

SCL/6000-09/2023/131

26<sup>th</sup> May 2023

To,  
Ministry of Environment, Forest and Climate Change,  
Eastern Regional Office (EZ),  
A/3, Chandrasekharpur,  
Bhubaneswar- 751023  
E-mail: [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in)

Sub : Half yearly Compliance report of M/s Shiva Cement Limited for the period October-2022 to March-2023.

Ref: 1) Environmental Clearance No: F.NO. J-11011/84/2008-IA II(I), Dt: 23.03.2022

Dear Sir,

With reference to the above-mentioned letters for the said subject matter, please find enclosed herewith the compliance to the conditions stipulated in the letters for the period October-2022 - March-2023 for your kind reference. The Said Period compliance is also being E-mailed on [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in).

Soft copy of this Compliance Report as well as the Environment data month wise are also uploaded in our official website: [www.shivacement.com](http://www.shivacement.com).

Thanking you,

Yours Faithfully,

For M/s. SHIVA CEMENT LIMITED



(ANIL MISHRA)  
UNIT HEAD



Encl: As above

- 1) HY Compliance report with Supportive Annexures
- 2) Environment Monitoring data for the period October-2022 to March-2023

Copy to:

- 1) Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.)
- 2) The Member Secretary, State Pollution Control Board, Odisha, Parivesh Bhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012.
- 3) The Regional Officer State Pollution Control Board, Odisha, Sector-5, Rourkela, Sundergarh- 756019

## SHIVA CEMENT LIMITED

CIN L26942OR1985PLC001557

Registered Office address- Village Telighana, PO: Birangatoli, Tehsil-Kutra, District-Sundargarh, Odisha- 770018.

E-mail-id: [corporate@shivacement.com](mailto:corporate@shivacement.com) | Phone (Off.): 8926964242 | Website: [www.shivacement.com](http://www.shivacement.com)

**ENVIRONMENT CLEARANCE COMPLIANCE  
STATUS**

**REPORT OF CEMENT PLANT  
PERIOD: October- 2022 to March- 2023**

**(Unit-Shiva Cement Limited)**

**Address**

**VILLAGE: TELIGHANA PO: BIRINGATOLI, TEHSIL: KUTRA,  
DIST. SUNDARGARH (ODISHA),770018**

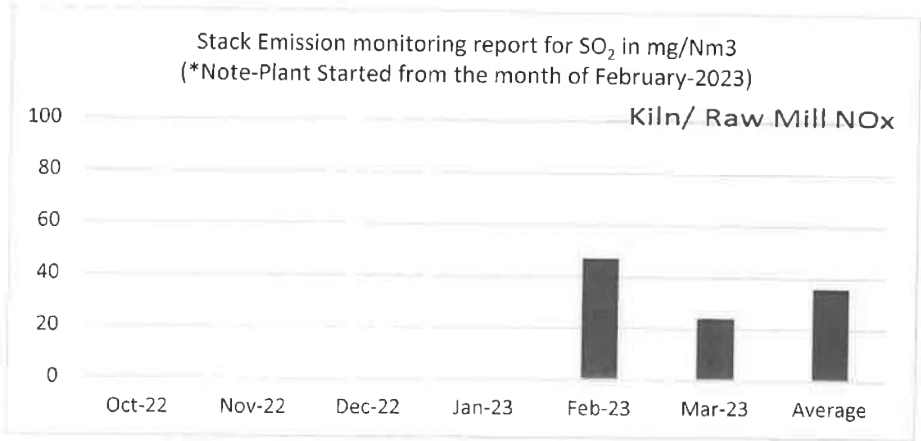
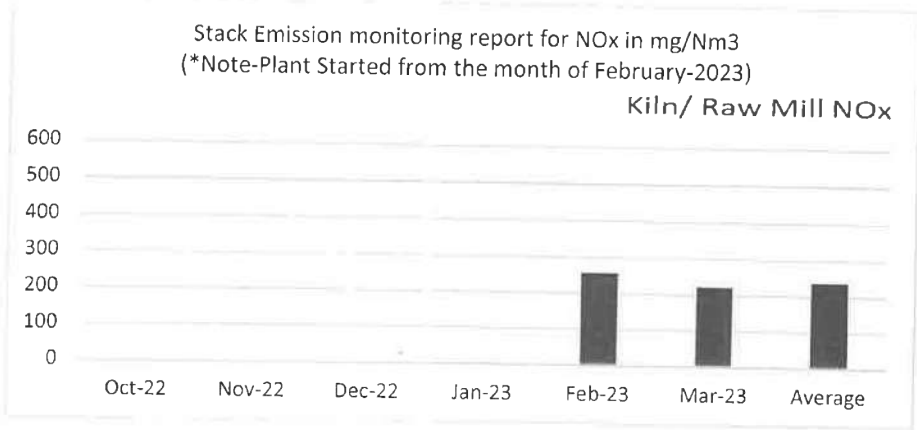
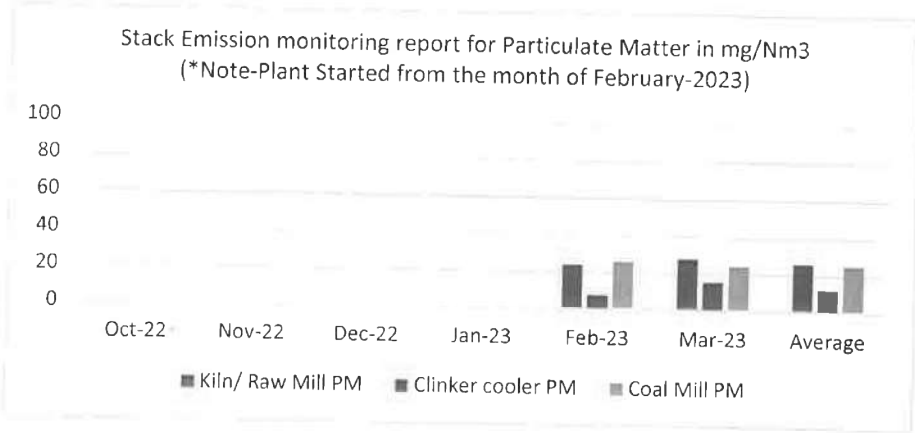
# Compliance Report

<b>Name of Project</b>	Expansion of Cement Plant with Increase of Clinker Production from 0,165 MTPA to 3,00 MTPA and Cement from 0,252 MTPA to 2,00 MTPA(OPC/PPC/PSC/Composite Cement/GGBS) along with installation of 12 MW
<b>Clearance Letter No.</b>	J-11011/84/2008- IA II (I)
<b>EC Identification No.</b>	EC22A009OR124706
<b>Period of Compliance Report</b>	October-2022 to March-2023

## Compliance report of conditions stipulated in the Environment clearance

### 1. ENVIRONMENT CLEARANCE NO J-11011/84/2008-IA II (I) dated 23.03.2022

A. Specific Conditions																																																														
Sl. No.	Conditions	Present Status																																																												
i	Overhead belt conveyor for transportation of Limestone from the mines to the plant site shall be established in a time frame of three years from the date of issue of Environment Clearance after obtaining requisite statutory permissions from the concerned competent authority. Thereafter, road transportation of limestone from the mines to the <b>plant</b> site is not <b>permitted</b> .	The unit is in progress of obtaining statutory permissions from the concerned competent authority. Once the permissions will obtain overhead belt conveyor for transportation of limestone from the mines to plant site will be done within the given time frame. <b>(Annexure-IA)</b>																																																												
ii	Particulate matter emissions from all the stacks shall be less than 30 mg/Nm <sup>3</sup>	The unit started its trail production from February 2023 and from February stack monitoring was carried out through NABL accredited lab and the result were found within the permissible limit (Table-1 & Figure-1).  To ensure that emission level lies within the prescribed norms OCEMS have been installed will be interlocked with the APC equipment's.																																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="8">Stack Emission report (October-2022 to March -2023)</th> </tr> <tr> <th>Stack attached to</th> <th></th> <th>Oct-22</th> <th>Nov-22</th> <th>Dec-22</th> <th>Jan-23</th> <th>Feb-23</th> <th>Mar-23</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Kiln/ Raw Mill</td> <td>PM</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>24</td> <td>28</td> <td>26</td> </tr> <tr> <td>NOx</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>254</td> <td>218</td> <td>236</td> </tr> <tr> <td>SO2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>47</td> <td>24</td> <td>35.5</td> </tr> <tr> <td>Clinker cooler</td> <td>PM</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>8</td> <td>16</td> <td>12</td> </tr> <tr> <td>Coal Mill</td> <td>PM</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>26</td> <td>24</td> <td>25</td> </tr> </tbody> </table>			Stack Emission report (October-2022 to March -2023)								Stack attached to		Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Average	Kiln/ Raw Mill	PM	0	0	0	0	24	28	26	NOx	0	0	0	0	254	218	236	SO2	0	0	0	0	47	24	35.5	Clinker cooler	PM	0	0	0	0	8	16	12	Coal Mill	PM	0	0	0	0	26	24	25
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<b>TABLE-1</b>																																																														



**FIGURE-1**



iii

Three tier Green Belt shall be developed in a time frame of one year covering 10.32 ha area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. This shall include development of green belt with a width of 20 m within the project site towards Telighana Village located at 650 m in South and Kandeimunda Village located at 100 m in NE. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

Three tier green belt have been developed in the plant periphery & existing area of the plant premises. 1000 numbers of sapling have been planted during the period of October-22 to March-23 (Table-2 & Figure-2).

Survival rate of the plantation is being monitoring by the internal horticulture team on regular basis.

The unit is in progress of developing green belt of width 20m within the project site towards the Telighana village located at 650m in south and Kandeimunda village located at 100m in NE.

**Plantation details for the Period October-22 to March-23**

Sl. No	Common Name	Botanical Name	Total no.
1	Chhatian	Alstonia scholaris	300
2	Krushnachuda	Delonix regia	150
3	Radhachuda	<b>Peltophorum petrocarpum</b>	150
4	Neem	Azadirachta indica	100
5	Chakunda	Senna tora	300
<b>Total</b>			<b>1000</b>

**TABLE -2**



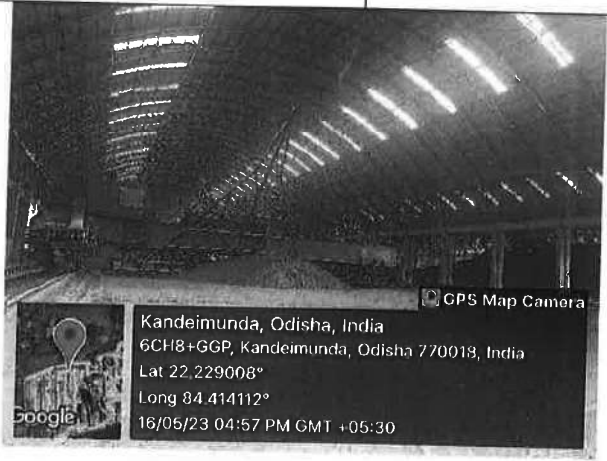
**FIGURE-2**

iv

1990 KLD of water requirement after the proposed expansion shall be met from mine pit water source. No ground water abstraction is permitted except for domestic purposes.

Present water requirement is 688 m3/day which is being sourced from ground water. However, 1990 KLD of water will required during the Production of Clinker 3.0 MTPA and Cement 2.0 MTPA & same will be sourced from mine dewatering.

v	All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material	All stock yards have the impervious floor & garland drain has been constructed in all along the stock yard. Necessary water sprinkling arrangement has been made for dust suppression (Figure-3).
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**FIGURE-3**

vi	Slip roads shall be provided at the gates and along crossings on main roads.	Slip roads were provided at the gates and along crossing on main roads.
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vii	All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.	All the internal and connecting roads to the highway are concreted with suitable load in term of Million standard axle (MSA) as per IRC guideline (Figure-4 &5).
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**FIGURE-4**



**FIGURE-5**

viii	Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to the concerned Regional Office of the MoEF &CC.	The unit was commissioned in February 2023. Hence after commercial production with subsequent time the performance monitoring of pollution control equipment's will be carried in given intervals.
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ix	Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.	Noted. <b>Only after obtaining consent to operate for co-processing of hazardous waste, the hazardous waste will be used and dioxin and furans will be monitored.</b>
x	Project proponent shall develop separate drainage system for storm water and industrial waste water and effectively prevent the pollution of natural waterbody.	The unit has constructed separate drainage system for storm water and industrial waste water. The unit is ensuring zero liquid discharge. Hence no natural waterbody gets polluted.
xi	Compensatory afforestation shall be done in consultation with DFO for the 530 trees going to be removed from the project site as per State Government norms.	After due permission from Forest Department/revenue department, unit will <b>transplant/remove</b> the 530 trees present in the area in which plant and machinery will be <b>installed</b> . Compensatory forestation will be done in consultation with DFO with native species.

**B. General Conditions**

**I. Statutory Compliance**

Sl.No.	Conditions	Present Status
i	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be <b>applicable</b> to the <b>project</b>	Noted.

**II. Air quality monitoring and preservation**

i	The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	The unit has installed three continuous emission monitoring system (CEMS) in all its three major stacks i.e. (1) Coal Mill (2) Clinker Cooler (3) Kiln & Preheater. The unit has installed four continuous ambient air quality monitoring station (CAAQMS) in four directions in consultation with regional Office (Figure-4,5,6 &7). The CEMS and CAAQMS are in the process of connectivity to SPCB and CPCB server.
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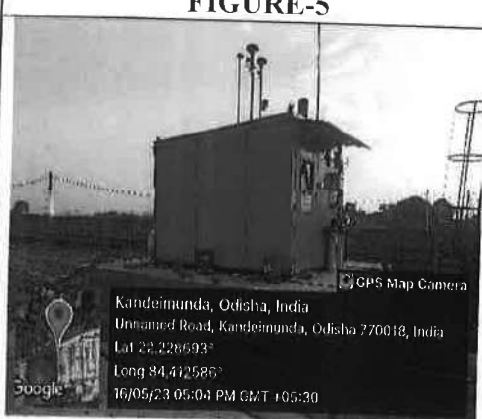
	 <p style="text-align: center;"><b>FIGURE-4</b></p>	 <p style="text-align: center;"><b>FIGURE-5</b></p>
	 <p style="text-align: center;"><b>FIGURE-6</b></p>	 <p style="text-align: center;"><b>FIGURE-7</b></p>
ii	<p>The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986</p>	<p>Complied. Fugitive emission <b>monitoring</b> is being carried out for our <b>existing</b> plant on quarterly basis through NABL approved laboratory. The Environment monitoring report for the period October-22 to March-23 is attached as <b>Annexure-II</b></p>
iii	<p>The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.</p>	<p>Complied. Leakage detection and mechanized bag cleaning facilities are provided for better maintenance of <b>bags</b>.</p>
iv	<p>The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;</p>	<p>Noted. All transportation materials are covered with tarpaulin to prevent spillage and dust emission.  Fly ash will be transported in the closed bulkers <b>only</b>.</p>
v	<p>The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;</p>	<p>Complied. Wind shelter fence is being provided at raw materials stock piles (Figure-8). DSS (dust suppression system) has been installed in raw material <b>yard</b>.</p>




Figure-8

vi	Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.	Complied. Ventilation system have been provided in all closed houses. Ventilation systems are provided to all tunnels, motor houses for adequate air changes.
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**III. Water Quality Monitoring & Preservation**

I	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R No. 612 (E) dated 25 <sup>th</sup> August, 2014 (Cement) and subsequent amendment dated 9 <sup>th</sup> May, 2016 (Cement) and 10 <sup>th</sup> May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7 <sup>th</sup> December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Effluent generated from the WHRB based power plant will be Neutralized in the Neutralization-Pit and Treated effluent will be utilized for dust suppression purposes.
li	The project proponent shall regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories	Complied. Monitoring of ground water quality is being carried out on quarterly basis through NABL approved laboratory for our unit. The Environment monitoring report for the period October-22 to March-23 is attached as <b>Annexure-II</b>

iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	The unit has installed 50KLD STP to treat domestic waste water (Figure-9).
 <p data-bbox="792 877 945 913"><b>FIGURE-9</b></p>		
iv	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off	Complied. Garland drain have been provided in all along the stock pile & same is connected to settling pit to arrest the run-off during the rainy season.
v	Water meters shall be provided at the inlet to all unit processes in the cement plant.	Noted Water meters are in the process of procurement and will be installed within 31.07.2023.
vi	The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water	Noted. Water meter has been provided to all bore well and the used water generated in process will be recycled. The treated water of STP is being used in dust suppression & for greenbelt development.
vii	Tyre washing facilities shall be provided at the entrance and exit of the plant gates.	Equipment's for tyre washing facilities have been procured and will be installed within 31.08.2023.



#### IV. Noise Monitoring and prevention

i	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied. Noise monitoring is being carried out on monthly basis for our unit through NABL approved laboratory. The Environment monitoring report for the period October -22 to March-23 is attached as <b>Annexure-II</b>
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#### V. Energy Conservation Measures

I	Waste heat recovery system shall be provided for kiln and cooler.	Complied. Unit has installed WHRB based power plant for Kiln and cooler section and from which unit will generate approx. 12 MW electricity.
ii	The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	Noted. The unit is designed in such a way to achieve best in class specific electrical energy consumption per tonne of Clinker/Cement. The unit is producing clinker at less than 670 Kcal/Kg of thermal energy <b>consumption.</b>
iii	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same <b>regularly</b>	Noted. The unit will install solar light system for all common area, street lights, <b>parking</b> around <b>project</b> area.
Iv	Provide the project proponent for LED lights in their offices and residential areas.	Complied. The unit has installed LED lights in office and residential areas.

#### VI. Waste Management

i	Used refractories shall be recycled as far as <b>possible</b>	Used refractories are sold to recyclers.
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#### VII. Greenbelt

I	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.	The unit is commissioned in February 2023. GHG emission inventory for the plant for scope-1 is 89000T of CO <sub>2</sub> and for scope-2 is 8050T of CO <sub>2</sub> . The unit will submit the program for reduction of the same including carbon sequestration by tree in the plant premises in the upcoming half yearly <b>compliance report.</b>
ii	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the <b>report shall also contain</b> time bound action plan	Once the commercial production starts decarbonisation study will be conducted consisting of companies carbon emission, carbon budget/ balancing, carbon sequestration activities and carbon capture, use and <b>storage</b> and <b>offsetting</b> strategies.

	to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.	Accordingly, time bound action plan will be prepared to reduce its carbon intensity and energy transition pathway from fossil fuels to renewable energy will be prepared.
<b>VIII. Public hearing and human health issues</b>		
I	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	The unit has implemented emergency preparedness plan based on the Hazardous identification and risk assessment (HIRA) and disaster <b>management plan.</b>
ii	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms	Complied. All mandatory PPEs are provided during working in high temperature zone.
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained	Occupational health surveillance of the workers is being carried out on periodically. The Occupational health surveillance report is attached as <b>Annexure-III</b>
<b>IX. Environment Management</b>		
I	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed	Noted. We will abide by the said conditions. The detail action plan & budget allocation for need based activities is attached as <b>Annexure-IV</b> However, the CSR based activities carried out for the period October-22 to March-23 is attached as <b>Annexure-V</b>
ii	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or stakeholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Complied. The Environmental Policy is available and copy is attached as <b>Annexure VI</b>
iii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization	Complied. A separate Environment Cell is already in placed with qualified personnel under the control of Unit Head.



	the head of the organization	A separate environment cell has been established at corporate as well as plant level under the leadership of senior executive.
<b>X. Miscellaneous</b>		
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied. The advertisement clips of Environmental clearance granted is published in two local papers that is The Pioneer (English News Paper) and Prameya (Odiya News Paper) on 29.03.2022. The advertisement clips were submitted to ministry on dated 15.04.2022 vide letter no. Shiva/SCL-Plant/EC/2022-01. The paper clip is attached as <b>Annexure-VII</b>
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied. The Environmental clearance copy has been submitted to all the relevant office and the Heads of local bodies, Panchayats and Municipal Bodies. The copy is attached as <b>Annexure-VIII</b>
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis	Complied. The unit is regularly uploading the compliance status of the stipulated environment clearance conditions. ( <a href="https://shivacement.com/investor-relations-approvals/">https://shivacement.com/investor-relations-approvals/</a> )
iv	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company	Complied. The unit is monitoring the pollutants level of PM10, SO2, NOx in ambient air quality and stack emission as indicated for the projects and displaying the same through LED display board installed Infront of the main gate (Figure-10).



**FIGURE -10**

v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	The unit is submitting six monthly compliance status of the stipulated environmental condition on the website each time.
vi	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Complied. The unit is submitting the environment statement every year in form-V to the concerned State pollution control board as prescribed under the Environment (Protection) Rules, 1986. The unit has submitted last environment statement through letter no.SCL/6000-09/2022/97 on dated 14.09.2022.
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	The project proponent has informed the Regional office as well as the ministry, the date of financial closure and final approval of the project is 27.11.2019. Commencing of land development work started on 22.10.2020 and the tentative date of start of production is June 2023.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee	The unit will abide by the said conditions. The detail action plan & budget allocation for need based activities is attached as <b>Annexure-IV</b> However, the CER based activities carried out for the period October-22 to March-23 is attached as <b>Annexure-V</b>
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted. Expansion and modification in plant will be done with prior approval from the <b>Ministry</b>

x	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not <b>satisfactory</b>	Noted.
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall <b>implement</b> these conditions	Noted.
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / <b>information/monitoring reports.</b>	Noted
xiv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
7.	This issues with the approval of the Competent Authority	Noted

For M/s. SHIVA CEMENT LIMITED



(AUTHORISED SIGNATORY)





# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FM37A

ULR – TC581622000002670F

REPORT NO: CPL/AAQ/NOV-22/1

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part – 2) & (Part – 6), EN12341  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : A1

Environmental Conditions During Monitoring	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sample ID No	CPL/AAQ/OCT-22/68	CPL/AAQ/OCT-22/82	CPL/AAQ/OCT-22/167	CPL/AAQ/OCT-22/197
Date of Sampling	03.10.2022 – 04.10.2022	06.10.2022 – 07.10.2022	10.10.2022 – 11.10.2022	15.10.2022 – 16.10.2022
Sampling Period	1820 – 1934 Hrs	1810 – 1825 Hrs	1745 – 1758 Hrs	1838 – 1930 Hrs
Time of Sampling	25.14 Hrs	24.15 Hrs	24.13 Hrs	24.52 Hrs
Sample Received on	04.10.2022	07.10.2022	11.10.2022	16.10.2022
Date of Test	05.10.2022	06.10.2022	12.10.2022	17.10.2022

Sample ID No	CPL/AAQ/OCT-22/251	CPL/AAQ/OCT-22/266	CPL/AAQ/OCT-22/339	CPL/AAQ/OCT-22/363
Date of Sampling	17.10.2022 – 18.10.2022	20.10.2022 – 21.10.2022	25.10.2022 – 26.10.2022	27.10.2022 – 28.10.2022
Sampling Period	1820 – 1828 Hrs	1810 – 1800 Hrs	1830 – 1815 Hrs	1750 – 1800 Hrs
Time of Sampling	24.08 Hrs	23.50 Hrs	23.45 Hrs	24.10 Hrs
Sample Received on	18.10.2022	21.10.2022	26.10.2022	28.10.2022
Date of Test	19.10.2022	22.10.2022	27.10.2022	29.10.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/AAQ/OCT-22/251, Issue No: 14, dt: 23.10.2017	EN 12341, 1994 Low Volume Sampler	IS: 5182 (Part – 2) 2001, RA 2011	IS: 5102 (Part – 6) 1996, RA 2011
1.	CPL/AAQ/OCT-22/68	23	52	05	16
2.	CPL/AAQ/OCT-22/82	14	52	12	32
3.	CPL/AAQ/OCT-22/167	07	22	09	22
4.	CPL/AAQ/OCT-22/197	27	60	05	14
5.	CPL/AAQ/OCT-22/251	20	56	10	23
6.	CPL/AAQ/OCT-22/266	13	45	06	18
7.	CPL/AAQ/OCT-22/339	24	57	07	23
8.	CPL/AAQ/OCT-22/363	24	59	04	14
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

*P. Saseeni*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

\*\*\*END OF TEST REPORT\*\*\*  
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Tele Fax: 9661 – 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/FR67

REPORT NO: CPL/R/AAQ/NOV-22/11N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Environmental Conditions During Monitoring	:	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	04.10.2022	1510 – 1610 Hrs	< 0.1
2	07.10.2022	0800 – 0900 Hrs	< 0.1
3	11.10.2022	0915 – 1015 Hrs	< 0.1
4	16.10.2022	1100 – 1200 Hrs	< 0.1
5	18.10.2022	1000 – 1100 Hrs	< 0.1
6	21.10.2022	1500 – 1600 Hrs	< 0.1
7	26.10.2022	0930 – 1030 Hrs	< 0.1
8	28.10.2022	0930 – 1030 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*P. Sareni*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

