Ambuja Cement

adani Cement

Registered Post

Ref. No. ACH/EMD/F-04/09-24 **25/09/2024**

The Regional Officer,
H P State Pollution Control Board,
SCF, 6-7-8, Sector – 4,
Parwanoo, Distt. Solan (H.P.)
PIN – 173220

Sub: Environmental Statement for 2023 – 2024 Unit - Suli

Sir,

Enclosed please find "Environmental Statement for the year 2023 - 2024 for "Suli Plant and Mines" along with two separate duly filled form V.

Hope you will find the above in order.

Yours Sincerely
For Ambuja Cements Ltd.
(Unit Himachal)

(Hem Raj Sharma)
Environment

Cc: (i) The Member Secretary, Himachal Pradesh State, Pollution Control Board "Paryavaran Bhawan", New Shimla (H.P.), PIN – 171 009.

(ii) Inspector General of Forests (C), MoEF&CC, Integrated Regional Office, Shimla 1st & 2nd Floor, C.G.O. Complex, Longwood, Shimla – 171001

Encl : As above

Ambuja Cements Limited
Unit – Suli & Rauri (Darlaghat)
Village Suli, P.O. Darlaghat,
Tehsil Arki, Distt. Solan, Himachal Pradesh - 171102
www.ambujacement.com

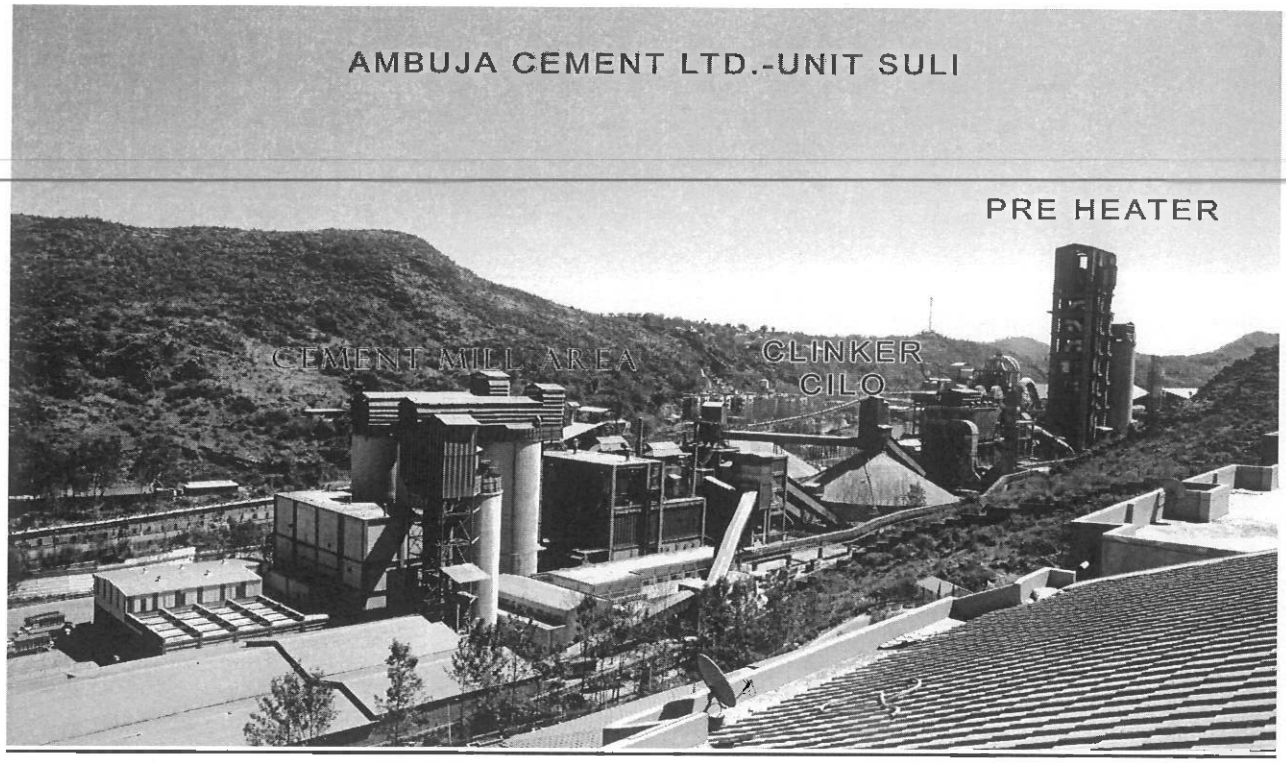
CIN: L26942GJ1981PLC004717

Registered Office:
Adani Corporate House
Shantigram, S. G. Highway
Khodiyar, Ahmedabad – 382 421, Gujarat, India
Ph.: +91 79-2555 5555, www.ambujacement.com

Ambuja
Cement

ENVIRONMENTAL STATEMENT

For
Plant and Mines
(2023 - 2024)



AMBUJA CEMENTS LIMITED.
(Unit - Suli)
Village Suli, P.O. Darlaghat, Teh. Arki,
Distt. Solan Himachal Pradesh 171102

Ambuja
Cement

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LIST OF ANNEXURES

1.0 INTRODUCTION OF THE PLANT

Ambuja Cement has entered into twenty-eighth year of its production with consented capacity of 2.6 MTPA Clinker including 1.6 MTPA Cement at Darlaghat, Teh. Arki, Distt. Solan, Himachal Pradesh. The plant has also installed the Waste Heat Recovery System of 9.8 MW for the generation of electricity through the utilization of waste heat.

