HCIL(NGH)-ENV-F-090 -419

HEIDELBERGCEMENT

Diamond Cements
Prop: HeidelbergCement India Limited
CIN: L26942HR1958FLC042301

Village and P. O. Narsingarh
District Damoh, M.P. 470 675, India
Phone +91-07601-241301, 02 & 05
Fax +91-07601-241235
Website: www.mycemco.com

The Member Secretary
M.P. Pollution Control Board
E-5, Arera Colony
Paryawaran Parisar
Bhopal (MP) 462 016

May 27, 2020

SUB: Environment Statement Report (Form -V) of Diamond Cements- Lime Stone Mines (Prop: HeidelbergCement India Limited), Patharia, Damoh, M.P.

Dear Sir,

Please find enclosed herewith the Environment Statement Report (Form V) of Diamond Cements- Lime Stone Mines (Prop: HeidelbergCement India Limited), Patharia, Damoh, M.P. for 2019-20.

This is for your kind perusals please.

Thanking you,

Yours faithfully

For Diamond Cements
(Prop: HeidelbergCement India Ltd)

Sanjeev Kumar Gupta
Head Works- Damoh
Sr. Vice President

Encl : as above.

CC : Zonal Office (Central)
Central Pollution Control Board
3rd Floor, Sahkar Bhawan,
North TT Nagar, Bhopal (MP) 462 003

CC : The Regional Officer
MP Pollution Control Board
Deen Dayal Nagar, Housing Board Colony
Sagar (MP)

CC: Office copy

HEIDELBERGCEMENT

ENVIRONMENT STATEMENT REPORT

(Form-V)

[Year 2019 - 2020]

REPORT BY

HEIDELBERGCEMENT

DIAMOND CEMENTS
(Prop. HeidelbergCement India Ltd.)
Patharia Lime Stone Mines
P.O. NARSINGARH
DIST. DAMOH (M.P.) - 470675

HEIDELBERGCEMENT

DIAMOND CEMENTS -Patharia Lime Stone Mines

(Prop. HeidelbergCement India Ltd.)
P.O. NARSINGARH
DIST. DAMOH (M.P.) - 470675

(For the Financial year ending 31st March 2020)

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INTEGRATED MANAGEMENT SYSTEM POLICY

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

- Produce cement much better than the applicable standards to satisfy the customer needs.
- Comply with all applicable legal, social and other requirements.
- Involve and train human resource to upgrade their skills in all areas including safety.
- Regularly set and review objectives and targets for continual improvement in quality, productivity, work environment and health & safety performance.
- Prevention of pollution.
- Prevention in occupational injuries and ill health.

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

-sd-

Date: 15th April 2013

CEO & 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.

In the words of our late Prime Minister, Mrs. Indira Gandhi "It is said that, in country after country, progress should become synonymous with an assault on nature.....the higher standard of living must be achieved without alienating our people from their heritage and without despoiling of its beauty, freshness and purity essential to our lives."

The environment is now catch for all, the industry, the government, the people. Hence, it is joint responsibility to protect, preserve the environment and avoid the perishing 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.

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 – Patharia Lime Stone Mines (Prop. HeidelbergCement India Ltd.) P.O. NARSINGARH DIST. DAMOH (M.P.) – 470 675
(ii)	Industry category	:	LARGE SCALE
(iii)	Production capacity	:	4.5 MTPA
(iv)	Year of establishment	:	1993
(v)	Date of the last Environmental statement submitted: 19.09.2019		

PART-B

Water and Raw Material Consumption

(I) Water consumption m3/d
Process }-207
Cooling }
Domestic }-25

Name of products	Process water consumption per unit of products output	
	During the previous financial year	During the current financial year
	(1)	(2)
Limestone	0.0133 KL/MT	0.0191 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 (%)
Since lime stone itself is a mined raw material and not the product, this is not applicable.			

