

ENVIRONMENT STATEMENT REPORT

(Form-V)

[Year 2020 - 2021]

REPORT BY

HEIDELBERGCEMENT

**DIAMOND CEMENT
(Prop. HeidelbergCement India Ltd.)
Grinding Unit
Jhansi Kanpur Road
Village- Madora
Distt.-Jhansi (U.P.) - 284121**

DIAMOND CEMENTS - Grinding Unit

(Prop. HeidelbergCement India Ltd.)

Jhansi Kanpur Road

Village-Madora

DIST. JHANSI (U.P.) -

(For the Financial year ending 31st March 2021)

CONTENTS

S.No.	Description	Part	Page No.
1		Corporate Environmental Policy	3-3
2		Introduction	4-4
3	Part A	General Information	5-6
4	Part B	Water & Raw Materials consumption	5-6
5	Part C	Pollution Discharge to Environment/ Unit of output	7-7
6	Part D	Hazardous Waste	8-9
7	Part E	Solid Waste	8-9
8	Part F	Characterizations of Hazardous Waste as well as Solid Waste & disposal practice	10-10
9.	Part G	Impact of the Pollution Abatement Measures	11-11
10.	Part H	Additional Measures / Investment Proposal for Environmental Protection	12-13

ANNEXURES

S. No.	Annexure	Details	Page No.
1	Annexure-1	Stack Emission results	14-14
2	Annexure-2	Ambient Air Quality Report (Monthly Average)	15-18
3	Annexure-3	Results of Treated Sewage Water	19-19
4	Annexure-4,	Ambient Noise Level Monitoring	20-20
5	Annexure-5	Details of Pollution Control Measures	21-22
6	Photographs	Green area development, WED celebration, Biodiversity	23-28

Integrated Management System Policy

We, at Heidelberg Cement India Limited are fully committed towards customer satisfaction, environmental protection, providing healthy & safe work environment, energy conservation, and socially accountability to all concerned and our endeavour is to:

- Produce cement much better than the applicable standards to satisfy the customer needs.
- Conform to all requirements of SA 8000 Standard and to respect the International instruments on social accountability
- Comply with all applicable legal, social and other requirements.
- Involve and train human resources to upgrade their skills in all areas including safety.
- Regularly set and review objectives and targets for continual improvement in the quality, productivity, work environment, health & safety performance, energy, and Social accountability.
- Ensuring availability of Information and necessary resources to achieve Objectives and Targets
- Prevention of pollution.
- Prevention in occupational injuries and ill health, Eliminating hazards and reducing OH&S risks
- Supporting the purchase of energy efficient & eco-friendly technologies, products, services and design for energy performance improvement.
- Consultation and participation of workers, and, where they exist, workers' representatives.

This policy has been communicated to all the employees and is available to the public and interested parties on demand.

Date: 01.07.2018

**-sd-
Managing Director**

INTRODUCTION

Man is a part of nature, and not separate or independent; at the same time, man is unique in the influence he has over nature. Man derives all his food, clothing, shelter, and other amenities from nature. In that process, if he does not take care to protect and cherish nature, but decrease or destroys, he will find that his own life and that of his children is in jeopardy.

The environment is now a catch for all, the industry, the government, the people. Hence, it is joint responsibility to protect, preserve the environment and avoid the perishing of the natural treasures. At this critical junction of time and efforts, the Indian industry has fulfilled its commitment in maintaining the environmental integrity.

HeidelbergCement India limited is committed to excel Environmental Sustainability by putting all engineering the best efforts to prevent environmental degradation, minimize the waste generation, resource conservation and reutilization of waste.

The next few pages of this Environment Statement Report (ESR) of HeidelbergCement India Limited is based on factual data and verified record, will present a picture of more optimism for environmental care than ever before.