The organisation is maintaining the emission norms well below to the standards laid down by the Government Regulatory Authorities, and taking care for further improvement of environment, by means of optimum utilization of raw material, use of waste material, energy, fuel conservation, afforestation and community development, etc.

Mining activities of Ambuja Cement at Kashlog Limestone Mines are the best example in Indian mining industry scenario for state of the art mining with excellent environmental control and conservation.

2.0 OBJECTIVES & SCOPE

The objective & benefits of this report are:

- To evaluate the performance of process and pollution control systems.
- To identify the areas where further attention is required for better environmental management.
- To identify the areas of waste minimization and abatement measures thereof.
- To create Environmental Awareness.
- To explore the maximum possibility of recycling and recovery.
- To have a sound data base on environment.
- To help in developing culture for self-environmental assessment.
- To comply with laws and regulations, company's policy and various applicable standards.

3.0 METHODOLODY

The Environmental Management Division (EMD) of Ambuja Cement along with the other supporting departments conducted a survey to monitor the various unit operations keeping in mind for the possibility of waste minimization and pollution prevention at source along with an emphasis on source reduction of fugitive emission.

The points for consideration were as follows:

- Raw material consumption;
- Material processed through various units and pollution generated thereof;
- Air Pollution control measures and their efficiencies;
- Utilization of dust collected from APCE;
- Measures adopted for pollution abatement;
- Monitoring of water and air quality
- Cost incurred on environmental management activities;

3.1 ENVIRONMENTAL MANAGEMENT & MONITORING

The environment of any area chiefly constitutes the biotic & abiotic factors of that area. Any infiltration of the foreign factors or addition or subtraction of any of the said factors beyond a definite limit causes harm to environment.

Keeping this objective in view and in continuation to our earlier activity in this respect, we are carrying out the following monitoring activities & protective measures for different parameters regularly at the defined interval for stipulated parameters.

Monitoring of Air & Water Pollution

3.2 AIR

Air being the major shareholder of environment, is immediately affected by each and every activity of an organization. So, keeping this fact in view, a program was designed to monitor the Air quality in and around plant and mining area initially in five fixed monitoring stations as per the HPPCB guideline. Presently Ambient Air Quality is being monitored in 07 fixed stations on regular basis. Apart from this, ambient air quality is also being monitored within 5 kms. radius of Plant and Mines. The Ambient Air quality monitoring results are enclosed. **(Pls. Refer Table – 1).**
Continuous Ambient Air Quality Monitoring Station is also installed to check the ambient air quality. The data of the same is being submitted to CPCB website & SPCB server on real-time basis.

Regular monitoring is carried out in different stacks attached to various pollution control equipment in process (like Bag Filters / Bag House / ESPs). The APCE's attached to main unit operations are inter locked with the operation, so as to avoid any idle running of the equipment.

The Stack Emission monitoring results are enclosed. **(Pls. Refer Table – 2).**
Continuous Particulate Monitor has been installed at Coal mill & Cooler ESP. Continuous Emission Monitoring System has been installed at the main stack attached to Raw Meal and Kiln.

4.2 WATER

Apart from source and fugitive emission monitoring facilities, we have two stationary labs for the analysis of air, water, and wastewater parameters.

The plant and colony domestic wastewater is treated in Sewage Water Reclamation Plant (SWRP) and recycled water is used by 100 % for plant cooling and greenery development. The treated water quality results are enclosed. **(Pls. Refer Table – 3).** SWRP outlet water samples results **(Analyzed by HPSPCB Parwanoo)** are enclosed. **(Pls. Refer Annexure – 1).**

Water quality of Gyana Khad, a nallah flowing adjacent to mining area is being monitored regularly and the results are enclosed **(Pls. Refer Table – 4).**

4.3 SOIL CONSERVATION

In the mining area soil cover above limestone is almost negligible. Wherever soil is there, it is being carefully scrapped, collected manually and presently being used in re-vegetation/plantation schemes and filling the sapling pits.

5.0 PLANTATION

At Ambuja Cement, Plantation is an integral part of our activities for environmental protection. This helps us in providing an additional aesthetic look in and around our works including our residential areas. We have started plantation in various sectors since the inception of the project.

The plantation status up to March 2024 is enclosed. **(Pls. Refer Table – 5).**

6.0 ENVIRONMENTAL EXPENDITURE

The total environmental expenditure for the financial year starting April 2023 to March 2024 is Rs. 145464853/ (Fourteen Crore Fifty Four Lacs Sixty Four Thousand Eight Hundred Fifty Three Only). The details are enclosed. **(Pls. Refer Table – 6).**

7.0 IMPLEMENTATION OF ENVIRONMENT MANAGEMENT SYSTEM

BIS, New Delhi has awarded the Himachal unit of Ambuja Cements with the latest version of Environmental Management System Certification - ISO 14001:2015 for the implementation of Environmental Management System in its Plant operations and Mining activity after the illustration of company's commitment for continual improvement and compliance to all the Legal and other requirements of the system.

