



Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FMS/A

REPORT NO: CPL/R/AAQ/DEC-22/12N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341
 Location of Monitoring : **Near Mines Office Area**
 Monitoring Station Code : A1

Sample ID No	CPL/AAQ/NOV-22/139	CPL/AAQ/NOV-22/150	CPL/AAQ/NOV-22/165	CPL/AAQ/NOV-22/178
Date of Sampling	03.11.2022 - 04.11.2022	05.11.2022 - 06.11.2022	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022
Sampling Period	0810 - 0822 Hrs	0802 - 0810 Hrs	0905 - 0915 Hrs	0853 - 0902 Hrs
Time of Sampling	24.12 Hrs	24.08 Hrs	24.10 Hrs	24.09 Hrs
Sample Received on	12.11.2022	12.11.2022	12.11.2022	14.11.2022
Date of Test	13.11.2022	13.11.2022	13.11.2022	15.11.2022

Sample ID No	CPL/AAQ/NOV-22/285	CPL/AAQ/NOV-22/301	CPL/AAQ/NOV-22/320	CPL/AAQ/NOV-22/347
Date of Sampling	15.11.2022 - 16.11.2022	18.11.2022 - 19.11.2022	22.11.2022 - 23.11.2022	26.11.2022 - 27.11.2022
Sampling Period	0815 - 0828 Hrs	0815 - 0820 Hrs	0902 - 0910 Hrs	0815 - 0824 Hrs
Time of Sampling	24.13 Hrs	24.05 Hrs	24.08 Hrs	24.09 Hrs
Sample Received on	19.11.2022	19.11.2022	24.11.2022	28.11.2022
Date of Test	20.11.2022	20.11.2022	25.11.2022	29.11.2022

Sl No	Sample ID	Parameters			
		PM _{2.5}	PM ₁₀	SO ₂	NO ₂
Units		µg/m ³	µg/m ³	µg/m ³	µg/m ³
Method of Analysis		CPL/SD/01/PM2.5, Issue No: 04, dt: 23.10.2017	EN12341, 1918 Low Volume Sampler	IS:5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2006, RA 2017
1.	CPL/AAQ/NOV-22/139	17	52	09	25
2.	CPL/AAQ/NOV-22/150	15	49	12	33
3.	CPL/AAQ/NOV-22/165	21	60	11	35
4.	CPL/AAQ/NOV-22/178	27	69	05	19
5.	CPL/AAQ/NOV-22/285	27	77	05	16
6.	CPL/AAQ/NOV-22/301	19	58	04	20
7.	CPL/AAQ/NOV-22/320	26	74	09	24
8.	CPL/AAQ/NOV-22/347	23	67	05	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 th November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Prharaj
Managing Director

*****END OF TEST REPORT*****
Page 1 of 1

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Registered Office:
D/318, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:
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Tels Fax: 0661 - 2475746, email: cleenviron@gmail.com



Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS7A

REPORT NO: CPL/R/AAQ/DEC-22/12N

SAMPLE DRAWN BY CLEENVIRO PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Location of Monitoring : **Near Mines Office Area**
 Monitoring Station Code : **A1**

S No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	03.11.2022	1510 – 1610 Hrs	< 0.1
2	05.11.2022	0800 – 0900 Hrs	< 0.1
3	10.11.2022	0915 – 1015 Hrs	< 0.1
4	13.11.2022	1100 – 1200 Hrs	< 0.1
5	15.11.2022	1000 – 1100 Hrs	< 0.1
6	18.11.2022	1500 – 1600 Hrs	< 0.1
7	22.11.2022	0930 – 1030 Hrs	< 0.1
8	26.11.2022	0930 – 1030 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 th November 2009			04 (1 Hour Average)

Test Done By

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Authorized Signatory
Subhanga Prsharaj
Managing Director

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Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FMS/1A

REPORT NO: CPL/IAAQ/DEC-22/13N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA
 Sampling Method : IS: 5182
 Location of Monitoring : **Near Mine Main Gate**
 Monitoring Station Code : A2

Sample ID No	CPL/AAQ/NOV-22/138	CPL/AAQ/NOV-22/151	CPL/AAQ/NOV-22/164	CPL/AAQ/NOV-22/181
Date of Sampling	03.11.2022 - 04.11.2022	05.11.2022 - 06.11.2022	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022
Sampling Period	0840 - 0850 Hrs	0814 - 0820 Hrs	0925 - 0934 Hrs	0905 - 0913 Hrs
Time of Sampling	24.10 Hrs	24.06 Hrs	24.09 Hrs	24.08 Hrs
Sample Received on	12.11.2022	12.11.2022	12.11.2022	14.11.2022
Date of Test	14.11.2022	14.11.2022	14.11.2022	15.11.2022

