

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF MAY
2022**

At the request of:

M/S. SHIVA CEMENT LIMITED

Teleghana, P.o. – Kutra, Dist.- Sundargarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

At/Po – Barbil
Dist.- : Keonjhar, (Odisha)
Pin - 758035.

Mitra S. K. Private Limited

A/P.O.: BARBIL Ward No-6
 Dist.: Keonjhar, Odisha - 758035
 CIN: U51909WB1956PTC023037
 T : +91 94370 09815,94370 09820,94370 75269
 E : barbil@mitrask.co.in
 W : www.mitrask.com



Ref. No.BBL/ENV/3247

DATE: 09/06/2022

AMBIENT AIR QUALITY MONITORING REPORT

Name of the Industry: M/s. SHIVA CEMENT LIMITED
 Address: Telegana, Kutra, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants											Benzo(a) pyrene (ng/m ³)	
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzen e (µg/m ³)		
1	16/17.05.2022	Near Main Gate	67.4	37.2	7.0	21.8	0.31	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5	
2	16/17.05.2022	Near TG Building	60.8	32.7	6.2	18.2	0.25	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5	
3	16/17.05.2022	Clinker Bulk loading Area.	63.7	34.6	6.4	19.2	0.27	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5	
4	17/18.05.2022	Colony Area of SCL	55.3	29.8	6.0	18.2	0.25	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5	
Limit as per CPCB notification, New Delhi, 18th Nov, 2009. for Ambient air quality			100	60	80	80	2	180	400	1	20	6	5	1	
Sampling and Analysis done according to			IS: 5182 (Part-23) -1999	USEPA CFR-40, Part-50, Appendix-L	IS: 5182 (Part-2) -2001	IS: 5182 (Part-6) -2006	IS 5182 : Part.10-1999	Air Sampling, 3 rd Edn. By James P. Lodge (Method-411)	Air Sampling, 3 rd Edn. By James P. Lodge (Method-401)	EPA IO-3.2	EPA IO-3.2	APHA 22 nd -3114 C	IS 5182: Part. 11	IS 5182: Part. 12	
Barometric pressure (mm of Hg):			750	Temperature °C:				29 - 42	Climatic condition:				Clear & Sunny		

Checked by:- *Jaydeo*



For Mitra S. K. Private Limited
 Authorised Signatory

H. O.: Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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Mitra S. K. Private Limited



At/P.O. : BARBIL Ward No - 6
Dist. : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269
E : barbil@mitrask.co.in

Ref. No. BBL/ENV/3248

DATE: 09/06/2022

ANALYSIS REPORT OF FUGITIVE AIR

Name of the Industries:		M/s. SHIVA CEMENT LIMITED	
Address:		Teleghana, Kutra, Dist. Sundargarh (Odisha)	
Sl.No.	Date of Sampling	Location	Concentration of Pollutants:
			Particulate Matter $\mu\text{g}/\text{m}^3$
1	17.05.2022	Crusher Area	176.3
2	17.05.2022	Cement Mill Area	194.2
3	18.05.2022	Coal Mill Area	183.4
4	18.05.2022	Kiln Area	187.8
Sampling & Analysis done According to			IS: 5182 (Part-23) IS: 5182 (Part-4) 1999 Rffm:
Barometric pressure (mm of Hg)			750
Temperature $^{\circ}\text{C}$			29 - 42
Climatic condition			Clear & Sunny

Checked by:- Jgandia



For Mitra S. K. Private Limited
[Signature]
Authorised Signatory

At/P.O. : BARBIL Ward No - 6
 Dist. : Keonjhar, Odisha - 758035
 CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269
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Ref. No. BBL/ENV/3249

DATE: 09/06/2022

CERTIFICATE OF NOISE MONITORING

Name of the Industry :		M/s. SHIVA CEMENT LIMITED			
Address :		Teleghana, Kutra, Dist. Sundargarh (Odisha)			
SL. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher Area	16/17.05.2022	51.6	31.5	37.9
2.	Raw Mill Area	16/17.05.2022	52.8	32.1	38.7
3.	Coal mill Area	16/17.05.2022	53.2	32.4	39.1
4.	Cement Mill Area	16/17.05.2022	53.5	32.8	39.6
5.	Main Gate Area	16/17.05.2022	55.2	38.6	40.9
6.	Colony Area	17/18.05.2022	48.1	31.4	36.8