PART-C

Pollution discharged to environment/unit of output (Parameters as specified in the consent issued)	Ambient Air Monitoring Results is described in Annexure – 1 and also result of stack emission for Lime stone crusher at Patharia units described in Annexure- 1A

CRUSHER DETAILS

Material of construction (Stack/ Duct)	:	M.S.
Stack attached to	:	Bag House of Crusher
Stack Height above the ground level	:	30 M
Inside diameter of stack	:	1.5 m

PART-D
Hazardous Wastes

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

Hazardous Wastes		Total Quantity	
		During the Previous Financial year (MT)	During the Current Financial year (MT)
(a) From Process	(a) Spent/ Used Oil (Category 5.1)	3.27	7.93
	(b) Residue containing waste oil (Category 5.2)	0	1.00
(b) From Pollution control Facilities	N.A.	N.A.	N.A.

* Hazardous waste is not generated from mining process. However, this waste is being generated from hydraulic movement of machines, oiling/ greasing etc., which is being sold to registered recycler.

PART-E
Solid Wastes

	Total Quantity (Solid waste) disposed	
	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.
	Total Quantity (E- waste) disposed	
	During the previous financial year (MT)	During the current financial year (MT)
(a) *From Plant & Mines	1.14	1.32

* E-waste disposed in 2019-20 have included Clinker plant, Grinding unit &Patharia Mines

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.	Hazardous waste is being sold to registered recycler for proper disposal.

PART-G

Impact of pollution abatement measures taken on conservation of natural resources and on the cost of production.	Bag House along with stack provided at Crusher. Other Pollution control measures like plantation/ water sprinkling have already been taken at all the points. A 22 Km long covered OLBC (Overland Belt conveyor) is provided for transportation of Crushed lime stone from L/S Mine Patharia mine to Clinker plant, Narsingarh, which is a eco-friendly technology. Dust collectors are provided at all the transfer points of OLBC.

LIST OF BAG FILTER OF OLBC & SILO/ HOPPERS

S. No	Location of air pollution control equipment (main equipment/ transfer point)	Type of air pollution control equipment (Bag House/ Dust Collector)
Patharia		
1	BF 1 at Crusher discharge	Bag House
Patharia Crushing Plant (PTH)		
1	BF 2 at Reject screen house	Dust collector
2	BF 3 at Transfer tower 1	Dust collector
3	BF 4 at Loading silos	Dust collector
4	BF 5 at Loading silos	Dust collector
5	BF 6 at Loading silos	Dust collector
6	BF 7 at Loading silos	Dust collector
7	BF 8 at Transfer tower 2	Dust collector
Overland Belt Conveyor (OLBC)		
1	BF-1 at Transfer Tower-1	Dust collector
2	BF-2 Transfer Tower-2	Dust collector
3	BF-3 Transfer Tower-3	Dust collector
4	BF-4 at Loading Silo	Dust collector
5	BF-5 at Loading Silo	Dust collector
6	BF-6 at Loading Silo	Dust collector

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 clean environment.