Sample ID No	CPL/AAQ/NOV-22/288	CPL/AAQ/NOV-22/300	CPL/AAQ/NOV-22/318	CPL/AAQ/NOV-22/349
Date of Sampling	15.11.2022 - 16.11.2022	18.11.2022 - 19.11.2022	22.11.2022 - 23.11.2022	26.11.2022 - 27.11.2022
Sampling Period	0830 - 0838 Hrs	0830 - 0840 Hrs	0930 - 0940 Hrs	0828 - 0839 Hrs
Time of Sampling	24.08 Hrs	24.10 Hrs	24.10 Hrs	24.11 Hrs
Sample Received on	19.11.2022	19.11.2022	24.11.2022	28.11.2022
Date of Test	21.11.2022	21.11.2022	25.11.2022	29.11.2022

Sl. No.	Sample ID	Parameters			
		PM _{2.5}	PM ₁₀	SO ₂	NO ₂
Units		µg/m ³	µg/m ³	µg/m ³	µg/m ³
Method of Analysis		CPL/ISO/11/PM2.5, Issue No: 04, dt: 23.10.2017	IS: 12341, 1998 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 1) 2001, RA 2017
1.	CPL/AAQ/NOV-22/138	23	56	03	11
2.	CPL/AAQ/NOV-22/151	24	76	05	19
3.	CPL/AAQ/NOV-22/164	19	53	06	22
4.	CPL/AAQ/NOV-22/181	24	65	06	23
5.	CPL/AAQ/NOV-22/288	27	69	04	15
6.	CPL/AAQ/NOV-22/300	26	60	05	19
7.	CPL/AAQ/NOV-22/318	16	44	14	35
8.	CPL/AAQ/NOV-22/349	25	58	04	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 th November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Praharaj
Managing Director

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Page 1 of 1

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FAQA

REPORT NO: CPL/RAAQ/DEC-22/13N

SAMPLE DRAWN BY CLEENVIRO PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Location of Monitoring : **Near Mine Main Gate**
 Monitoring Station Code : **A2**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	03.11.2022	1300 – 1400 Hrs	< 0.1
2	05.11.2022	1100 – 1200 Hrs	< 0.1
3	10.11.2022	0830 – 0930 Hrs	< 0.1
4	13.11.2022	1100 – 1200 Hrs	< 0.1
5	15.11.2022	0900 – 1000 Hrs	< 0.1
6	18.11.2022	1200 – 1300 Hrs	< 0.1
7	22.11.2022	1300 – 1400 Hrs	< 0.1
8	26.11.2022	0930 – 1030 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 th November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Prharaj
Managing Director

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PM2.5

REPORT NO: CPL/RAAQ/DEC-22/14N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341
 Location of Monitoring : **Near Mine Pit - 1**
 Monitoring Station Code : **A3**

Sample ID No	CPL/AAQ/NOV-22/141	CPL/AAQ/NOV-22/152	CPL/AAQ/NOV-22/166	CPL/AAQ/NOV-22/180
Date of Sampling	03.11.2022 - 04.11.2022	05.11.2022 - 06.11.2022	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022
Sampling Period	0825 - 0830 Hrs	0830 - 0840 Hrs	0912 - 0923 Hrs	0916 - 0925 Hrs
Time of Sampling	24.05 Hrs	24.10 Hrs	24.11 Hrs	24.09 Hrs
Sample Received on	12.11.2022	12.11.2022	12.11.2022	14.11.2022
Date of Test	13.11.2022	13.11.2022	13.11.2022	15.11.2022

Sample ID No	CPL/AAQ/NOV-22/286	CPL/AAQ/NOV-22/302	CPL/AAQ/NOV-22/319	CPL/AAQ/NOV-22/345
Date of Sampling	15.11.2022 - 16.11.2022	18.11.2022 - 19.11.2022	22.11.2022 - 23.11.2022	26.11.2022 - 27.11.2022
Sampling Period	0840 - 0855 Hrs	0837 - 0850 Hrs	0915 - 0930 Hrs	0837 - 0850 Hrs
Time of Sampling	24.15 Hrs	24.13 Hrs	24.15 Hrs	24.13 Hrs
Sample Received on	19.11.2022	19.11.2022	24.11.2022	28.11.2022
Date of Test	21.11.2022	21.11.2022	25.11.2022	29.11.2022

Sl No	Sample ID	Parameters			
		PM _{2.5} µg/m ³	PM ₁₀ µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³
	Units				
	Method of Analysis	CPL/SD/11/PM2.5, Issue No: 24, dt: 23.10.2017	EN 12341, 1998 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2003, RA 2017
1.	CPL/AAQ/NOV-22/141	21	67	08	24
2.	CPL/AAQ/NOV-22/152	14	50	08	21
3.	CPL/AAQ/NOV-22/166	24	72	07	22
4.	CPL/AAQ/NOV-22/180	21	64	07	26
5.	CPL/AAQ/NOV-22/286	26	77	04	17
6.	CPL/AAQ/NOV-22/302	25	79	05	21
7.	CPL/AAQ/NOV-22/319	21	58	06	17
8.	CPL/AAQ/NOV-22/345	23	67	13	36
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 th November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By