8.0 SYNTHESIS

In a continuing effort, the company's management, staff and Environmental Management Division have gone beyond the traditional views of compliance of Environmental stipulation as a part of statutory requirement. The Management of Ambuja Cements Limited has always been conscious of its responsibility at all the stages of production and abatement of pollution. All possible measures/steps are being taken to incorporate its commitment for social upliftment of the neighboring community. Better productivity by clean environment and healthy atmosphere in and around the industrial activities is the motto of the management.

Ambuja
Cement

ENVIRONMENTAL STATEMENT

FORM - V

Environmental statement Report of Ambuja Cement for the financial year ending **31st March 2024**

PART - A

(i) Name and Address of the Owner/ Occupier of the Industry, operation or process: **AMBUJA CEMENTS LTD.** (Unit - Suli) P.O : Darlaghat , Teh. : Arki Distt. : Solan, (HP) - 171 102

(ii) Date of the last Environmental Statement Report submitted: 22nd September 2023.

PART-B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION

Name of the Product	Water Consumption per unit of product	
	During the previous financial year	During the Current financial year
	1	2
1. Industrial *	140976 m3	159471 m3
2. Domestic	171651 m3	167281 m3

***- Water used for Industrial cooling purpose.**

(II) RAW MATERIAL CONSUMPTION

Name of Raw Material	Name of product	Consumption of raw material per unit of output	
		During the Previous Financial year (2022-2023)	During the current financial year (2023-2024)
1. Lime stone	CEMENT	0.872	0.877
2. Shale		0.098	0.097
3. Red mud/ Red ochre with high alumina,/ Mill scale/Red ocher with high iron etc.		0.029	0.026
4. Coal/Petcoke		0.0231/0793	0.0136/0.0856
5. Gypsum OPC/PPC/Kwach		0.450	0.406
6. Fly - ash (For PPC)/Kwach		0.906	0.65

PART – C

POLLUTION GENERATED
(PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Pollutants	Quality of Pollution Generated	Percentage of variation from prescribed standards with reasons
a. Water	N.A.	Being a dry process, no effluent is generated from plant
A Sewage Water Reclamation Plant of a capacity of 250 CuM/day is operational for the treatment of domestic wastewater. 100% of treated sewage water is recycled for plant cooling & greenery development. Total water recycled during the year 63210 CuM.		

b. Air

Ambient air quality is being monitored at fixed stations in Plant & in Mines, the results of the ambient air quality are enclosed in table – 1.

PART - D

HAZARDOUS WASTES
(Handling Rules, 2016)

Hazardous Wastes	During the current financial year
a. From process	**No Hazardous waste is generated from process.** However, the waste oil and grease (Lubricants) generated from Plant Machinery & F.O. Sludge generated from D.G. Sets are handled as per the authorization granted by HPSPCB vide their Letter No. SOL-PWN-184 **dated 24.07.2019** valid up to **31.03.2024.** Applied for the renewal. Ambuja dispensary has also obtained **Authorization under Bio medical waste management & handling rules** from HPSPCB vide their letter no. HPSPCB/BMW (18) Ambuja Hospital/4255-56 and further renewed vide authorization no. BMW/SOL/004 and valid up to 31/03/2024. Applied for the renewal.
b. From pollution control facility	No Hazardous waste is generated from process through pollution control facilities

PART - E
SOLID WASTES

There is no **solid waste generation** from process or activity; however, particulate matter collected through APCE is automatically recycled in the process.

	TOTAL QUANTITY	
	During previous financial year	**During current financial year**
a. From Process	No Solid Waste generation from process.	
b. From Pollution control facility	No solid waste is generated except emission from Pollution control facilities, which are well within the stipulated standard prescribed by HPSPCB.	
c. Quantity recycled or re-utilised	100 % of the particulate matter collected through air pollution control equipment is automatically recycled in the process.	

PART – F

Please specify the characteristics (in terms of concentration and quantum of Hazardous as well as solid wastes) and indicate disposal practice adopted for both these categories of waste.

The Annual return of hazardous waste has been submitted to the board vide our office letter no, ACH/EMD/F-20/06/2024 dated 22/06/2024.

PART – G

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.

Dust collected by pollution control equipment is automatically recycled in the process. This is a benefit to the production. Due to cleanliness, house keeping, better pollution control and down time reduction of the plant; dust generation is reduced to the minimum.
M/s Ambuja Cements Ltd. Darlaghat has installed the Waste Heat Recovery System to produce the electricity from waste heat of kiln. The capacity of this system is 11.5 MW. RCTO of the same is valid upto 31/03/2028. The key environmental benefits of WHRS are listed below:

1. Reduction of 145000 MT CO2 equivalent emissions to environment per year.
2. AQC & PH boilers acts as pre dust collector (reduces dust load on cooler ESP).
3. Prevention of dispersion of waste heat into the environment.
4. It is a Green energy.
5. It will reduce the electricity load on Govt. power supply.
6. It will help in resource conservation

Sewage Water Reclamation plant of 250 cubic meters per day capacity is in operation to treat the domestic sewage and 100% of the treated water is reused for plant cooling makeup and greenery development. The Solid Waste (sludge) from Sewage Water Reclamation Plant is used as manure for greenery development in Plant area. In the year 2023-2024 we have reused 6835 cubic meter of treated wastewater.

PART - H

Additional investment proposal for environmental protection and abatement of pollution.