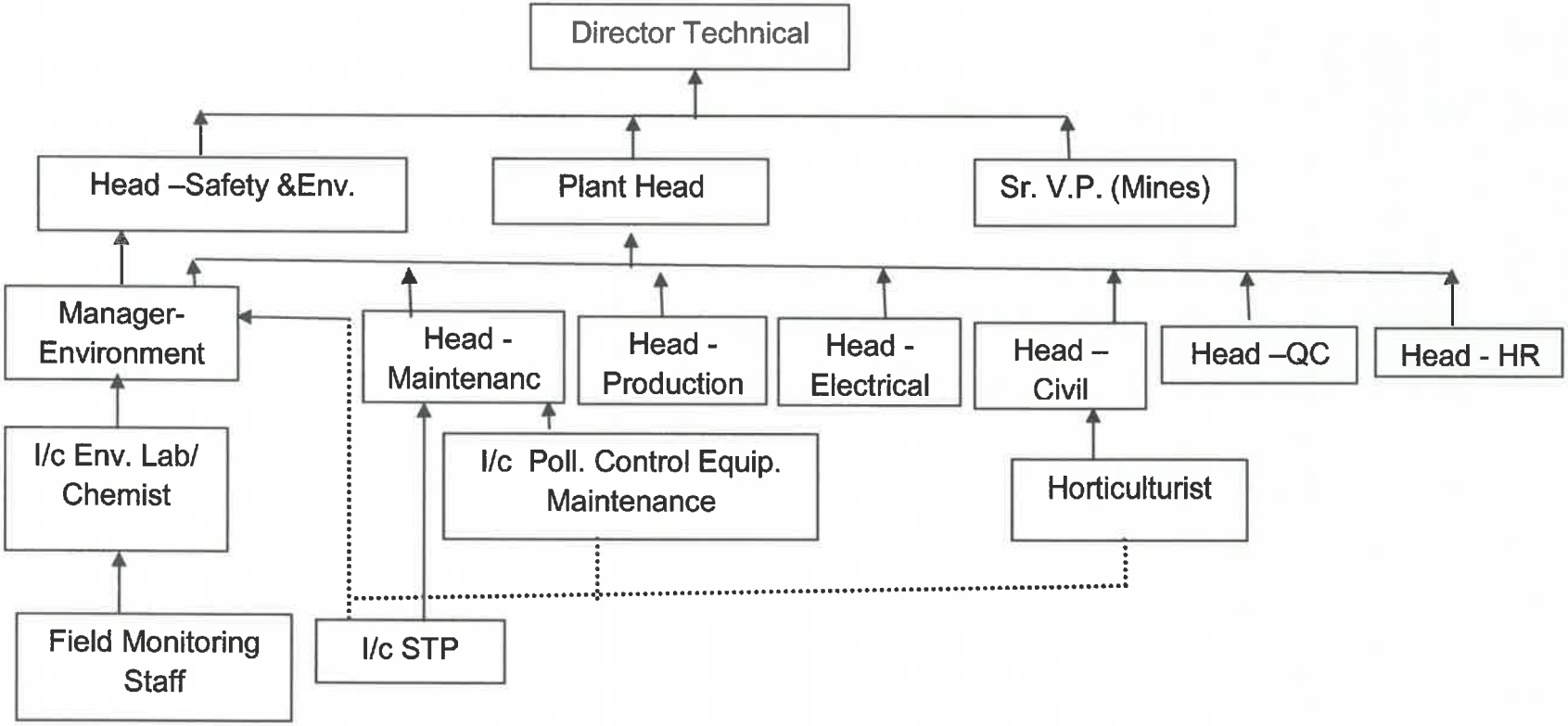
EXPENDITURE ON ENVIRONMENT MANAGEMENT INCURRED IN 2019-20 AND PROPOSED FOR 2020-21

S. NO.	DETAILS	COST RS. LAKHS (APPROX) IN 2019-20	COST RS. LAKHS (APPROX) PROPOSED FOR 2020-21
1	Stack and Ambient Air Quality Monitoring (Including Clinkerisation Unit Narsingarh, Lime Stone Mines Narsingarh & Lime Stone Mines Patharia)	37.56	35.0
2	Pollution control at Patharia Mines i.e. Water sprinkling on haul road etc.	19.31	20.30
3	Water sprinkling at screen plant/ crusher	6.38	6.80
4	Plantation and green belt development	53.43	56.20
5	Bag filter operation cost	3.35	3.50
6	Power consumption for running Pollution control devices	62.41	65.60

Part – I

(Any other particular in respect of environmental protection and abatement of pollution)

Details of Environmental Cell



Facilites available in Environment Laboratory at Diamond Cements (Prop. Heidelberg Cement India Ltd.)

(Env. Lab iscommonforClinkerization unit, Grinding unit & Mines)

Sl. No.	Instrument Name	Quantity
1	Work table & Chair	1 set
2	Respirable Dust Sampler (R.D.S.)	4
3	Fine Dust Sampler	4
4	Stack Monitoring Kit	1
5	NOx assembly	1
6	Digital Barometer	1
7	Noise Meter	1
8	Personal Sampler	2
9	Spectrophotometer	1
10	Weighing Balance	1
11	Kit (EC & Temp.)	1
12	pH Meter	1
13	Oven	1
14	Water Bath	1
15	Desiccator	1
16	Hot Plat	1
17	Refrigerator	1
18	Computers	1
19	Online Monitoring System	
A	CAAQMS	3
B	CEMS-Gaseous	3
C	CEMS-PM	9
20	Chemicals, Glasswares and Consumables	-

ANNEXURE-1

M/s Diamond Cements (Prop. HeidelbergCement India Limited)

Lime Stone Mines- Patharia

Ambient Air Quality Report (Monthly Average)