Authorized Signatory
Subhanga Praharaj
Managing Director

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FM/STA

REPORT NO: CPL/RIA/Q/DEC-22/14N

SAMPLE DRAWN BY CLEENVIIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Location of Monitoring : **Near Mine Pit - 1**
 Monitoring Station Code : **A3**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	03.11.2022	1300 - 1400 Hrs	< 0.1
2	06.11.2022	0900 - 1000 Hrs	< 0.1
3	09.11.2022	0800 - 0900 Hrs	< 0.1
4	13.11.2022	1100 - 1200 Hrs	< 0.1
5	15.11.2022	0900 - 1000 Hrs	< 0.1
6	18.11.2022	1200 - 1300 Hrs	< 0.1
7	22.11.2022	1300 - 1400 Hrs	< 0.1
8	26.11.2022	0930 - 1030 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 th November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Prabhakar
Managing Director

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS/A

REPORT NO: CPL/AAQ/DEC-22/15N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341
 Location of Monitoring : **Near Mine Pit - 2**
 Monitoring Station Code : A4

Sample ID No	CPL/AAQ/NOV-22/140	CPL/AAQ/NOV-22/153	CPL/AAQ/NOV-22/167	CPL/AAQ/NOV-22/179
Date of Sampling	03.11.2022 - 04.11.2022	05.11.2022 - 06.11.2022	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022
Sampling Period	0900 - 0917 Hrs	0847 - 0855 Hrs	0940 - 0952 Hrs	0843 - 0855 Hrs
Time of Sampling	24.17 Hrs	24.08 Hrs	24.12 Hrs	24.12 Hrs
Sample Received on	12.11.2022	12.11.2022	12.11.2022	14.11.2022
Date of Test	13.11.2022	13.11.2022	13.11.2022	15.11.2022

Sample ID No	CPL/AAQ/NOV-22/287	CPL/AAQ/NOV-22/303	CPL/AAQ/NOV-22/321	CPL/AAQ/NOV-22/346
Date of Sampling	15.11.2022 - 16.11.2022	18.11.2022 - 19.11.2022	22.11.2022 - 23.11.2022	26.11.2022 - 27.11.2022
Sampling Period	0857 - 0908 Hrs	0850 - 0908 Hrs	0945 - 0958 Hrs	0850 - 0905 Hrs
Time of Sampling	24.11 Hrs	24.18 Hrs	24.13 Hrs	24.15 Hrs
Sample Received on	19.11.2022	19.11.2022	24.11.2022	28.11.2022
Date of Test	21.11.2022	21.11.2022	25.11.2022	29.11.2022

Sl No	Sample ID	Parameters			
		PM _{2.5}	PM ₁₀	SO ₂	NO ₂
Units		µg/m ³	µg/m ³	µg/m ³	µg/m ³
Method of Analysis		CPL/BCP/IMP/PM2.5, Issue No: 24, dt: 23.10.2017	EN 12341, 1918 Low Volume Sampler	IS:5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2001, RA 2017
1.	CPL/AAQ/NOV-22/140	24	60	04	14
2.	CPL/AAQ/NOV-22/153	29	73	06	26
3.	CPL/AAQ/NOV-22/167	27	70	09	30
4.	CPL/AAQ/NOV-22/179	20	56	09	26
5.	CPL/AAQ/NOV-22/287	19	57	04	16
6.	CPL/AAQ/NOV-22/303	26	87	05	21
7.	CPL/AAQ/NOV-22/321	22	68	05	18
8.	CPL/AAQ/NOV-22/346	22	72	05	20
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 th November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Pruthi
Managing Director

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PRSTA

REPORT NO: CPL/IAAQ/DEC-22/15N

SAMPLE DRAWN BY CLEENVIRO PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Location of Monitoring : **Near Mine Pit - 2**
 Monitoring Station Code : **A4**

S No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	03.11.2022	1000 - 1100 Hrs	< 0.1
2	06.11.2022	0915 - 1015 Hrs	< 0.1
3	10.11.2022	1100 - 1200 Hrs	< 0.1
4	13.11.2022	1100 - 1200 Hrs	< 0.1
5	15.11.2022	1125 - 1225 Hrs	< 0.1
6	18.11.2022	1200 - 1300 Hrs	< 0.1
7	22.11.2022	1300 - 1400 Hrs	< 0.1
8	26.11.2022	0930 - 1030 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 th November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory
Subhanga Pradhan
Managing Director

*****END OF TEST REPORT*****

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Tel: Fax: 0661 - 2475746, email: cleenviron@gmail.com



Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MSA

REPORT NO: CPL/AAQ/DEC-22/16N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**
 Location of Monitoring : **Khatkurbahal Village Area (Buffer Zone)**
 Monitoring Station Code : **A5**

Sample ID No	CPL/AAQ/NOV-22/253	CPL/AAQ/NOV-22/284	CPL/AAQ/NOV-22/289	CPL/AAQ/NOV-22/304
Date of Sampling	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022	15.11.2022 - 16.11.2022	18.11.2022 - 19.11.2022
Sampling Period	0802 - 0800 Hrs	0832 - 0844 Hrs	0915 - 0930 Hrs	0918 - 0930 Hrs
Time of Sampling	23.98 Hrs	24.12 Hrs	24.15 Hrs	24.12 Hrs
Sample Received on	11.11.2022	19.11.2022	19.11.2022	19.11.2022
Date of Test	12.11.2022	21.11.2022	21.11.2022	21.11.2022

