

HCIL(NGH)-ENV-F-101/2020/

**The Member Secretary
M.P. Pollution Control Board
Paryavaran Parishar,
E-5, Arera Colony, Bhopal – 462016**

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

Dec 06, 2020**Sub.: Monthly Environmental Monitoring Reports for Nov 2020**

Sir,

Please find enclosed herewith the Environmental Monitoring Report of the following for the month of **Nov 2020**

S. No.	Name of Plant / Mines	Monitoring Details
1.	Clinkrisation Unit, Narsingarh (including WHRPP)	Ambient Air Quality Monitoring including Ambient Noise Monitoring, Stack Monitoring, STP Water Quality Analysis Report, ETP Water Quality Analysis Report, Performance of ESPs & Bag Houses, Energy meter reading, Online monitoring data of CAAQMS.
2.	Grinding Unit, Imlai	Ambient Air Quality Monitoring including Ambient Noise Monitoring, Stack Monitoring, STP Water Quality Analysis Report, Performance of Bag Houses, Energy meter reading and Online monitoring data of CAAQMS.
3.	Lime Stone Mines, Patharia	Ambient Air Quality Monitoring including Ambient Noise Monitoring, Stack Monitoring, Water, Waste water Quality Analysis Report and Online monitoring data of CAAQMS.

This is submitted for your kind perusal please.

Thanking you,

Yours faithfully,
For Diamond Cements
(Prop.: HeidelbergCement India Ltd.)



Sandeep Kumar Tiwari
Manager – Environment

Encl: as above

CC: The Zonal Officer (Central),

Central Pollution Control Board, E-5, Link Rd Number 3, Ekant Park, Arera Colony, Bhopal, Madhya Pradesh 462016

CC: The Regional Officer

MP Pollution Control Board, Deen Dayal Nagar, Housing Board Colony, Sagar (MP)

CC: Sr. G.M. Mines – For kind information & record please

CC: VP (T) Imlai – For kind information & record please

CC: Office Copy

ENVIRONMENTAL MONITORING REPORT

of

M/s Diamond Cements
(Prop. HeidelbergCement India Limited)
Village & Post: Narsingarh,
District : Damoh

for

November, 2020

Prepared by:



Certificate No.: T-2202

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Ecomen Laboratories Pvt. Ltd.

(An approved Laboratory from NABL & MoEF&CC)

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An approved Laboratory from Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi

FORMAT NO. : ECO/QS/D/FORMAT/01
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/A:05-08 & M:05-08/11/20
ISSUE DATE : 30.11.2020

Month: November. 2020

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Plant/Mines :

M/s Diamond Cements -Clinkerisation Unit
(Prop. HeidelbergCement India Limited), Narsingarh, Damoh (M.P.)

AAQMS	Date/ Time ^a	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	Time	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
		04.11.2020	05.11.2020		04.11.2020	04.11.2020	04.11.2020
Near Hospital	08.00 am	24.76	42.17	06:00 am to 10:00 am	340	8.90	11.98
				10:00 am to 02:00 pm		8.98	12.89
				02:00 pm to 06:00 pm	350	9.54	12.50
				06:00 pm to 10:00 pm		11.27	12.23
				10:00 pm to 02:00 am	330	9.52	12.47
				02:00 am to 06:00 am		7.18	12.51
				Average Value	340	9.23	12.43
Near Gate of Mine Pit No.1	06.00 am	30.27	47.19	06:20 am to 10:20 am	330	10.71	13.43
				10:20 am to 02:20 pm		10.17	14.22
				02:20 pm to 06:20 pm	350	11.33	14.19
				06:20 pm to 10:20 pm		9.57	13.98
				10:20 pm to 02:20 am	330	10.17	14.46
				02:20 am to 06:20 am		9.97	13.74
Average Value	337	10.32	14.00				
Near STP Area	06.00 am	29.26	46.71	06:40 am to 10:40 am	320	8.93	12.47
				10:40 am to 02:40 pm		8.35	13.07
				02:40 pm to 06:40 pm	360	9.47	12.41
				06:40 pm to 10:40 pm		10.09	12.92
				10:40 pm to 02:40 am	350	9.54	12.28
				02:40 am to 06:40 am		9.50	12.68
Average Value	343	9.31	12.64				
Near Worker Colony	06.00 am	31.80	49.53	07:00 am to 11:00 am	350	10.74	10.34
				11:00 am to 03:00 pm		11.96	12.29
				03:00 pm to 07:00 pm	380	12.53	12.50
				07:00 pm to 11:00 pm		11.33	11.54
				11:00 pm to 03:00 am	360	11.25	11.84
				03:20 am to 07:00 am		10.17	11.57
Average Value	363	11.33	11.88				

Air (Ambient Standard) - The Environment (Protection) Rules, 1986 [NAAQMS]							
S.NO.	Standard	Time	PM 2.5	PM 10	SO2	NO2	CO
1	(µg/m ³)	24 hours	60	100	80	80	2000
2		Annual	40	80	50	40	-

* Time mentioned above is the initial Time of Sampling.

SO₂ BDL < 4.0 (µg/m³) and NO₂ BDL < 6.1 (µg/m³)

Checked by

Page No. 1

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FORMAT NO. : ECO/QS/D/FORMAT/01
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/A:09-12 & M:09-12/10/20
ISSUE DATE : 30.11.2020

Month: November. 2020

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Plant/Mines :

M/s Diamond Cements -Grinding Unit
(Prop. HeidelbergCement India Limited), Imlai, Damoh (M.P.)

AAQMS	Date/ Time*	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	Time	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
		08.11.2020	07.11.2020		07.11.2020	07.11.2020	07.11.2020
Near Admin Bld.	08.00 am	25.07	42.91	06:00 am to 10:00 am	380	10.09	9.81
				10:00 am to 02:00 pm		8.97	9.40
				02:00 pm to 06:00 pm	420	8.93	10.79
				06:00 pm to 10:00 pm		8.41	11.64
				10:00 pm to 02:00 am	390	8.43	12.29
				02:00 am to 06:00 am		9.05	14.11
				Average Value	397	8.98	11.34
Near Water Storage Tank (Behind D.G. Set)	06.00 am	32.55	46.39	06:20 am to 10:20 am	390	10.13	13.84
				10:20 am to 02:20 pm		10.81	14.68
				02:20 pm to 06:20 pm	420	10.21	14.55
				06:20 pm to 10:20 pm		10.39	14.67
				10:20 pm to 02:20 am	430	9.51	14.05
				02:20 am to 06:20 am		9.05	14.02
				Average Value	413	10.02	14.30
Near Railway Siding	08.00 am	28.62	50.37	06:40 am to 10:40 am	480	9.61	12.98
				10:40 am to 02:40 pm		12.04	13.50
				02:40 pm to 06:40 pm	420	12.01	13.71
				06:40 pm to 10:40 pm		11.73	13.50
				10:40 pm to 02:40 am	400	10.84	13.02
				02:40 am to 06:40 am		10.21	13.16
				Average Value	417	11.07	13.31
Near Worker Colony	08.00 am	23.78	43.73	07:00 am to 11:00 am	390	8.45	10.83
				11:00 am to 03:00 pm		9.48	12.28
				03:00 pm to 07:00 pm	400	8.37	11.96
				07:00 pm to 11:00 pm		8.45	13.32
				11:00 pm to 03:00 am	410	10.21	12.50
				03:20 am to 07:00 am		10.23	13.02
				Average Value	400	9.20	12.28

Air (Ambient Standard) - The Environment (Protection) Rules, 1986 [NAAQMS]							
S.NO.	Standard	Time	PM 2.5	PM 10	SO2	NO2	CO
1	(µg/m ³)	24 hours	60	100	80	80	2000
2		Annual	40	60	50	40	-

* Time mentioned above is the initial Time of Sampling.

SO₂ BDL < 4.0 (µg/m³) and NO₂ BDL < 6.1 (µg/m³)
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FORMAT NO. : ECO/QS/D/FORMAT/01
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/A:01-04 & M:01-04/11/20
ISSUE DATE : 30.11.2020

Month: November. 2020

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Plant/Mines :

Lime Stone Mines, Palharla-Diamond Cements
(Prop. HeidelbergCement India Limited), Damoh (M.P.)