An additional expenditure of Rs. 25 Lakhs is proposed for plantation & beautification in the next year.

Rs. 30 Lakhs are proposed for pollution monitoring, analysis and environment protection measures for next year for plant & mines.

PART - I

Any other particulars in respect of environmental protection and abatement of pollution.

- The company organizes mass awareness programmes in the vicinity of plant and mines.
- Rural development programmes are executed by company through Ambuja Cement Foundation (ACF) which, is an NGO and includes various community development activities like health, hygiene, education, pathway and drinking

water supply for the neighboring community. A fully equipped mobile medical van is on use by the company to check health of rural mass of the adjacent locality.

- In addition to this, the company is providing financial assistance to Panchayats, Societies and some education institutions.

ENVIRONMENTAL AWARENESS

Ambuja Cements Ltd. Darlaghat has adopted a number of other approaches to promoting environmental education and public awareness. As we all understand that people are fundamental units in ecology which represent varied ethnic religious / economic groups within one location might have different environmental characteristics and for this we have involved them from the point of inception + implementation for the defined purpose/objective thereof. Various types of awareness programmes like World Environment Day, Van Mahotsava and World Ozone Day etc. for the society and employees have been celebrated during the year.

WED and Van Mahotsava Celebration

Awareness programme was focused on the following main points:-

- Increase awareness about trees and love of trees amongst the people.
- Help soil conservation and arrest deterioration of soil fertility.
- Popularize the planting and tending of trees in farms, villages, municipal and public lands for their aesthetic, economic and protective needs.
- Provide fuel and thus release cow dung for use as manure.
- Increase production of fruits and add to the potential food resources of the country.
- Help creation of shelter-belts around agricultural fields to increase their productivity.
- Provide fodder leaves for cattle to relieve intensity of grazing over reserved forests.
- Provide shade and ornamental trees for the landscape. Provide small poles and timber for agricultural implements, house construction and fencing.

Ambuja

Cement

ENVIRONMENTAL STATEMENT

FORM - V

Environmental statement Report of Ambuja Cement for the financial year ending **31st March 2024**.

PART - A

I)	Name and Address of the Owner/ : Occupier of the Industry, operation or Process	**KASHLOG LIMESTONE MINES AMBUJA CEMENTS LTD.** (Unit - Suli) P.O : Darlaghat , Teh. : Arki Distt. : Solan, (HP) - 171 102
(ii)	Date of the last Environmental Statement Report submitted	22nd September , 2023.

PART-B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION

Name of the Product	Water Consumption per unit of product	
	During the previous financial year	During the Current financial year
1. Industrial	14109 m3	19244 m3
2. Domestic	1825 m3	1825 m3

Water used for Dust suppression on Mines Haulage Road and Crusher Hopper.

(II) RAW MATERIAL CONSUMPTION

Name of Raw Material	Name of product	Consumption of raw material per unit of output (Per Tonne of Limestone)	
		During the Previous Financial year Tons/Ton of Product (2022-2023)	During the current Financial year Tons/Ton of Product (2023-2024)
Explosive *	Limestone (ROM)	*103.80 gm/MT*	*86.737 gm/MT*
Saw Dust / Rice Husk **	Limestone (ROM)	*6.3 gm/MT*	*6.670 gm/MT*
Diesel ***	Limestone (ROM)	*0.533 Lit/MT*	*0.520 Lit/MT*

* Ammonium Nitrate Fuel Oil (ANFO) explosive is used for blasting limestone in the benches. Maximum charge per blast of 15-16 holes is about 1 tonne. About 100 grams of explosive is used in blasting to extract 1 tonne of limestone.

** Saw dust/Rice husk, locally available waste is used for distributing explosive charge in the blast holes to optimise the explosive consumption & minimize ground vibrations.

*** Diesel is used for operating heavy earth moving machineries engaged in limestone extraction.

PART-C

POLLUTION GENERATED

(PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Pollutants	Quality of Pollution Generated	Percentage of variation from prescribed standards with reasons
a. Water	No effluent is generated from mining activity.	N.A.
b. Air	Ambient Air Quality Monitoring results are enclosed as **Table – 1 &** Stack monitoring results are enclosed as **Table – 2.**	No deviation

PART - D

HAZARDOUS WASTES
(Handling Rules, 2016)

Hazardous Wastes	During the current financial year
a. From process b. From pollution control activities	No Hazardous waste is generated from mining process. However, the waste oil and grease (Lubricants) generated from Mines Heavy Earth Moving Machinery is handled as per the authorization granted by HPSPCB vide the authorization no. SOL-PWN-114 dated 04/05/2024 valid upto 31/03/2027. The Annual return has been submitted in form – 4 vide our office letter no. ACH/EMD/F-20/06(02)/2024 dated 22/06/2024. No Hazardous waste is generated from pollution control facilities at the mine.

Ambuja
Cement

PART - E

SOLID WASTES

	TOTAL QUANTITY	
	During the previous financial year	**During the current financial year**
a. From process	No Solid Waste / Over burden is generated from mining activities.	
b. From Pollution Control Facility	N.A.	
c. Quantity recycled or reutilised	N.A.	

PART – F

Please specify the characteristics (in terms of concentration and quantum of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of waste.

No Hazardous & solid Waste is generated from the mining activity.

The details of hazardous waste has been submitted to the board vide our office letter no, ACH/EMD/F-20/06(02)/2024 dated 22/06/2024.