\*\*\*END OF TEST REPORT\*\*\*  
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# Cleenviron Private Limited

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS7A

ULR - TC58162200002671F  
REPORT NO: CPLR/AAQ/NOV-22/2

REPORT ISSUE DATE: 02.11.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Environmental Conditions During Monitoring	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sample ID No	CPL/AAQ/OCT-22/69	CPL/AAQ/OCT-22/83	CPL/AAQ/OCT-22/168	CPL/AAQ/OCT-22/196
Date of Sampling	03.10.2022 - 04.10.2022	06.10.2022 - 07.10.2022	10.10.2022 - 11.10.2022	15.10.2022 - 16.10.2022
Sampling Period	1812 - 1922 Hrs	1758 - 1808 Hrs	1802 - 1820 Hrs	1832 - 1920 Hrs
Time of Sampling	24.10 Hrs	23.52 Hrs	24.18 Hrs	24.50 Hrs
Sample Received on	04.10.2022	07.10.2022	11.10.2022	16.10.2022
Date of Test	05.10.2022	08.10.2022	12.10.2022	17.10.2022

Sample ID No	CPL/AAQ/OCT-22/250	CPL/AAQ/OCT-22/267	CPL/AAQ/OCT-22/340	CPL/AAQ/OCT-22/364
Date of Sampling	17.10.2022 - 18.10.2022	20.10.2022 - 21.10.2022	25.10.2022 - 26.10.2022	27.10.2022 - 28.10.2022
Sampling Period	1805 - 1817 Hrs	1810 - 1800 Hrs	1750 - 1750 Hrs	1720 - 1745 Hrs
Time of Sampling	24.12 Hrs	23.50 Hrs	24.00 Hrs	24.25 Hrs
Sample Received on	18.10.2022	21.10.2022	26.10.2022	28.10.2022
Date of Test	19.10.2022	22.10.2022	27.10.2022	29.10.2022

Sl. No.	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/PCW/PRG 2, Issue No: 04, dtd: 21.10.2017	EN 12341, 1026 Low Volume Sampler	IS:5182 (Part - 2) 2003, RA 2017	IS: 5182 (Part - 6) 2004, RA 2017
1.	CPL/AAQ/OCT-22/69	14	40	04	18
2.	CPL/AAQ/OCT-22/83	08	25	12	28
3.	CPL/AAQ/OCT-22/168	22	52	06	19
4.	CPL/AAQ/OCT-22/196	32	73	04	12
5.	CPL/AAQ/OCT-22/250	24	68	10	33
6.	CPL/AAQ/OCT-22/267	20	58	05	12
7.	CPL/AAQ/OCT-22/340	26	68	05	17
8.	CPL/AAQ/OCT-22/364	22	57	04	12
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

P. Caseni  
Test Done By



Authorized Signatory  
Subhanga Prabhata  
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/MS7

REPORT NO: CPLIR/AAQ/NOV-22/2N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Environmental Conditions During Monitoring	:	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)	
			Method of Analysis	Electrochemical Sensor
1	04.10.2022	1550 – 1650 Hrs		< 0.1
2	07.10.2022	0900 – 1000 Hrs		< 0.1
3	11.10.2022	0940 – 1040 Hrs		< 0.1
4	16.10.2022	1300 – 1230 Hrs		< 0.1
5	18.10.2022	1100 – 1200 Hrs		< 0.1
6	21.10.2022	1300 – 1400 Hrs		< 0.1
7	26.10.2022	0930 – 1030 Hrs		< 0.1
8	28.10.2022	1030 – 1130 Hrs		< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009				04 (1 Hour Average)

*P. Sareni*  
 Test Done By



*Subhanga Prabhara*  
 Authorized Signatory  
 Subhanga Prabhara  
 Managing Director

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

Page 1 of 1

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# Cleenviron Private Limited

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPLFM07A

ULR – TC68162200002672F

REPORT NO: CPL/AAQ/NOV-22/3

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part – 2) & (Part – 6), EN12341  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Environmental Conditions During Monitoring	: Min Temp.: 15.5°C	Max Temp.: 32.6°C	Min RH: 33%	Max RH: 100%
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Sample ID No	: CPL/AAQ/OCT-22/70	CPL/AAQ/OCT-22/84	CPL/AAQ/OCT-22/170	CPL/AAQ/OCT-22/199
Date of Sampling	: 03.10.2022 – 04.10.2022	06.10.2022 – 07.10.2022	10.10.2022 – 11.10.2022	15.10.2022 – 16.10.2022
Sampling Period	: 1055 – 1059 Hrs	0910 – 0925 Hrs	0911 – 0916 Hrs	1002 – 1002 Hrs
Time of Sampling	: 24.04 Hrs	24.15 Hrs	24.05 Hrs	24.00 Hrs
Sample Received on	: 04.10.2022	07.10.2022	11.10.2022	16.10.2022
Date of Test	: 05.10.2022	08.10.2022	12.10.2022	17.10.2022

Sample ID No	: CPL/AAQ/OCT-22/253	CPL/AAQ/OCT-22/269	CPL/AAQ/OCT-22/341	CPL/AAQ/OCT-22/361
Date of Sampling	: 17.10.2022 – 18.10.2022	20.10.2022 – 21.10.2022	25.10.2022 – 26.10.2022	27.10.2022 – 28.10.2022
Sampling Period	: 0840 – 0854 Hrs	0914 – 0920 Hrs	0930 – 0920 Hrs	0830 – 0820 Hrs
Time of Sampling	: 24.14 Hrs	24.06 Hrs	23.50 Hrs	23.50 Hrs
Sample Received on	: 18.10.2022	21.10.2022	26.10.2022	28.10.2022
Date of Test	: 19.10.2022	22.10.2022	27.10.2022	29.10.2022

Sl. No.	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/AAQ/PM2.5, Issue No: 64, dtd: 22.10.2017	IS 12341, 1994 Low Volume Sampler	IS: 5182 (Part – 2) 2001, RA 2017	IS: 5182 (Part – 6) 2006, RA 2017
1.	CPL/AAQ/OCT-22/70	15	50	11	35
2.	CPL/AAQ/OCT-22/84	22	63	12	32
3.	CPL/AAQ/OCT-22/170	13	41	04	21
4.	CPL/AAQ/OCT-22/199	21	58	12	30
5.	CPL/AAQ/OCT-22/253	26	68	18	42
6.	CPL/AAQ/OCT-22/269	28	70	09	24
7.	CPL/AAQ/OCT-22/341	23	61	05	23
8.	CPL/AAQ/OCT-22/361	24	62	08	24
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

*P. Sasani*  
Test Done By



*S. Subhanga*  
Authorized Signatory  
Subhanga Prakash  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CP/PM/7

REPORT NO: CPLR/AAQ/NOV-22/3N

SAMPLE DRAWN BY CLEENVIRO PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Environmental Conditions During Monitoring	:	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)	
			Method of Analysis	Electrochemical Sensor
1	03.10.2022	1530 – 1630 Hrs		< 0.1
2	06.10.2022	1000 – 1100 Hrs		< 0.1
3	10.10.2022	0840 – 0940 Hrs		< 0.1
4	15.10.2022	1200 – 1300 Hrs		< 0.1
5	17.10.2022	1100 – 1200 Hrs		< 0.1
6	20.10.2022	1300 – 1400 Hrs		< 0.1
7	25.10.2022	0930 – 1030 Hrs		< 0.1
8	27.10.2022	1200 – 1300 Hrs		< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009				04 (1 Hour Average)

*P. Sareni*  
 Test Done By

*Alkayesh*  
 Verified By



*S. Subhanga*  
 Authorized Signatory  
 Subhanga Prasad  
 Managing Director

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

Page 1 of 1

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# Cleenviron Private Limited

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS7A

ULR - TC681622000002673F

REPORT NO: CPL/IAAQ/NOV-22/4

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Environmental Conditions During Monitoring	: Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sample ID No	: CPL/IAAQ/OCT-22/71	CPL/IAAQ/OCT-22/85	CPL/IAAQ/OCT-22/169	CPL/IAAQ/OCT-22/198
Date of Sampling	: 03.10.2022 - 04.10.2022	06.10.2022 - 07.10.2022	10.10.2022 - 11.10.2022	15.10.2022 - 16.10.2022
Sampling Period	: 1040 - 1048 Hrs	0900 - 0930 Hrs	0902 - 0910 Hrs	1015 - 1011 Hrs
Time of Sampling	: 24.08 Hrs	24.30 Hrs	24.08 Hrs	23.56 Hrs
Sample Received on	: 04.10.2022	07.10.2022	11.10.2022	16.10.2022
Date of Test	: 05.10.2022	08.10.2022	12.10.2022	17.10.2022

Sample ID No	: CPL/IAAQ/OCT-22/252	CPL/IAAQ/OCT-22/268	CPL/IAAQ/OCT-22/342	CPL/IAAQ/OCT-22/362
Date of Sampling	: 17.10.2022 - 18.10.2022	20.10.2022 - 21.10.2022	25.10.2022 - 26.10.2022	27.10.2022 - 28.10.2022
Sampling Period	: 0850 - 0910 Hrs	0902 - 0905 Hrs	1000 - 0946 Hrs	0840 - 0850 Hrs
Time of Sampling	: 24.20 Hrs	24.03 Hrs	23.46 Hrs	24.10 Hrs
Sample Received on	: 18.10.2022	21.10.2022	26.10.2022	28.10.2022
Date of Test	: 19.10.2022	22.10.2022	27.10.2022	29.10.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/IAAQ/MS7A, Issue No: 64, ddt: 22.10.2017	IS 12341, 5182 Low Volume Sampler	IS: 5182 (Part - 2), 2001, RA 2017	IS: 5182 (Part - 6), 2016, RA 2017
1.	CPL/IAAQ/OCT-22/71	24	70	04	14
2.	CPL/IAAQ/OCT-22/85	23	59	06	19
3.	CPL/IAAQ/OCT-22/169	27	70	05	23
4.	CPL/IAAQ/OCT-22/198	25	68	05	14
5.	CPL/IAAQ/OCT-22/252	26	74	08	37
6.	CPL/IAAQ/OCT-22/268	19	51	09	27
7.	CPL/IAAQ/OCT-22/342	22	58	10	30
8.	CPL/IAAQ/OCT-22/362	28	70	08	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 16 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

*P. Sakeri*  
Test Done By



*Subhanga Prashar*  
Authorized Signatory  
Subhanga Prashar  
Managing Director

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

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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/MS7

REPORT NO: CPL/R/AAQ/NOV-22/4N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 02.11.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Environmental Conditions During Monitoring	:	Min Temp.:15.5°C	Max Temp.:32.6°C	Min RH:33%	Max RH:100%
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Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	03.10.2022	1330 - 1430 Hrs	< 0.1
2	06.10.2022	1100 - 1200 Hrs	< 0.1
3	10.10.2022	0910 - 1010 Hrs	< 0.1
4	15.10.2022	1200 - 1300 Hrs	< 0.1
5	17.10.2022	1105 - 1205 Hrs	< 0.1
6	20.10.2022	1300 - 1400 Hrs	< 0.1
7	25.10.2022	0930 - 1030 Hrs	< 0.1
8	27.10.2022	1100 - 1200 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*P. Saseeni*  
 Test Done By



*Subhanga Prahara*  
 Authorized Signatory  
 Subhanga Prahara  
 Managing Director

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

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# Cleenviron Private Limited

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

## TEST REPORT FOR STACK EMISSION MONITORING

FORM NO: CPL/EM3

REPORT NO: CPL/R/SE/OCT-22/74N

REPORT ISSUE DATE: 31.10.2022

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS 11255 (Part - 1): 1985, RA 2019

Sample ID No	:	CPL/SE/OCT-22/56
Location of Sampling	:	STACK - 1
Date of Sampling	:	26.10.2022
Time of Sampling	:	12:15 Hrs
Duration of Sampling	:	37 min
Sample Received on	:	26.10.2022
Date of Test	:	26.10.2022 - 27.10.2022

<b>A. General information About the Stack</b>	:	
1. Stack Connected to	:	DG SET - 1
2. Emission Due to	:	Diesel
3. Material of Construction of Stack	:	Steel
4. Shape of Stack	:	Circular
5. Whether Stack is provide with Permanent Platform & Ladder	:	No
6. Capacity	:	170 KVA
7. Running Load	:	Idle

<b>B. Physical Characteristics of Stack</b>	:	
1. Height of Stack from Ground Level	:	4.5 m
2. Height of Sampling Port from Ground Level	:	3.5 m
3. Diameter of Stack at sampling point	:	0.15 m

C. PARAMETERS ANALYSED	METHODS OF ANALYSIS	RESULTS OBTAINED
1. Ambient Temperature (°C)	IS 11255 Part - 3, 1985 (RA 2018)	33
2. Temperature of Gas Emission (°C)	IS 11255 Part - 3, 1985 (RA 2018)	85
3. Barometric Pressure (mm Hg)	IS 11255 Part - 3, 1985 (RA 2018)	746
4. Velocity of Gas Emitted (m/sec)	IS 11255 Part - 3, 1985 (RA 2018)	7.77
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	IS 11255 Part - 3, 1985 (RA 2018)	713.39
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 1, 1985 (RA 2019)	05
7. Sulphur Dioxide (SO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 2, 1985 (RA 2014)	37.27
8. Nitrogen Dioxide (NO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 7, 2005 (RA 2017)	61.8
9. Carbon Monoxide (CO) Concentration (mg/Nm <sup>3</sup> )	Flue Gas Analyser	68.4
10. Carbon Dioxide (CO <sub>2</sub> ) in %	Flue Gas Analyser	11.2
<b>D. Pollution Control Device Installed</b>	Not Installed	

*P. Sasaki*  
Test Done By

*Prakash*  
Verified By



*Subhanga Praharaj*  
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: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 15<sup>th</sup> October 2022 for the month from the following mentioned points and data thus recorded are as follows:

Sl No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Bore Well Back Side of Cement Mill Within Plant	0.15	-	6.38	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	12.01	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.8" E	0.10	-	13.7	242.0	228.3

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

  
Authorized Signatory  
For Cleenviron Private Limited



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# Cleenviron Private Limited

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



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/PM2

ULR - TC681622000002678F  
REPORT NO: CPL/R/N/NOV-22/1

REPORT ISSUE DATE: 02.11.2022

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Instrument Used : **Sound Level Meter (LUTRON: SL 4001)**

Station No	:	N1	N2	N3
Sample ID	:	CPL/N/OCT-22/58	CPL/N/OCT-22/55	CPL/N/OCT-22/56
Date of Monitoring	:	25.10.2022	06.10.2022	08.10.2022
Location of Monitoring	:	COLONY AREA	NEAR MAIN GATE	NEAR TG BUILDING

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
1.	N1	57.2	44.9	64.9	34.8
2.	N2	67.3	46.6	74.3	40.3
3.	N3	77.6	48.3	85.7	42.1

Station No	:	N4	N5
Sample ID	:	CPL/N/OCT-22/57	CPL/N/OCT-22/59
Date of Monitoring	:	10.10.2022	27.10.2022
Location of Monitoring	:	NEAR CLINKER BULK LOADING AREA	VILLAGE TELEGHANA

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
3.	N4	73.5	47.0	81.2	41.2
4.	N5	55.8	44.1	63.7	34.2

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	Silence Zone	50	40

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

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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/MSIA

REPORT NO: CPL/IAAQ/DEC-22/8N

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 : **At Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sample ID No	CPL/IAAQ/NOV-22/85	CPL/IAAQ/NOV-22/142	CPL/IAAQ/NOV-22/160	CPL/IAAQ/NOV-22/174
Date of Sampling	02.11.2022 - 03.11.2022	04.11.2022 - 05.11.2022	08.11.2022 - 09.11.2022	11.11.2022 - 12.11.2022
Sampling Period	0935 - 0940 Hrs	1804 - 1818 Hrs	1745 - 1758 Hrs	1838 - 1930 Hrs
Time of Sampling	24.05 Hrs	24.14 Hrs	24.13 Hrs	24.52 Hrs
Sample Received on	03.11.2022	12.11.2022	12.11.2022	12.11.2022
Date of Test	04.11.2022	13.11.2022	14.11.2022	14.11.2022

Sample ID No	CPL/IAAQ/NOV-22/188	CPL/IAAQ/NOV-22/297	CPL/IAAQ/NOV-22/316	CPL/IAAQ/NOV-22/337
Date of Sampling	14.11.2022 - 15.11.2022	17.11.2022 - 18.11.2022	21.11.2022 - 22.11.2022	25.11.2022 - 26.11.2022
Sampling Period	1830 - 1840 Hrs	1740 - 1750 Hrs	1821 - 1828 Hrs	1758 - 1805 Hrs
Time of Sampling	24.10 Hrs	24.10 Hrs	24.07 Hrs	24.07 Hrs
Sample Received on	15.11.2022	19.11.2022	24.11.2022	26.11.2022
Date of Test	16.11.2022	21.11.2022	25.11.2022	28.11.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	<b>Units</b>				
	<b>Method of Analysis</b>	CPL/SOP/01/PM2.5, Issue No. 01, etc. 23/10/2017	IS 12341, 1998 Low Volume Sampler	IS 5182 (Part - 2) 1991, RA 2017	IS 5182 (Part - 6) 2004, RA 2017
1.	CPL/IAAQ/NOV-22/85	22	69	04	19
2.	CPL/IAAQ/NOV-22/142	23	71	05	17
3.	CPL/IAAQ/NOV-22/160	18	55	07	19
4.	CPL/IAAQ/NOV-22/174	20	50	08	21
5.	CPL/IAAQ/NOV-22/188	21	57	04	12
6.	CPL/IAAQ/NOV-22/297	27	77	07	20
7.	CPL/IAAQ/NOV-22/316	29	72	06	18
8.	CPL/IAAQ/NOV-22/337	21	55	07	16
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		80 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By



Authorized Signatory  
Subhanga Pratihaj  
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/002A

REPORT NO: CPL/RIAQ/DEC-22/8N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	02.11.2022	1530 – 1630 Hrs	< 0.1
2	04.11.2022	1000 – 1100 Hrs	< 0.1
3	08.11.2022	0840 – 0940 Hrs	< 0.1
4	11.11.2022	1200 – 1300 Hrs	< 0.1
5	14.11.2022	1100 – 1200 Hrs	< 0.1
6	17.11.2022	1300 – 1400 Hrs	< 0.1
7	21.11.2022	0930 – 1030 Hrs	< 0.1
8	25.11.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By

Verified 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/51A

REPORT NO: CPL/IAAQ/DEC-22/9N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sample ID No	CPL/IAAQ/NOV-22/86	CPL/IAAQ/NOV-22/143	CPL/IAAQ/NOV-22/161	CPL/IAAQ/NOV-22/175
Date of Sampling	02.11.2022 - 03.11.2022	04.11.2022 - 05.11.2022	08.11.2022 - 09.11.2022	11.11.2022 - 12.11.2022
Sampling Period	0925 - 0934 Hrs	0925 - 0934 Hrs	1745 - 1758 Hrs	1738 - 1750 Hrs
Time of Sampling	24.09 Hrs	24.09 Hrs	24.13 Hrs	24.12 Hrs
Sample Received on	03.11.2022	12.11.2022	12.11.2022	12.11.2022
Date of Test	04.11.2022	13.11.2022	13.11.2022	13.11.2022

Sample ID No	CPL/IAAQ/NOV-22/189	CPL/IAAQ/NOV-22/296	CPL/IAAQ/NOV-22/317	CPL/IAAQ/NOV-22/336
Date of Sampling	14.11.2022 - 15.11.2022	17.11.2022 - 18.11.2022	21.11.2022 - 22.11.2022	25.11.2022 - 26.11.2022
Sampling Period	1807 - 1815 Hrs	1730 - 1743 Hrs	1810 - 1823 Hrs	1740 - 1755 Hrs
Time of Sampling	24.08 Hrs	24.13 Hrs	24.13 Hrs	24.15 Hrs
Sample Received on	15.11.2022	19.11.2022	24.11.2022	26.11.2022
Date of Test	16.11.2022	21.11.2022	25.11.2022	28.11.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/SOP/PM2.5, Issue No: 04, dt: 25.10.2017	IS 12241, 1996 Low Volume Sampler	IS 5182 (Part-2) 2011, RA 2017	IS 5183 (Part-1) 2016, RA 2017
1.	CPL/IAAQ/NOV-22/86	21	51	05	20
2.	CPL/IAAQ/NOV-22/143	28	78	07	21
3.	CPL/IAAQ/NOV-22/161	27	75	04	11
4.	CPL/IAAQ/NOV-22/175	16	47	07	18
5.	CPL/IAAQ/NOV-22/189	20	72	08	23
6.	CPL/IAAQ/NOV-22/296	15	46	08	25
7.	CPL/IAAQ/NOV-22/317	26	71	04	10
8.	CPL/IAAQ/NOV-22/336	24	68	07	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 16 <sup>th</sup> 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\*\*\*\*  
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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPLFW02A

REPORT NO: CPLR/AAQ/DEC-22/9N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis →			
1	02.11.2022	0930 – 1030 Hrs	< 0.1
2	04.11.2022	1000 – 1100 Hrs	< 0.1
3	08.11.2022	0840 – 0940 Hrs	< 0.1
4	11.11.2022	1200 – 1300 Hrs	< 0.1
5	14.11.2022	1100 – 1200 Hrs	< 0.1
6	17.11.2022	1300 – 1400 Hrs	< 0.1
7	21.11.2022	0930 – 1030 Hrs	< 0.1
8	25.11.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 15 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory  
Subhanga Prharaj  
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/MSDA

REPORT NO: CPL/R/AAQ/DEC-22/10N

SAMPLE DRAWN BY: CLEENVIKON PRIVATE LIMITED

REPORT ISSUE DATE: 01.12.2022

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code: **A3**

Sample ID No	CPL/AAQ/NOV-22/87	CPL/AAQ/NOV-22/144	CPL/AAQ/NOV-22/162	CPL/AAQ/NOV-22/176
Date of Sampling	02.11.2022 - 03.11.2022	04.11.2022 - 05.11.2022	08.11.2022 - 09.11.2022	11.11.2022 - 12.11.2022
Sampling Period	0915 - 0915 Hrs	0902 - 0915 Hrs	1810 - 1825 Hrs	0913 - 0921 Hrs
Time of Sampling	24.00 Hrs	24.13 Hrs	24.15 Hrs	24.08 Hrs
Sample Received on	03.11.2022	12.11.2022	12.11.2022	12.11.2022
Date of Test	04.11.2022	13.11.2022	13.11.2022	13.11.2022

Sample ID No	CPL/AAQ/NOV-22/191	CPL/AAQ/NOV-22/299	CPL/AAQ/NOV-22/314	CPL/AAQ/NOV-22/335
Date of Sampling	14.11.2022 - 15.11.2022	17.11.2022 - 18.11.2022	21.11.2022 - 22.11.2022	25.11.2022 - 26.11.2022
Sampling Period	0900 - 0914 Hrs	0905 - 0915 Hrs	1002 - 1010 Hrs	0905 - 0915 Hrs
Time of Sampling	24.15 Hrs	24.10 Hrs	23.50 Hrs	24.10 Hrs
Sample Received on	15.11.2022	19.11.2022	24.11.2022	26.11.2022
Date of Test	16.11.2022	21.11.2022	25.11.2022	28.11.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/SDP/ST/UM/2.5, Issue No: 04, dtd: 12.10.2017	EN 12341, 2088 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2007	IS: 5182 (Part - 6) 2008, RA 2017
1.	CPL/AAQ/NOV-22/87	25	76	06	23
2.	CPL/AAQ/NOV-22/144	22	77	07	27
3.	CPL/AAQ/NOV-22/162	26	78	06	16
4.	CPL/AAQ/NOV-22/176	26	81	05	15
5.	CPL/AAQ/NOV-22/191	26	84	07	20
6.	CPL/AAQ/NOV-22/299	18	58	09	25
7.	CPL/AAQ/NOV-22/314	28	79	04	16
8.	CPL/AAQ/NOV-22/335	29	80	06	21
National Ambient Air Quality Standards, CPCB Notification New Delhi, 15 <sup>th</sup> 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 Prakash  
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/PM07A

REPORT NO: CPL/IAAQ/DEC-22/10N

REPORT ISSUE DATE: 01.12.2022

SAMPLE OBTAIN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.11.2022	1530 – 1630 Hrs	< 0.1
2	04.11.2022	1000 – 1100 Hrs	< 0.1
3	08.11.2022	0840 – 0940 Hrs	< 0.1
4	11.11.2022	1200 – 1300 Hrs	< 0.1
5	14.11.2022	1100 – 1200 Hrs	< 0.1
6	17.11.2022	1300 – 1400 Hrs	< 0.1
7	21.11.2022	0930 – 1030 Hrs	< 0.1
8	25.11.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory  
Subhanga Prharaj  
Managing Director