Sample ID No	CPL/AAQ/NOV-22/322	CPL/AAQ/NOV-22/348	CPL/AAQ/NOV-22/363	CPL/AAQ/DEC-22/1
Date of Sampling	22.11.2022 - 23.11.2022	26.11.2022 - 27.11.2022	28.11.2022 - 29.11.2022	30.11.2022 - 01.12.2022
Sampling Period	0850 - 0900 Hrs	0803 - 0810 Hrs	0815 - 0810 Hrs	0830 - 0820 Hrs
Time of Sampling	24.10 Hrs	24.07 Hrs	23.55 Hrs	23.50 Hrs
Sample Received on	24.11.2022	28.11.2022	30.11.2022	01.12.2022
Date of Test	25.11.2022	29.11.2022	01.12.2022	02.12.2022

Sl No	Sample ID	Parameters			
		PM _{2.5}	PM ₁₀	SO ₂	NO ₂
Units		µg/m ³	µg/m ³	µg/m ³	µg/m ³
Method of Analysis		CPL/SOP/PM2.5, Issue No: 04, dt: 23.03.2017	EN 12341, 1998 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2006, RA 2007
1.	CPL/AAQ/NOV-22/253	23	54	05	18
2.	CPL/AAQ/NOV-22/284	26	69	04	17
3.	CPL/AAQ/NOV-22/289	20	52	05	16
4.	CPL/AAQ/NOV-22/304	18	54	05	23
5.	CPL/AAQ/NOV-22/322	20	58	07	33
6.	CPL/AAQ/NOV-22/348	22	55	06	20
7.	CPL/AAQ/NOV-22/363	24	59	05	22
8.	CPL/AAQ/DEC-22/1	21	55	06	20
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 th November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By

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Authorized Signatory
Subhanga Praharaj
Managing Director

Page 1 of 1

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/1837A

REPORT NO: CPL/IAAQ/DEC-22/16N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Location of Monitoring : **Khatkurbahal Village Area (Buffer Zone)**
 Monitoring Station Code : **A5**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
	Method of Analysis		
1	09.11.2022	0900 - 1000 Hrs	< 0.1
2	13.11.2022	0915 - 1015 Hrs	< 0.1
3	15.11.2022	1100 - 1200 Hrs	< 0.1
4	18.11.2022	1100 - 1200 Hrs	< 0.1
5	22.11.2022	1125 - 1225 Hrs	< 0.1
6	26.11.2022	1200 - 1300 Hrs	< 0.1
7	28.11.2022	1300 - 1400 Hrs	< 0.1
8	30.11.2022	1300 - 1400 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 th November 2009			04 (1 Hour Average)

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*****END OF TEST REPORT*****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/TKM

REPORT NO: CPL/R/W/DEC-22/1N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/27**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Bore well Near Mines Office**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 rd Edition, 2130 B	0.30	NTU	1.0
2	pH Value	APHA 23 rd Edition, 4500 H+B	7.30	-	6.5 – 8.5
3	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	307.5	mg/l	200
4	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.18	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	57.98	mg/l	250
6	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	400	mg/l	500
7	Electrical Conductivity	APHA 23 rd Edition, 2510 B	633	µS/cm	-
8	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	90.38	mg/l	75
9	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	19.93	mg/l	30
10	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	10.06	mg/l	200
13	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	6.31	mg/l	45
14	Total Alkalinity (as CaCO ₃)	APHA 23 rd Edition, 2320 B	176	mg/l	200
15	Acidity	APHA 23 rd Edition, 2310 B	10	mg/l	-
16	Sulphide (as H ₂ S)	APHA 23 rd Edition, 4500 S ²⁻ D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 rd Edition, 3500 Na B	28.10	mg/l	-
18	Potassium (as K)	APHA 23 rd Edition, 3500 K B	14.32	mg/l	-
19	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.0

Chakrabarty
Test Done By



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Managing Director

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/1880

REPORT NO: CPL/R/W/DEC-22/1N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/27**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Bore well Near Mines Office**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
20	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 rd Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 rd Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.


 Test Done By


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 Managing Director

**** End of Test Report ****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMSI


REPORT NO: CPL/R/W/DEC-22/11

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/27**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Bore well Near Mines Office**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10503: 2012
1	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 rd Edition, 2550 B	24.4	°C	-
5	Residual Free Chlorine	MERCK	0.03	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coll	RAKIRO	Absent	Nos/100ml	Absent


 Test Done By


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**** End of Test Report ****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/RW8