Note : Day Time : 6.00 AM -10.00 PM, Night Time: 10.00PM- 6.00AM

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE AS PER CPCB GUIDELINES

AREA CODE	CATEGORY OF AREA / ZONE	LIMITS IN dB (A)	
		DAY TIME	NIGHT TIME
A	INDUSTRIAL AREA	75	70
B	COMMERCIAL AREA	65	55
C	RESIDENTIAL AREA	55	45
D	SILENE ZONE	50	40

Checked by:- *Gourdeba,*



For Mitra S. K. Private Limited

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 CIN : U51909WB1956PTC023037

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Ref No./BBL/ENV/3250

Date: 09/06/2022

CERTIFICATE OF WORK ZONE NOISE MONITORING

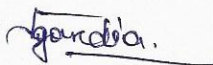
Name of the Industries:		M/s. SHIVA CEMENT LIMITED			
Address:		Teleghana, Kutra, Dist. Sundargarh (Odisha)			
SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Near Crusher Plant	16/17.05.2022	52.4	31.8	39.7
2.	Near Raw Mill	16/17.05.2022	53.2	32.1	40.3
3.	Near Coal Mill	16/17.05.2022	53.6	32.4	40.4
4.	Near Cement Mill	16/17.05.2022	54.1	32.8	40.6

Note : Day Time : 6.00 AM -10.00 PM, Night Time: 10.00PM- 6.00AM

19.10.95 OCCUPATIONAL NOISE EXPOSURE AS PER OCCUPATIONAL SAFETY AND HELTH ADMINISTRATION

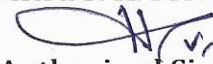
Duration per day, hours	Sound Level dB(A)
8	90
6	92
4	95
3	97
2	100
1 and 1/2	102
1	105
1/2	110
¼ or less	115

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

Checked by:- 



For Mitra S. K. Private Limited


 Authorised Signatory

At/P.O. : BARBIL Ward No - 6
Dist. : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269

E : barbil@mitrask.co.in
Ref. No. BBL/ENV/3251

DATE: 09/06/2022

CERTIFICATE OF ANALYSIS

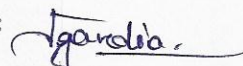
Name of the industry:	M/s. SHIVA CEMENT LIMITED
Address :	Teleghana, Kutra, Dist. Sundargarh (Odisha)
Type of Sample: Ground Water	Date of sampling: 17/05/2022
Sampling Location:	Bore well No.-1 (Back Side Kiln) Bore well No.-2 (Near Coal Yard)

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

Sl No.	Test Parameters	Norms as per IS:10500-2012	Results	Results
1	Total Coliform MPN/100ml	10 (MAX)	<2.0	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

Sl No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results	Results
			Desirable Limit	Permissible Limit		
1	Colour	Hazen	5	15	<5.0	<5.0
2	Odour	---	Agreeable	Agreeable	Agreeable	Agreeable
3	pH at 26°C	---	6.5-8.5	No Relaxation	7.50	7.66
4	Turbidity	NTU	1	5	2.4	<1.0
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	66.0	228.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.01	<0.01
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5	<0.5
9	Calcium (as Ca)	mg/l	75	200	12.0	37.0
10	Chloride (as Cl)	mg/l	250	1000	10.0	6.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.19	0.35
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	0.15	<0.05
15	Magnesium (as Mg)	mg/l	30	100	2.8	10.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02	<0.02
17	Nitrate (as NO3)	mg/l	45	No Relaxation	4.3	2.1
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005	<0.005
20	Sulphate (as SO ₄)	mg/l	200	400	<1.0	23.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	39.0	169.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	43.0	136.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.02	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	<0.001
27	Arsenic(as As)	mg/l	0.01	0.05	<0.005	<0.005
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01	<0.01
30	Pesticide	mg/l	---	---	<0.0005	<0.0005
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005	<0.005

Checked by : 



For Mitra S.K. Private Limited
Authorised Signatory

At/P.O. : BARBIL Ward No - 6
Dist. : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269
E : barbil@mitrask.co.in
Ref.No. BBL/ENV/3252