\*\*\*\*END OF TEST REPORT\*\*\*\*  
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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/MTA

REPORT NO: CPL/AAQ/DEC-22/11N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : A4

Sample ID No	: CPL/AAQ/NOV-22/88	CPL/AAQ/NOV-22/145	CPL/AAQ/NOV-22/163	CPL/AAQ/NOV-22/177
Date of Sampling	: 02.11.2022 - 03.11.2022	04.11.2022 - 05.11.2022	08.11.2022 - 09.11.2022	11.11.2022 - 12.11.2022
Sampling Period	: 0920 - 0910 Hrs	1820 - 1834 Hrs	1810 - 1825 Hrs	0913 - 0921 Hrs
Time of Sampling	: 23.50 Hrs	24.14 Hrs	24.15 Hrs	24.08 Hrs
Sample Received on	: 02.11.2022	12.11.2022	12.11.2022	12.11.2022
Date of Test	: 03.11.2022	13.11.2022	13.11.2022	13.11.2022

Sample ID No	: CPL/AAQ/NOV-22/190	CPL/AAQ/NOV-22/298	CPL/AAQ/NOV-22/315	CPL/AAQ/NOV-22/338
Date of Sampling	: 14.11.2022 - 15.11.2022	17.11.2022 - 18.11.2022	21.11.2022 - 22.11.2022	25.11.2022 - 26.11.2022
Sampling Period	: 0915 - 0930 Hrs	0915 - 0930 Hrs	1012 - 1023 Hrs	0912 - 0930 Hrs
Time of Sampling	: 24.15 Hrs	24.15 Hrs	24.11 Hrs	24.18 Hrs
Sample Received on	: 15.11.2022	19.11.2022	24.11.2022	26.11.2022
Date of Test	: 16.11.2022	21.11.2022	25.11.2022	27.11.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/2019/ISO 5, Issue No: 04, dt: 22.10.2017	EN 12341, 1996 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2006, RA 2017
1.	CPL/AAQ/NOV-22/88	24	67	05	21
2.	CPL/AAQ/NOV-22/145	24	68	04	14
3.	CPL/AAQ/NOV-22/163	26	75	08	21
4.	CPL/AAQ/NOV-22/177	17	52	11	28
5.	CPL/AAQ/NOV-22/190	23	63	07	26
6.	CPL/AAQ/NOV-22/298	17	49	03	19
7.	CPL/AAQ/NOV-22/315	25	68	04	13
8.	CPL/AAQ/NOV-22/338	27	73	06	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> 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\*\*\*

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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/PM/2A

REPORT NO: CPL/R/AAQ/DEC-22/11N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
			Method of Analysis
1	02.11.2022	1230 – 1330 Hrs	< 0.1
2	04.11.2022	1100 – 1200 Hrs	< 0.1
3	08.11.2022	0940 – 1040 Hrs	< 0.1
4	11.11.2022	1200 – 1300 Hrs	< 0.1
5	14.11.2022	1130 – 1230 Hrs	< 0.1
6	17.11.2022	1310 – 1410 Hrs	< 0.1
7	21.11.2022	1020 – 1120 Hrs	< 0.1
8	25.11.2022	1130 – 1230 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 16 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By

Verified By



Authorized Signatory  
Subhanga Prabhara  
Managing Director

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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/MSO

REPORT NO: CPL/R/WDEC-22/9N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/42**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Tube Well Village Kutra  
 Sampling Method : APHA 23<sup>rd</sup> 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 - 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	1.20	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.24	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	262.4	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.24	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	23.99	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	321	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	507	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	76.88	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	15.94	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> E	5.49	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	4.08	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	172	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	06	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	19.99	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	17.32	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Chakraborty*  
Test Done By

*M/S*  
Verified By



*S. Subhanga*  
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 WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMB

REPORT NO: CPL/R/WIDEC-22/9N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/NOV-22/42**  
 Date of Sampling : **19.11.2022**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Tube Well Village Kutra**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 - 26.11.2022**

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

ND: Non Detectable.

*Chandhan*  
Test Done By



*Subhanga Prahara*  
Authorized Signatory  
Subhanga Prahara  
Managing Director

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

Page 2 of 2

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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/MS2

REPORT NO: CPL/R/W/DEC-22/9N

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 : At: Telighana, Po: Biringatoll, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/42**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Tube Well Village Kutra  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

S No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 15500:2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.5	°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

*Chraha*  
Test Done By

*Subhanga*  
Verified By



*Subhanga*  
Authorized Signatory  
Subhanga Prahara  
Managing Director

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

Page 1 of 1

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WR

REPORT NO: CPL/IR/W/DEC-22/10N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/40**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Sialjhor  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

S No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500:2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.40	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.03	-	6.5 – 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	229.6	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.19	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	50.96	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	310	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	518	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	52.56	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	23.91	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	12.84	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	4.06	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	142	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	08	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	17.16	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	14.12	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Carshoo*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FW/3

REPORT NO: CPL/R/W/DEC-22/10N

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 : At: Telighana, Po: Biringatoll, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/40**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Sialjhor  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

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

ND: Non Detectable.

*Chandhan*  
Test Done By

*20/11/22*  
Verified By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WQI

REPORT NO: CPL/R/W/DEC-22/10N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/40**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Sialjhor  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.6	°C	-
5	Residual Free Chlorine	MERCK	0.07	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Subhanga*  
Test Done By

*Subhanga*  
Verified By



*Subhanga*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WR

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

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/41**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Budhakata  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	1.10	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.68	-	6.5 – 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	213.2	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.27	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	20.98	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	257	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	399	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	64.08	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	12.95	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	4.24	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	8.40	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	140	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	04	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	12.08	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	6.88	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Chakrav*  
Test Done By

*h. s.*  
Verified By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

Page 1 of 2

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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/FWR

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

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/41**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Budhakata  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501:2012
20	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

*Chandhan*  
Test Done By

*Subhanga*  
Verified By



*Subhanga Prahara*  
Authorized Signatory  
Subhanga Prahara  
Managing Director

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

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WR

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

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 : At: Telighana, Po: Biringatoll, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/41**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Budhakata  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.5	°C	-
5	Residual Free Chlorine	MERCK	0.05	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Chreshog*  
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: CPL/MS

REPORT NO: CPL/R/W/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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/44**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Kiln Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No.	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10900:2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	3.2	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	8.00	-	6.5 – 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	389.5	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.28	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	187.94	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	512	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	838	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	142.96	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	7.97	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	17.06	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	10.61	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	80	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	20	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	12.52	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	11.00	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Chhabra*  
Test Done By

*Subhanga*  
Verified By



*Subhanga*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FW/01

REPORT NO: CPL/R/W/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 : At: Tellghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/44**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Kiln Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 - 26.11.2022

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

ND: Non Detectable.

*Upachar*  
Test Done By

*20/11/22*  
Verified By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FW/01

REPORT NO: CPLIR/W/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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/44**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Kiln Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500:2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.5	°C	-
5	Residual Free Chlorine	MERCK	0.10	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*C. Sahoo*  
Test Done By

*S. S.*  
Verified By



*S. Subhanga*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/MBE

REPORT NO: CPL/R/W/DEC-22/13N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/45**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Near Cement Mill  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.20	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	8.40	-	6.5 – 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	53.3	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.29	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	14.98	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	82	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	150.6	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	14.78	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	3.98	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	17.85	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	2.34	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	28	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	24	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	6.16	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	0.59	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Chakrabarti*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Suhanga Praharaj  
Managing Director

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/PM00

REPORT NO: CPL/R/W/DEC-22/13N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/45**  
 Date of Sampling : **19.11.2022**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Near Cement Mill**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 – 26.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per (S 1050):2012
20	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

*Chaschoo*  
Test Done By

*Subhanga*  
Verified By



*Subhanga Praharej*  
Authorized Signatory  
Subhanga Praharej  
Managing Director

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

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WR

REPORT NO: CPL/R/W/DEC-22/13N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/45**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Near Cement Mill  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.7	°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

*Chaschon*  
Test Done By

*Subhanga*  
Verified By



*Subhanga*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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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/WR0

REPORT NO: CPLJR/W/DEC-22/14N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/43**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Coal Yard  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.40	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	6.64	-	6.5 – 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	237.8	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.23	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	24.96	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	342	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	552	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	64.08	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	18.93	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	171.37	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	3.18	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	24	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	20	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	20.16	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	12.19	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Chaschov*  
Test Done By

*Verified*  
Verified By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

Page 1 of 2

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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/PM9

REPORT NO: CPLIR/W/DEC-22/14N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/43**  
 Date of Sampling : 19.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Coal Yard  
 Sampling Method : APHA 23<sup>rd</sup> 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 – 26.11.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10300:2012
20	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

*Subhanga Praharaj*  
Test Done By

*Subhanga Praharaj*  
Verified By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/FW/04

REPORT NO: CPL/R/W/DEC-22/14N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/NOV-22/43**  
 Date of Sampling : **19.11.2022**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Back Side of Coal Yard**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 - 26.11.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	24.5	°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

*Chasahon*  
 Test Done By



*Subhanga Prahara*  
 Authorized Signatory  
 Subhanga Prahara  
 Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/WR

REPORT NO: CPL/R/W/DEC-22/15N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/56**  
 Date of Sampling : 25.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well of SCL Colony  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 26.11.2022  
 Date of Test : 26.11.2022 - 01.12.2022

S No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500:2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	1.0	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	6.54	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	20.5	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.11	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	9.09	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	60	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	93.1	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	4.93	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	1.99	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	7.00	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	16	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	24	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	12.10	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	7.32	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*[Signature]*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MS

REPORT NO: CPL/R/W/DEC-22/15N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/NOV-22/56**  
 Date of Sampling : **25.11.2022**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well of SCL Colony**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **26.11.2022**  
 Date of Test : **26.11.2022 - 01.12.2022**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10501: 2012
20	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

*C. Sahon*  
Test Done By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FORM

REPORT NO: CPL/R/W/DEC-22/15N

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 : At: Telighana, Po: Biringaloli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/56**  
 Date of Sampling : 25.11.2022  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well of SCL Colony  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 26.11.2022  
 Date of Test : 26.11.2022 - 01.12.2022

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limits as per IS 10500:2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	23.1	°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

*Chaschaos*  
 Test Done By

*M/S*  
 Verified By



*Subhanga Prahara*  
 Authorized Signatory  
 Subhanga Prahara  
 Managing Director

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

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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: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 14<sup>th</sup> November 2022 for the month 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	Bore Well Back Side of Cement Mill Within Plant	0.15	-	6.29	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	11.57	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.6" E	0.10	-	12.58	242.0	229.42

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

Authorized Signatory  
For Cleenviron Private Limited



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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/PM3

REPORT NO: CPL/R/W/DEC-22/16N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/34**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Matwali Jor Before ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 S. 2236 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.18	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	220	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	132	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	114.8	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	10.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2 E	2.33	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	24.65	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	12.95	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.42	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	17.1	mg/l	-

*Chandhoo*  
Test Done By

*Ver*  
Verified By



*Subhansu Pradhan*  
Authorized Signatory  
Subhansu Pradhan  
Managing Director

\*\*\*\*End of Test Report\*\*\*\*  
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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/FORM

REPORT NO: CPL/R/W/DEC-22/16N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/34**  
 Sample Description : Surface Water  
 Date of Sampling : 19.11.2022  
 Location of Sampling : Matwali Jor Before ML Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	3.52	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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

*Chiranjit*  
 Test Done By



Authorized Signatory  
 Subhanga Pratara  
 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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/R/W

REPORT NO: CPL/R/W/DEC-22/17N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/35**  
 Sample Description : Surface Water  
 Date of Sampling : 19.11.2022  
 Location of Sampling : Daku Nadi After ML Area  
 Sampling Method : APHA 23<sup>rd</sup> 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: 2291 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.74	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	302	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	181	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	147.6	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	13.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	4.73	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	36.15	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	13.94	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.39	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	4.4	mg/l	-

*Chakras*  
Test Done By

*Ver*  
Verified By



*Subhanga Prahara*  
Authorized Signatory  
(Subhanga Prahara)  
Managing Director

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

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Tele Fax: 0681 - 2475746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/MS

REPORT NO: CPL/R/W/DEC-22/17N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/35**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Daku Nadi After ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA.2019	6.1	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	1.78	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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	Noe/100ml	5000

*Chirachon*  
 Test Done By



*S. Prasad*  
 Authorized Signatory  
 Subhanga Prasad  
 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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MSO

REPORT NO: CPL/R/W/DEC-22/18N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/36**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Kanti Jharina Nala Before ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per S. 2236 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.70	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	381	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	229	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	206	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	10.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	3.44	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	49.29	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	19.93	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.19	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	6.2	mg/l	-

*Chandra*  
Test Done By



*Subhanga Prharaj*  
Authorized Signatory  
Subhanga Prharaj  
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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/FORM

REPORT NO: CPL/R/W/DEC-22/18N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/36**  
 Sample Description : Surface Water  
 Date of Sampling : 19.11.2022  
 Location of Sampling : Kanti Jharla Nala Before ML Area  
 Sampling Method : APHA 23<sup>rd</sup> 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	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazan	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 3B) 1989, RA 2019	6.2	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> Edition, 5210 D	01	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 3B) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	3.52	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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	Ncs/100ml	5000

*Chandrasekar*  
 Test Done By



*Subhanga Prataj*  
 Authorized Signatory  
 Subhanga Prataj  
 Managing Director

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

Page 1 of 1

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORM NO: CPL/WQ

REPORT NO: CPL/R/W/DEC-22/19N

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 : **At: Telighana, Po: Biringatoli, Via: Kulra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/37**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Kanti Jharla Nala After ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 4500 H+B	7.73	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	387	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	232	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	205	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	12.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	1.54	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	52.58	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	17.93	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.28	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	8.3	mg/l	-

*Chandana*  
Test Done By

*M/S*  
Verified By



*Subhanga Prataap*  
Authorized Signatory  
Subhanga Prataap  
Managing Director

\*\*\*\*End of Test Report\*\*\*\*  
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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/MS

REPORT NO: CPL/R/W/DEC-22/19N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/NOV-22/37**  
 Sample Description : Surface Water  
 Date of Sampling : 19.11.2022  
 Location of Sampling : Kanti Jharia Nala After ML Area  
 Sampling Method : APHA 23<sup>rd</sup> 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-2291 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	3.52	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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	Ncs/100ml	5000

*Chakrabarti*  
 Test Done By



*Subhanga Prasad*  
 Authorized Signatory  
 Subhanga Prasad  
 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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FW/16

REPORT NO: CPL/R/W/DEC-22/20N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/NOV-22/38**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Nakti Jor Nala Before ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per S-2296 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.52	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	392	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	235	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	213.2	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	10.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	3.13	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	37.79	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	28.89	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.39	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	5.2	mg/l	-

*Chiranjit*  
Test Done By

*Subhanga*  
Verified By



*Subhanga Prasad*  
Authorized Signatory  
Subhanga Prasad  
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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/VMK

REPORT NO: CPL/R/W/DEC-22/20N

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 : **At: Telighana, Po: Biringatol, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/NOV-22/38**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Nakti Jor Nala Before ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.1	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	3.52	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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	Ncs/100ml	5000

*Chanchos*  
 Test Done By

Verified By



Authorized Signatory  
 Subhanga Pisharaj  
 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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/7988

REPORT NO: CPL/RW/DEC-22/21N

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 : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/NOV-22/39**  
 Sample Description : Surface Water  
 Date of Sampling : 19.11.2022  
 Location of Sampling : Nakti Jor Nala After ML Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 4500 H+B	7.86	-	6.5 – 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	384	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	230	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	205	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	10.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	1.83	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	44.38	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	22.91	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.57	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05
21.	Total Suspended Solids	APHA 23 <sup>rd</sup> Edition, 2540 D	9.6	mg/l	-

*Chirakos*  
Test Done By



*Subhanga Prabhara*  
Authorized Signatory  
Subhanga Prabhara  
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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/MSI

REPORT NO: CPL/R/W/DEC-22/21N

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 : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/NOV-22/39**  
 Sample Description : **Surface Water**  
 Date of Sampling : **19.11.2022**  
 Location of Sampling : **Nakti Jor Nala After ML Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 3B) 1989, RA 2019	6.0	mg/l	4
5.	BOO 5 days at 20°C	APHA 23 <sup>rd</sup> Edition, 5210 D	02	mg/l	3
6.	Oil & Grease	IS: 3025 (Part 3B) 1991, RA 2019	< 0.10	mg/l	0.1
7.	Free Carbon Dioxide (as CO <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	1.76	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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	Noc/100ml	6000

*Chasab*  
 Test Done By



*Sudhanga Prashara*  
 Authorized Signatory  
 Sudhanga Prashara  
 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.

## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/PM02

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

REPORT ISSUE DATE: 01.12.2022

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Instrument Used : Sound Level Meter (LUTRON: SL 4001)

Station No	N1	N2	N3
Sample ID	CPL/N/NOV-22/12	CPL/N/NOV-22/13	CPL/N/NOV-22/14
Date of Monitoring	17.11.2022 – 18.11.2022	21.11.2022 – 22.11.2022	14.11.2022 – 15.11.2022
Location of Monitoring	COLONY AREA	NEAR MAIN GATE	NEAR TG BUILDING

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM – 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM – 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
1.	N1	59.2	48.1	65.8	42.1
2.	N2	65.8	50.6	73.0	35.2
3.	N3	69.4	61.7	73.7	50.2

Station No	N4	N5
Sample ID	CPL/N/NOV-22/15	CPL/N/NOV-22/43
Date of Monitoring	11.11.2022 – 12.11.2022	25.11.2022 – 26.11.2022
Location of Monitoring	NEAR CLINKER BULK LOADING AREA	TELEGHANA

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM – 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM – 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
3.	N4	68.4	59.5	73.2	39.6
4.	N5	61.2	47.8	68.1	43.1

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	Silence Zone	50	40

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

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS1A

ULR - TC681623000000055F  
REPORT NO: CPL/AAQ/JAN-23/19

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sample ID No	CPL/AAQ/DEC-22/35	CPL/AAQ/DEC-22/56	CPL/AAQ/DEC-22/119	CPL/AAQ/DEC-22/138
Date of Sampling	01.12.2022 - 02.12.2022	05.12.2022 - 06.12.2022	07.12.2022 - 08.12.2022	12.12.2022 - 13.12.2022
Sampling Period	1805 - 1830 Hrs	1815 - 1823 Hrs	1813 - 1820 Hrs	1811 - 1820 Hrs
Time of Sampling	24.15 Hrs	24.08 Hrs	24.07 Hrs	24.09 Hrs
Sample Received on	02.12.2022	06.12.2022	08.12.2022	13.12.2022
Date of Test	03.12.2022	07.12.2022	09.12.2022	14.12.2022

Sample ID No	CPL/AAQ/DEC-22/159	CPL/AAQ/DEC-22/283	CPL/AAQ/DEC-22/306	CPL/AAQ/DEC-22/371	CPL/AAQ/DEC-22/368
Date of Sampling	15.12.2022 - 16.12.2022	19.12.2022 - 20.12.2022	22.12.2022 - 23.12.2022	26.12.2022 - 27.12.2022	28.12.2022 - 29.12.2022
Sampling Period	1810 - 1825 Hrs	1815 - 1828 Hrs	1802 - 1815 Hrs	1846 - 1858 Hrs	1717 - 1730 Hrs
Time of Sampling	24.15 Hrs	24.18 Hrs	24.13 Hrs	24.12 Hrs	24.13 Hrs
Sample Received on	16.12.2022	20.12.2022	23.12.2022	27.12.2022	29.12.2022
Date of Test	17.12.2022	21.12.2022	24.12.2022	28.12.2022	30.12.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/SOP/19/MS-1 Issue No. 04, dt: 22.10.2017	IS 12341, 1997 Low Volume Sampler	IS 5182 (Part - 2) 2001, RA 2007	IS: 5182 (Part - 6) 2001, RA 2017
1.	CPL/AAQ/DEC-22/35	22	54	04	16
2.	CPL/AAQ/DEC-22/56	18	41	05	16
3.	CPL/AAQ/DEC-22/119	17	55	05	17
4.	CPL/AAQ/DEC-22/138	20	58	04	13
5.	CPL/AAQ/DEC-22/159	18	53	05	17
6.	CPL/AAQ/DEC-22/283	24	83	05	13
7.	CPL/AAQ/DEC-22/306	22	56	05	16
8.	CPL/AAQ/DEC-22/371	23	61	04	12
9.	CPL/AAQ/DEC-22/368	22	51	06	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> 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 *P. Sareni*

Authorized Signatory  
*Subhanga Prakash*  
 Managing Director

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PR/24

REPORT NO: CPL/IR/AAQ/JAN-23/19N

REPORT ISSUE DATE: 05.01.2023

SAMPLE OBTAIN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis →			
1	02.12.2022	1530 – 1630 Hrs	< 0.1
2	06.12.2022	1000 – 1100 Hrs	< 0.1
3	08.12.2022	0840 – 0940 Hrs	< 0.1
4	13.12.2022	1200 – 1300 Hrs	< 0.1
5	16.12.2022	1100 – 1200 Hrs	< 0.1
6	20.12.2022	1300 – 1400 Hrs	< 0.1
7	23.12.2022	0930 – 1030 Hrs	< 0.1
8	27.12.2022	1030 – 1130 Hrs	< 0.1
9	29.12.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*[Signature]*  
Test Done By

*P. Sasant*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Prabaraj  
Managing Director

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

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPLFR07A

ULR - TC681623000000056F  
REPORT NO: CPL/IAAQ/JAN-23/20

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sample ID No	CPL/IAAQ/DEC-22/34	CPL/IAAQ/DEC-22/55	CPL/IAAQ/DEC-22/120	CPL/IAAQ/DEC-22/139
Date of Sampling	01.12.2022 - 02.12.2022	05.12.2022 - 06.12.2022	07.12.2022 - 08.12.2022	12.12.2022 - 13.12.2022
Sampling Period	1805 - 1817 Hrs	1805 - 1810 Hrs	1801 - 1810 Hrs	1755 - 1808 Hrs
Time of Sampling	24.12 Hrs	24.05 Hrs	24.09 Hrs	24.13 Hrs
Sample Received on	02.12.2022	06.12.2022	08.12.2022	13.12.2022
Date of Test	03.12.2022	07.12.2022	09.12.2022	14.12.2022

Sample ID No	CPL/IAAQ/DEC-22/160	CPL/IAAQ/DEC-22/284	CPL/IAAQ/DEC-22/305	CPL/IAAQ/DEC-22/370	CPL/IAAQ/DEC-22/387
Date of Sampling	15.12.2022 - 16.12.2022	19.12.2022 - 20.12.2022	22.12.2022 - 23.12.2022	26.12.2022 - 27.12.2022	28.12.2022 - 29.12.2022
Sampling Period	1756 - 1810 Hrs	1805 - 1817 Hrs	1748 - 1805 Hrs	1830 - 1835 Hrs	1704 - 1715 Hrs
Time of Sampling	24.14 Hrs	24.12 Hrs	24.17 Hrs	24.05 Hrs	24.11 Hrs
Sample Received on	16.12.2022	20.12.2022	23.12.2022	27.12.2022	29.12.2022
Date of Test	17.12.2022	21.12.2022	24.12.2022	28.12.2022	30.12.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/ISO/15189:2015 Issue No: IA/001/23/10/2017	EN 12341, 1994 Low Volume Sampler	IS: 5182 (Part - 3) 2018, IA 2017	IS: 5182 (Part - 6) 2018, IA 2017
1.	CPL/IAAQ/DEC-22/34	21	64	06	14
2.	CPL/IAAQ/DEC-22/55	25	78	06	13
3.	CPL/IAAQ/DEC-22/120	24	68	04	13
4.	CPL/IAAQ/DEC-22/139	25	63	04	13
5.	CPL/IAAQ/DEC-22/160	24	66	05	14
6.	CPL/IAAQ/DEC-22/284	25	70	05	14
7.	CPL/IAAQ/DEC-22/305	16	53	05	15
8.	CPL/IAAQ/DEC-22/370	20	58	05	14
9.	CPL/IAAQ/DEC-22/387	27	77	06	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 15 <sup>th</sup> 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

P. Saren  
Verified By



Authorized Signatory  
Subhanga Prateraj  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PWSTA