REPORT NO: CPL/R/W/DEC-22/2N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/28**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Tube well Village Khatkurbahal**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 rd Edition, 2130 B	2.4	NTU	1.0
2	pH Value	APHA 23 rd Edition, 4500 H+B	7.40	-	6.5 – 8.5
3	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	246	mg/l	200
4	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.18	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	13.99	mg/l	250
6	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	311	mg/l	500
7	Electrical Conductivity	APHA 23 rd Edition, 2510 B	478	µS/cm	-
8	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	44.37	mg/l	75
9	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	32.87	mg/l	30
10	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	2.17	mg/l	200
13	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	4.23	mg/l	45
14	Total Alkalinity (as CaCO ₃)	APHA 23 rd Edition, 2320 B	192	mg/l	200
15	Acidity	APHA 23 rd Edition, 2310 B	06	mg/l	-
16	Sulphide (as H ₂ S)	APHA 23 rd Edition, 4500 S ²⁻ D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 rd Edition, 3500 Na B	17.86	mg/l	-
18	Potassium (as K)	APHA 23 rd Edition, 3500 K B	10.02	mg/l	-
19	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.0

C. Sahoo
Test Done By

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Authorized Signatory
Subhanga Praharaj
Managing Director

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLFM01

REPORT NO: CPLR/W/DEC-22/2N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/28**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Tube well Village Khatkurbahal**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**


Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
20	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 rd Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 rd Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.


 Test Done By


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 Subhanga Praharaj
 Managing Director

**** End of Test Report ****

Page 2 of 2

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FR0

REPORT NO: CPL/R/W/DEC-22/2N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRO PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/28**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Tube well Village Khatkurbahal**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

S/No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS-10500: 2012
1	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 rd Edition, 2550 B	24.3	°C	-
5	Residual Free Chlorine	MERCK	0.06	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

Test Done By

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**** End of Test Report ****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WRM

REPORT NO: CPL/RW/DEC-22/3N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/26**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Tube well Village Kullen Bahal**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 rd Edition, 2130 B	1.20	NTU	1.0
2	pH Value	APHA 23 rd Edition, 4500 H+B	6.93	-	6.5 – 8.5
3	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	45.1	mg/l	200
4	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.22	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	13.99	mg/l	250
6	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	70	mg/l	500
7	Electrical Conductivity	APHA 23 rd Edition, 2510 B	108.9	µS/cm	-
8	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	8.22	mg/l	75
9	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	5.98	mg/l	30
10	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	1.63	mg/l	200
13	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	45
14	Total Alkalinity (as CaCO ₃)	APHA 23 rd Edition, 2320 B	24	mg/l	200
15	Acidity	APHA 23 rd Edition, 2310 B	02	mg/l	-
16	Sulphide (as H ₂ S)	APHA 23 rd Edition, 4500 S ²⁻ D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 rd Edition, 3500 Na B	9.86	mg/l	-
18	Potassium (as K)	APHA 23 rd Edition, 3500 K B	5.46	mg/l	-
19	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.0

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Test Done By



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Subhanga Praharaj
Managing Director

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLFM/3

REPORT NO: CPL/R/W/DEC-22/3N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/26**
 Date of Sampling : **18.11.2022**
 Sample Description : **Ground Water**
 Location of Sampling : **Tube well Village Kullen Bahal**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
20	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 rd Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 rd Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 rd Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

[Signature]
Test Done By

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Managing Director

**** End of Test Report ****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMS

REPORT NO: CPL/RW/DEC-22/3N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA
 Sample ID No : **CPL/W/NOV-22/26**
 Date of Sampling : 18.11.2022
 Sample Description : Ground Water
 Location of Sampling : Tube well Village Kullen Bahal
 Sampling Method : APHA 23rd Edition, 1060
 Sampling Deviation (if any) : Nil
 Condition of Sample while receipt : Sealed
 Appearance of Sample while receipt: Clear
 Type of Container used for sampling: Wide mouth Plastic Bottles
 Sample Received on : 19.11.2022
 Date of Test : 19.11.2022 – 25.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501: 2012
1	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 rd Edition, 2550 B	24.2	°C	-
5	Residual Free Chlorine	MERCK	0.04	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

Chakras
Test Done By

Subhanga
Verified By



Subhanga
Authorized Signatory
Subhanga Praharaj
Managing Director

**** End of Test Report ****

Page 1 of 1

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

GROUND WATER LEVEL MONITORING REPORT

PROJECT SITE: **KHATKURBAHAL LIMESTONE & DOLOMITE MINES**

CLIENT: **M/s SHIVA CEMENT LIMITED, VIII: TELEGHANA, At: BRINGATOLI, KUTRA, DIST: SUNDARGARH: 770018, ODISHA**

Ground Water Levels are measured from existing Wells on 18th November 2022 for the Fourth Quarter from the following mentioned points and data thus recorded are as follows:

SI No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Village Khatkurbahal Dug Well 22° 16' 47.7" N – 84° 28' 41.8" E	0.50	11.0	5.80	261.8	256.2
2	Village Kulenbahal Dug Well 22° 16' 25.9" N – 84° 27' 11.8" E	0.00	9.0	4.23	178.3	174.07

MP : Measuring Point
GL : Ground Level
TDBMP : Total Depth Below Measuring Point
WLBGL : Water Level Below Ground Level
WLAMSL : Water Level Above Mean Sea Level

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For Cleenviron Private Limited



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Tel: Fax: 0661 – 2475746, email: cleenviron@gmail.com



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Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLR/WQ

REPORT NO: CPLR/W/DEC-22/4N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/31**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Jharia Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	7.94	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	303	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	182	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	172.2	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	8.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	1.69	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	34.51	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	20.92	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.28	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁶⁺)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	6.2	mg/l	-