AAQMS	Date/ Time*	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	Time	CO ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
		02.11.2020	03.11.2020		03.11.2020	03.11.2020	03.11.2020
Near Main Office	06.00 am	22.34	39.39	06:00 am to 10:00 am	380	7.17	10.77
				10:00 am to 02:00 pm		8.99	9.11
				02:00 pm to 06:00 pm	480	9.01	10.58
				06:00 pm to 10:00 pm		9.03	12.29
				10:00 pm to 02:00 am	410	10.47	13.67
				02:00 am to 06:00 am		9.83	12.29
				Average Value	423	9.05	11.45
Near Back Filling Area	06.00 am	27.10	44.27	06:20 am to 10:20 am	390	9.83	13.02
				10:20 am to 02:20 pm		9.48	14.17
				02:20 pm to 06:20 pm	410	10.76	13.18
				06:20 pm to 10:20 pm		10.21	12.98
				10:20 pm to 02:20 am	410	10.26	13.05
				02:20 am to 06:20 am		9.83	12.29
				Average Value	403	10.00	13.11
Near Mine Pit	06.00 am	27.29	48.12	06:40 am to 10:40 am	390	9.81	11.08
				10:40 am to 02:40 pm		9.59	11.27
				02:40 pm to 06:40 pm	410	10.18	12.47
				06:40 pm to 10:40 pm		9.61	12.65
				10:40 pm to 02:40 am	360	7.21	12.28
				02:40 am to 06:40 am		10.21	12.74
				Average Value	387	9.40	12.08
Near Temple	06.00 am	20.95	37.31	07:00 am to 11:00 am	350	9.03	12.29
				11:00 am to 03:00 pm		9.61	10.82
				03:00 pm to 07:00 pm	350	9.71	9.83
				07:00 pm to 11:00 pm		9.01	11.14
				11:00 pm to 03:00 am	390	8.41	12.26
				03:20 am to 07:00 am		7.83	13.02
				Average Value	370	8.93	11.56

Air (Ambient Standard) - The Environment (Protection) Rules, 1986 [NAAQMS]							
S.NO.	Standard	Time	PM 2.5	PM 10	SO2	NO2	CO
1	$(\mu\text{g}/\text{m}^3)$	24 hours	60	100	80	80	2000
2		Annual	40	80	50	40	-

* Time mentioned above is the initial Time of Sampling.

SO₂ BDL < 4.0 ($\mu\text{g}/\text{m}^3$) and NO₂ BDL < 6.1 ($\mu\text{g}/\text{m}^3$)

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FORMAT NO. : ECO/QS/D/FORMAT/01
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/A:13-16 & M:13-16/11/20
ISSUE DATE : 30.11.2020

Month: November, 2020

TEST REPORT OF AMBIENT AIR QUALITY MONITORING

Name of Plant/Mines :

Lime Stone Mines, Patharia-Diamond Cements

(Prop. HeidelbergCement India Limited), Damoh (M.P.)

AQMMS	Date/ Time*	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	Time	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
		23.11.2020	24.11.2020		24.11.2020	24.11.2020	24.11.2020
Near Main Office	06.00 am	21.78	40.51	06:00 am to 10:00 am	390	9.83	9.88
				10:00 am to 02:00 pm		9.48	10.82
				02:00 pm to 06:00 pm	410	9.03	9.90
				06:00 pm to 10:00 pm		10.23	10.61
				10:00 pm to 02:00 am	450	8.41	12.26
				02:00 am to 06:00 am		8.98	12.92
				Average Value	417	9.29	11.07
Near Back Filling Area	06.00 am	29.98	48.97	06:20 am to 10:20 am	350	10.21	12.50
				10:20 am to 02:20 pm		10.84	12.53
				02:20 pm to 06:20 pm	370	11.35	12.92
				06:20 pm to 10:20 pm		10.41	12.53
				10:20 pm to 02:20 am	340	9.59	12.88
				02:20 am to 06:20 am		10.21	12.50
				Average Value	353	10.43	12.65
Near Mine Pit	06.00 am	31.77	50.63	06:40 am to 10:40 am	410	10.08	12.44
				10:40 am to 02:40 pm		10.26	13.05
				02:40 pm to 06:40 pm	450	10.86	12.81
				06:40 pm to 10:40 pm		FALSE	12.95
				10:40 pm to 02:40 am	420	11.35	12.92
				02:40 am to 06:40 am		10.89	12.44
				Average Value	427	10.77	12.77
Near Temple	06.00 am	25.35	41.53	07:00 am to 11:00 am	380	9.03	10.61
				11:00 am to 03:00 pm		9.63	11.33
				03:00 pm to 07:00 pm	390	10.21	12.65
				07:00 pm to 11:00 pm		11.30	11.67
				11:00 pm to 03:00 am	400	9.86	11.54
				03:20 am to 07:00 am		9.63	11.09
				Average Value	390	9.94	11.48

Air (Ambient Standard) - The Environment (Protection) Rules, 1986 [NAAQMS]							
S.NO.	Standard	Time	PM 2.5	PM 10	SO2	NO2	CO
1	(µg/m ³)	24 hours	60	100	80	80	2000
2		Annual	40	80	50	40	-

* Time mentioned above is the Initial Time of Sampling.

SO₂ BDL < 4.0 (µg/m³) and NO₂ BDL < 6.1 (µg/m³)

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Page No. 4

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FORMAT NO. : ECO/QS/D/FORMAT/02
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/N:01/11/20
ISSUE DATE: 30.11.2020

Month: : November 2020


TEST REPORT OF AMBIENT NOISE MONITORING

Name of Plant/Mines : M/s Diamond Cements - Clinkerisation -Clinkersiation Unit
(Prop. Heidelberg Cement India Limited), Narsingarh, Damoh (M.P.)

Date of Monitoring : 05.11.2020

Sl. No.	Location	Leq Value in dB(A)	
		Day Time	Night Time
1.	Near Hospital	49.5	40.8
2.	Near Gate of Mine Pit No.1	58.6	55.7
3.	Near STP Area	58.7	56.2
4.	Near Worker Colony	46.8	40.5


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Noise (Ambient Standard) - Noise Pollution (Prevention & Control Rule 2000)

Area Code	Category of area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Note:

1	Day time is reckoned in between 6:00 AM and 10:00 PM.
2	Night time is reckoned in between 10:00 PM and 6:00 AM
3	Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
4	Mixed categories of areas should be declared as one of the four above-mentioned categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. : ECO/QS/D/FORMAT/02
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/N:02/11/20
ISSUE DATE: 30.11.2020

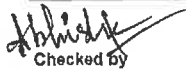
Month: : November 2020


TEST REPORT OF AMBIENT NOISE MONITORING

Name of Plant/Mines : M/s Diamond Cements -Grinding Unit
(Prop. Heidelberg Cement India Limited), Imial, Damoh (M.P.)

Date of Monitoring : 07.11.2020

Sl. No.	Location	Leq Value in dB(A)	
		Day Time	Night Time
1.	Near ADM Bld.	53.6	50.1
2.	Near Worker Colony	46.2	42.8
3.	Near Railway Sliding	60.6	56.7
4.	Near Water Storage Tank (Behind D.G.Set)	57.9	53.4


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Noise (Ambient Standard) - Noise Pollution (Prevention & Control Rule 2000)

Area Code	Category of area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Note:

1	Day time is reckoned in between 6:00 AM and 10:00 PM.
2	Night time is reckoned in between 10:00 PM and 6:00 AM
3	Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
4	Mixed categories of areas should be declared as one of the four above-mentioned categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. : ECO/QS/D/FORMAT/02
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/N:03/10/20
ISSUE DATE: 30.11.2020

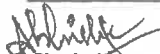
Month: : November 2020

TEST REPORT OF AMBIENT NOISE MONITORING

Name of Plant/Mines : Lime Stone Mines, Palharia- Diamond Cements
(Prop. Heidelberg Cement India Limited), Damoh (M.P.)

Date of Monitoring : 24.11.2020

Sl. No.	Location	Leq Value in dB(A)	
		Day Time	Night Time
1.	Near Main Office	58.6	55.4
2.	Near Back Filling Area	50.8	48.0
3.	Near Mine Pit	60.2	55.7
4.	Near Temple	54.8	51.6


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Noise (Ambient Standard) - Noise Pollution (Prevention & Control Rule 2000)

Area:Code	Category of area	Limit in dB (A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	65	45
D	Silence Zone	50	40

Note:

1	Day time is reckoned in between 6:00 AM and 10:00 PM.
2	Night time is reckoned in between 10:00 PM and 6:00 AM
3	Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
4	Mixed categories of areas should be declared as one of the four above-mentioned categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. : ECO/QS/D/FORMAT/03
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S:08,04 & 09/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

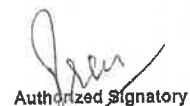
Name of Plant/Mines : M/s Diamond Cements -Clinkerisation Unit
(Prop. HeidelbergCement India Limited), Narsingarh, Damoh (M.P.)