REPORT NO: CPL/RJAAQ/JAN-23/20N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 05.01.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.12.2022	0930 – 1030 Hrs	< 0.1
2	06.12.2022	1000 – 1100 Hrs	< 0.1
3	08.12.2022	0840 – 0940 Hrs	< 0.1
4	13.12.2022	1200 – 1300 Hrs	< 0.1
5	16.12.2022	1100 – 1200 Hrs	< 0.1
6	20.12.2022	1300 – 1400 Hrs	< 0.1
7	23.12.2022	0930 – 1030 Hrs	< 0.1
8	27.12.2022	1030 – 1130 Hrs	< 0.1
9	29.12.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*Dhe*  
Test Done By

*P. Sahoo*  
Verified By



*Subhanga Prabhakar*  
Authorized Signatory  
Subhanga Prabhakar  
Managing Director

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# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS1A

ULR - TC68162300000057F  
REPORT NO: CPL/IAAQ/JAN-23/21

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sample ID No	CPL/IAAQ/DEC-22/37	CPL/IAAQ/DEC-22/58	CPL/IAAQ/DEC-22/121	CPL/IAAQ/DEC-22/140
Date of Sampling	01.12.2022 - 02.12.2022	05.12.2022 - 06.12.2022	07.12.2022 - 08.12.2022	12.12.2022 - 13.12.2022
Sampling Period	0910 - 0921 Hrs	0935 - 0950 Hrs	0955 - 1009 Hrs	0850 - 0905 Hrs
Time of Sampling	24.11 Hrs	24.15 Hrs	24.14 Hrs	24.15 Hrs
Sample Received on	02.12.2022	06.12.2022	08.12.2022	13.12.2022
Date of Test	03.12.2022	07.12.2022	09.12.2022	14.12.2022

Sample ID No	CPL/IAAQ/DEC-22/161	CPL/IAAQ/DEC-22/281	CPL/IAAQ/DEC-22/303	CPL/IAAQ/DEC-22/373	CPL/IAAQ/DEC-22/390
Date of Sampling	15.12.2022 - 16.12.2022	19.12.2022 - 20.12.2022	22.12.2022 - 23.12.2022	26.12.2022 - 27.12.2022	28.12.2022 - 29.12.2022
Sampling Period	0905 - 0912 Hrs	1003 - 1015 Hrs	0906 - 0917 Hrs	0945 - 1004 Hrs	0845 - 0902 Hrs
Time of Sampling	24.07 Hrs	24.12 Hrs	24.12 Hrs	24.19 Hrs	24.17 Hrs
Sample Received on	16.12.2022	20.12.2022	23.12.2022	27.12.2022	29.12.2022
Date of Test	17.12.2022	21.12.2022	24.12.2022	28.12.2022	30.12.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/ISO 9001:2015, (Issued Rec: 04.02.2017)	EN 12341, 1999 Low Volume Sampler	IS 5182 (Part - 2) 2007, (IA 2017)	IS 5182 (Part - 6) 2006, (IA 2017)
1.	CPL/IAAQ/DEC-22/37	20	69	06	18
2.	CPL/IAAQ/DEC-22/58	20	55	05	17
3.	CPL/IAAQ/DEC-22/121	28	78	05	20
4.	CPL/IAAQ/DEC-22/140	21	66	05	20
5.	CPL/IAAQ/DEC-22/161	25	68	05	15
6.	CPL/IAAQ/DEC-22/281	26	71	05	16
7.	CPL/IAAQ/DEC-22/303	23	74	06	15
8.	CPL/IAAQ/DEC-22/373	21	68	06	16
9.	CPL/IAAQ/DEC-22/390	29	72	06	20
National Ambient Air Quality Standards, CPCB Notification New Delhi, 15 <sup>th</sup> 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 *P. Sarani*

Authorized Signatory  
*Subhanga Prharaj*  
 Managing Director

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PM/TA

REPORT NO: CPLR/AAQ/JAN-23/21N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 05.01.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sl No.	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	01.12.2022	1530 – 1630 Hrs	< 0.1
2	05.12.2022	1000 – 1100 Hrs	< 0.1
3	07.12.2022	0840 – 0940 Hrs	< 0.1
4	12.12.2022	1200 – 1300 Hrs	< 0.1
5	15.12.2022	1100 – 1200 Hrs	< 0.1
6	19.12.2022	1300 – 1400 Hrs	< 0.1
7	22.12.2022	0930 – 1030 Hrs	< 0.1
8	26.12.2022	1030 – 1130 Hrs	< 0.1
9	28.12.2022	1030 – 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*[Signature]*  
Test Done By

*P. Saveni*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Prabhara  
Managing Director

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# Cleenviron Private Limited

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MSVA

ULR - TC681623000000058F  
REPORT NO: CPL/IAAQ/JAN-23/22

REPORT ISSUE DATE: 05.01.2023

SAMPLE OBTAIN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringaloli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sample ID No	CPL/IAAQ/DEC-22/36	CPL/IAAQ/DEC-22/57	CPL/IAAQ/DEC-22/122	CPL/IAAQ/DEC-22/141
Date of Sampling	01.12.2022 - 02.12.2022	05.12.2022 - 06.12.2022	07.12.2022 - 08.12.2022	12.12.2022 - 13.12.2022
Sampling Period	0917 - 0930 Hrs	0925 - 0940 Hrs	1005 - 1017 Hrs	0906 - 0915 Hrs
Time of Sampling	24.13 Hrs	24.15 Hrs	24.12 Hrs	24.09 Hrs
Sample Received on	02.12.2022	06.12.2022	08.12.2022	13.12.2022
Date of Test	03.12.2022	07.12.2022	09.12.2022	14.12.2022

Sample ID No	CPL/IAAQ/DEC-22/162	CPL/IAAQ/DEC-22/282	CPL/IAAQ/DEC-22/304	CPL/IAAQ/DEC-22/372	CPL/IAAQ/DEC-22/389
Date of Sampling	15.12.2022 - 16.12.2022	19.12.2022 - 20.12.2022	22.12.2022 - 23.12.2022	26.12.2022 - 27.12.2022	28.12.2022 - 29.12.2022
Sampling Period	0913 - 0924 Hrs	1014 - 1030 Hrs	0850 - 0906 Hrs	1006 - 1018 Hrs	0910 - 0912 Hrs
Time of Sampling	24.11 Hrs	24.16 Hrs	24.16 Hrs	24.13 Hrs	24.12 Hrs
Sample Received on	16.12.2022	20.12.2022	23.12.2022	27.12.2022	29.12.2022
Date of Test	17.12.2022	21.12.2022	24.12.2022	28.12.2022	30.12.2022

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/OP11/IND-3, Issue No: RA, etc. 23.10.2017	EN 12341, 1994 Low Volume Sampler	IS 5182 (Part - 2), 2006, RA 2017	IS: 5182 (Part - 6) 2006, RA 2017
1.	CPL/IAAQ/DEC-22/36	25	72	09	27
2.	CPL/IAAQ/DEC-22/57	26	78	06	17
3.	CPL/IAAQ/DEC-22/122	28	81	06	18
4.	CPL/IAAQ/DEC-22/141	25	70	06	22
5.	CPL/IAAQ/DEC-22/162	18	54	05	19
6.	CPL/IAAQ/DEC-22/282	21	64	07	23
7.	CPL/IAAQ/DEC-22/304	24	66	04	16
8.	CPL/IAAQ/DEC-22/372	19	62	06	16
9.	CPL/IAAQ/DEC-22/389	20	56	06	19
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> 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

P. Sareni  
Verified By



Authorized Signatory  
Subhanga Prashant  
Managing Director

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

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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/MS7A

REPORT NO: CPL/R/AAQ/JAN-23/22N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 05.01.2023


Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Location of Monitoring : **Near Clinker Bulk Loading Area**  
Monitoring Station Code : **A4**

S No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
1	01.12.2022	1230 – 1330 Hrs	< 0.1
2	05.12.2022	1100 – 1200 Hrs	< 0.1
3	07.12.2022	0940 – 1040 Hrs	< 0.1
4	12.12.2022	1200 – 1300 Hrs	< 0.1
5	15.12.2022	1130 – 1230 Hrs	< 0.1
6	19.12.2022	1310 – 1410 Hrs	< 0.1
7	22.12.2022	1020 – 1120 Hrs	< 0.1
8	26.12.2022	1130 – 1230 Hrs	< 0.1
9	28.12.2022	1130 – 1230 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 15 <sup>th</sup> November 2009			D4 (1 Hour Average)

  
Test Done By

  
Verified By



  
Authorized Signatory  
Subhanga Pratihara  
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 NABL Accredited Laboratory.



## TEST REPORT FOR FUGITIVE DUST EMISSION MONITORING

FORMAT NO: CPL/FRM

ULR – TC68162300000059F  
REPORT NO: CPL/R/FG/JAN-23/5

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Sampling Method : IS: 5182 (Part – 4)

Sample ID No	CPL/FG/DEC-22/83	CPL/FG/DEC-22/72	CPL/FG/DEC-22/82	CPL/FG/DEC-22/73
Station No	F1	F2	F3	F4
Date of Sampling	15.12.2022	06.12.2022	15.12.2022	07.12.2022
Sampling Period	1242 – 1725 Hrs	1120 – 1528 Hrs	0720 – 1229 Hrs	1531 – 1938 Hrs
Time of Sampling	04.43 Hrs	04.08 Hrs	05.09 Hrs	04.07 Hrs
Sample Received on	15.12.2022	07.12.2022	15.12.2022	06.12.2022
Date of Test	16.12.2022	08.12.2022	16.12.2022	07.12.2022
Method of Analysis	IS: 5182 (Part – 4)			

Sl No	Station No	Location of Sampling	Parameters
			SPM <sub>m</sub> in µg/m <sup>3</sup>
1.	F1	NEAR KILN AREA	877
2.	F2	NEAR CLINKER BULK LOADING AREA	375
3.	F3	NEAR RAW MILL	1107
4.	F4	NEAR MATERIAL STOCK YARD	755

Test Done By

P. Sareni  
Verified By



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: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 22<sup>nd</sup> December 2022 for the month from the following mentioned points and data thus recorded are as follows:

Sl No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Bore Well Back Side of Cement Mill Within Plant	0.15	-	6.64	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	10.91	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.8" E	0.10	-	15.72	242.0	226.28

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

  
Authorized Signatory  
For Cleenviron Private Limited



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# Cleenviron Private Limited

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



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/PM2

ULR - TC681623000000060F  
REPORT NO: CPL/R/N/JAN-23/3

REPORT ISSUE DATE: 05.01.2023

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Instrument Used : Sound Level Meter (LUTRON: SL 4001)

Station No	N1	N2	N3
Sample ID	CPL/N/DEC-22/59	CPL/N/DEC-22/56	CPL/N/DEC-22/52
Date of Monitoring	15.12.2022 - 16.12.2022	07.12.2022 - 08.12.2022	05.12.2022 - 06.12.2022
Location of Monitoring	COLONY AREA	NEAR MAIN GATE	NEAR TG BUILDING

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
1.	N1	57.3	46.9	65.8	44.2
2.	N2	64.9	51.9	72.6	38.6
3.	N3	76.9	64.8	83.6	47.6

Station No	N4	N5
Sample ID	CPL/N/DEC-22/41	CPL/N/DEC-22/57
Date of Monitoring	01.12.2022 - 02.12.2022	12.12.2022 - 13.12.2022
Location of Monitoring	NEAR CLINKER BULK LOADING AREA	TELEGHANA

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
3.	N4	69.7	49.9	78.2	45.1
4.	N5	61.9	47.0	69.2	43.7

*Bimark Jena*  
Test Done By



*Subhanga Praharaj*  
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	Silence Zone	50	40

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

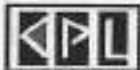
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# Cleenviron Private Limited

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



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/PR02

ULR - TC681623000000051F  
REPORT NO: CPL/R/N/JAN-23/4

REPORT ISSUE DATE: 05.01.2023

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Instrument Used : Sound Level Meter (LUTRON: SL 4001)

Station No	N1	N2	N3	N4
Sample ID	CPL/N/DEC-22/54	CPL/N/DEC-22/55	CPL/N/DEC-22/58	CPL/N/DEC-22/53
Date of Monitoring	05.12.2022	07.12.2022	13.12.2022	19.12.2022
Location of Monitoring	NEAR KILN AREA	NEAR RAW MILL	NEAR MATERIAL STOCK YARD	NEAR TG BUILDING

SL. NO	STATION NO	L <sub>eq</sub> dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
1.	N1	78.0	85.9	70.6
2.	N2	73.1	77.6	58.9
3.	N3	69.3	74.3	57.8
4.	N4	68.1	72.3	59.5

Station No	N5
Sample ID	CPL/N/DEC-22/51
Date of Monitoring	15.12.2022
Location of Monitoring	NEAR CLINKER BULK LOADING AREA

SL. NO	STATION NO	L <sub>eq</sub> dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
5	N5	70.1	75.3	59.8

*B. M. S. S. S.*  
Test Done By



*S. Subhanga*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

PERMISSIBLE EXPOSURE IN CASE OF CONTINUOUS NOISE as per OSHA

TOTAL TIME OF EXPOSURE PER DAY IN HOURS	SOUND PRESSURE LEVEL IN DB(A)
8	90
6	92
4	95
3	97
2	100
1 <sup>1/2</sup>	102
1	105
3/4	107
1/2	110
1/4	115

No Exposure in excess of 115 dB (A) is permitted

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

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# Cleenviron Private Limited

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



## TEST REPORT FOR SOIL QUALITY ANALYSIS

FORMAT NO: CPL/MS

ULR - TC68162300000064F  
REPORT NO: CPL/R/S/JAN-23/3

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatli, Via: Kutra, Dist: Sundargarh, Odisha

Sample ID No	CPL/SO/DEC-22/7	CPL/SO/DEC-22/8	CPL/SO/DEC-22/9
Sample Description	Soil (1.5ft below surface)	Soil (1.5ft below surface)	Soil (1.5ft below surface)
Location of Sampling	Plant Site	Village Sialjore	Village Budhakata
Station No	S1	S2	S3
Date of Sampling	22.12.2022	22.12.2022	22.12.2022
Sample Received on	23.12.2022	23.12.2022	23.12.2022
Appearance of Sample	Greyish	Brownish	Dark Brown
Date of Test	23.12.2022 - 03.01.2023		

Sl. No.	Parameter	Method of Analysis	Unit	S1	S2	S3
1.	pH (1:2 Suspension)	IS:2720 (Part 26): 1987, RA 2016	-	7.78	6.65	5.73
2.	Electrical Conductivity	IS 14787: 2000, RA 2016	$\mu\text{S/cm}$	340	260	186
3.	Available Nitrogen (as N)	CPL/SOP/03/N, Issue No: 03, Dtd.: 23.10.2017	Kg/ha	50.18	87.81	125.44
4.	Available Phosphorous (as $\text{P}_2\text{O}_5$ )	CPL/SOP/03/P, Issue No: 03, Dtd.: 23.10.2017	Kg/ha	< 5 (4.008)	< 5 (2.104)	< 5 (1.468)
5.	Available Potassium (as $\text{K}_2\text{O}$ )	CPL/SOP/03/K, Issue No: 03, Dtd.: 23.10.2017	Kg/ha	69.84	353.52	183
6.	Organic Carbon	IS 2720 (Part 22): 1972, RA 2015	%	0.24	0.07	0.61

*[Signature]*  
Test Done By

*[Signature]*  
Verified By



*[Signature]*  
Authorized Signatory  
Subhanga Prahara  
Managing Director

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

Page 1 of 1

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Registered Office:  
D/18, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:  
D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

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



# Cleenviron Private Limited

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

## TEST REPORT FOR SOIL QUALITY ANALYSIS

FORMAT NO: CPL/PS61

REPORT NO: CPLIR/S/JAN-23/3N

REPORT ISSUE DATE: 05.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha

Sample ID No	: CPL/SO/DEC-22/7	CPL/SO/DEC-22/8	CPL/SO/DEC-22/9
Sample Description	: Soil (1.5ft below surface)	Soil (1.5ft below surface)	Soil (1.5ft below surface)
Location of Sampling	: Plant Site	Village Sialjore	Village Budhakata
Station No	: S1	S2	S3
Date of Sampling	: 22.12.2022	22.12.2022	22.12.2022
Sample Received on	: 23.12.2022	23.12.2022	23.12.2022
Appearance of Sample	: Greyish	Brownish	Dark Brown
Date of Test	: 23.12.2022 - 03.01.2023		

Sl. No.	Parameter	Method of Analysis	Unit	S1	S2	S3
1	Organic Matter	IS 2720 (Part 2) - 1972, RA 2015	%	0.41	0.12	1.05

*Choudhary*  
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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# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/RASTA

ILR - TC58162300000240F  
REPORT NO: CPL/RAAQ/FEB-23/7

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : A1

Sample ID No	CPL/AAQ/JAN-23/75	CPL/AAQ/JAN-23/91	CPL/AAQ/JAN-23/164	CPL/AAQ/JAN-23/220
Date of Sampling	02.01.2023 - 03.01.2023	04.01.2023 - 05.01.2023	10.01.2023 - 11.01.2023	13.01.2023 - 14.01.2023
Sampling Period	1821 - 1832 Hrs	1805 - 1817 Hrs	1820 - 1834 Hrs	1740 - 1756 Hrs
Time of Sampling	24.11 Hrs	24.12 Hrs	24.14 Hrs	24.16 Hrs
Sample Received on	06.01.2023	06.01.2023	12.01.2023	16.01.2023
Date of Test	07.01.2023	07.01.2023	13.01.2023	17.01.2023

Sample ID No	CPL/AAQ/JAN-23/230	CPL/AAQ/JAN-23/308	CPL/AAQ/JAN-23/394	CPL/AAQ/JAN-23/409	CPL/AAQ/JAN-23/424
Date of Sampling	16.01.2023 - 17.01.2023	19.01.2023 - 20.01.2023	23.01.2023 - 24.01.2023	25.01.2023 - 26.01.2023	27.01.2023 - 28.01.2023
Sampling Period	1830 - 1842 Hrs	0753 - 8015 Hrs	1820 - 1834 Hrs	1818 - 1830 Hrs	1802 - 1817 Hrs
Time of Sampling	24.12 Hrs	24.22 Hrs	24.14 Hrs	24.12 Hrs	24.15 Hrs
Sample Received on	17.01.2023	20.01.2023	25.01.2023	27.01.2023	28.01.2023
Date of Test	18.01.2023	21.01.2023	27.01.2023	28.01.2023	30.01.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/SC/01/PM2.5, Issue No 64, dtd 23.10.2017	IS 12341, 1588 Low Volume Sampler	IS 5182 (Part - 2) 2001, RA 2017	IS 5182 (Part - 6) 2009, RA 2017
1.	CPL/AAQ/JAN-23/75	19	53	07	19
2.	CPL/AAQ/JAN-23/91	20	58	04	16
3.	CPL/AAQ/JAN-23/164	26	54	09	18
4.	CPL/AAQ/JAN-23/220	21	50	08	28
5.	CPL/AAQ/JAN-23/230	23	55	08	15
6.	CPL/AAQ/JAN-23/308	25	60	04	25
7.	CPL/AAQ/JAN-23/394	22	58	05	17
8.	CPL/AAQ/JAN-23/409	25	61	08	19
9.	CPL/AAQ/JAN-23/424	21	52	07	23
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)



P. Sareni  
Verified By

Authorized Signatory  
Subhanga Prharaj  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FM/1A

REPORT NO: CPLIR/AAQ/FEB-23/7N

SAMPLE DRAWN BY CLEENVIIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	02.01.2023	1530 - 1630 Hrs	< 0.1
2	05.01.2023	1000 - 1100 Hrs	< 0.1
3	11.01.2023	0840 - 0940 Hrs	< 0.1
4	14.01.2023	1200 - 1300 Hrs	< 0.1
5	17.01.2023	1100 - 1200 Hrs	< 0.1
6	19.01.2023	1300 - 1400 Hrs	< 0.1
7	24.01.2023	0930 - 1030 Hrs	< 0.1
8	25.01.2023	1030 - 1130 Hrs	< 0.1
9	28.01.2023	1030 - 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 13 <sup>th</sup> November 2005			04 (1 Hour Average)

*Chandhan*  
Test Done By

*P. Sareni*  
Verified By

*Subhanga Pradhan*  
Authorized Signatory  
Subhanga Pradhan  
Managing Director



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

Page 1 of 1

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DN11A, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:

DN24, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO.: CPL/PR21A

JLR - TC58162300000241F  
REPORT NO: CPL/IR/AAQ/FEB-23/8

REPORT ISSUE DATE: 04.02.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182  
 Location of Monitoring : Near Plant Main Gate  
 Monitoring Station Code : A2

Sample ID No	CPL/AAQ/JAN-23/76	CPL/AAQ/JAN-23/90	CPL/AAQ/JAN-23/185	CPL/AAQ/JAN-23/221
Date of Sampling	02.01.2023 - 03.01.2023	04.01.2023 - 05.01.2023	10.01.2023 - 11.01.2023	13.01.2023 - 14.01.2023
Sampling Period	1810 - 1818 Hrs	1748 - 1802 Hrs	1808 - 1819 Hrs	1758 - 1808 Hrs
Time of Sampling	24.08 Hrs	24.14 Hrs	24.11 Hrs	24.10 Hrs
Sample Received on	06.01.2023	06.01.2023	12.01.2023	16.01.2023
Date of Test	07.01.2023	07.01.2023	13.01.2023	17.01.2023

Sample ID No	CPL/AAQ/JAN-23/231	CPL/AAQ/JAN-23/309	CPL/AAQ/JAN-23/395	CPL/AAQ/JAN-23/410	CPL/AAQ/JAN-23/425
Date of Sampling	16.01.2023 - 17.01.2023	19.01.2023 - 20.01.2023	23.01.2023 - 24.01.2023	25.01.2023 - 26.01.2023	27.01.2023 - 28.01.2023
Sampling Period	1850 - 1904 Hrs	0744 - 0757 Hrs	1835 - 1847 Hrs	1801 - 1812 Hrs	1745 - 1757 Hrs
Time of Sampling	24.14 Hrs	24.13 Hrs	24.12 Hrs	24.11 Hrs	24.12 Hrs
Sample Received on	17.01.2023	20.01.2023	25.01.2023	27.01.2023	28.01.2023
Date of Test	18.01.2023	21.01.2023	27.01.2023	28.01.2023	30.01.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
	Method of Analysis	CPL/001/1/PM10 & Haze Sp. 04, 05, 23.10.2017	EN 12391, 1000 Low Volume Sampler	IS:5052 (Part - 2) 2001, RA 3317	IS: 5182 (Part - 6) 2005, RA 3317
1.	CPL/AAQ/JAN-23/76	23	61	05	16
2.	CPL/AAQ/JAN-23/90	24	66	06	19
3.	CPL/AAQ/JAN-23/185	20	59	05	20
4.	CPL/AAQ/JAN-23/221	28	68	03	09
5.	CPL/AAQ/JAN-23/231	17	48	05	17
6.	CPL/AAQ/JAN-23/309	26	71	08	24
7.	CPL/AAQ/JAN-23/395	21	67	06	17
8.	CPL/AAQ/JAN-23/410	25	64	09	27
9.	CPL/AAQ/JAN-23/425	26	72	04	16
National Ambient Air Quality Standards, CPCB Notification New Delhi, 16 <sup>th</sup> 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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# 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/23

REPORT NO: CPL/R/AAQ/FEB-23/8N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	03.01.2023	0930 - 1030 Hrs	< 0.1
2	05.01.2023	1000 - 1100 Hrs	< 0.1
3	11.01.2023	0840 - 0940 Hrs	< 0.1
4	14.01.2023	1200 - 1300 Hrs	< 0.1
5	17.01.2023	1100 - 1200 Hrs	< 0.1
6	20.01.2023	1300 - 1400 Hrs	< 0.1
7	24.01.2023	0930 - 1030 Hrs	< 0.1
8	25.01.2023	1030 - 1130 Hrs	< 0.1
9	28.01.2023	1030 - 1130 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 19 <sup>th</sup> November 2009			04 (1 Hour Average)

*Chakrabarty*  
Test Done By

*P. Sasaki*  
Verified By

*Subhanga Pratihara*  
Authorized Signatory  
Subhanga Pratihara  
Managing Director



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

Page 1 of 1

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Tel: Fax: 0661-2476748, Email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MS7A

JLR - TC681623000000242F

REPORT NO: CPLIR/JAAQ/FEB-23/9

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sample ID No	CPL/JAAQ/JAN-23/78	CPL/JAAQ/JAN-23/93	CPL/JAAQ/JAN-23/167	CPL/JAAQ/JAN-23/222
Date of Sampling	02.01.2023 - 03.01.2023	04.01.2023 - 05.01.2023	10.01.2023 - 11.01.2023	13.01.2023 - 14.01.2023
Sampling Period	1020 - 1033 Hrs	0905 - 0917 Hrs	1041 - 1056 Hrs	0904 - 0915 Hrs
Time of Sampling	24.13 Hrs	24.12 Hrs	24.15 Hrs	24.11 Hrs
Sample Received on	06.01.2023	06.01.2023	12.01.2023	16.01.2023
Date of Test	07.01.2023	07.01.2023	13.01.2023	17.01.2023