DATE: 09/06/2022

CERTIFICATE OF ANALYSIS

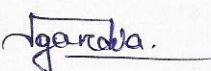
Name of the industry:	M/s. SHIVA CEMENT LIMITED		
Address :	Teleghana, Kutra, Dist. Sundargarh (Odisha)		
Type of Sample: Ground Water	Date of sampling: 17/05/2022		
Sampling Location:	Bore well No.-3 (Near Cement Mill)	Tube well at Kiringsira Village	

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

SI No.	Test Parameters	Norms as per IS:10500-2012	Results	Results
1	Total Coliform MPN/100ml	10 (MAX)	<2.0	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

SI No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results	Results
			Desirable Limit	Permissible Limit		
1	Colour	Hazen	5	15	<5.0	<5.0
2	Odour	---	Agreeable	Agreeable	Agreeable	Agreeable
3	pH at 26°C	---	6.5-8.5	No Relaxation	7.25	7.88
4	Turbidity	NTU	1	5	22.0	2.2
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	252.0	280.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.01	<0.01
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5	<0.5
9	Calcium (as Ca)	mg/l	75	200	40.0	47.0
10	Chloride (as Cl)	mg/l	250	1000	10.0	8.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.17	0.43
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	1.6	0.12
15	Magnesium (as Mg)	mg/l	30	100	20.0	26.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02	<0.02
17	Nitrate (as NO ₃)	mg/l	45	No Relaxation	5.8	4.6
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005	<0.005
20	Sulphate (as SO ₄)	mg/l	200	400	32.0	4.2
21	Alkalinity (as CaCO ₃)	mg/l	200	600	169.0	255.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	182.0	225.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	<0.001
27	Arsenic(as As)	mg/l	0.01	0.05	<0.005	<0.005
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01	<0.01
30	Pesticide	mg/l	---	---	<0.0001	<0.0001
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005	<0.005

Checked by : 



For Mitra S.K. Private Limited
Authorised Signatory

CERTIFICATE OF ANALYSIS

Name of the industry:	M/s. SHIVA CEMENT LIMITED		
Address :	Teleghana, Kutra, Dist. Sundargarh (Odisha)		
Type of Sample: Ground Water	Date of sampling: 17/05/2022		
Sampling Location:	Tube well at Budakata Village	Tube well at Karonga Village	

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

SI No.	Test Parameters	Norms as per IS:10500-2012	Results	Results
1	Total Coliform MPN/100ml	10 (MAX)	<2.0	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

SI No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results	Results
			Desirable Limit	Permissible Limit		
1	Colour	Hazen	5	15	<5.0	<5.0
2	Odour	---	Agreeable	Agreeable	Agreeable	Agreeable
3	pH at 26°C	---	6.5-8.5	No Relaxation	7.60	8.28
4	Turbidity	NTU	1	5	86.0	2.9
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	220.0	218.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.01	<0.01
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5	<0.5
9	Calcium (as Ca)	mg/l	75	200	31.0	40.0
10	Chloride (as Cl)	mg/l	250	1000	38.0	12.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.21	0.42
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	0.23	0.18
15	Magnesium (as Mg)	mg/l	30	100	15.0	7.4
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02	<0.02
17	Nitrate (as NO3)	mg/l	45	No Relaxation	2.7	15.0
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005	<0.005
20	Sulphate (as SO4)	mg/l	200	400	5.6	<1.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	129.0	151.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	140.0	132.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	<0.001
27	Arsenic(as As)	mg/l	0.01	0.05	<0.005	<0.005
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01	<0.01
30	Pesticide	mg/l	---	---	<0.0001	<0.0001
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005	<0.005

Checked by :

Agenda



For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

At/P.O. : BARBIL Ward No - 6
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CIN : U51909WB1956PTC023037

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Ref. No.BBL/ENV/3254

Date: 06/06/2022

GROUND WATER LEVEL MONITORING

Name of the industry:	M/s. SHIVA CEMENT LIMITED	
Address:	Teleghana, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
17.05.2022	Bore well No.-1 (Back Side Kiln)	10.80
17.05.2022	Bore well No.-2 (Near Coal Yard)	15.50
17.05.2022	Bore well No.-3 (Plant Site)	19.10

Checked by:-

J. Gauda



For Mitra S. K. Private Limited

[Signature]
Authorised Signatory

Mitra S. K. Private Limited



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Dist. : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269