Location	S-4	S-5	S-6
Date of Monitoring	13.11.2020	10.11.2020	17.11.2020
Stack-Details			
Material of Construction (Stack/Duct)	M.S.	M.S.	M.S.
Stack Attached to	Kiln / Raw Mill No-1	Kiln / Raw Mill No-2	Kiln / Raw Mill No-3
Name of Air Pollution Control Device	Hybrid Filter	Hybrid Filter	RABH
Stack Height above the Groundlevel (m)	76.4	98	110
Stack Top	Circular	Circular	Circular
Inside Diameter of Stack (m)	2.4	2.65	4.5
Cross sectional area of Duct/Stack (m ²)	4.52	5.51	15.90
Ambient Temp (°C)	30	30	20
Stack Gas Temp (°C)	116	120	92
Exit Velocity of Gas (m/sec.)	18.5	17.44	15.85
Flow Rate (Nm ³ / sec.)	59.46	67.81	191.92
Test Conducted			
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	11.4	14.3	19.1
Oxygen (O ₂) (%)	11.5	8.6	10.2
Sulphur Dioxide (SO ₂)	(mg/Nm ³)	13.8	15.2
	at 10 % O ₂ Correction (mg/Nm ³)	12.7	13.5
Nitrogen Dioxides (NO _x)	(mg/Nm ³)	360.8	484.7
	at 10 % O ₂ Correction (mg/Nm ³)	417.8	430.0
Standard			
	PM -	30 mg/Nm ³	
	SO ₂ -	100 mg/Nm ³ at 10 % O ₂	
	NO _x -	800 mg/Nm ³ at 10 % O ₂	

Note: * Plant was under Planned shutdown, Hence Stack Monitoring could not be conducted.

S-4 : Kiln / Raw Mill No-1
S-5 : Kiln / Raw Mill No-2
S-6 : Kiln / Raw Mill No-3


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FORMAT NO. : ECO/QS/D/FORMAT/03
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S:10,01 &,06/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

Name of Plant/Mines :

M/s Diamond Cements -Clinkerisation Unit
(Prop. HeidelbergCement India Limited), Narsingarh, Damoh (M.P.)

Location	S-1	S-2	S-3
Date of Monitoring	18.11.2020	02.11.2020	12.11.2020
Stack Details			
Material of Construction (Stack/Duct)	M.S.	M.S.	M.S.
Stack Attached to	Coal Mill No-1	Coal Mill No-2	Coal Mill No-3
Name of Air Pollution Control Device	Bag House	Bag House	Bag House
Stack Height above the Groundlevel (m)	30.4	37	72.7
Stack Top	Circular	Circular	Circular
Inside Diameter of Stack (m)	1.45	1.45	2.12
Cross sectional area of Duct/Stack (m ²)	1.65	1.65	3.53
Ambient Temp (°C)	22	21	22
Stack Gas Temp (°C)	54	64	74
Exit Velocity of Gas (m/sec.)	4.76	6.73	6.65
Flow Rate (Nm ³ / sec.)	6.68	9.06	18.70
Lab Testing			
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	13.1	12.8	10.8

Stack Emission Standard = 30 mg/NM³

* Plant was under Planned shutdown, Hence Stack Monitoring could not be conducted.

Note:

- S-1 : Coal Mill No-1
- S-2 : Coal Mill No-2
- S-3 : Coal Mill No-3

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REV. NO. : 00TEST REPORT NO. : ECO LAB/D/S:08,04 & 09/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORINGName of Plant/Mines : M/s Diamond Cements -Clinkerisation Unit
(Prop. HeidelbergCement India Limited), Narsingarh, Damoh (M.P.)

Location	S-4	S-5	S-6
Date of Monitoring	13.11.2020	10.11.2020	17.11.2020
Stack Details			
Material of Construction (Stack/Duct)	M.S.	M.S.	M.S.
Stack Attached to	Kiln / Raw Mill No-1	Kiln / Raw Mill No-2	Kiln / Raw Mill No-3
Name of Air Pollution Control Device	Hybrid Filter	Hybrid Filter	RABH
Stack Height above the Groundlevel (m)	76.4	98	110
Stack Top	Circular	Circular	Circular
Inside Diameter of Stack (m)	2.4	2.65	4.5
Cross sectional area of Duct/Stack (m ²)	4.52	5.51	15.90
Ambient Temp (°C)	30	30	20
Stack Gas Temp (°C)	116	120	92
Exit Velocity of Gas (m/sec.)	18.50	17.44	15.85
Flow Rate (Nm ³ / sec.)	59.46	67.81	191.92
(Test Conducted)			
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	11.4	14.3	19.1

Stack Emission Standard = 30 mg/NM³

* Plant was under Planned shutdown, Hence Stack Monitoring could not be conducted.

Note:

- S-4 : Kiln / Raw Mill No-1
S-5 : Kiln / Raw Mill No-2
S-6 : Kiln / Raw Mill No-3

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REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S:02,15,12 & 13/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

Name of Plant/Mines : M/s Diamond Cements -Clinkerisation Unit
(Prop. HeidelbergCement India Limited), Narsingarh, Damoh (M.P.)

Location	S-7	S-8	S-9	S-10
Date of Monitoring	03.11.2020	25.11.2020	20.11.2020	21.11.2020
Stack Details				
Material of Construction (Stack/Duct)	M.S.	M.S.	M.S.	M.S.
Stack Attached to	Clinker Cooler No-1	Clinker CoolerNo-2	Clinker Cooler No-3	Crusher
Name of Air Pollution Control Device	ESP	ESP	ESP	Bag House
Stack Height above the Groundlevel (m)	40	44.45	45.6	17
Stack Top	Circular	Circular	Circular	Circular
Inside Diameter of Stack (m)	2.976	3.75	3.75	0.8
Cross sectional area of Duct/Stack (m ²)	6.95	11.05	11.05	0.282
Ambient Temp (°C)	23	24	28	21
Stack Gas Temp (°C)	140	184	126	25
Exit Velocity of Gas (m/sec.)	12.45	13.68	9.85	6.55
Flow Rate (Nm ³ / sec.)	59.82	94.65	78.03	3.14
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	17.6	10.6	15.4	21.4

Stack Emission Standard = 30 mg/NM3

* Plant was under Planned shutdown, Hence Stack Monitoring could not be conducted.

Note:

S-7 : Clinker Cooler No-1

S-8 : Clinker Cooler No-2

S-9 : Clinker Cooler No-3

S-10 : Crusher

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FORMAT NO. : ECO/QS/D/FORMAT/03
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S: 05,14 & 07/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

Name of Plant/Mines : M/s Diamond Cements -Grinding Unit
(Prop. HeidelbergCement India Limited), Imlai, Damoh (M.P.)

Location	S-1	S-2	S-3
Date of Monitoring	10.11.2020	23.11.2020	12.11.2020
Stack Details			
Material of Construction (Stack/Duct)	M.S.	M.S.	M.S.
Stack Attached to	Cement Mill No-1	Cement Mill No-2	Cement Mill No-3
Name of Air Pollution Control Device	Bag House	Bag House	Bag House
Stack Height above the Groundlevel (m)	38	37.5	51
Stack Top	Circular	Circular	Circular
Inside Diameter of Stack (m)	1.45	1.5	1.12
Cross sectional area of Duct/Stack (m ²)	1.65	1.77	0.985
Ambient Temp (°C)	22	21	21
Stack Gas Temp (°C)	74	72	90
Exit Velocity of Gas (m/sec.)	6.88	7.39	13.95
Flow Rate (Nm ³ / sec.)	8.90	10.46	10.56
(Test Conducted)			
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	18.0	16.7	20.6

Stack Emission Standard = 30 mg/NM³


* Plant was under Planned shutdown, Hence Stack Monitoring could not be conducted.

Note:

S-1 : Cement Mill No-1
S-2 : Cement Mill No-2
S-3 : Cement Mill No-3


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FORMAT NO. : ECO/QS/D/FORMAT/03
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S:11/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

Name of Plant/Mines : M/s Diamond Cements -Grinding Unit
(Prop. HeidelbergCement India Limited), Imlai, Damoh (M.P.)