Month: April 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	37.01	52.38	198	6.94	8.61
Near Back Filling Area	41.07	58.62	238	7.47	9.01
Near Mine Pit	37.09	61.10	205	6.85	8.63
Near Temple	34.57	53.03	189	6.76	8.58

Month: May 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	37.9	56.35	426.5	6.47	10.38
Near Back Filling Area	45.23	68.50	455	8.23	11.15
Near Mine Pit	43.05	64.00	462	8.01	10.63
Near Temple	38.71	56.92	420	6.60	10.13

Month: June 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	39.25	56.44	445	6.95	9.83
Near Back Filling Area	43.94	70.97	502	8.04	11.33
Near Mine Pit	41.17	65.05	487	7.85	10.54
Near Temple	35.40	52.82	440	7.09	10.05

Month: July 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	17.7	39.9	420	5.2	8.2
Near Back Filling Area	23.1	44.4	433	6.0	9.1
Near Mine Pit	18.4	40.9	419	6.1	9.3
Near Temple	16.7	38.4	415	5.3	8.8

Month: August 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	16.6	25.6	311	8.9	13.5
Near Back Filling Area	20.2	32.0	319	9.2	13.6
Near Mine Pit	15.2	27.6	322	9.5	14.2
Near Temple	12.3	24.3	307	10.0	13.0

Month: September 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	8.9	21.1	330	8.6	12.4
Near Back Filling Area	14.2	17.6	387	11.3	12.9
Near Mine Pit	13.1	25.1	322	11.1	12.0
Near Temple	16.1	22.9	327	10.5	12.0

Month: October 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	18.6	35.4	325	8.1	13.1
Near Back Filling Area	26.8	42.0	346	8.4	12.6
Near Mine Pit	28.0	43.6	331	8.8	12.8
Near Temple	18.4	33.8	323	9.3	11.3

Month: November 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	24.0	47.7	344	9.6	15.2
Near Back Filling Area	31.3	60.2	384	10.1	14.9
Near Mine Pit	32.9	63.1	374	11.7	14.9
Near Temple	22.6	48.5	345	11.5	13.0

Month: December 2019

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	22.7	50.5	328	10.0	12.6
Near Back Filling Area	28.1	61.0	372	11.4	15.0
Near Mine Pit	33.0	63.4	399	12.3	15.9
Near Temple	20.7	47.4	312	8.5	11.2

Month: January 2020

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	26.99	54.61	332	9.24	13.48
Near Back Filling Area	30.59	61.34	377	11.61	15.52
Near Mine Pit	36.65	65.96	394	11.83	14.52
Near Temple	24.96	50.33	312	8.29	12.88

Month: February 2020

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	25.62	52.49	343	8.27	11.57
Near Back Filling Area	32.25	56.22	390	10.19	14.20
Near Mine Pit	36.71	59.77	404	10.54	12.61
Near Temple	28.89	47.97	330	7.57	11.26

Month: March 2020

AAQMS	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	CO (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)
Near Main Office	23.08	50.91	363	8.24	13.34
Near Back Filling Area	34.18	53.20	407	11.42	15.53
Near Mine Pit	39.56	59.21	414	12.68	12.98
Near Temple	28.78	48.01	355	9.01	11.36

Monitored by Ecomen Laboratories (P) Ltd.
(An approved Laboratory from Ministry of Environment, Forest and Climate Change)
Flat No.5-8, 2nd Floor, Arif Chamber V, Sector H, Aliganj, Lucknow - 226 024

ANNEXURE- 1A

M/s Diamond Cements (Prop. HeidelbergCement India Limited)
LIME STONE MINES PATHARIA

Stack Emission – Particulate Matter (mg/Nm^3)

Month	Crusher
Apr-19	22.7
May-19	25.0
Jun-19	24.4
Jul-19	22.7
Aug-19	25.4
Sep-19	26.4
Oct-19	22.1
Nov-19	24.6
Dec-19	13.8
Jan-20	18.4
Feb-20	14.8
Mar-20	17.2

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ANNEXURE-2

M/s Diamond Cements (Prop. HeidelbergCement India Limited)
LIME STONE MINES PATHARIA