E : barbil@mitrask.com
Ref. No. BBL/ENV/3255

Date:09/06/2022

CERTIFICATE OF ANALYSIS

Name of the Mines :			M/s. SHIVA CEMENT LIMITED		
Address:			Teleghana, Kutra, Dist. Sundargarh (Odisha)		
Type of Sample : Surface Water			Date of sampling : 18/05/2022		
Sampling Location:				Tank Near Gangajal Vill.	Nakti Jor Nalla
Sl. No.	Test Parameters	Unite	Max. Tolerance Limit as per IS: 2490 and CPCB	Result	Result
1	Colour	Hazen	5	<1.0	<1.0
2	Odour	---	Unobjectionable	Unobjectionable	Unobjectionable
3	pH at 26°C	---	5.5-9.0	8.10	8.10
4	Copper (as Cu)	mg/l	3.0	<0.02	<0.02
5	Fluoride (as F)	mg/l	2.0	0.48	0.48
6	Free Residual Chlorine	mg/l	1.0	<0.1	<0.1
7	Iron (as Fe)	mg/l	3.0	0.08	0.08
8	Manganese (as Mn)	mg/l	2.0	<0.02	<0.02
9	Nitrate (as NO ₃)	mg/l	10.0	<0.5	<0.5
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	<0.001	<0.001
11	Selenium (as Se)	mg/l	0.05	<0.005	<0.005
12	Cadmium (as Cd)	mg/l	2.0	<0.001	<0.001
13	Cyanide (as CN)	mg/l	0.2	<0.01	<0.01
14	Lead (as Pb)	mg/l	0.1	<0.005	<0.005
15	Mercury (as Hg)	mg/l	0.01	<0.001	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.02	<0.02
17	Arsenic(as As)	mg/l	0.2	<0.005	<0.005
18	Total Chromium (as Cr)	mg/l	2.0	<0.01	<0.01
19	Zinc (as Zn)	mg/l	5.0	<0.02	<0.02
20	Hexavalent Chromium (as Cr+6)	mg/l	0.1	<0.01	<0.01
21	Vanadium as V	mg/l	0.2	<0.2	<0.2
22	Total Suspended Solid (as TSS)	mg/l	100	5.6	5.6
23	Temperature	°C	---	25.0	25.0
24	Dissolved Oxygen	mg/l	---	6.5	6.5
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	<2.0	<2.0
26	Chemical Oxygen Demand (COD)	mg/l	250	<4.0	<4.0
27	Oil and Grease	mg/l	10	<1.4	<1.4
28	Ammoniacal Nitrogen (as N)	mg/l	50	<0.1	<0.1
29	Total Kjeldahl Nitrogen	mg/l	100	<0.3	<0.3
30	Sulphide (as S)	mg/l	2.0	<0.1	<0.1
31	Free Ammonia	mg/l	5.0	<0.1	<0.1
32	Particle size of suspended solids	---	850 µm IS Sieve	Pass	Pass
33	Dissolved Phosphate (as P)	mg/l	5	<0.05	<0.05
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:- *Jgandis*



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

At/P.O. : BARBIL Ward No - 6
Dist. : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037