Location	S-4
Date of Monitoring	19.11.2020
Stack Details	
Material of Construction (Stack/Duct)	M.S.
Stack Attached to	Packing Plant No-3
Name of Air Pollution Control Device	Bag House
Stack Height above the Groundlevel (m)	30
Stack Top	Circular
Inside Diameter of Stack (m)	0.53
Cross sectional area of Duct/Stack (m ²)	0.22
Ambient Temp (°C)	19
Stack Gas Temp (°C)	24
Exit Velocity of Gas (m/sec.)	22.98
Flow Rate (Nm ³ / sec.)	4.90
(Test Conducted)	
Particulate Matter(PM) (mg/Nm ³) Samples)	(Isokinetic) 22.9

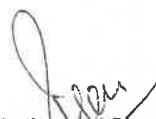
Stack Emission Standard = 30 mg/NM³

Note:

S-4 : Packer No-3


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REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/S:03/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF STACK MONITORING

Name of Plant/Mines : Lime Stone Mines, Patharia-Diamond Cements
(Prop. HeidelbergCement India Limited), Damoh (M.P.)

Location	S-01
Date of Monitoring	05.11.2020
Stack Details	
Material of Construction (Stack/Duct)	M.S.
Stack Attached to	Crusher
Name of Air Pollution Control Device	Bag House
Stack Height above the Groundlevel (m)	30
Stack Top	Circular
Inside Diameter of Stack (m)	1.5
Cross sectional area of Duct/Stack (m ²)	1.77
Ambient Temp (°C)	24
Stack Gas Temp (°C)	27
Exit Velocity of Gas (m/sec.)	11.70
Flow Rate (Nm ³ / sec.)	19.65
(Test Conducted)	
Particulate Matter(PM) (mg/Nm ³) (Isokinetic Samples)	23.6


Stack Emission Standard = 30 mg/NM³

Note:

S-1 : Crusher


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FORMAT NO. : ECO/QS/D/FORMAT/06
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12668-12869/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WASTE WATER ANALYSIS

Name of Plant/Mines : M/s Diamond Cements -Clinkerisation Unit
(Prop. Heidelbergcemen India Limited),Narsingarh Damoh (M.P.)

Date of Sample Collection : 24.11.2020

Source of Sample : Sewage Treatment Plant (STP)

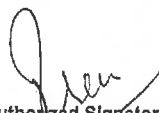
Sl. No.	Parameters	Result		PCB Standards
		STP Inlet	STP Outlet	
1	pH	7.65	7.47	5.5 - 9.0
2	Total Suspended Solid (TSS)	340.7	8.2	10.0
3	Total Dissolved Solid (TDS)	718.2	349.5	-
4	Biochemical Oxygen Demand (3 days at 27 °C)	158.0	7.7	10.0
5	Chemical Oxygen Demand (COD)	55.8	27.6	50.0
6	Oil & Grease (O&G)	1.7	BDL	10.0
7	Sodium Adsorption Ratio (SAR)	1.6	0.76	-
8	Fecal Coliform (FC) MPN/100ml	-	84	1000

Note: All parameters are in mg/l except pH and SAR

Oil & Grease BDL < 1.0 (mg/l)


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FORMAT NO. : ECO/QS/D/FORMAT/06
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12670-12671/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WASTE WATER ANALYSIS

Name of Plant/Mines : M/s Diamond Cements -Grinding Unit
(Prop. HeidelbergCement India Limited), Imlai, Damoh (M.P.)

Date of Sample Collection : 24.11.2020

Source of Sample : Sewage Treatment Plant (STP)

Sl. No.	Parameters	Result		PCB Standards
		STP Inlet	STP Outlet	
1	pH	7.85	7.59	5.5 - 9.0
2	Total Suspended Solid (TSS)	265.6	7.8	10.0
3	Total Dissolved Solid (TDS)	480.7	278.0	-
4	Biochemical Oxygen Demand (3 days at 27 °C)	174.6	8.9	10.0
5	Chemical Oxygen Demand (COD)	385.6	19.8	50.0
6	Oil & Grease (O&G)	1.9	BDL	10.0
7	Sodium Adsorption Ratio (SAR)	1.7	1.2	-
8	Fecal Coliform (FC) MPN/100ml	-	85	1000

Note: All parameters are in mg/l except pH and SAR

Oil & Grease BDL < 1.0 (mg/l)

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FORMAT NO. : ECO/QS/D/FORMAT/06
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12672/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WASTE WATER ANALYSIS

Name of Plant/Mines : Lime Stone Mines, Patharia-Diamond Cements
(Prop. HeidelbergCement India Limited), Damoh (M.P.)
Date of Sample Collection : 24.11.2020
Source of Sample : Septic tank

Sl. No.	Parameters	Result	PCB Standards
1	pH	7.8	5.5 - 9.0
2	Total Suspended Solid (TSS)	8.2	10.0
3	Total Dissolved Solid (TDS)	460.6	-
4	Biochemical Oxygen Demand (3 days at 27 °C)	8.6	10.0
5	Chemical Oxygen Demand (COD)	23.4	50.0
6	Oil & Grease (O&G)	BDL	10.0
7	Chloride(Cl)	37.9	1000.0

Note: All parameters are in mg/l except pH and SAR

Oil & Grease BDL < 1.0 (mg/l)

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FORMAT NO. : ECO/QS/D/FORMAT/08
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12673/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WASTE WATER ANALYSIS

Name of Plant/Mines : Lime Stone Mines, Patharia-Diamond Cements
(Prop. HeidelbergCement India Limited), Damoh (M.P.)

Date of Sample Collection : 24.11.2020

Source of Sample : Oil & Grease Trap

Sl. No.	Parameters	Result	PCB Standards
1	pH	7.7	5.5 - 9.0
2	Total Suspended Solid (TSS)	8.2	10
3	Total Dissolved Solid (TDS)	474.9	-
4	Biochemical Oxygen Demand (3 days at 27 °C)	7.6	10
5	Chemical Oxygen Demand (COD)	16.7	50
6	Oil & Grease (O&G)	BDL	10

Note: All parameters are in mg/l except pH and SAR

Oil & Grease BDL < 1.0 (mg/l)

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An approved Laboratory from Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi

FORMAT NO. : ECO/QS/D/FORMAT/06
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12674/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WATER ANALYSIS

Name of Plant/Mines : Lime Stone Mines, Patharia-Diamond Cements
(Prop. HeidelbergCement India Limited), Damoh (M.P.)

Date of Sample Collection : 24.11.2020

Source of Sample : Mine Pit

Sl. No.	Parameters	Result
1	pH	7.2
2	Suspended Solid	79.1
3	Total Dissolved Solid (TDS)	374.9
4	Total Hardness as CaCO ₃	422
5	Oil & Grease (O&G)	BDL
6	Fluoride as F	0.06
7	Calcium as CaCO ₃	268
8	Magnesium as CaCO ₃	154
9	Sodium as Na	16.5
10	Total Alkalinity	22.7
11	Potassium	1.5
12	Chloride as Cl	13.4
13	Total Organic Carbon (TOC)	1.8

Note: All parameters are in mg/l except pH

Oil & Grease BDL < 1.0 (mg/l)

Checked by 

Page No. 19


Authorized Signatory

Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. : ECO/QS/D/FORMAT/06
REV. NO. : 00

TEST REPORT NO. : ECO LAB/D/ELW:12675/11/20
ISSUE DATE : 30.11.2020

Month: November 2020

TEST REPORT OF WASTE WATER ANALYSIS

Name of Plant/Mines

(Prop. Heidelbergcemen India Limited), Narsingarh Damoh (M.P.)