Test Done By

Verified By



Authorized Signatory
Subhanga Praharaj
Managing Director

****End of Test Report****
Page 1 of 1

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MS9

REPORT NO: CPL/R/W/DEC-22/4N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/31**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Jharia Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 36) 1989, RA 2019	6.1	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	< 01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	3.52	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	10	Nos/100ml	5000

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 Test Done By



[Signature]
 Authorized Signatory
 Subhanga Praharaj
 Managing Director

****End of Test Report****

Page 1 of 1

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/RMNC

REPORT NO: CPL/R/W/DEC-22/5N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/30**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Tambu Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2298 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	7.89	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	228	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	137	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	106.6	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	8.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ 2-E	4.15	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	23.01	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	11.96	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.32	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁺⁶)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	4.2	mg/l	-

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Test Done By

[Signature]
Verified By



[Signature]
Authorized Signatory
Subhanga Praharaj
Managing Director

****End of Test Report****
Page 1 of 1

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLFRW

REPORT NO: CPLR/W/DEC-22/5N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/30**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Tambu Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.2	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	5.28	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	10	Nos/100ml	5000


 Test Done By


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 Subhanga Prabhara
 Managing Director

****End of Test Report****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMSD

REPORT NO: CPL/R/WIDEC-22/6N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/29**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Sankh River After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	8.04	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	173.3	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	104	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	57.4	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	9.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	2.26	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	16.30	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	3.98	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.30	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁶⁺)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	10.4	mg/l	-

[Signature]
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Authorized Signatory
Subhanga Prasharaj
Managing Director

****End of Test Report****
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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FORM

REPORT NO: CPLR/W/DEC-22/6N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/29**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Sankh River After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.4	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	< 01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	1.78	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	Absent	Nos/100ml	5000


 Test Done By


 Verified By




 Authorized Signatory
 Subhanga Praharaj
 Managing Director

****End of Test Report****

Page 1 of 1

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/RSB

REPORT NO: CPL/R/W/DEC-22/7N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/24**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Kanti Jharia Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	7.70	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	374	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	224	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	192.7	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	13.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	1.61	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	49.29	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	16.24	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.16	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁶⁺)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	5.5	mg/l	-

[Signature]
Test Done By

[Signature]
Verified By



[Signature]
Authorized Signatory
Subhanga Prabhara
Managing Director

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Page 1 of 1

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FRW

REPORT NO: CPL/R/WIDEC-22/7N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/24**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Kanti Jharia Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.0	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	3.52	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	10	Nos/100ml	5000


 Test Done By



Authorized Signatory 
 Subhanga Praharaj
 Managing Director

****End of Test Report****

Page 1 of 1

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MS03

REPORT NO: CPL/R/W/DEC-22/8N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/25**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Nakti Jor Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per (SI: 2296 (Class C))
1.	pH Value	APHA 23 rd Edition, 4500 H+B	7.58	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	383	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	230	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	205	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	6.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	2.16	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	39.44	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	25.90	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.14	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.032	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁶⁺)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	8.8	mg/l	-


 Test Done By



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 Subhanga Prabharaaj
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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FORM

REPORT NO: CPL/R/W/DEC-22/8N

REPORT ISSUE DATE: 01.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/25**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Nakti Jor Nala After ML Area**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 – 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.0	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	< 01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	3.52	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	10	Nos/100ml	5000


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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FWS

REPORT NO: CPL/RW/DEC-22/22N

REPORT ISSUE DATE: 02.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/32**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Mine Pit - 1**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 - 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	7.32	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	421	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	253	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	196.8	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	28.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	13.59	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	50.94	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	16.94	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.39	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ⁶⁺)	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	20.7	mg/l	-


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Subhanga Prasharaj
Managing Director

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLTRMRE

REPORT NO: CPLRW/DEC-22/22N

REPORT ISSUE DATE: 02.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPLW/NOV-22/32**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Mine Pit - 1**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 - 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.2	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	< 01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	1.76	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	Absent	Ncs/100ml	5000


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 Subhanga Prabhara
 Managing Director

****End of Test Report****

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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLIRW3

REPORT NO: CPLIRW/DEC-22/23N

REPORT ISSUE DATE: 02.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/33**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Mine Pit - 2**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt : **Clear**
 Type of Container used for sampling : **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 - 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2295 (Class C)
1.	pH Value	APHA 23 rd Edition, 4500 H+B	6.38	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 rd Edition, 2510 B	309	µS/cm	-
3.	Total Dissolved Solids	APHA 23 rd Edition, 2540 B	185	mg/l	1500
4.	Total Hardness (as CaCO ₃)	APHA 23 rd Edition, 2340 C	114.8	mg/l	-
5.	Chlorides (as Cl)	APHA 23 rd Edition, 4500 Cl B	34.99	mg/l	600
6.	Sulfate (as SO ₄)	APHA 23 rd Edition, 4500 SO ₄ ²⁻ E	1.69	mg/l	400
7.	Total Nitrate (as NO ₃)	APHA 23 rd Edition, 4500 NO ₃ B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 rd Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 rd Edition, 3500 Ca B	34.51	mg/l	-
10.	Magnesium (as Mg)	APHA 23 rd Edition, 3500 Mg B	6.97	mg/l	-
11.	Copper (as Cu)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 rd Edition, 3500 Fe B	0.18	mg/l	50
13.	Manganese (as Mn)	APHA 23 rd Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 rd Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 rd Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 rd Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 rd Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 rd Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr ^{VI})	APHA 23 rd Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 rd Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	3.9	mg/l	-

