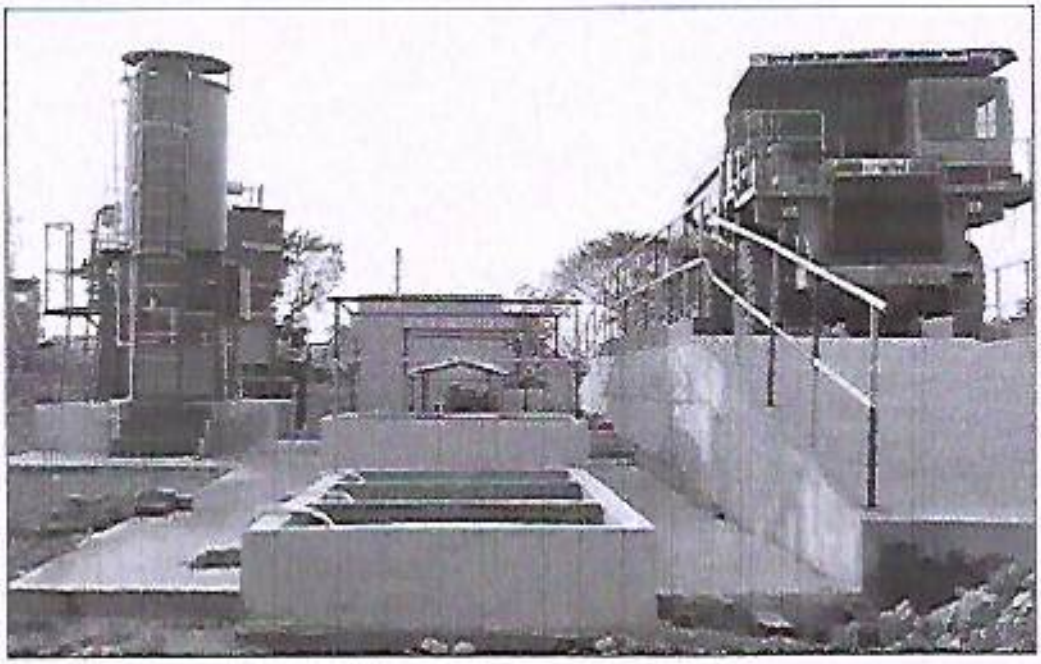
Sewage Water Reclamation Plant

We have installed SWRP (Sewage water recirculation plant) with concept of treating & 100% recycling of domestic sewage water. It is a regular practice at ACL to recycle 100% treated water for process usage. It reduces the burden on water supplying agencies and indicates our environmental commitment.

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Effluent Treatment Plant at Mines Workshop

We have installed ETP (Effluent Treatment plant) for treatment of Mines workshop waste water. The treated water is recycled back into the system.



Annexure:- 9

Ambuja Cements Ltd.

(Unit: - Maratha Cement Works, Upparwahi)

Air Quality Monitoring Results

For Captive Limestone Mines, Cement Plant and Captive Power Plant

Six Monthly Average Values of Ambient Air Quality

(From 1st October 2021 To 31st March 2022)

Sr. No.	Location	Distance From Plant (km)	Direction w.r.t. Plant site	Ambient Air Quality Results ($\mu g/m^3$)			
				PM2.5	PM10	SO_2	NO_x
1	House (L- Type)	0.5	E	35.35	65.18	8.52	15.38
2	Guest House (Near Bachelor Accommodation)	0.5	SE	36.81	69.27	8.46	15.41
3	L.S. Crusher	0.1	W	41.18	73.07	8.48	15.32
4	Near magazine Section	1.5	SW	32.56	58.82	7.90	14.85
5	Near Water Pond	2	NW	39.85	71.70	9.18	16.31