Date of Sample Collection

: 24.11.2020

Source of Sample

: Effluent Treatment Plant

Sl. No.	Parameters	Result	PCB Standards
1	pH	6.8	5.5 - 9.0
2	Total Suspended Solid (TSS)	18.6	100
3	Total Dissolved Solid (TDS)	471.6	2100
4	Biochemical Oxygen Demand (3 days at 27 °C)	4.7	30
5	Chemical Oxygen Demand (COD)	31.4	250
6	Oil & Grease (O&G)	BDL	10
7	Chlorides	264	1000

Note: All parameters are in mg/l except pH

Oil & Grease BDL < 1.0 (mg/l)

Checked by
Abhinav

Page No. 20

Authorized Signatory
[Signature]

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Data Report

Hospital

FromTime : 01 Nov 2020 00:00:00 ToTime : 01 Dec 2020 00:00:00 Interval : hour

Time	Diamond cements clinkerisation Unit--AAQMS3--PM-10--µg/m3	Diamond cements clinkerisation Unit--AAQMS3--PM-2.5--µg/m3	Diamond cements clinkerisation Unit--AAQMS3--CO--mg/m3	Diamond cements clinkerisation Unit--AAQMS3--NO2--µg/m3	Diamond cements clinkerisation Unit--AAQMS3--SO2--µg/m3
01 Nov 2020 00:00	47.35	21.04	0.57	5.82	39.65
01 Nov 2020 12:00	27.71	16.68	0.52	5.77	40.65
02 Nov 2020 00:00	52.1	24.55	0.62	5.5	39.11
02 Nov 2020 12:00	34.31	16.82	0.5	5.5	42.82
03 Nov 2020 00:00	56.78	20.28	0.56	5.48	41.66
03 Nov 2020 12:00	29.4	9.48	0.38	5.75	43.23
04 Nov 2020 00:00	29.45	14.04	0.49	5.75	42.13
04 Nov 2020 12:00	28.03	7.27	0.33	5.74	43.74
05 Nov 2020 00:00	27.42	13.92	0.49	5.27	42.76
05 Nov 2020 12:00	18.69	11.06	0.4	5.3	44.73
06 Nov 2020 00:00	46.41	18.12	0.54	4.99	43.74
06 Nov 2020 12:00	22.55	14.09	0.46	6.1	44.35
07 Nov 2020 00:00		20.43	0.57	6.11	42.97
07 Nov 2020 12:00		14.68	0.45	6	45.26
08 Nov 2020 00:00		22.64	0.61	5.92	44.13
08 Nov 2020 12:00		25	0.62	5.77	46.36
09 Nov 2020 00:00		31.65	0.75	6.04	44.31
09 Nov 2020 12:00		18.04	0.51	5.85	45.95
10 Nov 2020 00:00		32.13	0.78	5.53	44.88
10 Nov 2020 12:00	34.53	22.95	0.65	5.22	47.38
11 Nov 2020 00:00	32.14	24.31	0.67	5.36	47.65
11 Nov 2020 12:00	17.64	11	0.41	5.18	48.91
12 Nov 2020 00:00	17.9	11.45	0.4	5.37	49.02
12 Nov 2020 12:00	17.08	11.02	0.36	5.23	49.64
13 Nov 2020 00:00	18.99	12.29	0.43	5.69	49.77
13 Nov 2020 12:00	18.37	11.86	0.41	5.57	50.02
14 Nov 2020 00:00	22.26	15.97	0.46	5.82	49.31
14 Nov 2020 12:00	14.85	10.94	0.38	5.68	51.25
15 Nov 2020 00:00	24.9	18.86	0.5	5.63	53.57
15 Nov 2020 12:00	10.11	6.97	0.32	5.72	53.71
16 Nov 2020 00:00	14.87	10.12	0.4	5.33	52.13
16 Nov 2020 12:00	16.89	13.17	0.4	6.06	52.58
17 Nov 2020 00:00	23.39	16.3	0.46	5.25	52.96
17 Nov 2020 12:00	13.69	10.65	0.36	5.63	55.15
18 Nov 2020 00:00	15.25	11.08	0.4	5.51	54.28
18 Nov 2020 12:00	12.91	10.79	0.36	5.65	53.69
19 Nov 2020 00:00	17.54	14.39	0.41	5.51	54.78

19 Nov 2020 12:00	20.1	15.83	0.43	5.39	55.18
20 Nov 2020 00:00	21.99	18.21	0.47	5.57	53.64
20 Nov 2020 12:00	18.2	13.62	0.4	5.86	54.64
21 Nov 2020 00:00	23.36	15.47	0.41	5.54	991.33
21 Nov 2020 12:00	15.55	10.3	0.34	5.44	76.57
22 Nov 2020 00:00	31.26	14.9	0.43	5.48	48.58
22 Nov 2020 12:00	13.96	9.81	0.36	5.46	52.4
23 Nov 2020 00:00	26.94	13.5	0.44	5.37	50.94
23 Nov 2020 12:00	13.89	8.61	0.33	5.46	52.64
24 Nov 2020 00:00	18.19	12.31	0.39	5.27	51.49
24 Nov 2020 12:00	14.48	10.15	0.36	5.63	54.95
25 Nov 2020 00:00	21.93	14.95	0.42	5.55	53.36
25 Nov 2020 12:00	18.65	12.07	0.38	5.61	53.36
26 Nov 2020 00:00	26.8	18.33	0.45	5.78	49.98
26 Nov 2020 12:00	21.16	15.38	0.41	5.52	51.67
27 Nov 2020 00:00	38.99	29.32	0.67	5.52	52.6
27 Nov 2020 12:00	25.92	19.11	0.52	5.61	56.07
28 Nov 2020 00:00	37.71	19.26	0.54	5.6	55.92
28 Nov 2020 12:00	14.87	8.43	0.35	5.84	56.33
29 Nov 2020 00:00	30.5	12.46	0.43	5.54	55.91
29 Nov 2020 12:00	14.3	7.69	0.32	5.8	56.77
30 Nov 2020 00:00	25.23	11.08	0.38	5.51	55.7
30 Nov 2020 12:00	14.74	7.9	0.33	5.88	56.44

Data Report

FromTime : 01 Nov 2020 00:00:00 ToTime : 01 Dec 2020 00:00:00 Interval : hour

Worker

Time	Diamond cements clinkerisation Unit--AAQMS2--PM10--µg/m3	Diamond cements clinkerisation Unit--AAQMS2--PM2.5--µg/m3	Diamond cements clinkerisation Unit--AAQMS2--SO2--µg/m3	Diamond cements clinkerisation Unit--AAQMS2--NO2--µg/m3	Diamond cements clinkerisation Unit--AAQMS2--CO--mg/m3
01 Nov 2020 00:00	23.52	26.16	15.76	24.84	0.14
01 Nov 2020 12:00	66.18	32.37	15.74	24.82	0.14
02 Nov 2020 00:00	29.13	35.94	15.73	24.87	0.17
02 Nov 2020 12:00	29.49	23.21	15.8	24.82	0.15
03 Nov 2020 00:00	18.67	23.02	15.75	24.9	0.15
03 Nov 2020 12:00	16.2	12.6	15.81	25.47	0.1
04 Nov 2020 00:00	15.46	11.7	15.94	24.61	0.09
04 Nov 2020 12:00	35.1	14.44	15.77	24.8	0.11
05 Nov 2020 00:00	24.05	18.73	15.76	24.84	0.13
05 Nov 2020 12:00	43.67	18.55	15.79	24.85	0.12
06 Nov 2020 00:00	29.33	21.6	15.82	24.9	0.14
06 Nov 2020 12:00	32.28	19.52	15.82	24.87	0.13
07 Nov 2020 00:00	49.3	30.49	15.83	24.8	0.16
07 Nov 2020 12:00	43.37	24.43	15.84	24.91	0.14
08 Nov 2020 00:00	39.56	29.04	15.89	24.95	0.16
08 Nov 2020 12:00	60.74	33.45	15.87	24.83	0.18
09 Nov 2020 00:00	15.78	13.66	15.91	24.9	0.2
09 Nov 2020 12:00	14.8	10.8	16.04	24.88	0.17
10 Nov 2020 00:00		15.81	15.93	24.72	0.21
10 Nov 2020 12:00	18.25	12.32	15.94	24.93	0.18
11 Nov 2020 00:00	16.21	11.64	15.95	24.88	0.17
11 Nov 2020 12:00	13.76	6.02	15.94	24.84	0.12
12 Nov 2020 00:00	9.59	5.96	16.01	24.97	0.09
12 Nov 2020 12:00	7.82	4.69	16.16	24.82	0.07
13 Nov 2020 00:00	11.34	6.06	16.23	24.87	0.09
13 Nov 2020 12:00	9.59	5.62	16.29	24.87	0.08
14 Nov 2020 00:00	11.82	7.49	16.32	24.88	0.09
14 Nov 2020 12:00	9.31	5.68	16.36	24.73	0.09
15 Nov 2020 00:00	13.02	8.73	16.32	24.83	0.11
15 Nov 2020 12:00	4.05	2.93	16.32	24.86	0.06
16 Nov 2020 00:00	7.95	5.03	16.37	24.92	0.09
16 Nov 2020 12:00	9.98	6.09	16.44	24.91	0.09
17 Nov 2020 00:00	15.39	9.51	16.45	24.91	0.1
17 Nov 2020 12:00	27.18	15.85	16.45	24.88	0.09
18 Nov 2020 00:00	24.15	16.28	16.5	24.76	0.09
18 Nov 2020 12:00	23.44	16.3	16.52	24.89	0.09
19 Nov 2020 00:00	26.28	21.7	16.58	24.93	0.09