C. Sahoo
Test Done By

[Signature]
Verified By



[Signature]
Authorized Signatory
Subhanga Praharaj
Managing Director

****End of Test Report****
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TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMSR

REPORT NO: CPL/R/WIDEC-22/23N

REPORT ISSUE DATE: 02.12.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Sample ID No : **CPL/W/NOV-22/33**
 Sample Description : **Surface Water**
 Date of Sampling : **18.11.2022**
 Location of Sampling : **Mine Pit - 2**
 Sampling Method : **APHA 23rd Edition, 1060**
 Sampling Deviation (if any) : **Nil**
 Condition of Sample while receipt : **Sealed**
 Appearance of Sample while receipt: **Clear**
 Type of Container used for sampling: **Wide Mouth Plastic Bottles**
 Sample Received on : **19.11.2022**
 Date of Test : **19.11.2022 - 25.11.2022**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 rd Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.2	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 rd Edition, 5210 D	01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 39) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO ₂)	APHA 23 rd Edition, 4500 CO ₂ C	7.04	mg/l	-
8.	Free Ammonia (as NH ₃)	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C ₆ H ₅ OH)	MERCK	< 0.002	mg/l	0.005
11.	Anionic Detergents (as MBAS)	MERCK	< 0.05	mg/l	1.0
12.	Total Coliforms	RAKIRO	Absent	Ncs/100ml	5000

Chirahoo
Test Done By



Subhanga Praharaj
Authorized Signatory
Subhanga Praharaj
Managing Director

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Cleenviron Private Limited

Consultant and Engineers in Environmental Pollution Control & Monitoring with Laboratory Facility.

STREAM FLOW MEASUREMENT DATA


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTOME & DOLOMITE MINES,
 VILL: TELEGHANA, PO: BRINGATOLI, DIST: SUNDARGARH - 770018,
 ODISHA**

Flow Measurement was carried out from the JHARIA NALA from the following points and data thus recorded is as follows:

Location Width of the Stream
 JHARIA NALA 3.2 m
 Coordinates Lat: 22° 18' 3"N to Long: 84° 29' 36"E Elevation: 151m AMSL
 Date of Monitoring 18.11.2022

Cross Section	0m (Left Bank)	1.0m	2.0m	3.0m	3.2m (Right Bank)
Water Depth (m)	0.01	0.22	0.41	0.21	0.01
Surface Flow (m/s)					
1st	0.769	0.769	0.769	0.909	0.909
2nd	0.667	0.667	0.667	1.11	1.11
3rd	0.714	0.714	0.714	0.833	0.833
Average Flow (m/s)	0.717	0.717	0.717	0.951	0.951

Water Discharge (m ³ /s)	0.082	0.226	0.222	0.021
Total Discharge of Water through the Cross-section (m ³ /s)	0.551			
(m ³ /h)	1984.49			
(m ³ /D)	47627.8			


 Authorized Signatory
 For Cleenviron Private Limited



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STREAM FLOW MEASUREMENT DATA

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES,
 VILL: TELEGHANA, PO: BRINGATOLI, DIST: SUNDARGARH - 770018,
 ODISHA**

Flow Measurement was carried out from the JHARIA NALA from the following points and data thus recorded is as follows:

Location **KANTI JHARIA NALA** Width of the Stream **6.1 m**
 Coordinates **Lat: 22° 13' 12"N to Long: 84° 29' 22"E** Elevation **164m AMSL**
 Date of Monitoring **18.11.2022**

Cross Section	0m (Left Bank)	1.0m	2.0m	3.0m	4.0m	5.0m	6.0m	6.1m (Right Bank)
Water Depth (m)	0.020	0.350	0.330	0.300	0.280	0.200	0.028	0.010
Surface Flow (m/s)								
1st	0.324	0.324	0.324	0.324	0.308	0.308	0.308	0.308
2nd	0.344	0.344	0.344	0.344	0.289	0.289	0.289	0.289
3rd	0.354	0.354	0.354	0.354	0.296	0.296	0.296	0.296
Average Flow (m/s)	0.341	0.341	0.341	0.341	0.298	0.298	0.298	0.298

Water Discharge (m ³ /s)	0.063	0.116	0.107	0.069	0.071	0.034	0.001	
Total Discharge of Water through the Cross-section (m ³ /s)	0.461							
(m ³ /h)	1660.52							
(m ³ /D)	39852.4							


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STREAM FLOW MEASUREMENT DATA


Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTOME & DOLOMITE MINES,
 VILL: TELEGHANA, PO: BRINGATOLI, DIST: SUNDARGARH - 770018,
 ODISHA**