PART A, B & C

ENVIRONMENTAL STATEMENT REPORT

[FORM-V]

(See rule 14)

PART-A

- (i) Name and address of the Owner/occupier of the industry, Operation or process : DIAMOND CEMENTS
(Prop:HeidelbergCement India Limited)
Jhansi-Kanpur Road
Vill: Madora
- (ii) Industry category : Heavy
- (iii) Production capacity : 3.25 Million Ton/Annum
- (iv) Year of establishment : Cement Mill – 1 1989
Cement Mill-2 2013
- (v) Date of the last Environmental statement submitted: 12.09.2020

PART-B

Water and Raw Material Consumption

(I) Water consumption M3
Process} 33484 (April -20 to March – 21)
Cooling} -
Domestic } 32557

Name of products	Process water consumption per unit of products output	
	During the previous financial year	During the current financial year
	(1)	(2)
(1) Water	0.0110 KL/MT	0.0129 KL/MT

(ii) Raw material consumption

* Name of raw materials	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (%)	During the current financial year (%)
Fly Ash	Portland Pozzolna Cement	34.78	34.90
Gypsum		2.97	3.02
Clinker		62.25	62.08

PART-C

Pollution discharged to environment/unit of output
(Parameters as specified in the consent issued)

(i) Pollutants	Quantity of pollution discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	Please see Annexure-3		
(b) Air	Please see Annexure-1 & Annexure-2		

PART-D
Hazardous Wastes

[as specified under Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008]

Hazardous Wastes		Total Quantity (kg)	
		During the Previous Financial year (MT)	During the Current Financial year (MT)
(a) From Process	(a) Spent/ Used Oil (Category 5.1) (Including TPP)	4.83	4.41
	(b) Residue containing waste oil (Category 5.2) Including(TPP)	2.88	1.80
(b) From Pollution control Facilities	N.A.	N.A.	N.A.

* The above Hazardous Waste is not being generated from process, However this is generated from hydraulic machineries, gear oil, lubrication of machines and its related activities, which is being sold to registered to recycler

PART-E
Solid Wastes

	Total Quantity	
	During the previous financial year (%)	During the current financial year (%)
(a) From process	N.A.	N.A.
(b) From pollution control facility	N.A.	N.A.
(c) Quantity recycled or re-utilized	N.A.	N.A.

PART-F

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

Details given in Part –D. Hazardous waste is being sold to registered recycler.

We have separate storage yard for Hazardous waste.



Hazardous waste Storage Yard for Category 5.1 & 5.2 at Grinding Unit-Jhansi

FORM B (Rev. June 30, 2011, under 18-2011)	
LABELLING OF CONTAINERS OF HAZARDOUS AND OTHER WASTE	
Fillable with care	
Hazard category and characteristic as per Part C of Schedule 1 of the Hazardous Waste and Environment Act, 1986	Transportation hazard and classification
5.2 - Flammable liquid	
Net quantity: 0-100 tons	Date of filling: 05/11/17
Physical state of waste (Solid / Liquid / Gas / Other)	
Semi Solid	
Manufacturer Name and Address:	Receiver's Name and Address:
M/s. Shreeji Group G1, Shreeji Group Chandigarh, Chandigarh Phone: 9814012345678901 Address:	M/s. Shreeji Group G1, Shreeji Group Chandigarh, Chandigarh Phone: 9814012345678901 Address:
Phone: 9814012345678901	Phone: 9814012345678901
E-mail: shreeji@shreeji.com	E-mail: shreeji@shreeji.com
Web Page: www.shreeji.com	Web Page: www.shreeji.com
Contract Period: 10-12-2017	Contract Period: 10-12-2017
Signature of Manufacturer/Supplier	Signature of Receiver
Date: 05/11/17	Date: 05/11/17

PART-G

Impact of pollution abatement measures taken on conservation of natural resources.

Regular monitoring of Ambient air quality, stack emissions have been taken up to evaluate the efficiency of pollution control system and control measures on the overall emissions from stack and ambient air. Pollution control measures have already been taken at all the point of source emission and fugitive emission. Online CEMS data transmitted to CPCB & SPCB.



Road Sweeping Machine



CEMS in Ball Mill Bag House Stack



CEMS in VRM Bag House Stack

PART H

PART-H

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

Continuous efforts are always being made to maintain the environment clean and dust free and we have done up gradation of the existing pollution control system and also adequate quantity of Pollution Control Equipment i.e. We have replaced the ESP of Cement Mill-1 by Bag house, Bag House, Dust Collectors, Water Sprinkler, STP, Green Belt Development. List of Pollution Control Devices given below.(In Annex.5)