19 Nov 2020 12:00	24.36	17.93	16.56	24.88	0.08
20 Nov 2020 00:00	38.7	26.1	16.61	24.8	0.11
20 Nov 2020 12:00	32.84	21.01	16.59	24.74	0.1
21 Nov 2020 00:00	27.25	18.75	16.6	25.03	0.1
21 Nov 2020 12:00	166.91	30.64	16.43	24.83	0.1
22 Nov 2020 00:00	26.23	17.8	16.45	24.9	0.1
22 Nov 2020 12:00	33.38	15.21	16.43	24.91	0.11
23 Nov 2020 00:00	61.92	24.74	16.42	24.96	0.13
23 Nov 2020 12:00	29.63	13.92	16.41	24.86	0.12
24 Nov 2020 00:00	38.15	29.68	16.43	24.87	0.11
24 Nov 2020 12:00	36.39	16.97	16.44	24.85	0.12
25 Nov 2020 00:00	39.77	21.7	16.46	24.92	0.13
25 Nov 2020 12:00	50.81	21.2	16.59	24.92	0.12
26 Nov 2020 00:00	39.47	25.15	16.63	24.95	0.12
26 Nov 2020 12:00	42.24	23.72	16.66	24.93	0.11
27 Nov 2020 00:00	55.75	42.73	16.6	25.05	0.18
27 Nov 2020 12:00	48.02	29.21	16.67	24.95	0.16
28 Nov 2020 00:00	34.45	25.18	16.65	24.97	0.14
28 Nov 2020 12:00	34.58	15.22	16.66	24.96	0.11
29 Nov 2020 00:00	29.12	18.07	16.67	24.95	0.12
29 Nov 2020 12:00	28.35	12.12	16.74	24.92	0.1
30 Nov 2020 00:00	25.27	15.2	16.74	24.98	0.11
30 Nov 2020 12:00	40.69	15.54	16.74	24.97	0.11

Data Report

FromTime : 01 Nov 2020 00:00:00 ToTime : 01 Dec 2020 00:00:00 Interval : hour

Patharia

Time	Diamond cements clinkerisation Unit--AAQMS1--PM10--µg/m3	Diamond cements clinkerisation Unit--AAQMS1--PM2.5--µg/m3	Diamond cements clinkerisation Unit--AAQMS1--SO2--µg/m3	Diamond cements clinkerisation Unit--AAQMS1--NO2--µg/m3	Diamond cements clinkerisation Unit--AAQMS1--CO--mg/m3
01 Nov 2020 00:00	96.25	52.15	46.27	10.51	0.08
01 Nov 2020 12:00	109.72	43.18	46.76	10.55	0.07
02 Nov 2020 00:00	104.37	60.67	46.42	10.46	0.08
02 Nov 2020 12:00	72.35	40.5	46.91	10.46	0.07
03 Nov 2020 00:00	84.74	39.11	46.69	10.4	0.07
03 Nov 2020 12:00	66.65	21.9	47.18	10.46	0.05
04 Nov 2020 00:00	91.58	34.88	47.05	10.47	0.06
04 Nov 2020 12:00	116.99	28.3	47.69	10.45	0.06
05 Nov 2020 00:00	79.1	38.9	47	10.49	0.06
05 Nov 2020 12:00	58.73	28.91	47.35	10.54	0.06
06 Nov 2020 00:00	98.4	44.89	46.96	10.52	0.07
06 Nov 2020 12:00	83.34	37.2	47.38	10.47	0.06
07 Nov 2020 00:00	99.59	55.11	47.39	10.43	0.08
07 Nov 2020 12:00	79.15	38.49	47.72	10.46	0.07
08 Nov 2020 00:00	82.57	53.25	47.35	10.5	0.08
08 Nov 2020 12:00	114.81	62.85	47.82	10.51	0.08
09 Nov 2020 00:00	127.12	87.54	47.32	10.4	0.1
09 Nov 2020 12:00	94.27	44.21	47.75	10.51	0.07
10 Nov 2020 00:00	104.06	83.43	47.34	10.45	0.1
10 Nov 2020 12:00	114.24	63.31	47.65	10.49	0.09
11 Nov 2020 00:00	77.21	72.66	47.6	10.54	0.09
11 Nov 2020 12:00	48.73	26.44	48.14	10.49	0.05
12 Nov 2020 00:00	76.79	34.25	47.65	10.52	0.06
12 Nov 2020 12:00	26.63	19.48	47.87	10.43	0.05
13 Nov 2020 00:00	58.18	24.22	47.55	10.51	0.05
13 Nov 2020 12:00	57.2	19.19	47.58	10.45	0.05
14 Nov 2020 00:00	55.23	32.67	47.62	10.52	0.06
14 Nov 2020 12:00	22.84	18.95	47.8	10.54	0.05
15 Nov 2020 00:00	32.86	39.79	47.61	10.49	0.06
15 Nov 2020 12:00	44.87	11.2	48.02	10.48	0.04
16 Nov 2020 00:00	31.38	20.22	47.72	10.52	0.05
16 Nov 2020 12:00	72.04	24.96	47.62	10.52	0.06
17 Nov 2020 00:00	72.12	34.57	47.25	10.41	0.06
17 Nov 2020 12:00		21.78	47.28	10.4	0.05
18 Nov 2020 00:00		22.76	47.04	10.48	0.05
18 Nov 2020 12:00	21.47	19.86	47.88	10.56	0.05
19 Nov 2020 00:00	27.01	31.98	50.51	10.59	0.05
19 Nov 2020 12:00	30.7	34.76	57.34	10.64	0.05
20 Nov 2020 00:00	33.13	38.29	58.32	10.54	0.07
20 Nov 2020 12:00	41.29	32.31	49.99	10.59	0.06

21 Nov 2020 00:0	43.46	39.43	53.06	10.66	0.06
21 Nov 2020 12:0	76.36	46.59	48.26	10.51	0.05
22 Nov 2020 00:0	56.28	65.68	48.99	10.51	0.06
22 Nov 2020 12:0	41.12	19.26	49.23	10.54	0.05
23 Nov 2020 00:0	54.8	33.34	49.4	10.5	0.07
23 Nov 2020 12:0	141.35	23.92	49.78	10.46	0.05
24 Nov 2020 00:0	85.78	32.73	49.54	10.49	0.06
24 Nov 2020 12:0	122.66	19.89	49.83	10.41	0.05
25 Nov 2020 00:0	69.48	34.98	49.21	10.48	0.06
25 Nov 2020 12:0	44.36	24.44	50.39	10.47	0.05
26 Nov 2020 00:0	146.2	43.83	49.63	10.53	0.06
26 Nov 2020 12:0	122.97	39.62	50.97	10.55	0.06
27 Nov 2020 00:0	89.38	73.83	49.77	10.48	0.09
27 Nov 2020 12:0	81.69	36.86	50.31	10.49	0.07
28 Nov 2020 00:0	42.47	37.72	49.78	10.54	0.07
28 Nov 2020 12:0	52.05	17.92	50.55	10.4	0.05
29 Nov 2020 00:0	35.89	26.34	50.11	10.5	0.06
29 Nov 2020 12:0	26.46	14.14	50.7	10.53	0.05
30 Nov 2020 00:0	48.69	25.48	50.11	10.51	0.06
30 Nov 2020 12:0	42.02	13.48	50.71	10.52	0.05