T : 06767-275209, 94370-75269

E : barbil@mitraskp.com
Ref. No. BBL/ENV/3256

Date:09/06/2022

CERTIFICATE OF ANALYSIS

Name of the Mines :		M/s. SHIVA CEMENT LIMITED			
Address:		Teleghana, Kutra, Dist. Sundargarh (Odisha)			
Type of Sample : Surface Water		Date of sampling : 18/05/2022			
Sampling Location:			Daku River	Matwai Nalla	
Sl. No.	Test Parameters	Unite	Max. Tolerance Limit as per IS: 2490 and CPCB	Result	Result
1	Colour	Hazen	5	<1.0	<1.0
2	Odour	---	Unobjectionable	Unobjectionable	Unobjectionable
3	pH at 26°C	---	5.5-9.0	8.10	8.10
4	Copper (as Cu)	mg/l	3.0	<0.02	<0.02
5	Fluoride (as F)	mg/l	2.0	0.48	0.48
6	Free Residual Chlorine	mg/l	1.0	<0.1	<0.1
7	Iron (as Fe)	mg/l	3.0	0.08	0.08
8	Manganese (as Mn)	mg/l	2.0	<0.02	<0.02
9	Nitrate (as NO ₃)	mg/l	10.0	<0.5	<0.5
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	<0.001	<0.001
11	Selenium (as Se)	mg/l	0.05	<0.005	<0.005
12	Cadmium (as Cd)	mg/l	2.0	<0.001	<0.001
13	Cyanide (as CN)	mg/l	0.2	<0.01	<0.01
14	Lead (as Pb)	mg/l	0.1	<0.005	<0.005
15	Mercury (as Hg)	mg/l	0.01	<0.001	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.02	<0.02
17	Arsenic(as As)	mg/l	0.2	<0.005	<0.005
18	Total Chromium (as Cr)	mg/l	2.0	<0.01	<0.01
19	Zinc (as Zn)	mg/l	5.0	<0.02	<0.02
20	Hexavalent Chromium (as Cr+6)	mg/l	0.1	<0.01	<0.01
21	Vanadium as V	mg/l	0.2	<0.2	<0.2
22	Total Suspended Solid (as TSS)	mg/l	100	5.6	5.6
23	Temperature	°C	---	25.0	25.0
24	Dissolved Oxygen	mg/l	---	6.5	6.5
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	<2.0	<2.0
26	Chemical Oxygen Demand (COD)	mg/l	250	<4.0	<4.0
27	Oil and Grease	mg/l	10	<1.4	<1.4
28	Ammoniacal Nitrogen (as N)	mg/l	50	<0.1	<0.1
29	Total Kjeldahl Nitrogen	mg/l	100	<0.3	<0.3
30	Sulphide (as S)	mg/l	2.0	<0.1	<0.1
31	Free Ammonia	mg/l	5.0	<0.1	<0.1
32	Particle size of suspended solids	---	850 µm IS Sieve	Pass	Pass
33	Dissolved Phosphate (as P)	mg/l	5	<0.05	<0.05
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:-

gandia



For Mitra S. K. Private Limited

Authorized Signatory

At/P.O. : BARBIL Ward No - 6
 Dist. : Keonjhar, Odisha - 758035
 CIN : U51909WB1956PTC023037

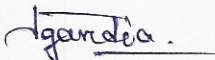
T : 06767-275209, 94370-75269
 E : barbil@mitrask.co.in

Ref. No.BBL/ENV/3257

Date: 09/06/2022

CERTIFICATE OF SOIL ANALYSIS

Name of the Industry :			M/s. SHIVA CEMENT LIMITED		
Address :			Teleghana, Kutra, Dist. Sundargarh (Odisha)		
Type of Sample:			Soil		
Date of Sampling:			18.05.2022		
Location of Sampling:			Plant Area	Kiringsira Village	Budakata Village
Sl. No.	Test Parameters	Unit	Result	Result	Result
01.	pH (1:2:5) at 25°C	---	6.62	7.30	6.81
02.	Conductivity at 25°C	(mohs/cm)	389.0	88.0	391.0
03.	Texture	---	Sandy Clay Laom	Sandy Clay Loam	Sandy Clay Loam
04.	Colour	---	2.5	2.5	0.31
05.	SAR Value	---	0.30	0.47	0.18
06.	Water holding capacity	%	27	32.0	78.0
07.	Organic carbon	%	0.38	0.21	<3.0
08.	Organic Matter	%	0.66	0.36	26.0
09.	Bulk density	gm/cc	1.28	1.33	120.0
10.	Potassium as K	kg/hect	170.0	16.0	10
11.	Available Nitrogen as N	kg/hect	168.0	78.0	185.0
12.	Available Phosphorus	kg/hect	18.0	<3.0	6.2
13.	Magnesium as Mg	mg/Kg	180.0	90.0	150.0
14.	Zinc as Zn	mg/Kg	7.6	6.1	8.3
15.	Manganese as Mn	mg/Kg	14.0	1393.0	59.0
16.	Chromium as Cr	mg/Kg	5.2	3.3	22.0
17.	Lead as Pb	mg/Kg	8.1	2.8	34.0
18.	Cadmium as Cd	mg/Kg	<2.0	<2.0	<2.0
19.	Copper as Cu	mg/Kg	7.7	42.0	17.0
20.	Chloride	mg/Kg	120.0	30.0	90.0
21.	Calcium	mg/Kg	1120.0	630.0	840.0
22.	Sodium as Na	mg/Kg	29.0	18.0	48.0

Checked by: 



For Mitra S.K. Private Limited


 Authorised Signatory