PART – G

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.

1. Dust suppression by water spraying on the haul road through sprinklers and water tankers help in minimising the SPM concentration in the mine and Ambient air in surrounding areas. In spraying water through tankers an additive is premixed.
2. Automatic fogger is used at the site of unloading the limestone into the hopper at crushing plant.
3. Rainwater-harvesting ponds has been constructed at the mine. The water filled in the ponds helps recharging the local water table.
4. Greening of the mined out area is being done with the involvement of local villagers and the State government authorities.
5. Geo-jute coir matting technique is being used for stabilizing the slope of the area being reclaimed at the mine. This innovative technique not only controls the soil erosion but also control the loss of nutrients assisting in improving the rate of re-vegetation.
6. For minimizing the dust generated during blasting on the limestone benches, the floor of lower bench/haul roads is being regularly wetted.

PART - H

Additional investment proposal for environmental protection and abatement of pollution.

An additional expenditure of Rs. 25 Lakh (Twenty Five Lakhs) is proposed for maintaining plantation & beautification in Darlaghat Plant & Kashlog Limestone Mines in the next year.
Rs. 30 Lakh (Thirty Lakhs) are proposed for Environment protection measures for Plant & Mines.

PART - I

Any other particulars in respect of environmental protection and abatement of pollution.

1. The company organizes mass awareness programmes in the vicinity of plant and mines.

2. Rural development programmes are executed by company through Ambuja Cement Foundation (ACF) which is an NGO and includes various community development activities like health, hygiene, education, pathway and drinking water supply for the neighboring community. A fully equipped mobile medical van is on use by the company to check health of rural mass of the adjacent locality.

3. In addition to this, the company is providing financial assistance to Panchayats, Societies and some educational institutions.

4. Company is organising various training programmes for upgrading the environmental management knowledge & skills.

5. The company is already IS/ISO 9001:2015 (QMS), IS/ISO 14001:2015 (EMS), IS/ISO 50001:2011(Energy Management System) and IS/ISO 45001:2018 (OHSAS) certified & has integrated all management system into a common management system called as Integrated Management System (IMS).

Monthly Average of Ambient Air Quality Monitoring Results Suli Plant Table I
(PM 10, PM 2.5, SO2 and NO2)

MONTH	Khata				Pacheaur				Batedh			
	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3
Apr-23	32.80	52.60	4.80	16.40	31.70	53.60	4.10	16.00	30.90	49.70	3.90	12.30
May-23	33.00	47.20	6.40	14.90	33.50	52.70	5.20	10.90	34.70	52.50	5.50	11.10
Jun-23	30.85	49.08	3.58	7.54	30.34	52.42	3.53	8.18	30.80	50.97	5.38	12.93
Jul-23	31.40	49.90	5.30	11.30	31.50	49.00	3.70	8.60	33.30	46.20	5.40	15.10
Aug-23	37.70	53.70	5.90	11.90	39.20	52.20	5.40	10.90	40.30	54.30	7.20	13.90
Sep-23	33.59	50.68	5.64	9.81	34.59	55.08	4.49	8.36	33.08	51.54	5.65	9.3
Oct-23	33.49	54.28	5.94	11.83	31.15	53.25	5.51	11.06	33.39	51.14	7.24	13.90
Nov-23	34.01	53.90	5.64	9.81	30.99	48.29	4.49	8.36	31.77	46.80	5.65	9.36
Dec-23	32.90	47.15	5.59	16.44	33.74	52.71	4.61	11.83	32.74	48.88	5.56	13.43
Jan-24	33.17	44.54	5.59	9.83	34.70	52.04	4.60	8.44	30.54	48.38	5.62	9.44
Feb-24	32.10	51.81	5.51	9.62	32.98	52.06	4.81	8.61	34.76	53.10	5.13	9.70
Mar-24	32.68	50.88	5.53	9.99	28.39	49.18	4.57	8.80	33.96	54.21	5.76	9.36

Monthly Average of Ambient Air Quality Monitoring Results Suli Plant
(Lead, Nickel, Arsenic, CO)

MONTH	Khata				Pacheaur				Batedh			
	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3
Apr-23	ND	ND	ND	0.81	ND	ND	ND	0.56	ND	ND	ND	0.68
May-23	ND	ND	ND	0.58	ND	ND	ND	0.46	ND	ND	ND	0.92
Jun-23	ND	ND	ND	0.73	ND	ND	ND	0.61	ND	ND	ND	0.88
Jul-23	ND	ND	ND	0.52	ND	ND	ND	0.56	ND	ND	ND	0.94
Aug-23	ND	ND	ND	0.88	ND	ND	ND	0.71	ND	ND	ND	0.92
Sep-23	ND	ND	ND	0.52	ND	ND	ND	0.41	ND	ND	ND	0.65
Oct-23	ND	ND	ND	0.55	ND	ND	ND	0.47	ND	ND	ND	0.52
Nov-23	ND	ND	ND	0.62	ND	ND	ND	0.45	ND	ND	ND	0.55
Dec-23	ND	ND	ND	0.52	ND	ND	ND	0.48	ND	ND	ND	0.56
Jan-24	ND	ND	ND	0.52	ND	ND	ND	0.42	ND	ND	ND	0.48
Feb-24	ND	ND	ND	0.5	ND	ND	ND	0.44	ND	ND	ND	0.46
Mar-24	ND	ND	ND	0.55	ND	ND	ND	0.47	ND	ND	ND	0.52