EXPENDITURE ON ENVIRONMENT MANAGEMENT INCURRED IN 2020-21

S. NO.	DETAILS	COST RS. LAKHS (APPROX)
1.	Stack and Ambient Air Quality Monitoring	5.53
2.	Operation and maintenance of Sewage treatment plant	14.52
3.	Green belt Development and maintenance	20.84
4.	House Keeping Expenses	19.23
5.	Maintenance of Air Pollution Control Devices	18.29
6.	Operation & Maintenance of Municipal Solid waste	5.78
7.	Road Sweeping (Mechanized)	2.28
8.	Operation & Maintenance of CEMS & AAQMS	10.50
	Total	96.97

PROPOSED EXPENDITURE ON ENVIRONMENT MANAGEMENT (FOR 2021-22)

S. NO.	DETAILS	COST RS. LAKHS (APPROX)
1.	Stack and Ambient Air Quality Monitoring	7.0
2.	Operation and maintenance of Sewage treatment plant	16
3.	Green belt Development and maintenance	25
4.	House Keeping Expenses	18
5.	Operation & Maintenance of Municipal Solid waste	6.0
6.	Maintenance of Air Pollution Control Devices	15
7.	Operation and Maintenance of CEMS & AAQMS	15.0
8.	Road sweeping (Mechanized)	5.0
9.	Two New CAAQMS	134
	Total	241

ANNEXURE-1**Stack Emission results of Grinding Unit - Jhansi**

Month	Cement Mill-1 (mg/nm ³)	Cement Mill-2 (mg/nm ³)
Apr-20		23.46
May-20	17.10	16.30
Jun-20	16.90	17.60
Jul-20	16.91	17.47
Aug-20	15.15	16.86
Sep-20	17.37	16.14
Oct-20	16.35	15.03
Nov-20	15.96	14.82
Dec-20	16.02	15.74
Jan-21	15.95	15.35
Feb-21	16.26	14.59
Mar-21	14.89	15.63

Environmental and Technical Research Centre
Office & Laboratory :2/261, Vishwas Khand, Gomti Nagar,
Lucknow:226010 (UP), NBAL Accredited Laboratory

ANNEXURE-2

**M/s Diamond Cement (Prop. HeidelbergCement India Limited)
Grinding Unit-Jhansi(UP)
Ambient Air Quality Report (Monthly Average)**

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

May2020

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	65.80	36.98	0.85	14.45	19.65
Near Khatibaba Temple	71.3	39.66	0.69	11.02	15.17
Behind New Weigh bridge	70.8	40.35	0.72	12.85	16.38
Near 132 Kv switch yard	68.60	38.22	0.66	11.45	15.68

June2020

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	72.50	40.22	0.79	13.58	19.24
Near Khatibaba Temple	69.5	38.77	0.58	11.89	15.22
Behind New Weigh bridge	74.60	41.86	0.81	13.04	17.54
Near 132 Kv switch yard	70.40	40.49	0.67	12.33	16.04

Location	Ozone (µg/m ³)	Ammonia (µg/m ³)	Lead (µg/m ³)	Benzene (µg/m ³)	Benzo(a) Pyrene (ng/m ³)	Arsenic (ng/m ³)	Nickel (ng/m ³)
Near ADM building	BDL	14.3	BDL	BDL	BDL	BDL	BDL
Near Khatibaba Temple	BDL	10.2	BDL	BDL	BDL	BDL	BDL
Behind New Weigh bridge	BDL	13.0	BDL	BDL	BDL	BDL	BDL
Near 132 Kv switch yard	BDL	12.0	BDL	BDL	BDL	BDL	BDL

<u>TEST REPORT OF AMBIENT AIR QUALITY MONITORING</u>

July 2020

Location	PM10(µg/m ³)	PM2.5(µg/m ³)	CO(µg/m ³)	SO2(µg/m ³)	NOx(µg/m ³)
Near ADM building	70.50	39.74	0.63	11.32	18.06
Near Khatibaba Temple	66.7	38.3	0.55	11.12	16.24
Behind New Weigh bridge	75.90	42.19	0.73	12.92	18.36
Near 132 Kv switch yard	70.40	40.24	0.67	12.33	16.11

TEST REPORT OF AMBIENT AIR QUALITY MONITORING**August 2020**

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	72.10	41.75	0.61	12.36	19.08
Near Khatibaba Temple	70.5	40.18	0.50	11.53	17.26
Behind New Weigh bridge	78.50	40.11	0.53	13.28	19.16
Near 132 Kv switch yard	72.30	37.99	0.59	12.63	17.42