Sample ID No	CPL/JAAQ/JAN-23/232	CPL/JAAQ/JAN-23/310	CPL/JAAQ/JAN-23/396	CPL/JAAQ/JAN-23/411	CPL/JAAQ/JAN-23/426
Date of Sampling	16.01.2023 - 17.01.2023	19.01.2023 - 20.01.2023	23.01.2023 - 24.01.2023	25.01.2023 - 26.01.2023	27.01.2023 - 28.01.2023
Sampling Period	1023 - 1037 Hrs	1801 - 1815 Hrs	1040 - 1058 Hrs	1820 - 1834 Hrs	0744 - 0758 Hrs
Time of Sampling	24.14 Hrs	24.14 Hrs	24.16 Hrs	24.14 Hrs	24.14 Hrs
Sample Received on	17.01.2023	20.01.2023	25.01.2023	27.01.2023	28.01.2023
Date of Test	18.01.2023	21.01.2023	27.01.2023	28.01.2023	29.01.2023

Sl. No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/SDP01/PM2.5, Issue No: BA, ENE, 23.10.2017	EN 12341, 1998 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2004, RA 2017
1.	CPL/JAAQ/JAN-23/78	24	63	07	20
2.	CPL/JAAQ/JAN-23/93	29	68	08	20
3.	CPL/JAAQ/JAN-23/167	28	73	04	21
4.	CPL/JAAQ/JAN-23/222	29	78	08	25
5.	CPL/JAAQ/JAN-23/232	26	67	07	20
6.	CPL/JAAQ/JAN-23/310	26	80	07	23
7.	CPL/JAAQ/JAN-23/396	29	70	09	23
8.	CPL/JAAQ/JAN-23/411	24	66	09	28
9.	CPL/JAAQ/JAN-23/426	20	59	08	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 30 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Chanchan  
Test Done By



P. Sareni  
Verified By

Authorized Signatory  
Subhanga Prharaj  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/IN/21A

REPORT NO: CPL/R/AAQ/FEB-23/9N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.01.2023	1030 - 1130 Hrs	< 0.1
2	04.01.2023	1000 - 1100 Hrs	< 0.1
3	10.01.2023	0840 - 0940 Hrs	< 0.1
4	13.01.2023	1200 - 1300 Hrs	< 0.1
5	16.01.2023	1100 - 1200 Hrs	< 0.1
6	19.01.2023	1300 - 1400 Hrs	< 0.1
7	23.01.2023	0930 - 1030 Hrs	< 0.1
8	25.01.2023	1030 - 1130 Hrs	< 0.1
9	27.01.2023	0830 - 0930 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 15 <sup>th</sup> November 2009			04 (1 Hour Average)

*Chakrabarty*  
Test Done By

*P. Saseeni*  
Verified By

*S. Prabhakar*  
Authorized Signatory  
Suthanga Prabhakar  
Managing Director



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

Page 1 of 1

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Registered Office:

0/318, KOELNAGAR, ROURKELA - 759014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:

0/124, KOELNAGAR, ROURKELA - 759014, Dist: SUNDARGARH, ODISHA



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MSA

ULR - TC68162300000243F  
REPORT NO: CPL/IAAQ/FEB-23/10

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po, Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS: 5182 (Part - 2) & (Part - 6), EN12341  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sample ID No	CPL/AAQ/JAN-23/77	CPL/AAQ/JAN-23/92	CPL/AAQ/JAN-23/166	CPL/AAQ/JAN-23/223
Date of Sampling	02.01.2023 - 03.01.2023	04.01.2023 - 05.01.2023	10.01.2023 - 11.01.2023	13.01.2023 - 14.01.2023
Sampling Period	1034 - 1045 Hrs	0916 - 0934 Hrs	1028 - 1042 Hrs	0851 - 0905 Hrs
Time of Sampling	24.11 Hrs	24.18 Hrs	24.14 Hrs	24.14 Hrs
Sample Received on	06.01.2023	06.01.2023	12.01.2023	16.01.2023
Date of Test	07.01.2023	07.01.2023	13.01.2023	17.01.2023

Sample ID No	CPL/AAQ/JAN-23/233	CPL/AAQ/JAN-23/311	CPL/AAQ/JAN-23/397	CPL/AAQ/JAN-23/412	CPL/AAQ/JAN-23/427
Date of Sampling	16.01.2023 - 17.01.2023	19.01.2023 - 20.01.2023	23.01.2023 - 24.01.2023	25.01.2023 - 26.01.2023	27.01.2023 - 28.01.2023
Sampling Period	1036 - 1047 Hrs	1745 - 1802 Hrs	1050 - 1107 Hrs	1805 - 1817 Hrs	0753 - 0810 Hrs
Time of Sampling	24.12 Hrs	24.17 Hrs	24.17 Hrs	24.12 Hrs	24.17 Hrs
Sample Received on	17.01.2023	20.01.2023	25.01.2023	27.01.2023	28.01.2023
Date of Test	18.01.2023	21.01.2023	27.01.2023	28.01.2023	29.01.2023

Sl. No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/SOP/PM2.5, Issue No: 04, Rev: 23.10.2017	EN 12241, 1995 Low Volume Sampler	IS: 1182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2006, RA 2017
1.	CPL/AAQ/JAN-23/77	27	67	07	23
2.	CPL/AAQ/JAN-23/92	30	75	11	33
3.	CPL/AAQ/JAN-23/166	26	62	06	28
4.	CPL/AAQ/JAN-23/223	30	70	05	27
5.	CPL/AAQ/JAN-23/233	23	59	10	29
6.	CPL/AAQ/JAN-23/311	28	72	07	21
7.	CPL/AAQ/JAN-23/397	29	65	07	19
8.	CPL/AAQ/JAN-23/412	27	61	11	43
9.	CPL/AAQ/JAN-23/427	28	69	04	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 13 <sup>th</sup> 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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# Cleenviron Private Limited

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

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORM NO: CPLFM07A

REPORT NO: CPL/RIAQ/FEB-23/10N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 04.02.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.01.2023	1230 - 1330 Hrs	< 0.1
2	04.01.2023	1100 - 1200 Hrs	< 0.1
3	10.01.2023	0940 - 1040 Hrs	< 0.1
4	13.01.2023	1200 - 1300 Hrs	< 0.1
5	16.01.2023	1130 - 1230 Hrs	< 0.1
6	19.01.2023	1310 - 1410 Hrs	< 0.1
7	23.01.2023	1120 - 1220 Hrs	< 0.1
8	25.01.2023	1030 - 1130 Hrs	< 0.1
9	27.01.2023	1130 - 1230 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*C. Saha*  
Test Done By

*P. Sasaki*  
Verified By

*S. Subhanga*  
Authorized Signatory  
Subhanga Prabhara  
Managing Director



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

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Tel: Fax: 0661-2475740; email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLVMS

ULR - TC581623000000174F  
REPORT NO: CPLR/WIJAN-23/20

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/JAN-23/17**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Tube Well Village Kutra  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.70	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.19	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	254.2	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.24	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	21.99	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	398	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	599	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	92.02	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	59.77	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> P E	3.37	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	4.06	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	220	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	14	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	13.28	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	10.91	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

Test Done By

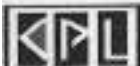


Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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# Cleenviron Private Limited

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/002

JLR - TC68162300000174F  
REPORT NO: CPL/R/W/JAN-23/20

REPORT ISSUE DATE: 25.01.2023

SAMPLE OBTAIN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/17**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Tube Well Village Kutra  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

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

ND: Non Detectable.

*Purusho*  
Test Done By



*M. J.*  
Verified By

*S. Subhanga*  
Authorized Signatory  
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/WRD

REPORT NO: CPL/RWIJAN-23/20N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/WI/JAN-23/17**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Tube Well Village Kutra**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 – 18.01.2023**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2180 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	21.8	°C	-
5	Residual Free Chlorine	MERCK	0.11	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E.coli	RAKIRO	Absent	Nos/100ml	Absent

*C. Chakraborty*  
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: CPL/PR02

ULR - TC68162300000175F  
REPORT NO: CPL/R/W/JAN-23/21

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/15**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Sialjhor  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.10	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	6.70	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	250.1	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.26	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	53.98	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	336	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	534	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	57.51	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	25.90	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	15.41	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	4.23	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	160	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	22	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	18.08	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	10.45	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*C. Saha*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMS

ULR - TC68162300000175F

REPORT NO: CPL/RW/JAN-23/21

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/15**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Village Sialjhor**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

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

ND: Non Detectable.

*[Signature]*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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Tele Fax: 0661 - 2423745, email: cleenviron@gmail.com





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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/W/8

REPORT NO: CPL/R/W/JAN-23/21N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/15**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Sialjhor  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limits as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	21.7	°C	-
5	Residual Free Chlorine	MERCK	0.14	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Purshu*  
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/FMS3

JLR - TC681623000000176F  
REPORT NO: CPL/R/W/JAN-23/22

REPORT ISSUE DATE: 23.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/16**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Budhakata  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.60	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	6.54	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	94.3	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.26	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	34.89	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	193	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	309	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	31.22	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	15.32	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	< 0.50	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	6.18	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	68	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	12	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	22.5	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	12.1	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

Test Done By



Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/PMO

LR - TC681623000000176F  
REPORT NO: CPL/R/W/JAN-23/22

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/16**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Village Budhakata**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

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

ND: Non Detectable.

*Cusabos*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

Page 2 of 2

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Registered Office:

01318, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:

D/524, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Tel: Fax: 0661 2425745, email: cleenviron@gmail.com



# Cleenviron Private Limited

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FM/1

REPORT NO: CPL/R/W/JAN-23/22N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/16**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Village Budhakata  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS-10501: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	21.8	°C	-
5	Residual Free Chlorine	MERCK	0.11	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Chakrabarti*  
Test Done By



*12/1*  
Verified By

*Subhanga Prahara*  
Authorized Signatory  
Subhanga Prahara  
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:

D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA





# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/PRM

ULR - TC681623000000177F  
REPORT NO: CPL/R/WIJAN-23/23

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/WIJAN-23/18**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Back Side of Kiln Area**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10000:2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.30	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	6.40	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	41	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.19	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	9.99	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	77	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	127.3	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	8.21	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	7.96	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	< 0.50	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	36	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	08	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	10.88	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	6.05	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

Test Done By:   


Verified By: 

Authorized Signatory:   
 Subhanga Praharaj  
 Managing Director

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# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MSO

JLR - TC58162300000177F  
REPORT NO: CPL/RW/JAN-23/23

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/JAN-23/18**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Kiln Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 15000: 2012
20	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.003
21	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.01
22	Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	ND	mg/l	0.01
23	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	ND	mg/l	0.001
24	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	ND	mg/l	0.01
25	Nickel (as Ni)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.02
26	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	5.0
27	Total Chromium (as Cr)	APHA 23 <sup>rd</sup> Edition, 3111 B	ND	mg/l	0.05

ND: Non Detectable.

*C. Sahoo*  
Test Done By



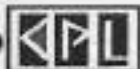
*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

Page 2 of 2

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# Cleenviron Private Limited

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMS

REPORT NO: CPLIRW/JAN-23/23N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/18**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of KIn Area  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	21.7	°C	-
5	Residual Free Chlorine	MERCK	0.08	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Enoch*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/RW

ULR - TC58162300000178F  
REPORT NO: CPL/RW/JAN-23/24

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPLW/JAN-23/19**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Near Cement Mill**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500:2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.10	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	5.71	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	106.6	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.20	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	10.99	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	172	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	265	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	31.22	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	6.97	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	54.22	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	2.34	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	48	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	30	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	14.06	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	3.38	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

Test Done By



Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/8888

JLR - TC68162300000178F  
REPORT NO: CPL/R/WJAN-23/24

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/WJAN-23/19**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Near Cement Mill  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

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

ND: Non Detectable.

*Chetana*  
Test Done By



*X/1*  
Verified By

*Subhanga Prahara*  
Authorized Signatory  
Subhanga Prahara  
Managing Director

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

Page 2 of 2

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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/1910

REPORT NO: CPL/RW/JAN-23/24N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/19**  
 Date of Sampling : **12.01.2023**  
 Sample Description : **Ground Water**  
 Location of Sampling : **Bore Well Near Cement Mill**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 – 18.01.2023**

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	21.8	°C	-
5	Residual Free Chlorine	MERCK	0.09	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Nos/100ml	Absent
7	E coli	RAKIRO	Absent	Nos/100ml	Absent

*Lasabos*  
Test Done By



*10/1/23*  
Verified By

*Subhanga Praharaj*  
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 NABL Accredited Laboratory.



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MSB

ULR - TC68162300000179F  
REPORT NO: CPL/R/W/JAN-23/25

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatol, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/25**  
 Date of Sampling : 14.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Coal Yard  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 16.01.2023  
 Date of Test : 16.01.2023 - 22.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500, 2012
1	Turbidity	APHA 23 <sup>rd</sup> Edition, 2130 B	0.20	NTU	1.0
2	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	5.93	-	6.5 - 8.5
3	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	76	mg/l	200
4	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.29	mg/l	0.3
5	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	6.98	mg/l	250
6	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	93	mg/l	500
7	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	154	µS/cm	-
8	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	17.84	mg/l	75
9	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	7.78	mg/l	30
10	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.05
11	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	0.1
12	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	1.63	mg/l	200
13	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	45
14	Total Alkalinity (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2320 B	60	mg/l	200
15	Acidity	APHA 23 <sup>rd</sup> Edition, 2310 B	04	mg/l	-
16	Sulphide (as H <sub>2</sub> S)	APHA 23 <sup>rd</sup> Edition, 4500 S <sup>2-</sup> D	< 0.02	mg/l	0.05
17	Sodium (as Na)	APHA 23 <sup>rd</sup> Edition, 3500 Na B	6.29	mg/l	-
18	Potassium (as K)	APHA 23 <sup>rd</sup> Edition, 3500 K B	1.41	mg/l	-
19	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.0

*Subhangra*  
Test Done By



*Subhangra*  
Verified By

*Subhangra*  
Authorized Signatory  
Subhangra Praharaj  
Managing Director

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# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/PMG

LR - TC68162300000179F

REPORT NO: CPL/RW/JAN-23/25

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/25**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Coal Yard  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

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

D: Non Detectable.

*Chasabho*  
Test Done By



*Test*  
Verified By

*Subhanga Prataraj*  
Authorized Signatory  
Subhanga Prataraj  
Managing Director

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

Page 2 of 2

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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/WMO

REPORT NO: CPL/RW/JAN-23/25N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/RW/JAN-23/25N**  
 Date of Sampling : 12.01.2023  
 Sample Description : Ground Water  
 Location of Sampling : Bore Well Back Side of Coal Yard  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameter	Method of Analysis	Results Obtained	Unit	Acceptable Limit as per IS 10500: 2012
1	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	5
2	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	Agreeable
3	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	Agreeable
4	Temperature	APHA 23 <sup>rd</sup> Edition, 2550 B	22.0	°C	-
5	Residual Free Chlorine	MERCK	0.06	mg/l	0.2 (min)
6	Total Bacterial Count	RAKIRO	Absent	Ncs/100ml	Absent
7	E coli	RAKIRO	Absent	Ncs/100ml	Absent

*Cusachos*  
Test Done By



*Nil*  
Verified By

*Subhanga Praharaj*  
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: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 28<sup>th</sup> January 2023 for the month from the following mentioned points and data thus recorded are as follows:

Sl No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Bore Well Back Side of Cement Mill Within Plant	0.15	-	7.29	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	12.32	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.6" E	0.10	-	11.56	242.0	230.44

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

  
Authorized Signatory  
For Cleenviron Private Limited



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# Cleenviron Private Limited

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MSO

ULR - TC681623000000168F  
REPORT NO: CPL/RW/JAN-23/14

REPORT ISSUE DATE: 25.01.2023

SAMPLE OBTAIN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/JAN-23/9**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Matwali Jor Upstream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.10	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	294	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	180	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	147.6	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	7.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	< 0.50	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.01	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	37.80	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	12.95	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.40	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*C. S. Choudhary*  
Test Done By



*Manoj Kumar*  
Verified By

*Subhanga Prakash*  
Authorized Signatory  
Subhanga Prakash  
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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FMS

REPORT NO: CPL/R/W/JAN-23/14N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/9**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Matwali Jor Upstream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2298 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 39) 1989, RA 2019	6.2	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	5.28	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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	Noe/100ml	5000

Test Done By



Verified By

Authorized Signatory  
Subhanga Prharaj  
Managing Director

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

Page 1 of 1

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# Cleenviron Private Limited

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/PMO

ULR - TC63162300000169F  
REPORT NO: CPL/R/W/JAN-23/15

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPLW/JAN-23/10**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Daku Nadi Down Stream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2256 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.44	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	335	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	204	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	172.2	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	11.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	2.94	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	49.30	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	11.95	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.6
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.36	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3900 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*Prashant*  
Test Done By



*Subhanga*  
Verified By

*Subhanga*  
Authorized Signatory  
Subhanga Prashant  
Managing Director

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

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D/316, KOELNAGAR, ROURKELA - 769014, Dist. SUNDARGARH, ODISHA

Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA - 769014, Dist. SUNDARGARH, ODISHA



# Cleenviron Private Limited

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/FM/0

REPORT NO: CPL/IR/WIJAN-23/15N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telihana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/WIJAN-23/10**  
 Sample Description : **Surface Water**  
 Date of Sampling : **12.01.2023**  
 Location of Sampling : **Daku Nadi Down Stream**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 – 18.01.2023**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.1	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	5.28	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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	Noe/100ml	5000

*Cusakov*  
Test Done By



*Subhanga*  
Verified By

*Subhanga Prasharaj*  
Authorized Signatory  
Subhanga Prasharaj  
Managing Director

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

Page 1 of 1

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Registered Office:

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Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA – 769014, Dist: SUNDARGARH, ODISHA

Tel: Fax: 0661-2476742, email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPLFR09

ULR - TC591623000000170F  
REPORT NO: CPLR/WIJAN-23/16

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer: **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer: At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No: **CPL/WIJAN-23/11**  
 Sample Description: Surface Water  
 Date of Sampling: 12.01.2023  
 Location of Sampling: Kanti Jharla Nala Up Stream  
 Sampling Method: APHA 23<sup>rd</sup> 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: 12.01.2023  
 Date of Test: 12.01.2023 - 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.65	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	418	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	259	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	233.7	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	9.99	mg/l	603
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	< 0.05	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	58.15	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	20.92	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.21	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*Chandhan*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Prakash  
Managing Director

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

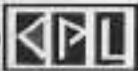
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# Cleenviron Private Limited

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/RW/01

REPORT NO: CPL/RW/JAN-23/16N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/RW/JAN-23/11**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Kanti Jharia Nala Up Stream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standards as per IS: 2296 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1988, RA 2019	6.2	mg/l	4
5.	BCD 5 days at 20°C	APHA 23 <sup>rd</sup> Edition, 5210 D	0f	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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	7.04	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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

*C. Sahas*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Prishra  
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 NABL Accredited Laboratory.



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MS2

ULR - TC681623000000171F  
REPORT NO: CPL/R/W/JAN-23/17

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/12**  
 Sample Description : **Surface Water**  
 Date of Sampling : **12.01.2023**  
 Location of Sampling : **Kanti Jharina Nala Down Stream**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2286 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.69	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	424	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	263	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	233.7	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	9.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> <sup>2-</sup> E	2.59	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	72.30	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	12.95	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.26	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*Chetan*  
Test Done By



*Arpit*  
Verified By

*Sushanta Prakash*  
Authorized Signatory  
Subhanga Prakash  
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.

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/BIR

REPORT NO: CPL/RW/JAN-23/17N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/12**  
 Sample Description : **Surface Water**  
 Date of Sampling : **12.01.2023**  
 Location of Sampling : **Kanil Jharia Nala Down Stream**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 – 18.01.2023**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2290 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	< 2.0	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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

*Prabha*  
Test Done By



*Nil*  
Verified By

*Subhanga Prharaj*  
Authorized Signatory  
Subhanga Prharaj  
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 NABL Accredited Laboratory.



## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/003

JLR - TC881623000000172F  
REPORT NO: CPLIR/WIJAN-23/18

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/WIJAN-23/13**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Nakti Jor Nala Up Stream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 - 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.60	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	440	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	268	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	254.2	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	6.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> B E	1.23	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	54.22	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	28.89	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.38	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*Chelios*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Prashar  
Managing Director

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

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/MS

REPORT NO: CPL/R/W/JAN-23/18N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/13**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Nakti Jor Nala Up Stream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> Edition, 2160 B	Agreeable	-	-
4.	Dissolved Oxygen (Min.)	IS: 3025 (Part 38) 1989, RA 2019	6.1	mg/l	4
5.	BOD 5 days at 20°C	APHA 23 <sup>rd</sup> 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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	7.04	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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

*C. S. Choudhary*  
Test Done By



*T. S. Singh*  
Verified By

*S. Subhang Pradhan*  
Authorized Signatory  
Subhang Pradhan  
Managing Director

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

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## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO: CPL/1982

ULR - TC681623000000173F

REPORT NO: CPL/RW/JAN-23/19

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sample ID No : **CPL/W/JAN-23/14**  
 Sample Description : **Surface Water**  
 Date of Sampling : **12.01.2023**  
 Location of Sampling : **Nakti Jor Nala Down Stream**  
 Sampling Method : **APHA 23<sup>rd</sup> 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 : **12.01.2023**  
 Date of Test : **12.01.2023 - 18.01.2023**

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2296 (Class C)
1.	pH Value	APHA 23 <sup>rd</sup> Edition, 4500 H+B	7.56	-	6.5 - 8.5
2.	Electrical Conductivity	APHA 23 <sup>rd</sup> Edition, 2510 B	427	µS/cm	-
3.	Total Dissolved Solids	APHA 23 <sup>rd</sup> Edition, 2540 B	259	mg/l	1500
4.	Total Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 2340 C	250.1	mg/l	-
5.	Chlorides (as Cl)	APHA 23 <sup>rd</sup> Edition, 4500 Cl B	6.99	mg/l	600
6.	Sulfate (as SO <sub>4</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 SO <sub>4</sub> 2-E	0.68	mg/l	400
7.	Total Nitrate (as NO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 NO <sub>3</sub> B	< 2.20	mg/l	50
8.	Fluoride (as F)	APHA 23 <sup>rd</sup> Edition, 4500 F D	< 0.05	mg/l	1.5
9.	Calcium (as Ca)	APHA 23 <sup>rd</sup> Edition, 3500 Ca B	70.66	mg/l	-
10.	Magnesium (as Mg)	APHA 23 <sup>rd</sup> Edition, 3500 Mg B	17.93	mg/l	-
11.	Copper (as Cu)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	1.5
12.	Iron (as Fe)	APHA 23 <sup>rd</sup> Edition, 3500 Fe B	0.44	mg/l	50
13.	Manganese (as Mn)	APHA 23 <sup>rd</sup> Edition, 3500 Mn B	< 0.05	mg/l	-
14.	Zinc (as Zn)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.02	mg/l	15
15.	Total Arsenic (as As)	APHA 23 <sup>rd</sup> Edition, 3114 B	< 0.002	mg/l	0.2
16.	Mercury (as Hg)	APHA 23 <sup>rd</sup> Edition, 3112 B	< 0.01	mg/l	-
17.	Lead (as Pb)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.10	mg/l	0.1
18.	Cadmium (as Cd)	APHA 23 <sup>rd</sup> Edition, 3111 B	< 0.05	mg/l	0.01
19.	Hex. Chromium (as Cr <sup>6+</sup> )	APHA 23 <sup>rd</sup> Edition, 3500 Cr. B	< 0.01	mg/l	0.05
20.	Selenium (as Se)	APHA 23 <sup>rd</sup> Edition, 3114 C	< 0.01	mg/l	0.05

*Lurachon*  
Test Done By



*nit*  
Verified By

*Subhanga Prharaj*  
Authorized Signatory  
Subhanga Prharaj  
Managing Director

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

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

## TEST REPORT FOR WATER QUALITY ANALYSIS

FORMAT NO. CPL/FRM

REPORT NO: CPL/RW/JAN-23/19N

REPORT ISSUE DATE: 25.01.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sample ID No : **CPL/W/JAN-23/14**  
 Sample Description : Surface Water  
 Date of Sampling : 12.01.2023  
 Location of Sampling : Nakti Jor Nala Down Stream  
 Sampling Method : APHA 23<sup>rd</sup> 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 : 12.01.2023  
 Date of Test : 12.01.2023 – 18.01.2023