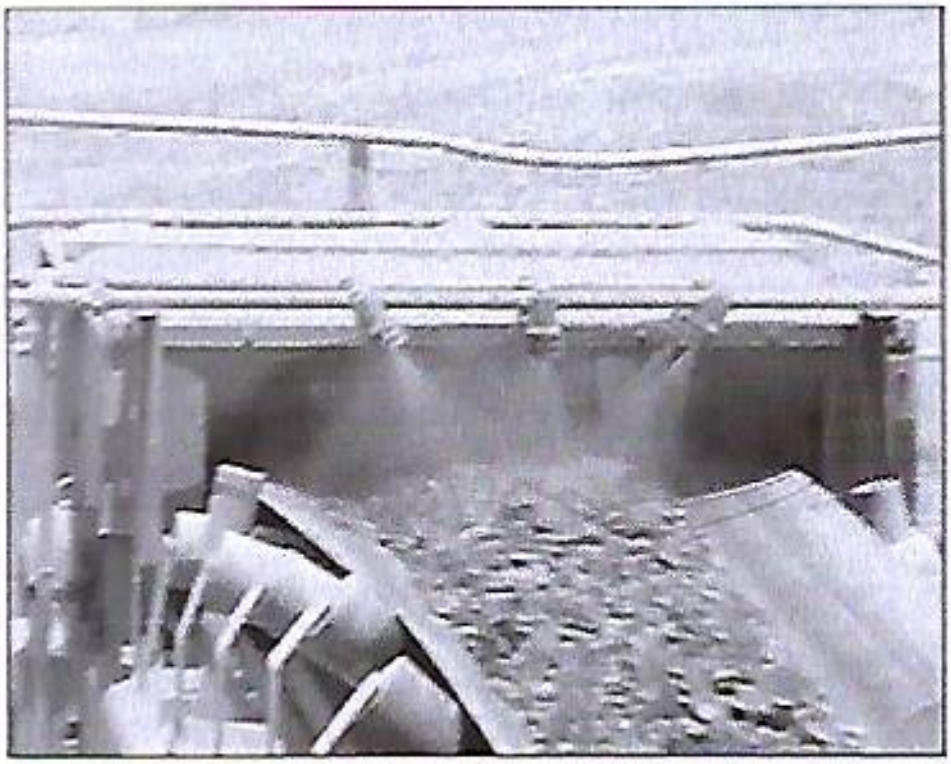
Note: - All the values are Monthly Average Values.

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure - 10

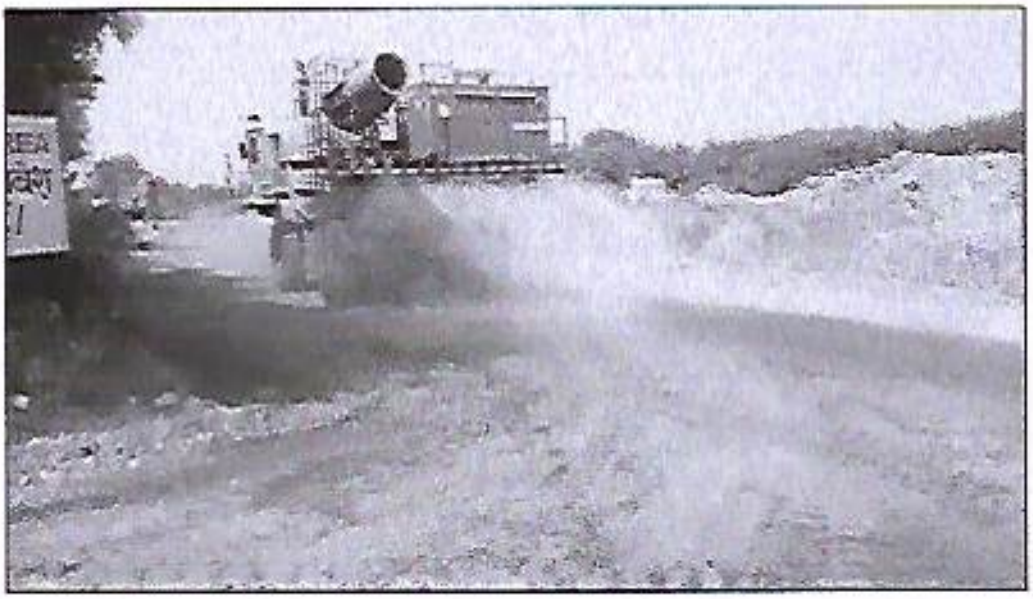
Water Sprinkling System

Water tankers have been engaged for sprinkling water to control the fugitive dust at Mines Haul roads. MCW has installed automatic dust suppression system at limestone & coal dump hoppers, stacker reclaimers, and at coal handling systems.



Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

New Water Tanker with Sprinkling System for Dust Suppression in Haul Roads, It uses 10% water less water than conventional water tankers. Dumper converted into Water Sprinklers with fogging arrangement.



Annexure:- 11

Ambuja Cements Ltd.

(Unit: - Maratha Cement Works Upparwahi)

Fugitive Emission Monitoring Results

Six Monthly Average Values of Fugitive Emission Monitoring

(From October - 2021 To March - 2022)

Sr.NO.	Location	SPM in ($\mu g/M^3$)	CPCB Standard ($\mu g/M^3$)
1	Limestone stockpile area	876	5000
2	Near Mines Site Office	905	
3	Mines Haul Road	1569	
4	Near Limestone Crusher	1154	

Note :- All the Values are Monthly Average Values.

Annexure: - 12

Ambuja Cements Ltd.

(Unit: - Maratha Cement Works, Upparwahi)

Noise Level Monitoring Results

For Capacity Lime Stone Mines, Cement Plant and Captive Power Plant

Monthly Values of Noise Level Monitoring

(From 1st October 2021 To 31st March 2022)

Name of Location	Near Water Pond		Near Magazine Area		Near Crusher		Along Roadside		Colony Area	
Month	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Oct-21	48.2	44.7	47	42.8	68.3	67.7	47.4	43.3	47.4	43
Nov-21	47.4	43.1	48.1	43.6	69	67.4	47.1	44.2	49.6	44.5
Dec-21	48.2	44.5	47.6	43.1	68.5	67	46.8	45.4	48.3	47.7
Jan-22	47.7	45.2	48.3	43.8	68.2	67.4	46	45.3	48.7	47.1
Feb-22	46.2	44.1	47.6	45.6	68.7	67.8	46.4	44.8	48.3	47.5
Mar-22	47.5	45.4	46.2	44.3	68.3	67	45.3	44.2	48.9	46.4

Note: - All the Values are Monthly Average Values.

Ambuja Cements Ltd.,
(Unit: Maratha Cement Works)

Annexure - 13

Air Pollution Control Equipments

Bag Filter

Technical Specification of the Air Pollution Control Equipment

Sr. No	Details	Crusher
1	Material of Construction of Stack	MS Sheet
2	Stack attached to	B/F
3	Stack height	
a.	Round or Rectangular	Round
b.	Above the ground level (mt)	28 m
4	Stack top	
a.	Round of Rectangular	Round
b.	Inside dimension of the stack at top	1.5 m
5	Gas quantity M3/hr	90,000
6	Flue gas temperature deg.cel	50
7	Exit velocity of the gas m/sec	14.12
8	Dust load gm/ m3	60
9	Dust emission mg/Nm3, Design	<30
10	Design pressure mm Wg	500
11	Max flange to flange pressure droup mm	150
12	Air to cloth ratio m3/min/m2	1.4
13	Size of bags mm x mmdia x height	149 x 3650
14	Total no. of bags	612
15	Type of Cloth	Polyester Needle Felt
16	Permeability at 20 mm Wg lt / min / cm2	120-160
17	Filteration area m2	1046.52
18	Max. allowable temperature °C	130

Annexure:- 15

Ambuja Cements Ltd.

(Unit: - Maratha Cement Works Upparwahi)

Air Quality Monitoring Results

Six Monthly Average Values of Stack Emission Monitoring

(From 1st October - 2021 To 31st March - 2022)

Sr.No.	Stack Attached to	Stack Height (m)	Velocity (m/sec)	Particulate Matter (mg/Nm^3)
1	L .S Crusher B/F	30	8.91	17.40

Note :- Values are Monthly Average Values.

Annexure - 16

Annexure - F