TEST REPORT OF AMBIENT AIR QUALITY MONITORING**Sep 2020**

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	73.9	41.3	0.6	13.0	20.11
Near Khatibaba Temple	68.4	37.83	0.49	11.25	16.83
Behind New Weigh bridge	76.40	43.30	0.54	12.94	19.68
Near 132 Kv switch yard	79.30	42.23	0.56	12.68	19.17

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Oct2020

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	70.30	46.48	0.53	13.25	21.09
Near Khatibaba Temple	66.28	40.09	0.48	11.82	17.26
Behind New Weigh bridge	82.60	48.52	0.50	13.46	20.23
Near 132 Kv switch yard	80.30	45.85	0.52	13.27	20.05

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Nov2020

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO($\mu\text{g}/\text{m}^3$)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	76.30	45.74	0.51	13.17	20.45
Near Khatibaba Temple	72.40	41.33	0.49	12.58	16.28
Behind New Weigh bridge	85.90	50.12	0.54	13.15	21.03
Near 132 Kv switch yard	83.40	46.73	0.50	12.49	19.43

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Dec2020

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO(mg/m^3)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	74.90	46.40	0.50	13.05	19.76
Near Khatibaba Temple	75.10	40.76	0.48	11.13	17.68
Behind New Weigh bridge	88.50	51.31	0.55	14.03	22.18
Near 132 Kv switch yard	80.50	47.13	0.53	12.95	20.05

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Jan2021

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO(mg/m^3)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	78.90	44.95	0.49	12.76	20.11
Near Khatibaba Temple	79.60	41.93	0.50	12.52	18.43
Behind New Weigh bridge	91.50	52.28	0.51	13.86	21.03
Near 132 Kv switch yard	85.40	49.78	0.55	13.01	19.86

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Feb2021

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO(mg/m ³)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	82.50	47.38	0.48	12.93	19.56
Near Khatibaba Temple	80.90	43.02	0.52	12.83	18.05
Behind New Weigh bridge	95.20	53.76	0.53	14.06	22.54
Near 132 Kv switch yard	87.90	48.73	0.53	13.64	21.45

TEST REPORT OF AMBIENT AIR QUALITY MONITORING
Mar2021

Location	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)	CO(mg/m ³)	SO2($\mu\text{g}/\text{m}^3$)	NOx($\mu\text{g}/\text{m}^3$)
Near ADM building	86.20	45.54	0.51	13.28	20.16
Near Khatibaba Temple	85.40	49.77	0.50	13.76	20.12
Behind New Weigh bridge	92.40	55.33	0.56	14.25	22.91
Near 132 Kv switch yard	89.60	50.12	0.55	14.03	22.56

ANNEXURE-3

M/s Diamond Cement (Prop. HeidelbergCement India Limited)
Grinding Unit-Jhansi (UP)

Results of Treated Sewage Water

S. N o.	Parameters	23-05-20	24-06-20	31-07-20	22-08-20	30-09-20	21-10-20	28-11-20	23-12-20	30.01.21	16-02-21	18-03-21
		STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet	STP Outlet
1	pH	7.7	7.7	7.4	7.5	7.7	7.6	7.50	8.2	7.8	8.1	8.1
2	TSS	14.9	13.9	14.6	13.3	6.3	8.9	9.5	4.8	8.1	BDL	6.0
3	BOD	11.3	12.2	12.80	12.2	2.08	4.5	4.8	2.8	5.0	16.0	7.6
4	COD	56.0	64.0	72	60.0	12.0	16.0	20.0	8.0	12.48	44.4	28.0
5	Oil & Grease	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	-	-	-

Note: All parameters are in mg/l except pH
ND- Not Detectable

Environmental and Technical Research Centre
Office & Laboratory :2/261, Vishwas Khand,
Gomti Nagar, Lucknow:226010 (UP), NBAL
Accredited Laboratory

ANNEXURE-4

**M/s Diamond Cements (Prop. HeidelbergCement India Limited)
Grinding Unit-Jhansi(UP)**

AMBIENT NOISE LEVEL [Leq Value in dB(A)]