Sl No	Parameters	Method of Analysis	Results Obtained	Unit	Surface Water Quality Standard as per IS: 2293 (Class C)
1.	Colour	APHA 23 <sup>rd</sup> Edition, 2120 B	< 5	Hazen	300
2.	Odour	APHA 23 <sup>rd</sup> Edition, 2150 B	Agreeable	-	-
3.	Taste	APHA 23 <sup>rd</sup> 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 <sup>rd</sup> Edition, 5210 D	02	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 <sub>2</sub> )	APHA 23 <sup>rd</sup> Edition, 4500 CO <sub>2</sub> C	7.04	mg/l	-
8.	Free Ammonia (as NH <sub>3</sub> )	MERCK	< 0.012	mg/l	-
9.	Cyanide (as CN)	MERCK	< 0.002	mg/l	0.05
10.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> 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

*C. Saha*  
Test Done By



*[Signature]*  
Verified By

*[Signature]*  
Authorized Signatory  
Subhanga Prakash  
Managing Director

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

Page 1 of 1

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Registered Office:

D/118, KOELNAGAR, ROURKELA - 768014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA - 768014, Dist: SUNDARGARH, ODISHA



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MSA

ULR - TC58162300000538F  
REPORT NO: CPL/AAQ/MAR-23/20

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sample ID No	CPL/AAQ/FEB-23/62	CPL/AAQ/FEB-23/74	CPL/AAQ/FEB-23/155	CPL/AAQ/FEB-23/169
Date of Sampling	01.02.2023 - 02.02.2023	03.02.2023 - 04.02.2023	06.02.2023 - 07.02.2023	08.02.2023 - 09.02.2023
Sampling Period	18:57 - 19:10 Hrs	18:15 - 18:30 Hrs	18:47 - 18:58 Hrs	19:01 - 19:18 Hrs
Time of Sampling	24.13 Hrs	24.15 Hrs	24.11 Hrs	24.17 Hrs
Sample Received on	02.02.2023	04.02.2023	09.02.2023	09.02.2023
Date of Test	03.02.2023	05.02.2023	10.02.2023	10.02.2023

Sample ID No	CPL/AAQ/FEB-23/218	CPL/AAQ/FEB-23/227	CPL/AAQ/FEB-23/326	CPL/AAQ/FEB-23/344	CPL/AAQ/FEB-23/359
Date of Sampling	13.02.2023 - 14.02.2023	15.02.2023 - 16.02.2023	21.02.2023 - 22.02.2023	23.02.2023 - 24.02.2023	27.02.2023 - 28.02.2023
Sampling Period	19:01 - 19:18 Hrs	10:30 - 10:43 Hrs	07:10 - 08:05 Hrs	19:30 - 18:20 Hrs	16:10 - 15:40 Hrs
Time of Sampling	24.17 Hrs	24.13 Hrs	23.55 Hrs	22.50 Hrs	21.30 Hrs
Sample Received on	17.02.2023	17.02.2023	23.02.2023	24.02.2023	28.02.2023
Date of Test	18.02.2023	18.02.2023	24.02.2023	25.02.2023	01.03.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/AAQ/MSA, Issue No: 14, dt: 23.10.2017	EN 12341, 1998 Low Volume Sampler	IS:5182 (Part-2) 2001, IS: 5017	IS: 5182 (Part - 6) 2006, IS: 5017
1.	CPL/AAQ/FEB-23/62	22	59	05	13
2.	CPL/AAQ/FEB-23/74	21	52	05	14
3.	CPL/AAQ/FEB-23/155	28	62	07	18
4.	CPL/AAQ/FEB-23/169	23	53	05	15
5.	CPL/AAQ/FEB-23/218	26	58	04	15
6.	CPL/AAQ/FEB-23/227	25	55	04	11
7.	CPL/AAQ/FEB-23/326	26	54	04	10
8.	CPL/AAQ/FEB-23/344	28	64	06	16
9.	CPL/AAQ/FEB-23/359	27	57	07	19
National Ambient Air Quality Standards, CPCB Notification New Delhi, 16 <sup>th</sup> 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



P. Sareni  
Verified By

Authorized Signatory  
Subhanga Prasad  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CFLR007A

REPORT NO: CPL/RAAQ/MAR-23/20N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 03.03.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.02.2023	15:30 – 16:30 Hrs	< 0.1
2	04.02.2023	10:00 – 11:00 Hrs	< 0.1
3	07.02.2023	08:40 – 09:40 Hrs	< 0.1
4	09.02.2023	12:00 – 13:00 Hrs	< 0.1
5	14.02.2023	11:00 – 12:00 Hrs	< 0.1
6	15.02.2023	13:00 – 14:00 Hrs	< 0.1
7	21.02.2023	09:30 – 10:30 Hrs	< 0.1
8	24.02.2023	10:30 – 11:30 Hrs	< 0.1
9	28.02.2023	10:30 – 11:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 16 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By



P. Sazeni  
Verified By

Authorized Signatory  
Subhanga Prashara  
Managing Director

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

Page 1 of 1

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Registered Office:

D/316, KOELNAGAR, ROURKELA – 769014, Dist: SUNDARGARH, ODISHA

Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA – 769014, Dist: SUNDARGARH, ODISHA

Tele Fax: 0661 – 2475740, email: cleenviron@gmail.com





# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO. CPL/MEA

ULR - TC68162300000539F  
REPORT NO: CPL/AAQ/MAR-23/21

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sample ID No	CPL/AAQ/FEB-23/60	CPL/AAQ/FEB-23/77	CPL/AAQ/FEB-23/155	CPL/AAQ/FEB-23/170
Date of Sampling	01.02.2023 - 02.02.2023	03.02.2023 - 04.02.2023	06.02.2023 - 07.02.2023	08.02.2023 - 09.02.2023
Sampling Period	18:40 - 18:52 Hrs	18:00 - 18:12 Hrs	18:30 - 18:41 Hrs	18:40 - 18:52 Hrs
Time of Sampling	24.12 Hrs	24.12 Hrs	24.11 Hrs	24.12 Hrs
Sample Received on	02.02.2023	04.02.2023	09.02.2023	09.02.2023
Date of Test	03.02.2023	05.02.2023	10.02.2023	10.02.2023

Sample ID No	CPL/AAQ/FEB-23/219	CPL/AAQ/FEB-23/228	CPL/AAQ/FEB-23/327	CPL/AAQ/FEB-23/343	CPL/AAQ/FEB-23/356
Date of Sampling	13.02.2023 - 14.02.2023	15.02.2023 - 16.02.2023	21.02.2023 - 22.02.2023	23.02.2023 - 24.02.2023	27.02.2023 - 28.02.2023
Sampling Period	18:48 - 19:02 Hrs	19:02 - 19:13 Hrs	19:00 - 19:10 Hrs	18:18 - 18:00 Hrs	17:50 - 15:20 Hrs
Time of Sampling	24.14 Hrs	24.11 Hrs	24.16 Hrs	23.42 Hrs	21.30 Hrs
Sample Received on	17.02.2023	17.02.2023	23.02.2023	24.02.2023	28.02.2023
Date of Test	18.02.2023	18.02.2023	24.02.2023	26.02.2023	01.03.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/SP/01/19/025, Issue No: 01, dtd 23.10.2017	EN 12381, 1998 Low Volume Sampler	IS: 5182 (Part-2) 2001, RA 2017	IS: 5182 (Part-1) 2001, RA 2017
1.	CPL/AAQ/FEB-23/60	24	52	05	15
2.	CPL/AAQ/FEB-23/77	16	50	05	14
3.	CPL/AAQ/FEB-23/155	20	53	06	17
4.	CPL/AAQ/FEB-23/170	16	50	05	15
5.	CPL/AAQ/FEB-23/219	17	50	04	11
6.	CPL/AAQ/FEB-23/228	27	64	06	14
7.	CPL/AAQ/FEB-23/327	22	53	05	14
8.	CPL/AAQ/FEB-23/343	32	69	05	16
9.	CPL/AAQ/FEB-23/356	29	67	05	15
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> 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 Prashant  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PRD/A

REPORT NO: CPL/R/AAQ/MAR-23/21N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 03.03.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Tellghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	02.02.2023	09:30 – 10:30 Hrs	< 0.1
2	04.02.2023	10:00 – 11:00 Hrs	< 0.1
3	07.02.2023	08:40 – 09:40 Hrs	< 0.1
4	09.02.2023	12:00 – 13:00 Hrs	< 0.1
5	14.02.2023	11:00 – 12:00 Hrs	< 0.1
6	16.02.2023	13:00 – 14:00 Hrs	< 0.1
7	22.02.2023	09:30 – 10:30 Hrs	< 0.1
8	24.02.2023	10:30 – 11:30 Hrs	< 0.1
9	26.02.2023	10:30 – 11:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 16 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By



P. Saveni  
Verified By

Authorized Signatory  
Subhanga Prasad  
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:

D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Tele Fax: 6651 - 2473746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/RES/24

ULR - TC68162300000540F  
REPORT NO: CPL/IAAQ/MAR-23/22

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sample ID No	CPL/IAAQ/FEB-23/61	CPL/IAAQ/FEB-23/76	CPL/IAAQ/FEB-23/158	CPL/IAAQ/FEB-23/172
Date of Sampling	01.02.2023 - 02.02.2023	03.02.2023 - 04.02.2023	06.02.2023 - 07.02.2023	08.02.2023 - 09.02.2023
Sampling Period	10:12 - 10:24 Hrs	09:10 - 09:22 Hrs	11:00 - 11:15 Hrs	09:18 - 09:30 Hrs
Time of Sampling	24.12 Hrs	24.12 Hrs	24.15 Hrs	24.12 Hrs
Sample Received on	02.02.2023	04.02.2023	09.02.2023	09.02.2023
Date of Test	03.02.2023	05.02.2023	10.02.2023	10.02.2023

Sample ID No	CPL/IAAQ/FEB-23/221	CPL/IAAQ/FEB-23/230	CPL/IAAQ/FEB-23/329	CPL/IAAQ/FEB-23/341	CPL/IAAQ/FEB-23/358
Date of Sampling	13.02.2023 - 14.02.2023	15.02.2023 - 16.02.2023	21.02.2023 - 22.02.2023	23.02.2023 - 24.02.2023	27.02.2023 - 28.02.2023
Sampling Period	11:40 - 11:52 Hrs	18:45 - 18:56 Hrs	11:45 - 11:50 Hrs	08:00 - 07:30 Hrs	06:00 - 08:15 Hrs
Time of Sampling	24.12 Hrs	24.14 Hrs	24.05 Hrs	22.30 Hrs	23.15 Hrs
Sample Received on	17.02.2023	17.02.2023	23.02.2023	24.02.2023	28.02.2023
Date of Test	18.02.2023	18.02.2023	24.02.2023	25.02.2023	01.03.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/SD/01/PM2.5, Issue No: 04.02.23/10/2017	EN 12341, 1993 Low Volume Sampler	IS: 5182 (Part - 2) 2001, IAQ 2017	IS: 5182 (Part - 6) 2018, IAQ 2017
1.	CPL/IAAQ/FEB-23/61	23	54	05	15
2.	CPL/IAAQ/FEB-23/76	19	40	05	14
3.	CPL/IAAQ/FEB-23/158	23	60	08	25
4.	CPL/IAAQ/FEB-23/172	20	52	11	40
5.	CPL/IAAQ/FEB-23/221	29	72	05	25
6.	CPL/IAAQ/FEB-23/230	29	76	06	15
7.	CPL/IAAQ/FEB-23/329	21	54	06	20
8.	CPL/IAAQ/FEB-23/341	23	57	05	15
9.	CPL/IAAQ/FEB-23/358	25	66	10	30
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Areas		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By



P. Sahoo  
Verified By

Authorized Signatory  
Subhanga Prabhara  
Managing Director

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

This report refers to the values obtained at the time of testing and results related to the item tested. This report may not be reproduced in part or full without written permission of the Company.





# Cleenviron Private Limited

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

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PNS/A

REPORT NO: CPL/R/AAQ/MAR-23/22N

SAMPLE OBTAIN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 03.03.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoll, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electrochemical Sensor
Method of Analysis			
1	01.02.2023	10:30 – 11:30 Hrs	< 0.1
2	03.02.2023	10:00 – 11:00 Hrs	< 0.1
3	07.02.2023	08:40 – 09:40 Hrs	< 0.1
4	08.02.2023	12:00 – 13:00 Hrs	< 0.1
5	14.02.2023	09:00 – 10:00 Hrs	< 0.1
6	16.02.2023	13:00 – 14:00 Hrs	< 0.1
7	22.02.2023	09:30 – 10:30 Hrs	< 0.1
8	23.02.2023	10:30 – 11:30 Hrs	< 0.1
9	27.02.2023	11:30 – 12:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By



P. Sareni  
Verified By

Authorized Signatory  
Subhanga Prharaj  
Managing Director

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

Page 1 of 1

This report refers to the values obtained at the time of testing and results related to the item tested. This report may not be reproduced in part or full without written permission of the Company.





# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/REGTA

ULR - TC68162300000541F  
REPORT NO: CPL/AAQ/MAR-23/23

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sample ID No	CPL/AAQ/FEB-23/69	CPL/AAQ/FEB-23/75	CPL/AAQ/FEB-23/157	CPL/AAQ/FEB-23/171
Date of Sampling	01.02.2023 - 02.02.2023	03.02.2023 - 04.02.2023	06.02.2023 - 07.02.2023	08.02.2023 - 09.02.2023
Sampling Period	10:23 - 10:40 Hrs	09:01 - 09:15 Hrs	10:45 - 10:57 Hrs	09:07 - 09:20 Hrs
Time of Sampling	24.13 Hrs	24.14 Hrs	24.12 Hrs	24.13 Hrs
Sample Received on	02.02.2023	04.02.2023	09.02.2023	09.02.2023
Date of Test	03.02.2023	05.02.2023	10.02.2023	10.02.2023

Sample ID No	CPL/AAQ/FEB-23/220	CPL/AAQ/FEB-23/229	CPL/AAQ/FEB-23/328	CPL/AAQ/FEB-23/342	CPL/AAQ/FEB-23/357
Date of Sampling	13.02.2023 - 14.02.2023	16.02.2023 - 16.02.2023	21.02.2023 - 22.02.2023	23.02.2023 - 24.02.2023	27.02.2023 - 28.02.2023
Sampling Period	11:21 - 11:35 Hrs	10:42 - 10:50 Hrs	11:50 - 11:50 Hrs	09:00 - 08:00 Hrs	09:16 - 08:30 Hrs
Time of Sampling	24.14 Hrs	24.08 Hrs	24.00 Hrs	23.00 Hrs	23.14 Hrs
Sample Received on	17.02.2023	17.02.2023	23.02.2023	24.02.2023	28.02.2023
Date of Test	18.02.2023	18.02.2023	24.02.2023	25.02.2023	01.03.2023

Sl No	Sample ID	Parameters			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/AAQ/FEB-23/102, Issue No: 04, 09, 23, 10, 2017	EN 12341, 1999 Low Volume Sampler	IS 5182 (Part - 2) 2011, RA 2817	IS 5182 (Part - 6) 2006, RA 2817
1.	CPL/AAQ/FEB-23/69	19	54	05	15
2.	CPL/AAQ/FEB-23/75	20	50	06	16
3.	CPL/AAQ/FEB-23/157	25	69	09	24
4.	CPL/AAQ/FEB-23/171	21	54	06	19
5.	CPL/AAQ/FEB-23/220	08	28	04	18
6.	CPL/AAQ/FEB-23/229	18	49	06	17
7.	CPL/AAQ/FEB-23/328	26	64	05	17
8.	CPL/AAQ/FEB-23/342	22	52	04	15
9.	CPL/AAQ/FEB-23/357	26	67	08	25
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> 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 Pratihara  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORM NO: CFLR027A

REPORT NO: CPL/RAAQ/MAR-23/23N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

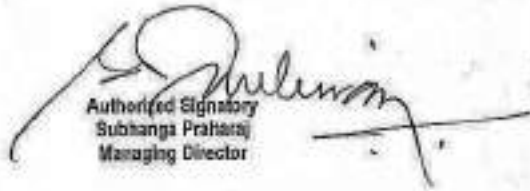
REPORT ISSUE DATE: 03.03.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	01.02.2023	12:30 – 13:30 Hrs	< 0.1
2	03.02.2023	11:00 – 12:00 Hrs	< 0.1
3	07.02.2023	09:40 – 10:40 Hrs	< 0.1
4	08.02.2023	12:00 – 13:00 Hrs	< 0.1
5	13.02.2023	11:30 – 12:30 Hrs	< 0.1
6	15.02.2023	13:10 – 14:10 Hrs	< 0.1
7	21.02.2023	12:20 – 13:20 Hrs	< 0.1
8	23.02.2023	10:30 – 11:30 Hrs	< 0.1
9	27.02.2023	11:30 – 12:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 10 <sup>th</sup> November 2008			04 (1 Hour Average)

Test Done By   


Verified By 

  
 Authorized Signatory  
 Subhanga Prakash  
 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 NABL Accredited Laboratory.



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPLFM2

ULR – TC68162300000564F  
REPORT NO: CPL/R/N/MAR-23/1

REPORT ISSUE DATE: 03.03.2023

MONITORING DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Instrument Used : **Sound Level Meter (LUTRON: SL 4001)**

Station No	N1	N2	N3
Sample ID	CPL/N/FEB-23/63	CPL/N/FEB-23/61	CPL/N/FEB-23/62
Date of Monitoring	14.02.2023 – 15.02.2023	16.02.2023 – 17.02.2023	15.02.2023 – 16.02.2023
Location of Monitoring	COLONY AREA	NEAR MAIN GATE	NEAR TG BUILDING

SL NO	STATION NO	L: DAY TIME (6:00AM – 10:00PM)		L: NIGHT TIME (10:00PM – 6:00AM)	
		L <sub>eq</sub> dB(A)	L <sub>10</sub> dB(A)	L <sub>eq</sub> dB(A)	L <sub>10</sub> dB(A)
1.	N1	57.2		45.2	65.9
2.	N2	57.3		46.8	65.2
3.	N3	59.2		46.8	65.9

Station No	N4	N5
Sample ID	CPL/N/FEB-23/64	CPL/N/FEB-23/60
Date of Monitoring	13.02.2023 – 14.02.2023	17.02.2023 – 18.02.2023
Location of Monitoring	NEAR CLINKER BULK LOADING AREA	VILLAGE TELEGHANA

SL NO	STATION NO	L: DAY TIME (6:00AM – 10:00PM)		L: NIGHT TIME (10:00PM – 6:00AM)	
		L <sub>eq</sub> dB(A)	L <sub>10</sub> dB(A)	L <sub>eq</sub> dB(A)	L <sub>10</sub> dB(A)
3.	N4	58.0		45.2	65.7
4.	N5	53.8		45.8	60.2

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	Silence Zone	50	40

\*\*\*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: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 13<sup>th</sup> February 2023 for the month from the following mentioned points and data thus recorded are as follows:

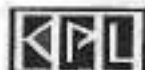
Sl No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Bore Well Back Side of Cement Mill Within Plant	0.15	-	25.60	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	13.94	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.6" E	0.10	-	12.83	242.0	229.17

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

  
Authorized Signatory  
For Cleenviron Private Limited

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## TEST REPORT FOR STACK EMISSION MONITORING

FORM NO: CPL/FMS

ULR - TC68162300000568F  
REPORT NO: CPL/R/SE/MAR-23/1

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Sampling Method : **IS 11255 (Part - 1): 1985, RA 2019**

Sample ID No	:	CPL/SE/FEB-23/37
Location of Sampling	:	STACK - 1
Date of Sampling	:	16.02.2023
Time of Sampling	:	16:35 Hrs
Duration of Sampling	:	20 min
Sample Received on	:	17.02.2023
Date of Test	:	17.02.2023 - 18.02.2023

<b>A. General Information About the Stack</b>	
1. Stack Connected to	: COAL MILL
2. Emission Due to	: Coal Crushing
3. Material of Construction of Stack	: Steel
4. Shape of Stack	: Circular
5. Whether Stack is provide with Permanent Platform & Ladder	: Yes
6. Capacity	: 11 TPH
7. Running Load	: 11 TPH

<b>B. Physical Characteristics of Stack</b>	
1. Height of Stack from Ground Level	: 57 m
2. Height of Sampling Port from Ground Level	: 15.7 m
3. Diameter of Stack at sampling point	: 1.9 m

C. PARAMETERS ANALYSED	METHODS OF ANALYSIS	RESULTS OBTAINED
1. Ambient Temperature (°C)	IS 11255 Part - 3, 1985 (RA 2018)	33
2. Temperature of Gas Emission (°C)	IS 11255 Part - 3, 1985 (RA 2018)	69
3. Barometric Pressure (mm Hg)	IS 11255 Part - 3, 1985 (RA 2018)	748
4. Velocity of Gas Emitted (m/sec)	IS 11255 Part - 3, 1985 (RA 2018)	7.44
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	IS 11255 Part - 3, 1985 (RA 2018)	65,051.25
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 1, 1985 (RA 2019)	26
D. Pollution Control Device Installed	Bag Filter	

Test Done By



Verified By

*P. Sareni*

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

Page 1 of 1

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# Cleenviron Private Limited

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## TEST REPORT FOR STACK EMISSION MONITORING

FORMAT NO: CPL/MS

ULR - TC68162300000589F  
REPORT NO: CPL/R/SE/MAR-23/2

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Sampling Method : IS 11255 (Part - 1): 1985, RA 2019

Sample ID No	:	CPL/SE/FEB-23/38
Location of Sampling	:	STACK - 2
Date of Sampling	:	16.02.2023
Time of Sampling	:	12:10 Hrs
Duration of Sampling	:	30 min
Sample Received on	:	17.02.2023
Date of Test	:	17.02.2023 - 18.02.2023

<b>A. General Information About the Stack</b>	:	
1. Stack Connected to	:	KILN/ RAW MILL
2. Emission Due to	:	Limestone Crushing
3. Material of Construction of Stack	:	Steel
4. Shape of Stack	:	Circular
5. Whether Stack is provide with Permanent Platform & Ladder	:	Yes
6. Capacity	:	2000 TPD
7. Running Load	:	2000 TPD

<b>B. Physical Characteristics of Stack</b>	:	
1. Height of Stack from Ground Level	:	149 m
2. Height of Sampling Port from Ground Level	:	21 m
3. Diameter of Stack at sampling point	:	3.2 m

C. PARAMETERS ANALYSED	METHODS OF ANALYSIS	RESULTS OBTAINED
1. Ambient Temperature (°C)	IS 11255 Part - 3, 1985 (RA 2018)	30
2. Temperature of Gas Emission (°C)	IS 11255 Part - 3, 1985 (RA 2018)	136
3. Barometric Pressure (mm Hg)	IS 11255 Part - 3, 1985 (RA 2018)	748
4. Velocity of Gas Emitted (m/sec)	IS 11255 Part - 3, 1985 (RA 2018)	10.62
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	IS 11255 Part - 3, 1985 (RA 2018)	220205.97
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 1, 1985 (RA 2019)	24
7. Sulphur Dioxide (SO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 2, 1985 (RA 2014)	47.0
8. Nitrogen Dioxide (NO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 7, 2005 (RA 2017)	254.9
D. Pollution Control Device Installed	Bag Filter	

Test Done By



P. Sareni  
Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

Page 1 of 1

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



# Cleenviron Private Limited

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



## TEST REPORT FOR STACK EMISSION MONITORING

FORMAT NO: CPL/MS

ULR - TC58162300000590F  
REPORT NO: CPL/R/SE/MAR-23/3

REPORT ISSUE DATE: 03.03.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Sampling Method : IS 11255 (Part - 1): 1985, RA 2019

Sample ID No	:	CPL/SE/FEB-23/36
Location of Sampling	:	STACK - 3
Date of Sampling	:	15.02.2023
Time of Sampling	:	16:50 Hrs
Duration of Sampling	:	30 min
Sample Received on	:	17.02.2023
Date of Test	:	17.02.2023 - 18.02.2023

<b>A. General Information About the Stack</b>		:	
1. Stack Connected to	:	Clinker Cooler	
2. Emission Due to	:	Limestone	
3. Material of Construction of Stack	:	Steel	
4. Shape of Stack	:	Circular	
5. Whether Stack is provide with Permanent Platform & Ladder	:	Yes	
6. Capacity	:	2000 TPD	
7. Running Load	:	2000 TPD	
<b>B. Physical Characteristics of Stack</b>		:	
1. Height of Stack from Ground Level	:	63 m	
2. Height of Sampling Port from Ground Level	:	45 m	
3. Diameter of Stack at sampling point	:	3.6 m	
<b>C. PARAMETERS ANALYSED</b>		<b>METHODS OF ANALYSIS</b>	<b>RESULTS OBTAINED</b>
1. Ambient Temperature (°C)	:	IS 11255 Part - 3, 1985 (RA 2018)	37
2. Temperature of Gas Emission (°C)	:	IS 11255 Part - 3, 1985 (RA 2018)	203
3. Barometric Pressure (mm Hg)	:	IS 11255 Part - 3, 1985 (RA 2018)	748
4. Velocity of Gas Emitted (m/sec)	:	IS 11255 Part - 3, 1985 (RA 2018)	8.81
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	:	IS 11255 Part - 3, 1985 (RA 2018)	198687.98
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	:	IS 11255 Part - 1, 1985 (RA 2019)	08
<b>D. Pollution Control Device Installed</b>		:	ESP

Test Done By



Verified By

*P. Sabeni*

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 NABL Accredited Laboratory.