Note : Location/Direction from the Plant

KHATA 1.0 km. E from Plant
PACHEUR 1.0 km. W from Plant
BATEDH 2.0 km. S from Plant

Monthly Average of Ambient Air Quality Monitoring Results Kashlog Limestone Mines
(April 2023 to March 2024
(PM 10, PM 2.5, SO2 and NO2)

MONTH	Mines Dormitory				Rathoh				Mangoo				Chandi			
	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3	PM 2.5 µg/m3	PM 10 µg/m3	SO2 µg/m3	NO2 µg/m3
Apr-23	33.00	50.70	5.30	16.00	34.00	51.60	5.30	14.00	32.60	52.60	3.40	7.80	27.80	45.50	3.30	11.10
May-23	35.00	54.10	6.10	12.60	30.90	48.00	5.30	21.10	32.00	51.80	5.40	13.80	30.50	47.70	3.80	8.20
Jun-23	32.59	53.59	5.72	12.07	33.07	52.82	3.70	8.12	34.17	53.03	4.30	12.85	26.87	43.84	4.15	7.58
Jul-23	31.40	49.90	5.30	11.30	32.90	52.20	3.80	9.80	32.00	50.40	4.20	10.10	22.60	41.60	3.80	8.40
Aug-23	34.80	52.30	5.50	10.40	37.00	53.70	5.00	10.00	39.30	54.80	6.00	11.80	35.30	57.50	5.10	9.20
Sep-23	32.13	52.37	5.63	9.91	31.46	52.90	4.88	7.38	36.78	50.88	4.61	9.06	23.53	43.17	3.63	8.13
Oct-23	32.01	54.17	5.65	10.34	31.62	50.95	4.95	9.83	31.34	48.87	5.90	11.63	27.48	47.05	4.35	7.73
Nov-23	32.27	54.07	5.70	9.91	34.13	53.89	4.88	7.38	33.03	53.33	4.61	9.06	32.50	42.11	3.63	8.13
Dec-23	34.76	51.74	5.21	8.14	31.63	54.20	4.26	12.83	32.28	48.19	4.01	10.46	29.24	44.45	3.41	7.63
Jan-24	32.46	53.32	5.20	8.52	28.71	52.73	4.13	12.62	30.10	42.35	4.02	8.38	32.62	42.70	3.47	7.60
Feb-24	32.25	50.78	5.33	8.19	30.30	46.28	4.51	12.11	28.79	44.68	4.20	8.76	29.80	39.33	3.42	7.60
Mar-24	35.26	49.35	5.24	8.52	33.27	47.80	4.18	12.28	35.34	51.84	4.00	7.57	29.93	40.28	3.41	7.42

Monthly Average of Ambient Air Quality Monitoring Results Suli Plant
(April 2023 to March 2024
(Lead, Nickel, Arsenic, CO)

MONTH	Mines Dormitory				Rathoh				Mangoo				Chandi			
	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3	Lead µg/m3	Nickel ng/m3	Arsenic ng/m^3	CO mg/m^3
Apr-23	ND	ND	ND	0.72	ND	ND	ND	0.64	ND	ND	ND	0.62	ND	ND	ND	0.40
May-23	ND	ND	ND	0.66	ND	ND	ND	0.87	ND	ND	ND	0.38	ND	ND	ND	0.34
Jun-23	ND	ND	ND	0.91	ND	ND	ND	0.96	ND	ND	ND	0.58	ND	ND	ND	0.44
Jul-23	ND	ND	ND	0.88	ND	ND	ND	0.76	ND	ND	ND	0.62	ND	ND	ND	0.38
Aug-23	ND	ND	ND	0.64	ND	ND	ND	0.97	ND	ND	ND	0.52	ND	ND	ND	0.40
Sep-23	ND	ND	ND	0.56	ND	ND	ND	0.61	ND	ND	ND	0.48	ND	ND	ND	0.47
Oct-23	ND	ND	ND	0.51	ND	ND	ND	0.58	ND	ND	ND	0.5	ND	ND	ND	0.45
Nov-23	ND	ND	ND	0.58	ND	ND	ND	0.62	ND	ND	ND	0.48	ND	ND	ND	0.42
Dec-23	ND	ND	ND	0.52	ND	ND	ND	0.51	ND	ND	ND	0.44	ND	ND	ND	0.40
Jan-24	ND	ND	ND	0.62	ND	ND	ND	0.53	ND	ND	ND	0.41	ND	ND	ND	0.58
Feb-24	ND	ND	ND	0.60	ND	ND	ND	0.54	ND	ND	ND	0.46	ND	ND	ND	0.56
Mar-24	ND	ND	ND	0.51	ND	ND	ND	0.58	ND	ND	ND	0.5	ND	ND	ND	0.45

Table - 2

Weekly Average of Stack Monitoring Results

(FROM April 2023 - March 2024)