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

Location→	Near Main office		Near Back Filling Area		Near Mine Pit		Near Temple	
Month↓	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	60.4	56.0	62.2	57.0	57.3	54.0	64.1	61.4
May-19	59.0	54.6	60.4	57.7	56.0	53.4	63.3	61.0
Jun-19	57.0	55.0	61.3	54.2	54.6	50.0	64.4	62.0
Jul-19	59.3	55.5	63.0	51.3	54.6	47.4	66.2	61.8
Aug-19	69.2	58.8	65.8	59.3	57.9	52.1	68.2	60.7
Sep-19	61.5	59.	63.3	56.6	54.3	51.7	67.5	62.3
Oct-19	59.3	56.0	62.2	53.7	57.7	50.3	66.2	61.8
Nov-19	55.8	51.3	59.7	49.7	54.2	49.3	63.9	57.1
Dec-19	58.2	52.1	55.0	48.0	60.3	53.3	64.0	58.0
Jan-20	59.4	54.6	57.1	51.2	63.4	53.3	66.2	60.7
Feb-20	61.5	57.8	58.9	53.9	65.4	56.4	68.7	63.7
Mar-20	64.1	52.2	54.5	51.4	63.9	52.6	65.7	61.9

Monitored by Ecomen Laboratories (P) Ltd.
(An approved Laboratory from Ministry of Environment, Forest and Climate Change)
Flat No.5-8, 2nd Floor, Arif Chamber V, Sector H, Aliganj, Lucknow - 226 024

ANNEXURE-3

M/s Diamond Cements (Prop. HeidelbergCement India Limited)
Lime Stone Mines - Patharia
Analytical Report of Mine Pit Water

Sl. No.	Parameters	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
		22.04.19	25.05.19	22.06.19	26.07.19	26.08.19	25.09.19	22.10.19	27.11.19	27.12.19	25.01.20	26.02.20	14.03.20
1	pH	7.85	7.95	7.20	7.30	7.21	7.15	7.11	7.30	7.50	7.40	7.70	7.60
2	Suspended Solid	79.8	85.5	80.4	95.2	93.2	88.8	65.21	81.8	85.3	87.3	90.3	84.1
3	Dissolved Solid	433.0	450.0	425.7	475.8	471.3	465.5	430.54	463.4	455.5	449.2	455.2	431.0
4	Oil & Grease	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	Fluoride as F	0.18	0.20	0.30	0.25	0.23	0.20	0.5	0.27	0.30	0.30	0.25	0.25
6	Calcium as CaCO3	300.7	325.4	340.2	300.8	293.1	280.5	151.3	286.4	290.2	285.4	280.3	295.4
7	Magnesium as CaCO3	132.3	140.0	138.6	220.4	211.9	206.4	46.21	168.4	160.0	156.3	150.7	157.3
8	Sodium as Na	30.2	30.2	32.4	30.2	27.3	22.8	34.2	20.4	19.5	17.5	14.2	13.7
9	Total Alkalinity	36.3	38.7	34.5	32.6	29.6	20.7	56.9	18.1	16.6	15.9	17.9	15.1
10	Potassium	2.5	3.0	2.8	2.7	2.4	2.2	7.6	2.1	2.0	1.8	1.5	1.9
11	Chloride as Cl	24.4	28.5	30.1	25.9	23.4	21.5	9.2	22.4	21.9	19.8	17.4	12.7
12	Total Organic Carbon	1.3	1.6	1.4	1.3	1.1	1.1	2.3	1.6	1.4	1.7	1.4	1.1

Note: All parameters are in mg/l except pH
BDL- Below Detection Limit

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(An approved Laboratory from Ministry of Environment, Forest and Climate Change)
Flat No.5-8, 2nd Floor, Arif Chamber V, Sector H, Aliganj, Lucknow - 226 024

ANNEXURE – 4

Plantation at Patharia Lime Stone Mine

Year	Plantation at Patharia L/M
2010-11	5500
2011-12	2000
2012-13	4000
2013-14	8500
2014-15	10000
2015-16	10000
2016-17	9000
2017-18	8000
2018-19	8500
2019-20	8000

Major planted trees in LSM Patharia are Neem (Azadirachta indica), Sheesham (Dalbergia sissoo), Gulmohar(Delonix regia),Bamboo, Peltrafarm,Dubai tree etc.