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FR07A

ULR - TC68162300000910F

REPORT NO: CPL/R/AAQ/APR-23/18

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

Sample ID No	CPL/AAQ/MAR-23/95	CPL/AAQ/MAR-23/107	CPL/AAQ/MAR-23/186	CPL/AAQ/MAR-23/203
Date of Sampling	03.03.2023 - 04.03.2023	06.03.2023 - 07.03.2023	10.03.2023 - 11.03.2023	13.03.2023 - 14.03.2023
Sampling Period	18:48 - 17:02 Hrs	18:35 - 18:40 Hrs	19:30 - 19:45 Hrs	18:45 - 19:03 Hrs
Time of Sampling	24.14 Hrs	24.05 Hrs	24.15 Hrs	24.18 Hrs
Sample Received on	04.03.2023	07.03.2023	11.03.2023	14.03.2023
Date of Test	06.03.2023	08.03.2023	13.03.2023	15.03.2023

Sample ID No	CPL/AAQ/MAR-23/275	CPL/AAQ/MAR-23/290	CPL/AAQ/MAR-23/314	CPL/AAQ/MAR-23/413	CPL/AAQ/MAR-23/431
Date of Sampling	17.03.2023 - 18.03.2023	20.03.2023 - 21.03.2023	22.03.2023 - 23.03.2023	27.03.2023 - 28.03.2023	29.03.2023 - 30.03.2023
Sampling Period	18:50 - 19:10 Hrs	18:30 - 18:45 Hrs	06:20 - 06:40 Hrs	18:54 - 19:18 Hrs	08:25 - 09:40 Hrs
Time of Sampling	24.20 Hrs	24.15 Hrs	24.20 Hrs	24.24 Hrs	24.15 Hrs
Sample Received on	18.03.2023	21.03.2023	23.03.2023	28.03.2023	30.03.2023
Date of Test	20.03.2023	22.03.2023	24.03.2023	29.03.2023	31.03.2023

Sl. No	Sample ID	Pollutants			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/SOP/SPM2.5, Issue No: 04, dt: 22.10.2017	IS: 12541, 1978 Low Volume Sampler	IS: 5182 (Part - 2) 2001, RA 2017	IS: 5182 (Part - 6) 2016, RA 2017
1.	CPL/AAQ/MAR-23/95	24	57	08	29
2.	CPL/AAQ/MAR-23/107	22	54	07	26
3.	CPL/AAQ/MAR-23/186	23	50	04	18
4.	CPL/AAQ/MAR-23/203	24	55	06	17
5.	CPL/AAQ/MAR-23/275	26	60	05	17
6.	CPL/AAQ/MAR-23/290	20	49	06	21
7.	CPL/AAQ/MAR-23/314	19	45	05	17
8.	CPL/AAQ/MAR-23/413	22	55	05	16
9.	CPL/AAQ/MAR-23/431	21	46	06	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> 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 Pradhan  
Managing Director

\*\*\*\*END OF TEST REPORT\*\*\*\*  
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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/PR/24

REPORT NO: CPL/IR/AAQ/APR-23/18N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Colony Area of SCL**  
 Monitoring Station Code : **A1**

S. No.	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical sensor
1	04.03.2023	15:30 - 16:30 Hrs	< 0.1
2	07.03.2023	10:00 - 11:00 Hrs	< 0.1
3	11.03.2023	08:40 - 09:40 Hrs	< 0.1
4	14.03.2023	12:00 - 13:00 Hrs	< 0.1
5	18.03.2023	11:00 - 12:00 Hrs	< 0.1
6	21.03.2023	13:00 - 14:00 Hrs	< 0.1
7	23.03.2023	09:30 - 10:30 Hrs	< 0.1
8	28.03.2023	10:30 - 11:30 Hrs	< 0.1
9	29.03.2023	10:30 - 11:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*Dha*  
Test Done By

*P. Saseni*  
Verified By

*Subhanga Pratihara*  
Authorized Signatory  
Subhanga Pratihara  
Managing Director



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

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PWS/A

ULR - TC68162300000911F  
REPORT NO: CPL/R/AAQ/APR-23/19

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringaloli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sample ID No	CPL/AAQ/MAR-23/194	CPL/AAQ/MAR-23/108	CPL/AAQ/MAR-23/187	CPL/AAQ/MAR-23/204
Date of Sampling	03.03.2023 - 04.03.2023	06.03.2023 - 07.03.2023	10.03.2023 - 11.03.2023	13.03.2023 - 14.03.2023
Sampling Period	19:05 - 19:18 Hrs	18:47 - 19:02 Hrs	19:10 - 19:18 Hrs	18:34 - 18:52 Hrs
Time of Sampling	24.13 Hrs	24.15 Hrs	24.08 Hrs	24.18 Hrs
Sample Received on	04.03.2023	07.03.2023	11.03.2023	14.03.2023
Date of Test	06.03.2023	08.03.2023	13.03.2023	15.03.2023

Sample ID No	CPL/AAQ/MAR-23/276	CPL/AAQ/MAR-23/291	CPL/AAQ/MAR-23/315	CPL/AAQ/MAR-23/414	CPL/AAQ/MAR-23/429
Date of Sampling	17.03.2023 - 18.03.2023	20.03.2023 - 21.03.2023	22.03.2023 - 23.03.2023	27.03.2023 - 28.03.2023	29.03.2023 - 30.03.2023
Sampling Period	19:00 - 19:20 Hrs	18:40 - 18:57 Hrs	06:05 - 06:18 Hrs	18:40 - 19:20 Hrs	18:45 - 19:05 Hrs
Time of Sampling	24.20 Hrs	24.17 Hrs	24.13 Hrs	24.40 Hrs	24.20 Hrs
Sample Received on	18.03.2023	21.03.2023	23.03.2023	28.03.2023	30.03.2023
Date of Test	20.03.2023	22.03.2023	24.03.2023	29.03.2023	31.03.2023

Sl. No.	Sample ID	Pollutants			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/AAQ/19/025, Issue No. 24, dt: 23.10.2017	IS 1291, 1998 Low Volume Sampler	IS 1823 (Part - 2) 2001, RA 2017	IS 5182 (Part - 1) 2001, RA 2017
1	CPL/AAQ/MAR-23/194	25	58	08	25
2	CPL/AAQ/MAR-23/108	21	63	07	22
3	CPL/AAQ/MAR-23/187	21	56	05	14
4	CPL/AAQ/MAR-23/204	27	59	06	18
5	CPL/AAQ/MAR-23/276	28	62	06	18
6	CPL/AAQ/MAR-23/291	24	53	06	17
7	CPL/AAQ/MAR-23/315	29	70	06	17
8	CPL/AAQ/MAR-23/414	26	58	05	16
9	CPL/AAQ/MAR-23/429	25	54	06	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 19 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		80 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By



P. Saveni  
Verified By

Authorized Signatory  
Subhansu Prisharaj  
Managing Director

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

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

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORM NO: CPL/MSA

REPORT NO: CPL/IR/AAQ/APR-23/19N

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Plant Main Gate**  
 Monitoring Station Code : **A2**

Sl No.	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Electrochemical Sensor
1	04.03.2023	09:30 - 10:30 Hrs	< 0.1
2	07.03.2023	10:00 - 11:00 Hrs	< 0.1
3	11.03.2023	08:40 - 09:40 Hrs	< 0.1
4	14.03.2023	12:00 - 13:00 Hrs	< 0.1
5	18.03.2023	11:00 - 12:00 Hrs	< 0.1
6	21.03.2023	13:00 - 14:00 Hrs	< 0.1
7	23.03.2023	09:30 - 10:30 Hrs	< 0.1
8	28.03.2023	10:30 - 11:30 Hrs	< 0.1
9	29.03.2023	10:30 - 11:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 15 <sup>th</sup> November 2005			04 (1 Hour Average)

*Poh*  
Test Done By

*P. Sahoo*  
Verified By

*S. Prasad*  
Authorized Signatory  
Subhange Prasad  
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: D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA  
 Tele Fax: 0661 - 2475746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/PMQA

ULR - TC68162300000912F  
REPORT NO: CPL/IAAQ/APR-23/20

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sample ID No	CPL/IAAQ/MAR-23/92	CPL/IAAQ/MAR-23/106	CPL/IAAQ/MAR-23/188	CPL/IAAQ/MAR-23/205
Date of Sampling	03.03.2023 - 04.03.2023	06.03.2023 - 07.03.2023	10.03.2023 - 11.03.2023	13.03.2023 - 14.03.2023
Sampling Period	08:22 - 08:40 Hrs	07:30 - 07:45 Hrs	10:54 - 11:03 Hrs	09:40 - 09:57 Hrs
Time of Sampling	24.28 Hrs	24.15 Hrs	24.09 Hrs	24.17 Hrs
Sample Received on	04.03.2023	07.03.2023	11.03.2023	14.03.2023
Date of Test	06.03.2023	08.03.2023	13.03.2023	15.03.2023

Sample ID No	CPL/IAAQ/MAR-23/277	CPL/IAAQ/MAR-23/292	CPL/IAAQ/MAR-23/312	CPL/IAAQ/MAR-23/416	CPL/IAAQ/MAR-23/430
Date of Sampling	17.03.2023 - 18.03.2023	20.03.2023 - 21.03.2023	22.03.2023 - 23.03.2023	27.03.2023 - 28.03.2023	29.03.2023 - 30.03.2023
Sampling Period	10:45 - 11:02 Hrs	09:28 - 09:37 Hrs	09:12 - 09:40 Hrs	10:37 - 10:50 Hrs	09:12 - 09:25 Hrs
Time of Sampling	24.17 Hrs	24.09 Hrs	24.28 Hrs	24.13 Hrs	24.13 Hrs
Sample Received on	18.03.2023	21.03.2023	23.03.2023	28.03.2023	30.03.2023
Date of Test	20.03.2023	22.03.2023	24.03.2023	29.03.2023	31.03.2023

Sl. No	Sample ID	Parameter			
		PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>
	Units				
	Method of Analysis	CPL/CPM/PM2.5, Issue No: 24, dt: 23.10.2017	IS 12341, 100 Low Volume Sampler	IS 5182 (Part - 2) 2001, RA 2017	IS 5182 (Part - 6) 2016, RA 2017
1	CPL/IAAQ/MAR-23/92	27	66	08	25
2	CPL/IAAQ/MAR-23/106	25	58	05	15
3	CPL/IAAQ/MAR-23/188	23	56	06	18
4	CPL/IAAQ/MAR-23/205	25	64	06	19
5	CPL/IAAQ/MAR-23/277	17	49	05	18
6	CPL/IAAQ/MAR-23/292	28	68	06	17
7	CPL/IAAQ/MAR-23/312	23	55	06	20
8	CPL/IAAQ/MAR-23/416	24	59	05	17
9	CPL/IAAQ/MAR-23/430	26	62	05	17
National Ambient Air Quality Standards, CPCB Notification New Delhi, 13 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		80 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)

Test Done By



Verified By P. Sareni

Authorized Signatory Subhanga Prabhara 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/7A

REPORT NO: CPL/R/AAQ/APR-23/20N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near TG Building**  
 Monitoring Station Code : **A3**

Sl No.	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
Method of Analysis			Photochemical Based
1	04.03.2023	10:30 - 11:30 Hrs	< 0.1
2	07.03.2023	10:00 - 11:00 Hrs	< 0.1
3	11.03.2023	08:40 - 09:40 Hrs	< 0.1
4	14.03.2023	12:00 - 13:00 Hrs	< 0.1
5	18.03.2023	09:00 - 10:00 Hrs	< 0.1
6	21.03.2023	13:00 - 14:00 Hrs	< 0.1
7	23.03.2023	09:30 - 10:30 Hrs	< 0.1
8	28.03.2023	10:30 - 11:30 Hrs	< 0.1
9	29.03.2023	11:30 - 12:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

*P. Sahoo*  
 Test Done By

*P. Sahoo*  
 Verified By

*S. Subhanga*  
 Authorized Signatory  
 Subhanga Prakash  
 Managing Director



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# Cleenviron Private Limited

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



## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORM NO. CPL/RSA

ULR - TC88162300000913F  
REPORT NO: CPL/R/AAQ/APR-23/21

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182 (Part - 2) & (Part - 6), EN12341**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sample ID No	CPL/AAQ/MAR-23/93	CPL/AAQ/MAR-23/105	CPL/AAQ/MAR-23/189	CPL/AAQ/MAR-23/208
Date of Sampling	03.03.2023 - 04.03.2023	06.03.2023 - 07.03.2023	10.03.2023 - 11.03.2023	13.03.2023 - 14.03.2023
Sampling Period	08:19 - 08:22 Hrs	07:45 - 07:58 Hrs	10:46 - 10:55 Hrs	09:30 - 09:42 Hrs
Time of Sampling	24.03 Hrs	24.23 Hrs	24.09 Hrs	24.12 Hrs
Sample Received on	04.03.2023	07.03.2023	11.03.2023	14.03.2023
Date of Test	06.03.2023	08.03.2023	13.03.2023	15.03.2023

Sample ID No	CPL/AAQ/MAR-23/278	CPL/AAQ/MAR-23/293	CPL/AAQ/MAR-23/313	CPL/AAQ/MAR-23/415	CPL/AAQ/MAR-23/428
Date of Sampling	17.03.2023 - 18.03.2023	20.03.2023 - 21.03.2023	22.03.2023 - 23.03.2023	27.03.2023 - 28.03.2023	29.03.2023 - 30.03.2023
Sampling Period	10:54 - 11:20 Hrs	09:37 - 09:49 Hrs	09:10 - 09:23 Hrs	10:47 - 11:05 Hrs	07:00 - 07:20 Hrs
Time of Sampling	24.26 Hrs	24.11 Hrs	24.13 Hrs	24.18 Hrs	24.20 Hrs
Sample Received on	18.03.2023	21.03.2023	23.03.2023	28.03.2023	30.03.2023
Date of Test	20.03.2023	22.03.2023	24.03.2023	29.03.2023	31.03.2023

Sl. No.	Sample ID	Pollutants			
		PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Units		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis		CPL/SOP/PM2.5, Issue No: 04.08.22.10.001	IS: 12341, 1998 Low Volume Sampler	IS: 5182 (Part - 1) 2001, RA 2017	IS: 5182 (Part - 6) 2006, RA 2017
1.	CPL/AAQ/MAR-23/93	23	57	10	32
2.	CPL/AAQ/MAR-23/105	25	66	07	20
3.	CPL/AAQ/MAR-23/189	21	53	05	16
4.	CPL/AAQ/MAR-23/208	24	56	06	17
5.	CPL/AAQ/MAR-23/278	27	62	06	19
6.	CPL/AAQ/MAR-23/293	21	49	06	19
7.	CPL/AAQ/MAR-23/313	25	60	05	16
8.	CPL/AAQ/MAR-23/415	20	52	05	18
9.	CPL/AAQ/MAR-23/428	24	59	06	18
National Ambient Air Quality Standards, CPCB Notification New Delhi, 13 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area		60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)



P. Sasaki  
Verified By

Authorized Signatory  
Subhanga Prharaj  
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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/MSDA

REPORT NO: CPL/R/AAQ/APR-23/21N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Location of Monitoring : **Near Clinker Bulk Loading Area**  
 Monitoring Station Code : **A4**

Sl No	Date of Monitoring	Time of Monitoring	Carbon Monoxide (as CO)
			Electro-chemical Sensor
Method of Analysis			
1	04.03.2023	12:30 - 13:30 Hrs	< 0.1
2	07.03.2023	11:00 - 12:00 Hrs	< 0.1
3	11.03.2023	09:40 - 10:40 Hrs	< 0.1
4	14.03.2023	12:00 - 13:00 Hrs	< 0.1
5	18.03.2023	11:30 - 12:30 Hrs	< 0.1
6	21.03.2023	13:10 - 14:10 Hrs	< 0.1
7	23.03.2023	12:20 - 13:20 Hrs	< 0.1
8	28.03.2023	10:30 - 11:30 Hrs	< 0.1
9	29.03.2023	11:30 - 12:30 Hrs	< 0.1
National Ambient Air Quality Standards, CPCB Notification 18 <sup>th</sup> November 2009			04 (1 Hour Average)

Test Done By

Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director



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

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# Cleenviron Private Limited

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## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CP/UM/21A

ULR - TC681623000000914F  
REPORT NO: CPL/RIAQ/APR-23/22

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Sampling Method : **IS: 5182 (Part - 2), (Part - 5) & EN12341**

Sample ID No	CPL/AAQ/MAR-23/290	CPL/AAQ/MAR-23/291	CPL/AAQ/MAR-23/292	CPL/AAQ/MAR-23/293
Station No	A1	A2	A3	A4
Date of Sampling	20.03.2023 - 21.03.2023	20.03.2023 - 21.03.2023	20.03.2023 - 21.03.2023	20.03.2023 - 21.03.2023
Sampling Period	18:30 - 18:45 Hrs	18:40 - 18:57 Hrs	09:28 - 09:37 Hrs	09:37 - 09:48 Hrs
Time of Sampling	24.15 Hrs	24.17 Hrs	24.09 Hrs	24.11 Hrs
Sample Received on	21.03.2023	21.03.2023	21.03.2023	21.03.2023
Date of Test	22.03.2023	22.03.2023	22.03.2023	22.03.2023

Sl No	Station No	Location of Sampling	Parameters					
			PM2.5	PM10	SO <sub>2</sub>	NO <sub>2</sub>	NH <sub>3</sub>	O <sub>3</sub>
Units			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Method of Analysis			IS: 5182 (Part - 2) & EN 12341	IS: 5182 (Part - 2) & EN 12341	IS: 5182 (Part - 2) & EN 12341	IS: 5182 (Part - 5) & EN 12341	IS: 5182 (Part - 12) & EN 12341	IS: 5182 (Part - 3) & EN 12341
1.	A1	COLONY AREA OF SCL	20	49	06	21	52	26
2.	A2	NEAR MINES MAIN GATE	24	53	06	17	49	25
3.	A3	NEAR TG BUILDING	28	68	06	17	51	27
4.	A4	NEAR CLINKER BULK LOADING AREA	21	49	06	19	49	26
National Ambient Air Quality Standards, CPCB Notification New Delhi, 18 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area			60 (24 Hours Average)	100 (24 Hours Average)	80 (24 Hours Average)	80 (24 Hours Average)	400 (24 Hours Average)	180 (1 Hour Average)

Test Done By



P. Sareni  
Verified By

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.

## TEST REPORT FOR AMBIENT AIR QUALITY MONITORING

FORMAT NO: CPL/FM07A

REPORT NO: CPL/R/AAQ/APR -23/22N

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS: 5182**

Sample ID No	CPL/AAQ/MAR-23/290	CPL/AAQ/MAR-23/291	CPL/AAQ/MAR-23/292	CPL/AAQ/MAR-23/293
Station No	A1	A2	A3	A4
Date of Sampling	20.03.2023 – 21.03.2023	20.03.2023 – 21.03.2023	20.03.2023 – 21.03.2023	20.03.2023 – 21.03.2023
Sampling Period	18:30 – 18:45 Hrs	16:40 – 16:57 Hrs	09:28 – 09:37 Hrs	09:37 – 09:48 Hrs
Time of Sampling	24.15 Hrs	24.17 Hrs	24.09 Hrs	24.11 Hrs
Sample Received on	21.03.2023	21.03.2023	21.03.2023	21.03.2023
Date of Test	22.03.2023	22.03.2023	22.03.2023	22.03.2023

Sl No	Station No	Location of Sampling	Parameters					
			CO	Lead (Pb)	Arsenic (As)	Nickel (Ni)	Benzene (C <sub>6</sub> H <sub>6</sub> )	Benzo(a)pyrene (BaP) – Particulate Phase only
Units			mg/m <sup>3</sup>	µg/m <sup>3</sup>	ng/m <sup>3</sup>	ng/m <sup>3</sup>	µg/m <sup>3</sup>	ng/m <sup>3</sup>
Method of Analysis			Electro-chemical Sensor	IS 5182 Part-22:2014, RA 2014	CPL/AAQ/MAR-23/290, Issue No: 02, 04: 22.10.2017	CPL/AAQ/MAR-23/290, Issue No: 02, 04: 22.10.2017	IS 1616 (Part-11): 2015, RA 2017	IS 1616 (Part-12)
1.	A1	COLONY AREA OF SCL	< 0.1	< 0.4	< 0.2	< 12	< 0.5	< 0.1
2.	A2	NEAR MINES MAIN GATE	< 0.1	< 0.4	< 0.2	< 12	< 0.5	< 0.1
3.	A3	NEAR TG BUILDING	< 0.1	< 0.4	< 0.2	< 12	< 0.5	< 0.1
4.	A4	NEAR CLINKER BULK LOADING AREA	< 0.1	< 0.4	< 0.2	< 12	< 0.5	< 0.1
National Ambient Air Quality Standards, CPCB Notification New Delhi, 10 <sup>th</sup> November, 2009 for Industrial, Residential, Rural & Other Area			4 (1 Hour Average)	1.0 (24 Hours Average)	06 (Annual Average)	20 (Annual Average)	05 (Annual Average)	01 (Annual Average)

Test Done By



P. Saveni  
Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

Page 1 of 1

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Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA – 769014, Dist: SUNDARGARH, ODISHA

Tele Fax: 0661 – 2473746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR FUGITIVE DUST EMISSION MONITORING

FORMAT NO: CPL/FMIS

ULR - TC68162300000919F  
REPORT NO: CPL/R/FG/APR -23/25

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Sampling Method : **IS: 5182 (Part - 4)**

Sample ID No	CPL/FG/MAR-23/229	CPL/FG/MAR-23/230	CPL/FG/MAR-23/228	CPL/FG/MAR-23/231
Station No	F1	F2	F3	F4
Date of Sampling	18.03.2023	18.03.2023	18.03.2023	18.03.2023
Sampling Period	13:05 - 17:03 Hrs	12:10 - 16:45 Hrs	08:21 - 12:47 Hrs	07:40 - 12:05 Hrs
Time of Sampling	03:58 Hrs	04:45 Hrs	04:26 Hrs	04:25 Hrs
Sample Received on	18.03.2023	18.03.2023	18.03.2023	18.03.2023
Date of Test	20.03.2023	20.03.2023	20.03.2023	20.03.2023
Method of Analysis	IS: 5182 (Part - 4)			

Sl No	Station No	Location of Sampling	Parameters
			PM <sub>10</sub> in µg/m <sup>3</sup>
1.	F1	NEAR KILN AREA	205
2.	F2	NEAR CLINKER BULK LOADING AREA	712
3.	F3	NEAR RAW MIEL	536
4.	F4	NEAR MATERIAL STOCK YARD	813

Test Done By

Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director



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

Page 1 of 1

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Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

Tele Fax: 0661 - 2473746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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

## GROUND WATER LEVEL MONITORING REPORT

PROJECT SITE: **CEMENT PLANT**

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

Ground Water Levels are measured from existing Wells on 29<sup>th</sup> March 2023 for the month from the following mentioned points and data thus recorded are as follows:

Sl No	Location	MP to GL (m)	TDBMP (m)	WLBGL (m)	GL (m)	WLAMSL (m)
1	Bore Well Back Side of Cement Mill Within Plant	0.15	-	21.08	-	-
2	Bore Well Back Side of Coal Yard Within Plant 22° 13' 46.4" N – 84° 25' 02.5" E	0.50	-	7.27	-	-
3	Bore Well Back Side of Kiln Within Plant 22° 16' 31.0" N – 84° 27' 08.6" E	0.10	-	10.15	242.0	231.85

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

  
Authorized Signatory  
For Cleenviron Private Limited



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Tel: Fax: 9661 – 2475746, email: cleenviron@gmail.com



# Cleenviron Private Limited

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



## TEST REPORT FOR STACK EMISSION MONITORING

FORMAT NO: CPLRMS

ULR - TC88162300000918F  
REPORT NO: CPL/R/SEJAPR-23/14

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS 11255 (Part - 1): 1985, RA 2019**

Sample ID No	:	<b>CPL/SE/MAR-23/58</b>
Location of Sampling	:	<b>STACK - 2</b>
Date of Sampling	:	<b>24.03.2023</b>
Time of Sampling	:	<b>14:45 Hrs</b>
Duration of Sampling	:	<b>30 min</b>
Sample Received on	:	<b>24.03.2023</b>
Date of Test	:	<b>24.03.2023 - 25.03.2023</b>