Location→	Nr Khatibaba Temple		132 kva switch yard		Admin area		Nr. Worker Colony	
Month↓	Day	Night	Day	Night	Day	Night	Day	Night
Apr-20								
May-20	54.58	42.14	55.06	44.85	51.46	42.55	52.12	41.96
Jun-20	55.28	42.77	57.26	47.34	51.96	41.09	52.88	42.84
Jul-20	51.21	43.17	58.67	48.36	50.96	40.88	53.14	44.65
Aug-20	52.83	44.06	60.65	49.13	51.13	41.27	52.84	43.96
Sep-20	53.19	43.87	61.14	50.05	50.96	42.15	54.25	44.03
Oct-20	55.31	44.03	63.05	51.58	51.38	42.80	52.84	43.95
Nov-20	54.92	44.78	64.11	50.42	49.95	39.86	51.39	44.27
Dec-20	53.72	44.72	62.89	51.16	49.32	38.85	52.48	43.97
Jan-21	52.81	53.76	63.46	52.08	49.86	39.54	51.98	44.25
Feb-21	53.6	51.4	61.80	53.2	49.9	38.6	54.1	44.6
Mar-21	54.2	50.6	63.5	54.1	50.0	39.8	53.9	43.5

Environmental and Technical Research Centre
Office & Laboratory :2/261, Vishwas Khand, Gomti
Nagar, Lucknow:226010 (UP), NBAL Accredited
Laboratory

ANNEXURE-5

**Details of Pollution Control Measures installed at various locations
Diamond Cement, Jhansi (U.P.)**

Details of Pollution Control Equipment – Cement Mill-1 & Cement Mill-2

S. No.	Location of PCM	PCM
Clinkerisation unit Narsinghgarh		
1	Wagon Tippler	Bag House
2	Cement Mill-2	Bag House
3	Cement Mill-1	Bag House
4	Belt conveyor of Wagon Tippler	Bag filter
5	Wagon Tippler belt conveyor transfer point	Bag filter
6	Clinker stock pile top	Bag filter
7	Gypsum Crusher	Bag filter
8	Gypsum Crusher discharge belt	Bag filter
9	Gypsum Crusher discharge belt transfer point	Bag filter
10	Gypsum Hopper	Bag filter
11	Clinker transport belt-10	Bag filter
12	Clinker transport belt-20	Bag filter
13	Clinker transport belt-30	Bag filter
14	Pan conveyor discharge	Bag filter
15	Clinker hopper top	Bag filter
16	Fly Ash silo top	Bag filter
17	Fly ash silo extraction	Bag filter
18	Fly ash silo elevator discharge(Near Silo)	Bag filter
19	Fly ash silo elevator(Near mill building)	Bag filter
20	Fly ash Elevator discharge	Bag filter
21	Weigh feeder discharge	Bag filter
22	Mill feed belt	Bag filter
23	Recirculation circuit	Bag filter
24	Fly ash Bin top	Bag filter
25	Fly ash bin discharge	Bag filter
26	Bag House air slide	Bag filter
27	Cement Silo-1 extraction	Bag filter
28	Cement Silo feed elevator	Bag filter
29	Cement Silo-2 extraction	Bag filter
30	Cement Silo-1 top	Bag filter
31	Cement Silo-2 top	Bag filter
32	Packer-1 Elevator	Bag filter
33	Packer-2 Elevator	Bag filter
34	Packing plant Packer-1	Bag filter
35	Packing plant Packer-2	Bag filter
36	Packer-1 air slide & Bin	Bag filter

37	Packer-2 air slide & Bin	Bag filter
38	Packing Plant packer-3	Bag filter
39	Packing Plant packer-4	Bag filter
40	Packer-3 air slide & Bin	Bag filter
41	Packer-3 air slide & Bin	Bag filter
42	Cement Silo-3	Bag filter
43	Cement Silo-3	Bag filter
44	Hopper feed belt transfer point of Cement Mill-1	Bag filter
45	Cement Mill Separator	Bag filter
46	Hopper top of Cement Mill-1	Bag filter
47	Truck Tippler	Bag filter
48	Fly Ash Silo	Bag filter
49	Cement Mill-1 Roller press	Bag filter
50	Separator venting	Bag filter
51	Ball Mill silo feed bucket elevator	Bag filter

Green Area Development



Green Area Development in the Plant Area



Gree Area in the Colony Area



BIODIVERSITY

- Jhansi Unit, home for many beautiful distinct species.
- Some of the birds seen in the campus are:
 - Grey Hornbill
 - Black Drongo
 - Little Egret
 - White Throated Kingfisher
 - Oriental Magpie Robin
 - Golden Oriole