Flow Measurement was carried out from the NAKTIJOR NALA from the following points and data thus recorded is as follows:

Location Width of the Stream
 NAKTIJOR NALA 2.2 m
 Coordinates Lat: 22° 12' 5"N to Long: 84° 26' 35"E Elevation: 183m AMSL
 Date of Monitoring 18.11.2022

Cross Section	0m (Left Bank)	1.0m	2.0m	2.2m (Right Bank)
Water Depth (m)	0	0.32	0.36	0.01
Surface Flow (m/s)				
1st	0.376	0.376	0.376	0.376
2nd	0.421	0.421	0.421	0.421
3rd	0.399	0.399	0.399	0.399
Average Flow (m/s)	0.399	0.399	0.399	0.399

Water Discharge (m ³ /s)	0.064	0.136	0.015
Total Discharge of Water through the Cross-section (m ³ /s)	0.214		
(m ³ /h)	770.70		
(m ³ /D)	18496.9		


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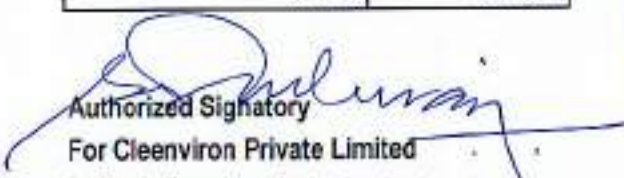
STREAM FLOW MEASUREMENT DATA

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTOME & DOLOMITE MINES,
 VILL: TELEGHANA, PO: BRINGATOLI, DIST: SUNDARGARH
 ODISHA - 770018**

Flow Measurement was carried out from the JHARIA NALA from the following points and data thus recorded is as follows:

Location **TAMBU NALA** Width of the Stream **7.3 m**
 Coordinates **Lat: 22° 19' 35"N to Long: 84° 28' 24"E** Elevatic **129m AMSL**
 Date of Monitoring **18.11.2022**

	0m (Left Bank)	1.0m	2.0m	3.0m	4.0m	5.0m	6.0m	7.0m
Cross Section								
Water Depth (m)	0.01	0.36	0.44	0.48	0.42	0.31	0.405	0.21
Surface Flow (m/s)								
1st	0.114	0.114	0.114	0.114	0.175	0.175	0.175	0.133
2nd	0.128	0.128	0.128	0.128	0.154	0.154	0.154	0.128
3rd	0.122	0.122	0.122	0.122	0.162	0.162	0.162	0.142
Average Flow (m/s)	0.121	0.121	0.121	0.121	0.164	0.164	0.164	0.134
Cross Section	7.3m (Right Bank)							
Water Depth (m)	0.01							
Surface Flow (m/s)								
1st	0.133							
2nd	0.128							
3rd	0.142							
Average Flow (m/s)	0.134							
Water Discharge (m³/s)	0.022	0.049	0.056	0.038	0.060	0.059	0.050	0.004
Total Discharge of Water through the Cross-section (m³/s)	0.338							
(m ³ /h)	1216.88							
(m ³ /D)	29205.2							


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TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/PM2

REPORT NO: CPL/R/N/DEC-22/2N

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**
 Address of the Customer : **KHATKURBAHAL LIMESTONE & DOLOMITE MINES, SUNDARGARH, ODISHA**
 Instrument Used : **Sound Level Meter (LUTRON: SL 4001)**

Station No	N1	N2	N3
Sample ID	CPL/N/NOV-22/10	CPL/N/NOV-22/11	CPL/N/NOV-22/17
Date of Monitoring	09.11.2022 - 10.11.2022	12.11.2022 - 13.11.2022	15.11.2022 - 16.11.2022
Location of Monitoring	NEAR MINES MAIN GATE	NEAR MINES OFFICE AREA	NEAR MINES PIT-1

SL NO	STATION NO	L_{eq} DAY TIME (6:00AM - 10:00PM) dB(A)	L_{eq} NIGHT TIME (10:00PM - 6:00AM) dB(A)	L_{max} dB(A)	L_{min} dB(A)
1.	N1	58.2	46.6	65.3	44.3
2.	N2	63.6	48.7	68.8	44.1
3.	N3	64.8	45.6	72.4	43.8

Station No	N4	N5
Sample ID	CPL/N/NOV-22/16	CPL/N/NOV-22/42
Date of Monitoring	18.11.2022 - 19.11.2022	22.11.2022 - 23.11.2022
Location of Monitoring	NEAR MINES PIT-2	KHATKURBAHAL VILLAGE AREA

SL NO	STATION NO	L_{eq} DAY TIME (6:00AM - 10:00PM) dB(A)	L_{eq} NIGHT TIME (10:00PM - 6:00AM) dB(A)	L_{max} dB(A)	L_{min} dB(A)
3.	N4	65.6	48.3	72.4	44.1
4.	N5	61.0	46.1	68.4	44.1

Test Done By



Authorized Signatory
 Subhanga Praharaj
 Managing Director

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE AS PER CPCB

Area Code	Category of Area/Zone	Limits in dB (A) Leq.	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Sience Zone	50	40

****END OF TEST REPORT****

Page 1 of 1

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