Real Time Data Acquisition And Monitoring



Created By: glensAdmin
Created At: 2020-12-03 09:45:13

Report Name : Average Report

From: 01-11-2020 - 00:00:00 To: 30-11-2020 - 23:59:00

Date (DD-MM-YYYY)	AAQMS_1 PM10 (ug/m3)Normalized	AAQMS_1 SO2 (ug/m3)Normalized	AAQMS_1 NO2 (ug/m3)Normalized	AAQMS 1 PM2.5 (ug/m3) Normalized	AAQMS_1 NOx (ug/m3)Normalized	AAQMS_1 NO (ug/m3)Normalized
Avg	88.97	27.55	1.57	44.73	4.61	2.15
Min	39.81	24.66	1.52	28.16	4.55	2.13
Max	147.17	36.27	1.59	70.82	4.75	2.24
Geom.Mean	88.97	27.55	1.57	44.73	4.61	2.15
Median	29.93	4.23	0.02	12.26	0.03	0.02
Mode	95.06	36.27	1.56	54.95	4.62	2.15
Std.Deviation	96.48	25.6	1.57	41.61	4.6	2.15
Prescribed Standard	100.0	80.0	80.0	60.0	80.0	80.0
First Max occurred at	07-11-2020	03-11-2020	06-11-2020	10-11-2020	07-11-2020	07-11-2020
First Min occurred at	18-11-2020	11-11-2020	25-11-2020	18-11-2020	01-11-2020	01-11-2020
Valid Data Points	30	30	30	30	30	30
Total Data Points	30	30	30	30	30	30
Data Availability %	100	100	100	100	100	100
Uncertainty	0	0	0	0	0	0
01-11-2020	95.06	36.25	1.54	54.95	4.55	2.13
02-11-2020	93.91	36.23	1.58	54.88	4.58	2.13
03-11-2020	101.47	36.27	1.57	45.36	4.6	2.15
04-11-2020	98.62	36.27	1.53	41.7	4.55	2.14
05-11-2020	58.87	36.18	1.56	45.73	4.59	2.15
06-11-2020	111.82	34.18	1.59	58.64	4.6	2.14
07-11-2020	147.17	28.02	1.59	65.53	4.75	2.24
08-11-2020	102.8	26.6	1.56	62.37	4.62	2.16
09-11-2020	121.03	25.6	1.58	64.12	4.62	2.15
10-11-2020	130.78	24.73	1.57	70.82	4.63	2.17
11-11-2020	127.23	24.66	1.54	61.29	4.6	2.17
12-11-2020	57.26	24.7	1.58	31.85	4.6	2.14
13-11-2020	50.94	24.77	1.56	30.15	4.59	2.15

14-11-2020	56.79	24.85	1.58	37.5	4.62	2.15
15-11-2020	76.08	24.97	1.54	35.76	4.59	2.16
16-11-2020	47.96	24.97	1.56	29.4	4.61	2.16
17-11-2020	51.78	25	1.54	35.06	4.58	2.15
18-11-2020	39.81	25.08	1.59	28.16	4.62	2.14
19-11-2020	55.4	25.3	1.59	33.31	4.63	2.15
20-11-2020	61.69	25.41	1.58	40.51	4.63	2.16
21-11-2020	108.26	25.46	1.59	40.79	4.62	2.15
22-11-2020	126.4	25.52	1.57	41.71	4.58	2.14
23-11-2020	140.22	25.52	1.57	41.22	4.62	2.16
24-11-2020	73.05	25.48	1.58	35.46	4.6	2.14
25-11-2020	67.44	25.63	1.52	37.45	4.56	2.15
26-11-2020	64.95	25.8	1.56	43.39	4.59	2.15
27-11-2020	96.73	25.77	1.55	63.9	4.61	2.17
28-11-2020	106.64	25.76	1.59	41.61	4.63	2.16
29-11-2020	96.48	25.82	1.56	33.96	4.58	2.15
30-11-2020	102.36	25.73	1.56	35.45	4.61	2.15

Report Name : Average Report(Continued)

Date (DD-MM-YYYY)	AAQMS_1 CO (mg/m3)Normalized
Avg	0.41
Min	0.33
Max	0.58
Geom.Mean	0.41
Median	0.06
Mode	0.39
Std.Deviation	0.4
Prescribed Standard	4.0
First Max occurred at	10-11-2020
First Min occurred at	18-11-2020
Valid Data Points	30
Total Data Points	30
Data Availability %	100
Uncertainty	0
01-11-2020	0.46
02-11-2020	0.49
03-11-2020	0.43
04-11-2020	0.44
05-11-2020	0.39
06-11-2020	0.45
07-11-2020	0.48
08-11-2020	0.5
09-11-2020	0.49
10-11-2020	0.58
11-11-2020	0.51
12-11-2020	0.37
13-11-2020	0.34
14-11-2020	0.36
15-11-2020	0.35

16-11-2020	0.34
17-11-2020	0.36
18-11-2020	0.33
19-11-2020	0.34
20-11-2020	0.35
21-11-2020	0.33
22-11-2020	0.39
23-11-2020	0.39
24-11-2020	0.4
25-11-2020	0.39
26-11-2020	0.4
27-11-2020	0.51
28-11-2020	0.41
29-11-2020	0.38
30-11-2020	0.41



Real Time Data Acquisition And Monitoring



Created By: glensAdmin
Created At: 2020-12-03 10:01:08

Report Name : Average Report

From: 01-11-2020 - 00:00:00 To: 30-11-2020 - 23:59:00

Date (DD-MM-YYYY)	AAQMS_2 NOx (ug/m3)Normalized	AAQMS_2 NO (ug/m3)Normalized	AAQMS_2 CO (mg/m3)Normalized	AAQMS_2 SO2 (ug/m3)Normalized	AAQMS_2 NO2 (ug/m3)Normalized	AAQMS 2 PM2.5 (ug/m3) Normalized
Avg	4.48	2.25	0.17	18.69	1.23	26.12
Min	4.47	2.23	0.15	18.63	1.21	17.01
Max	4.50	2.27	0.24	18.82	1.25	41.57
Geom.Mean	4.48	2.25	0.17	18.69	1.23	26.12
Median	0.01	0.01	0.02	0.05	0.01	7.85
Mode	4.47	2.25	0.16	18.68	1.23	37.31
Std.Deviation	4.48	2.25	0.16	18.68	1.23	22.79
Prescribed Standard	80.0	80.0	4.0	80.0	80.0	60.0
First Max occurred at	04-11-2020	29-11-2020	10-11-2020	19-11-2020	04-11-2020	10-11-2020
First Min occurred at	01-11-2020	01-11-2020	04-11-2020	06-11-2020	28-11-2020	30-11-2020
Valid Data Points	30	30	30	30	30	27
Total Data Points	30	30	30	30	30	30
Data Availability %	100	100	100	100	100	90
Uncertainty	0	0	0	0	0	0
01-11-2020	4.47	2.23	0.19	18.68	1.24	37.31
02-11-2020	4.47	2.24	0.2	18.7	1.23	39.81
03-11-2020	4.48	2.25	0.17	18.71	1.22	0
04-11-2020	4.5	2.25	0.15	18.68	1.25	0
05-11-2020	4.49	2.25	0.16	18.67	1.25	0
06-11-2020	4.48	2.25	0.18	18.63	1.23	27.66
07-11-2020	4.49	2.24	0.2	18.64	1.25	32.74
08-11-2020	4.48	2.24	0.21	18.64	1.24	39.12
09-11-2020	4.47	2.25	0.21	18.68	1.23	39.89
10-11-2020	4.49	2.25	0.24	18.7	1.23	41.57
11-11-2020	4.47	2.25	0.2	18.71	1.22	32.04
12-11-2020	4.48	2.24	0.16	18.68	1.24	20.76
13-11-2020	4.47	2.23	0.16	18.74	1.24	21

14-11-2020	4.47	2.23	0.17	18.67	1.24	25.24
15-11-2020	4.48	2.25	0.16	18.69	1.24	21.78
16-11-2020	4.47	2.24	0.16	18.76	1.23	19.71
17-11-2020	4.49	2.25	0.17	18.79	1.25	22.79
18-11-2020	4.48	2.25	0.16	18.74	1.23	18.81
19-11-2020	4.49	2.25	0.16	18.82	1.24	18.33
20-11-2020	4.47	2.24	0.16	18.76	1.22	23.21
21-11-2020	4.48	2.25	0.15	18.69	1.23	20.96
22-11-2020	4.49	2.26	0.15	18.64	1.23	20.5
23-11-2020	4.49	2.26	0.15	18.65	1.23	20.64
24-11-2020	4.48	2.25	0.15	18.68	1.23	19.09
25-11-2020	4.47	2.25	0.16	18.67	1.22	23.26
26-11-2020	4.48	2.25	0.17	18.67	1.23	27.43
27-11-2020	4.5	2.26	0.21	18.65	1.23	35.78
28-11-2020	4.47	2.26	0.16	18.65	1.21	21.36
29-11-2020	4.49	2.27	0.15	18.65	1.22	17.4
30-11-2020	4.49	2.26	0.15	18.66	1.24	17.01

Report Name : Average Report(Continued)

Date (DD-MM-YYYY)	AAQMS_2 PM10 (ug/m3)Normalized
Avg	89.58
Min	37.16
Max	200.18
Geom.Mean	89.58
Median	34.65
Mode	142.85
Std.Deviation	78.98
Prescribed Standard	100.0
First Max occurred at	09-11-2020
First Min occurred at	19-11-2020
Valid Data Points	28
Total Data Points	30
Data Availability %	93
Uncertainty	0
01-11-2020	0
02-11-2020	142.85
03-11-2020	96.63
04-11-2020	78.96
05-11-2020	54.42
06-11-2020	78.98
07-11-2020	74.43
08-11-2020	0
09-11-2020	200.18
10-11-2020	126.21
11-11-2020	137.82
12-11-2020	81.1
13-11-2020	70.65
14-11-2020	95.2
15-11-2020	68.83