MONTHS	Average PM Value in mg./Nm3					
	Glass Bag House	Cooler ESP	Cement Mill ESP I	Coal Mill B/F	E-Mill B/F	Main Crusher B/F
Apr-23	17.80	17.30	6.3	14.30	7.30	12.8
	18.90	20.70	6.0	15.10	7.90	10.8
	18.10	23.10	4.1	18.40	8.60	19.0
	10.0	22.4	8.6	20.2	8.1	12.1
May-23	9.4	18.6	6.4	19.5	7.5	12.8
	9.3	22.4	5.7	6.2	8.3	15.7
	10.2	24.2	7.0	5.1	7.9	8.3
	8.4	21.8	4.2	4.7	8.4	14.4
Jun-23	8.5	24.0	4.4	3.3	8.3	20.4
	16.9	23.4	7.4	4.6	8.4	21.6
	16.4	23.7	3.4	3.4	5.3	19.7
	10.4	8.3	3.2	3.2	9.0	20.6
Jul-23	10.3	17.5	3.6	3.9	3.2	20.5
	11.2	16.2	3.8	3.6	4.1	17.0
	8.6	3.8	4.3	9.5	6.6	19.6
	9.0	5.1	6.6	7.0	4.1	15.0
Aug-23	12.3	13.3	18.8	12.9	16.8	19.1
	13.4	16.3	10.3	11.2	13.6	20.4
	*	*	11.1	*	*	15.4
	11.7	23.5	10.7	11.7	14.3	24.3
Sep-23	12.3	13.1	3.3	8.2	3.8	13.6
	13.9	14.9	4.7	6.7	4.1	16.7
	12.1	19.8	5.2	7.8	5.9	19.7
	11.3	15.4	5.8	5.8	4.1	20.6
	*	*	9.67	*	*	*
Oct-23	*	*	13.1	*	*	*
	10.68	13.4	16.15	5.1	4.1	8.27
	11.4	15.5	7.63	4.7	2.5	14.5
Nov-23	16.7	21.6	8.8	8.4	5.0	19.8
	11.6	25.2	5.7	14.6	4.3	12.5
	12.3	19.7	5.6	15.1	6.4	15.4
	14.1	18.7	8.5	13.6	4.1	18.7
Dec-23	22.1	22.2	9.4	21.0	10.4	20.2
	23.9	16.4	5.7	16.5	6.8	21.1
	20.6	19.7	10.7	15.1	7.6	25.3
	17.8	20.6	8.5	20.4	6.6	22.1
Jan-24	9.8	22.8	18.9	12.6	8.6	20.7
	10.3	26.2	15.7	17.5	10.8	18.9
	13.7	19.2	16.0	13.7	9.9	22.4
	8.3	25.1	19.9	14.4	7.3	24.1
Feb-24	7.0	22.8	13.0	12.6	8.6	19.0
	6.9	24.7	10.8	15.7	8.1	18.9
	7.6	19.2	9.8	13.7	9.9	22.4
	8.1	25.1	10.2	14.4	7.3	20.9
Mar-24	8.0	20.8	11.6	14.3	4.0	17.9
	5.5	13.4	12.4	11.1	5.5	21.0
	4.1	17.3	13.4	12.1	6.8	25.2
	6.3	15.1	10.8	13.6	4.8	20.3

Table - 3

Inlet and Outlet Sewage Water Characteristics (Monthly Average)
(From April 2023 to March 2024)

MONTHS	INLET			OUTLET		
	pH	BOD	TSS	pH	BOD	TSS
Apr-23	8.2	254.0	353.0	7.5	9.0	13.0
May-23	8.3	248.0	344.8	7.5	7.6	12.4
Jun-23	8.1	242.5	334.5	7.5	8.0	11.5
Jul-23	8.1	258.8	350.0	7.4	10.0	12.0
Aug-23	8.2	225.0	347.0	7.5	9.0	11.0
Sep-23	8.1	255.0	357.0	7.5	11.0	12.0
Oct-23	8.1	253.0	353.0	7.5	11.0	12.0
Nov-23	8.1	254.0	354.0	7.5	12.0	11.0
Dec-23	8.1	253.0	352.0	7.4	12.0	10.5
Jan-24	8.1	254.0	354.0	7.5	12.0	10.7
Feb-24	8.1	254.0	352.0	7.4	11.0	11.0
Mar-24	8.1	253.0	351.0	7.5	11.0	11.3

Except pH, all parameters are in mg/lit.

Table - 4

Monthly Average of Gyana Khad Water Quality Analysis Report
April 2023 to March 2024