Real Time Data Acquisition And Monitoring

16-11-2020	73.93
17-11-2020	69.99
18-11-2020	62.67
19-11-2020	37.16
20-11-2020	53.47
21-11-2020	64.79
22-11-2020	71.65
23-11-2020	122.21
24-11-2020	86.97
25-11-2020	106.52
26-11-2020	81.49
27-11-2020	115.34
28-11-2020	133.97
29-11-2020	51
30-11-2020	70.74

DIAMOND CEMENTS - DAMOH
PERFORMANCE OF ESPs/ BAG HOUSES

Nov-20

PCM ATTACHED TO	Plant Operation		PCM Operation		PCM Stoppage Hrs.	No. OF ESP Trippings	% OF ESP R.Hrs	Remarks
	Hrs.	Min	Hrs.	Min				
ESP To KILN NO. 1 + RAW MILL NO.1	675	10	675	10	0.000	0	100.00	
ESP To KILN NO. 2 + RAW MILL NO. 2	699	35	699	35	0.000	0	100.00	
REVERSE AIR BAG HOUSE(RABH) To KILN NO. 3 + RAW MILL NO. 3	479	55	479	55	0.000	0	100.00	
BAG HOUSE To COAL MILL NO. 1	479	5	479	5	0.000	0	100.00	
BAG HOUSE To COAL MILL NO. 2	612	0	612	0	0.000	0	100.00	
BAG HOUSE To COAL MILL NO. 3	429	25	429	25	0.000	0	100.00	
ESP To COOLER NO. 1	675	10	675	9	0.017	1	99.998	
ESP To COOLER NO. 2	699	35	699	35	0.000	0	100.000	
ESP To COOLER NO. 3	479	55	479	55	0.000	0	100.00	
BAG HOUSE To CEMENT MILL NO. 1	632	15	632	15	0.000	0	100.00	
BAG HOUSE To CEMENT MILL NO. 2	575	0	575	0	0.000	0	100.00	
BAG HOUSE To CEMENT MILL NO. 3	82	25	82	25	0.000	0	100.00	

DIAMOND CEMENTS DAMOH

Energy Meter Reading

Month : November - 20

S.No.	Location	Month	Consumption (KWH)	Remarks, If Any
Clinkerisation Unit Narsingarh				
1	Hybrid ESP For KILN/ RAW MILL NO.1	Nov-20	7015	
2	Hybrid ESP For KILN/ RAW MILL NO.2	Nov-20	9032	
3	RABH For KILN / RAW MILL NO. 3	Nov-20	189000	
4	ESP For COOLER NO. 1	Nov-20	19971	
5	ESP For COOLER NO. 2	Nov-20	20970	
6	ESP For COOLER NO. 3	Nov-20	11500	
7	BAG HOUSE For COAL MILL NO. 1	Nov-20	39959	
8	BAG HOUSE For COAL MILL NO. 2	Nov-20	130900	
9	BAG HOUSE For COAL MILL NO. 3	Nov-20	236990	
10	SEWAGE TREATMENT PLANT	Nov-20	8150	
Grinding Unit Imlai				
1	BAG HOUSE For CEMENT MILL NO. 1	Nov-20	7318	
2	BAG HOUSE For CEMENT MILL NO. 2	Nov-20	14455	
3	BAG HOUSE For CEMENT MILL NO. 3	Nov-20	4500	
4	SEWAGE TREATMENT PLANT	Nov-20	10400	

ABBREVIATIONS

S. No.	Abbreviation	Full Form
1.	SPM	Suspended Particulate Matter
2.	RABH	Reverse Air Bag House
3.	PM	Particulate Matter
4.	PM ₁₀	Particulate Matter of less than 10 micron size
5.	PM _{2.5}	Particulate Matter of less than 2.5 micron size
6.	SO ₂	Sulphur Dioxide
7.	NO ₂	Nitrogen Dioxide
8.	CO	Carbon Monoxide
9.	AAQMS	Ambient Air Quality Monitoring Station
10.	BDL	Below Detection Limit
11.	dB	Decibel
12.	°C	Degree Centigrade
13.	m/sec	Meter per second
14.	m ²	Meter square
15.	Nm ³ /sec	Normal cubic meter per second
16.	µg/m ³	Micro Grams per cubic meter
17.	mg/Nm ³	Milli Grams per Normal cubic meter
18.	mg/l	Milli Grams per liter



**National Accreditation Board for
Testing and Calibration Laboratories**
(A Constituent Board of Quality Council of India)



CERTIFICATE OF ACCREDITATION

ECOMEN LABORATORIES PVT. LTD.

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj,
Lucknow, Uttar Pradesh

in the field of

TESTING

Certificate Number TC-7587 (in lieu of T-2202)

Issue Date 25/07/2018

Valid Until 24/07/2020

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL



89076970100030001777

Anil Relia
Chief Executive Officer



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



26.06.2020

Extension in Validity of Accreditation

NABL Policy: It is decided to extend the validity of accreditation for a period of one year to all conformity assessment bodies (CABs) where renewal of accreditation is to take place and accreditation validity date is between 01.01.2020 and 30.06.2022 **subject to the following:**

1. Providing satisfactory documents based on NABL-218 wrt compliance to the requirements of the relevant Standard and NABL requirements.
2. The CABs are required to conduct additional internal audit to ensure compliance with the standard requirements (by increasing the existing frequency of their audit plan) and submit the document.
3. The CABs are required to provide control charts and trends for assuring the validity of results.
4. CABs are required to provide an undertaking to undergo unannounced assessment (onsite and/or remotely, depending on the situation) and actions as per NABL-216 thereof, at any point of time during the validity period.
5. Making payment of **annual accreditation fee** for the extended period.

Examples:

- Accredited CABs with date of issue 15.01.2018 and valid till 14.01.2020, then their Accreditation validity will be extended till 14.01.2021.
- Accredited CABs with date of issue 15.02.2019 and valid till 14.02.2021, then their Accreditation validity will be extended till 14.02.2022.
- Accredited CABs with date of issue 15.06.2020 and valid till 14.06.2022, then their Accreditation validity will be extended till 14.06.2023

NOTE:

1. The above will be applicable to the laboratories for which transition to ISO/IEC 17025:2017 version has been completed. For the laboratories which are accredited as per ISO/IEC 17025:2005 version, they have to undergo transition assessment (onsite and/or remotely, depending on the situation) and follow transition plan defined.
2. The above is not applicable to CABs where there will be a change in name of CAB and/or legal identity change and/or Premises change.
3. Also, **the above is not applicable to the CABs which are not registered in portal** (exemption- International accredited CABs).
4. Routine assessments will take place for any scope extension /addition.
5. Payment due to NABL can be deferred (postpone the payment) upto a period of Six (6) months. There will be no waive-off of any fee for any CABs. If payments are not made, then action as per procedure (NABL-216) will be initiated. There will be no relaxations wrt payment from 01.01.2021.

N.Venkateswaran
CEO, NABL



CERTIFICATE

*This is to Certify that the
Occupational Health & Safety Management System
of*

ECOMEN LABORATORIES PVT. LTD.

**FLAT NO. 5-8, 2ND FLOOR, ARIF CHAMBER-V, SECTOR- H,
ALIGANJ, LUCKNOW- 226024, (U.P.) INDIA.**

has been independently assessed and is compliant
with the requirements of

OHSAS 18001:2007

This Certificate is applicable to the following product or service ranges:

**ENVIRONMENTAL MONITORING, STUDIES, TESTING SERVICES IN
CHEMICAL FIELD, ENVIRONMENTAL IMPACT ASSESSMENT,
ENVIRONMENTAL MANAGEMENT PLAN AND
CONSULTANCY SERVICES**

Certificate No.: IN32538C

LAS UID No.: MSCB-132-76321

Date of initial registration 15 July 2015

Date of this Certificate 14 July 2018

Surveillance audit on or before 14 July 2019

Recertification Due / Certificate expiry 14 July 2021

This Certificate is property of LMS Certifications and remains valid
subject to satisfactory surveillance audits.



Director

For verification and updated information concerning the present certificate visit to www.lmscon.com
This Certificate is the property of LMS Certification Limited and shall be returned immediately when demanded.



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