MONTH	SAMPLING POINTS	PARAMETERS			
		pH	TSS	TDS	DO
Apr-23	1	7.3	32.0	298.0	5.9
	2	7.8	51.7	342.0	5.0
	3	7.7	39.1	336.0	5.6
	4	7.6	38.7	330.0	6.1
May-23	1	7.2	47.6	378.2	4.3
	2	7.4	65.4	413.0	4.0
	3	7.3	50.5	398.4	4.4
	4	7.2	44.4	384.9	4.5
Jun-23	1	7.4	31.6	363.5	4.5
	2	7.7	44.1	400.4	3.6
	3	7.5	38.3	379.1	4.1
	4	7.4	35.4	368.1	4.5
Jul-24	1	7.3	40.5	360.3	4.0
	2	7.7	48.9	376.3	3.5
	3	7.6	34.8	360.4	4.2
	4	7.4	28.8	348.5	4.2
Aug-24	1	7.6	26.7	366.2	4.2
	2	7.8	36.1	390.5	3.6
	3	7.7	27.4	376.1	4.2
	4	7.6	24.8	370.1	4.4
Sep-24	1	7.4	24.7	367.6	4.0
	2	7.4	33.6	380.9	3.6
	3	7.5	25.6	369.6	4.7
	4	7.1	24.0	365.1	4.2
Oct-23	1	7.5	30.9	300.0	5.2
	2	7.7	42.2	345.1	4.6
	3	7.5	36.1	322.6	5.0
	4	7.4	29.2	319.0	5.3
Nov-23	1	7.3	41.1	346.4	4.9
	2	7.7	54.7	369.6	3.9
	3	7.6	43.1	352.6	4.5
	4	7.4	36.6	339.4	4.5
Dec-23	1	7.5	41.1	345.2	5.5
	2	7.5	53.3	367.5	4.6
	3	7.4	48.8	354.8	4.1
	4	7.3	37.6	338.0	4.6
Jan-24	1	7.4	36.1	314.8	4.8
	2	7.7	48.6	375.1	4.1
	3	7.5	45.4	352.0	4.6
	4	7.5	40.1	340.0	4.8
Feb-24	1	7.4	19.9	294.0	6.6
	2	7.7	39.4	321.1	5.7
	3	7.6	31.1	313.6	6.5
	4	7.5	25.3	306.3	7.2
Mar-24	1	7.4	30.3	319.4	5.1
	2	7.6	43.2	359.0	4.4
	3	7.4	38.3	347.0	5.0
	4	7.4	34.9	335.1	5.2
	AVERAGE	7.5	38.0	352.1	4.7

Except pH all the parameters are in mg/lit.

Sampling Points

1. 500mts. Upstream of First Nallah before joining Gyana Khad.
2. 500mts. Upstream of Second Nallah before joining Gyana Khad.
3. V-Notch installed in Gyana Khad. (SE Side of ML Area)
4. 500mts. Downstream from V-Notch of Gyana Khad.

Table 5

TOTAL NOS. OF PLANTS PLANTED
(FROM Apr. 2023TO March 2024)

Area of Plantation	Total
Inside Plant Area	45
Around Plant Area	125
Within Colony Area	30
Inside Mines Area	5200
Total	**5400**

Total plantation inclusive cuttings,Saplings,Shrubs and replacement etc.

Table - 6

EXPENSES RELATED TO ENVIRONMENTAL PROTECTION AND OTHER ENVIRONMENTAL RELATED ACTIVITIES

The following table shows the expenditure for Environment Protection and other environment related activities for the period from April 2023 to March 2024

Sr. No.	Environmental Expenditure Area	Capital/Recurring	Amount (Rs)
1	Air pollution control equipments maintenance, STP maintenance, Analyzers and other monitoring equipments maintenance.	Recurring	2610002
2	Monitoring and analysis of environmental parameters, studies, purchase of small new equipments ,plantation, fees, salaries, Plant housekeeping etc.	Recurring	10892198
		Capital	1200000
3	Air pollution control equipments running expenses	Recurring	70306008
4	Mines – construction of check dams/ check filters, Toe walls etc, Water spraying on haul roads, use of IKON, plantation, soil conservation works, water harvesting etc.	Recurring	3539565
5	Community development works	Recurring	55036278
		Capital	1880802
	Total Cost		145464853

(Rs Fourteen Crore Fifty Four Lakh Sixty Four Thousand Eight Hundred Fifty Three Only)

Annexe-1

H.P.STATE POLLUTION CONTROL BOARD
FORM X
REPORT BY STATE BOARD ANALYST
(See Rule 26)

Report No: 66133/W-9714 **19/10/2023**

I hereby certify that I **Rama Kant Awasthi , SO**, State Board Analyst duly appointed under sub-section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) received on **28/09/2023** from **Anurag Raina, JEE**, HP State Pollution Control Board **RO Parwanoo** a **Grab** sample of **Final Outlet of STP** of **Ambuja Cements Limited (Suli Plant), Cement Village Suli, P.O. Darlaghat, Tehsil Arki, District Solan, H.P. 171102, Arki** Distt. **Solan Parwanoo**, H.P. **171102** on dated **27/09/2023** for analysis. The sample was in a condition fit for analysis reported below:

I further certify that I have analyzed the aforementioned sample on **28/09/2023** to **19/10/2023** and declare the result of analysis is to be as follows :-

Method of analysis					
IS- 2488(I-V), IS-3025(Part 44): 1933, 'Standard method for examination of water', 23rd edition prepared and published jointly by:-					
1. American Public Health Association 2. American Water Works Association 3. Water Pollution Control Federation					
SAMPLING PARAMETERS					
Sr. No.	**Parameter Name**	**Results**	**Units**	**Permissible Limit**	**Remark/Result Analysis**
1	pH	7.72		6.5-9.0	Within Permissible Limit
2	COD	24.0	mg/L	250	Within Permissible Limit
3	BOD	3.4	mg/L	30	Within Permissible Limit
4	Oil and Grease	0.0	mg/L	10	Within Permissible Limit
5	TSS	3.0	mg/L	99	Within Permissible Limit

The condition of the seals, fastening and container on receipt was as: sealed as **HPPCB262**

Signed this on **19/10/2023**

Remarks of Lab Head:

-

Rama Kant Awasthi , SO
(State Board Analyst)
CL Parwanoo