<b>A. General Information About the Stack</b>	
1. Stack Connected to	: <b>KILN/RAW MILL</b>
2. Emission Due to	: <b>Limestone Crushing</b>
3. Material of Construction of Stack	: <b>Steel</b>
4. Shape of Stack	: <b>Circular</b>
5. Whether Stack is provide with Permanent Platform & Ladder	: <b>Yes</b>
6. Capacity	: <b>2000 TPD</b>
7. Running Load	: <b>2000 TPD</b>

<b>B. Physical Characteristics of Stack</b>	
1. Height of Stack from Ground Level	: <b>149 m</b>
2. Height of Sampling Port from Ground Level	: <b>21 m</b>
3. Diameter of Stack at sampling point	: <b>3.2 m</b>

<b>C. PARAMETERS ANALYSED</b>		<b>METHODS OF ANALYSIS</b>	<b>RESULTS OBTAINED</b>
1. Ambient Temperature (°C)		IS 11255 Part - 3, 1985 (RA 2018)	38
2. Temperature of Gas Emission (°C)		IS 11255 Part - 3, 1985 (RA 2018)	165
3. Barometric Pressure (mm Hg)		IS 11255 Part - 3, 1985 (RA 2018)	748
4. Velocity of Gas Emitted (m/sec)		IS 11255 Part - 3, 1985 (RA 2018)	11.22
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)		IS 11255 Part - 3, 1985 (RA 2018)	2, 17, 229.70
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )		IS 11255 Part - 1, 1985 (RA 2019)	26
7. Sulphur Dioxide (SO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )		IS 11255 Part - 2, 1985 (RA 2014)	24.0
8. Nitrogen Dioxide (NO <sub>2</sub> ) Concentration (mg/Nm <sup>3</sup> )		IS 11255 Part - 7, 2005 (RA 2017)	218.0

<b>D. Pollution Control Device Installed</b>	<b>Bag Filter</b>
--	-------------------

Test Done By



Verified By

Authorized Signatory  
Subhanga Praharaj  
Managing Director

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

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Branch Office & Laboratory:

D/124, KOELNAGAR, ROURKELA - 769014, Dist: SUNDARGARH, ODISHA

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 STACK EMISSION MONITORING

FORMAT NO: CPL/PRSE

REPORT NO: CPL/R/SE/APR-23/11

REPORT ISSUE DATE: 10.04.2023

SAMPLE GRABBY OF CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : At Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
 Sampling Method : IS 11255 (Part - 1): 1985, RA 2019

Sample ID No	:	CPL/SE/MAR-23/69
Location of Sampling	:	STACK - 1
Date of Sampling	:	24.03.2023
Time of Sampling	:	16:35 Hrs
Duration of Sampling	:	20 min
Sample Received on	:	24.03.2023
Date of Test	:	24.03.2023 - 25.03.2023

<b>A. General Information About the Stack</b>		:
1. Stack Connected to	:	COAL MIEL
2. Emission Due to	:	Coal Crushing
3. Material of Construction of Stack	:	Steel
4. Shape of Stack	:	Circular
5. Whether Stack is provide with Permanent Platform & Ladder	:	Yes
6. Capacity	:	11 TPH
7. Running Load	:	11 TPH
<b>B. Physical Characteristics of Stack</b>		:
1. Height of Stack from Ground Level	:	57 m
2. Height of Sampling Part from Ground Level	:	15.7 m
3. Diameter of Stack at sampling point	:	1.9 m
<b>C. PARAMETERS ANALYSED</b>		
	<b>METHODS OF ANALYSIS</b>	<b>RESULTS OBTAINED</b>
1. Ambient Temperature (°C)	IS 11255 Part - 3, 1985 (RA 2018)	39
2. Temperature of Gas Emission (°C)	IS 11255 Part - 3, 1985 (RA 2018)	72
3. Barometric Pressure (mm Hg)	IS 11255 Part - 3, 1985 (RA 2018)	749
4. Velocity of Gas Emitted (m/sec)	IS 11255 Part - 3, 1985 (RA 2018)	7.52
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	IS 11255 Part - 3, 1985 (RA 2018)	65,180.72
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	IS 11255 Part - 1, 1985 (RA 2019)	24
<b>D. Pollution Control Device Installed</b>		Bag Filter

Test Done By



P. Saveni  
Verified By

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.

## TEST REPORT FOR STACK EMISSION MONITORING

FORMAT NO: CPL/RTS

REPORT NO: CPL/R/SE/APR-23/2N

REPORT ISSUE DATE: 10.04.2023

SAMPLE DRAWN BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS 11255 (Part - 1): 1985, RA 2019**

Sample ID No	:	<b>CPL/SE/MAR-23/70</b>
Location of Sampling	:	<b>STACK - 3</b>
Date of Sampling	:	<b>24.03.2023</b>
Time of Sampling	:	<b>14:40 Hrs</b>
Duration of Sampling	:	<b>30 min</b>
Sample Received on	:	<b>24.03.2023</b>
Date of Test	:	<b>24.03.2023 - 25.03.2023</b>

<b>A. General Information About the Stack</b>		:		
1. Stack Connected to	:	Clinker Cooler		
2. Emission Due to	:	Limestone		
3. Material of Construction of Stack	:	Steel		
4. Shape of Stack	:	Circular		
5. Whether Stack is provide with Permanent Platform & Ladder	:	Yes		
6. Capacity	:	2000 TPD		
7. Running Load	:	2000 TPD		
<b>B. Physical Characteristics of Stack</b>		:		
1. Height of Stack from Ground Level	:	63 m		
2. Height of Sampling Port from Ground Level	:	45 m		
3. Diameter of Stack at sampling point	:	3.6 m		
<b>C. PARAMETERS ANALYSED</b>			<b>METHODS OF ANALYSIS</b>	<b>RESULTS OBTAINED</b>
1. Ambient Temperature (°C)	:	IS 11255 Part - 3, 1985 (RA 2018)		39
2. Temperature of Gas Emission (°C)	:	IS 11255 Part - 3, 1985 (RA 2018)		187
3. Barometric Pressure (mm Hg)	:	IS 11255 Part - 3, 1985 (RA 2018)		749
4. Velocity of Gas Emitted (m/sec)	:	IS 11255 Part - 3, 1985 (RA 2018)		8.89
5. Quantity of Gas Emitted (Nm <sup>3</sup> /hr)	:	IS 11255 Part - 3, 1985 (RA 2018)		2,07,388.12
6. Particulate Matter Concentration (mg/Nm <sup>3</sup> )	:	IS 11255 Part - 1, 1985 (RA 2019)		16
<b>D. Pollution Control Device Installed</b>		:	ESP	

*Dhe*  
Test Done By



*P. Sareni*  
Verified By

*S. 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.

## TEST REPORT FOR STACK EMISSION MONITORING

FORMAT NO: CPUMMS

REPORT NO: CPLIR/SE/APR-23/13N

SAMPLE DRAWN BY: CLEENVIRON PRIVATE LIMITED

REPORT ISSUE DATE: 10.04.2023

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telghana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Sampling Method : **IS 11255 (Part - 1): 1985, RA 2019**

Sample ID No	:	<b>CPL/SE/MAR-23/72</b>
Location of Sampling	:	<b>STACK - 4</b>
Date of Sampling	:	<b>24.03.2023</b>
Time of Sampling	:	<b>12:15 Hrs</b>
Duration of Sampling	:	<b>37 min</b>
Sample Received on	:	<b>24.03.2023</b>
Date of Test	:	<b>24.03.2023 - 25.03.2023</b>

<b>E. General Information About the Stack</b>	
8. Stack Connected to	: <b>DG SET - 1</b>
9. Emission Due to	: <b>Diesel</b>
10. Material of Construction of Stack	: <b>Steel</b>
11. Shape of Stack	: <b>Circular</b>
12. Whether Stack is provide with Permanent Platform & Ladder	: <b>No</b>
13. Capacity	: <b>170 KVA</b>
14. Running Load	: <b>Idle</b>

<b>F. Physical Characteristics of Stack</b>	
4. Height of Stack from Ground Level	: <b>4.5 m</b>
5. Height of Sampling Port from Ground Level	: <b>3.5 m</b>
6. Diameter of Stack at sampling point	: <b>0.15 m</b>

<b>G. PARAMETERS ANALYSED</b>		<b>METHODS OF ANALYSIS</b>	<b>RESULTS OBTAINED</b>
7. Ambient Temperature (°C)	IS 11255 Part - 3, 1985 (RA 2018)		38
8. Temperature of Gas Emission (°C)	IS 11255 Part - 3, 1985 (RA 2018)		88
9. Barometric Pressure (mm Hg)	IS 11255 Part - 3, 1985 (RA 2018)		749
10. Velocity of Gas Emitted (m/sec)	IS 11255 Part - 3, 1985 (RA 2018)		7.85
11. Quantity of Gas Emitted (Nm³/hr)	IS 11255 Part - 3, 1985 (RA 2018)		406.51
12. Particulate Matter Concentration (mg/Nm³)	IS 11255 Part - 1, 1985 (RA 2019)		06
13. Sulphur Dioxide (SO₂) Concentration (mg/Nm³)	IS 11255 Part - 2, 1985 (RA 2014)		32.34
14. Nitrogen Dioxide (NO₂) Concentration (mg/Nm³)	IS 11255 Part - 7, 2005 (RA 2017)		57.8
15. Carbon Monoxide (CO) Concentration (mg/Nm³)	Flue Gas Analyser		72.3
16. Carbon Dioxide (CO₂) in %	Flue Gas Analyser		10.8
<b>H. Pollution Control Device Installed</b>		<b>Not installed</b>	

Test Done By



Verified By

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 NABL Accredited Laboratory.



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/MS2

ULR - TC581623000000915F  
REPORT NO: CPL/R/N/APR -23/16

REPORT ISSUE DATE: 10.04.2023

MONITORING DONE BY CLEENVIIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
 Address of the Customer : **At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
 Instrument Used : **Sound Level Meter (LUTRON: SL 4001)**

Station No	N1	N2	N3
Sample ID	CPL/N/MAR-23/36	CPL/N/MAR-23/35	CPL/N/MAR-23/33
Date of Monitoring	20.03.2023 - 21.03.2023	18.03.2023 - 19.03.2023	13.03.2023 - 14.03.2023
Location of Monitoring	COLONY AREA	NEAR MAIN GATE	NEAR TG BUILDING

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
1.	N1	47.8	43.3	54.8	42.3
2.	N2	55.4	49.1	62.7	42.1
3.	N3	55.4	43.8	66.9	41.9

Station No	N4	N5
Sample ID	CPL/N/MAR-23/34	CPL/N/MAR-23/37
Date of Monitoring	17.03.2023 - 18.03.2023	21.03.2023 - 22.03.2023
Location of Monitoring	NEAR CLINKER BULK LOADING AREA	VILLAGE TELIGHANA

SL NO	STATION NO	L <sub>eq</sub> DAY TIME (6:00AM - 10:00PM) dB(A)	L <sub>eq</sub> NIGHT TIME (10:00PM - 6:00AM) dB(A)	L <sub>max</sub> dB(A)	L <sub>min</sub> dB(A)
3.	N4	61.3	43.8	72.9	41.9
4.	N5	48.8	43.9	52.7	42.7

*Finash*  
Test Done By



*Subhanga Prahara*  
Authorized Signatory  
Subhanga Prahara  
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	Silence Zone	50	40

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

Page 1 of 1

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



## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/FM/2

ILR - TC681623000000917F  
REPORT NO: CPLJR/NIAPR -23/18

REPORT ISSUE DATE: 10.04.2023

REMARKS: DONE BY CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : At: Telighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha  
Instrument Used : Sound Level Meter (LUTRON: SL 4001)

Station No	N1	N2	N3	N4
Sample ID	CPL/N/MAR-23/47	CPL/N/MAR-23/48	CPL/N/MAR-23/49	CPL/N/MAR-23/53
Date of Monitoring	22.03.2023	23.03.2023	24.03.2023	13.03.2023
Location of Monitoring	NEAR KILN AREA	NEAR RAW MILL	NEAR MATERIAL STOCK YARD	NEAR TG BUILDING

SLNO	STATION NO	$L_{eq}$ dB(A)	$L_{max}$ dB(A)	$L_{min}$ dB(A)
1.	N1	65.6	71.8	53.8
2.	N2	59.5	64.3	51.7
3.	N3	59.8	65.3	50.7
4.	N4	54.8	62.7	42.9

Station No	N5
Sample ID	CPL/N/MAR-23/46
Date of Monitoring	17.03.2023
Location of Monitoring	NEAR CLINKER BULK LOADING AREA

SLNO	STATION NO	$L_{eq}$ dB(A)	$L_{max}$ dB(A)	$L_{min}$ dB(A)
5	N5	54.8	62.7	43.3

Swati  
Test Done By



Authorized Signatory  
Subhanga Prasharaj  
Managing Director

PERMISSIBLE EXPOSURE IN CASE OF CONTINUOUS NOISE as per OSHA

NOISE LEVEL (dB(A))	PERMISSIBLE EXPOSURE (HOURS)
8	90
6	82
4	95
3	97
2	100
1.5	102
1	105
0.5	107
0	110
0	115

No Exposure in excess of 115 dB (A) is permitted

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

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# Cleenviron Private Limited

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## TEST REPORT FOR NOISE LEVEL MONITORING

FORMAT NO: CPL/1862

ULR - TC58162300000916F  
REPORT NO: CPL/R/M/APR-23/17

REPORT ISSUE DATE: 10.04.2023

MONITORING DONE BY: CLEENVIRON PRIVATE LIMITED

Name of the Customer : **M/s SHIVA CEMENT LIMITED**  
Address of the Customer : **At: Teighana, Po: Biringatoli, Via: Kutra, Dist: Sundargarh, Odisha**  
Instrument Used : **Sound Level Meter (LUTRON: SL 4001)**

Station No	:	<b>N1</b>	<b>N2</b>
Sample ID	:	<b>CPL/N/MAR-23/86</b>	<b>CPL/N/MAR-23/87</b>
Date of Monitoring	:	<b>29.03.2023</b>	<b>30.03.2023</b>
Location of Monitoring	:	<b>DG SET - 1</b>	<b>DG SET - 2</b>

Sl. No	STATION NO	$L_{eq}$ dB(A)	$L_{10}$ dB(A)	$L_{50}$ dB(A)
1.	N1	55.9	61.2	47.6
2.	N2	56.8	61.5	46.8

*Binash*  
Test Done By



*Subhanga Praharaj*  
Authorized Signatory  
Subhanga Praharaj  
Managing Director

PERMISSIBLE EXPOSURE IN CASE OF CONTINUOUS NOISE as per CSIA

PERMISSIBLE EXPOSURE IN CASE OF CONTINUOUS NOISE	PERMISSIBLE EXPOSURE IN CASE OF INTERMITTENT NOISE
0	90
1	92
2	95
3	97
4	100
5	102
6	105
7	107
8	110
9	115

No Exposure in excess of 115 dB (A) is permitted

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

Page 1 of 1

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**Annexure-1****Status of land acquisition for OLBC**

**LAND:** FOR PLANT & OLBC TOTAL LAND REQUIREMENT IS 107.95 ACRES (100.77 ACRES-PVT. LAND + 2.39 ACRES FOREST LAND + 4.79 ACRES GOVT. LAND)

<b>Activity</b>	<b>Present Status (as on 18-05-2023)</b>
Project approval by IPICOL	Completed
Recommendation to IDCO by IPICOL for land	Completed
Scrutiny of Land records by IDCO	Completed
NOC from 5 irrigation deptts & Geology deptt initiated by IDCO	Completed
Administrative approval from Industry Deptt, Steel & Mines Deptt. To start the land acquisition process	Obtained
Recommendation by IDCO, Steel & Mines Deptt. and District Administration to start the Land Acquisition process	Has been recommended to District Administration by IDCO
District Administration to start the Land Acquisition process as per land Acquisition Act.	Started
Posting of data in LARRMS	Completed
District Land acquisition deptt. shall scrutinize the land records and will proceed for 4 (1) notification.	Scrutiny of land records is under process. Post 4(1) notification process for preparation of Draft SIA study shall be started.

FORM No.31-A  
Health Record  
(Periodical Medical Examination)  
[Prescribed Under Rule 62-I]

Annexure-III

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	TRILOCHANA PADHI
3	Employee Distinguishing Number	
4	Age of the Employee:	57 YR
	Identification Mark	NA
	Nature of Job	ASO
5	Date of Employment	01-05-2018
6	Length Service in Year	4YR
7	General Survey	
	Health:	MEDIUM
	Height:	182CM
	Weight:	90.0 KG
8	Blood Group	B +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	YES
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	43 INCH
	EXPIRATION	42 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	100/MIN
	B.P	151/94mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
		NORMAL
15	Locomotory System:	
16	Skin Condition:	NO
	Remark on any Skin Diseases Noticed:	ABSENT
17	Hernias:	ABSENT
18	Hydrocele;	
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	yes
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disease if any	
21	Recommendation, if any further investigation	

Signature of Employee  
Date=

  
 Signature of Medical Officer  
**Ay. Medical Officer**  
 G.A.D., Khatkurbahal  
 Dist- Sundarn-



**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	RAJENDRA MILUAR
3	Employee Distinguishing Number	
4	Age of the Employee:	36 YR
	Identification Mark	NA
	Nature of Job	MAZDOOR
5	Date of Employment	01-05-2013
6	Length Service in Year	9 YR
7	General Survey	
	Health:	MEDIUM
	Height:	169 CM
	Weight:	77.9 KG
8	Blood Group	B +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	40 INCH
	EXPIRATION	39 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	69/ MIN
	B.P	127/78mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disede if any	NO
21	Recommendation, if any further investigation	

Rajendra miluar  
Signature of Employee  
Date=

  
Signature of Medical Officer  
Ay. Medical Officer  
G.A.D., Khatkurbahal  
Dist- Sundarga-h

**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	REENA EKKA
3	Employee Distinguishing Number	
4	Age of the Employee:	36 YR
	Identification Mark	NA
	Nature of Job	HOUSE KEEPER
5	Date of Employment	22-12-2020
6	Length Service in Year	2 YR
7	General Survey	
	Health:	MEDIUM
	Height:	156 CM
	Weight:	49.9 KG
8	Blood Group	"O" +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	34 INCH
	EXPIRATION	33 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	87/ MIN
	B.P	115/74mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotor System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseases Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese if any	
21	Recommendation,if any further investigation	

Reena Ekka  
Signature of Employee  
Date=

Signature of Medical Officer  
Ay. Medical Officer  
G.A.D., Khatkurbahal  
Dist- Sundargarh



**Health Record  
(Periodical Medical Examination)  
[Prescribed Under Rule 62-I]**

1	Name of the Factory:	
2	Name of the Employee:	SHIVA CEMENT LTD
3	Employee Distinguishing Number	RABIL NAG
4	Age of the Employee:	
	Identification Mark	38YR
	Nature of Job	NA
5	Date of Employment	WELDER
6	Length Service in Year	01-03-2017
7	General Survey	05YR
	Health:	
	Height:	MEDIUM
	Weight:	159CM
8	Blood Group	" " 57.9KG O <sup>+</sup> FVE
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	37 INCH
	EXPIRATION	30 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	90/MIN
	B.P	154/96mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseases Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO-YES
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disease if any	NO
21	Recommendation, if any further investigation	

Signature of Employee  
Date=

  
 Signature of Medical Officer  
**Ay. Medical Officer**  
**G.A.D., Khatkurbahal**  
**Dist- Sundargarh**

**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	
2	Name of the Employee:	SHIVA CEMENT LTD
3	Employee Distinguishing Number	FULMANI BARLA
4	Age of the Employee:	
	Identification Mark	36 YR
	Nature of Job	NA
5	Date of Employment	MAZDOOR
6	Length Service in Year	01-08-2019
7	General Survey	3 YR
	Health:	
	Height:	MEDIUM
	Weight:	143 CM
8	Blood Group	32.8 KG
9	Eye Vision:	"0" +ve
	Normal/Abnormal	
	Use of Glass:YES/NO	NORMAL
		NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	30 INCH
	EXPIRATION	29 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	85/MIN
	B.P	113/67mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese If any	NO
21	Recommendation,if any further investigation	

Signature of Employee  
Date=

  
Signature of Medical Officer  
**Ay. Medical Officer**  
**G.A.D., Khatkurbah-1**  
**Dist- Sundergarh**



**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	
2	Name of the Employee:	SHIVA CEMENT LTD
3	Employee Distinguishing Number	SUMESH KUMAR
4	Age of the Employee:	
	Identification Mark	27 YR
	Nature of Job	NA
5	Date of Employment	OPERATER
6	Length Service in Year	01-06-2017
7	General Survey	5 YR
	Health:	
	Height:	MEDIUM
	Weight:	162 CM
8	Blood Group	B <sup>+</sup> 59.6 KG
9	Eye Vision:	B <sup>+</sup> FVP
	Normal/Abnormal	
	Use of Glass: YES/NO	NORMAL
		NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	
	EXPIRATION	36 INCH
	RESPIRATION RATE/MIN.	35 INCH
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	85/ MIN
	B.P	129/77mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese if any	NO
21	Recommendation, If any further investigation	

Signature of Employee  
Date=

  
Signature of Medical Officer  
**G.A.D., Khatkurbahal**  
**Dist- Sundargarh**

**Health Record**  
(Periodical Medical Examination)  
[Prescribed Under Rule 62-I]

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	SUMANTA PRASAD BEHERA
3	Employee Distinguishing Number	
4	Age of the Employee:	31YR
	Identification Mark	NA
	Nature of Job	GARDENER
5	Date of Employment	01-02-2021
6	Length Service in Year	01YR
7	General Survey	
	Health:	MEDIUM
	Height:	162CM
	Weight:	69.2KG
8	Blood Group	"O" +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	38 INCH
	EXPIRATION	37 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	90/MIN
	B.P	112/85mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseases Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disease If any	NO
21	Recommendation, if any further investigation	

Signature of Employee  
Date=

  
 Signature of Medical Officer  
**Ay. Medical Officer**  
**G.A.D., Khatkurbahal**  
**Dist- Sundargarh**



**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	SATYANANDA DAS
3	Employee Distinguishing Number	
4	Age of the Employee:	51YR
	Identification Mark	NA
	Nature of Job	COOK
5	Date of Employment	26-05-2020
6	Length Service in Year	2 YR
7	General Survey	
	Health:	MEDIUM
	Height:	173 CM
	Weight:	94.8 KG
8	Blood Group	"A" +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	41 INCH
	EXPIRATION	40 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	75/ MIN
	B.P	155/82mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese If any	NO
21	Recommendation,if any further investigation	


Signature of Employee  
Date=

  
Signature of Medical Officer  
**G.A.D., Khatkurbehah**  
**Dist- Sundargarh**

**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	BIJAY KUMAR SAMADHIA
3	Employee Distinguishing Number	20411
4	Age of the Employee:	59YR
	Identification Mark	NA
	Nature of Job	HELPER
5	Date of Employment	01-07-2015
6	Length Service in Year	8YR
7	General Survey	
	Health:	
	Height:	MEDIUM
	Weight:	166CM
8	Blood Group	71.0KG
9	Eye Vision:	"AB" +ve
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	
	EXPIRATION	38 INCH
	RESPIRATION RATE/MIN.	37 INCH
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	
	B.P	106/MIN
	HEART SOUND	150/104mmHg
	REMARKS IF ANY	NORMAL
13	Abdomen Tenderness	
14	Nervous System	NORMAL
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseases Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO YES
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disease if any	NO
21	Recommendation,if any further investigation	

Bijay Ku Samadhia  
 Signature of Employee  
 Date=

  
 Signature of Medical Officer  
 Ay. Medical Officer  
 G.A.D., Khatkurbahal  
 Dist- Sundargarh



**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	
2	Name of the Employee:	SHIVA CEMENT LTD
3	Employee Distinguishing Number	SUBHA MAJHI
4	Age of the Employee:	20075
	Identification Mark	46 YR
	Nature of Job	NA
5	Date of Employment	MAZDOOR
6	Length Service in Year	04-09-2003
7	General Survey	19 YR
	Health:	
	Height:	MEDIUM
	Weight:	155 CM
8	Blood Group	"A" 65.3 KG A+ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	37 INCH
	EXPIRATION	36 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	91/MIN
	B.P	144/83mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotor System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseases Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA/yes
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disease if any	NO
21	Recommendation, if any further Investigation	


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 Signature of Employee  
 Date=

Signature of Medical Officer  
 Ay. Medical Officer,  
 G.A.D., Khatkurbahal  
 Dist- Sundargarh

**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	ASHOK KUMAR HAZRA
3	Employee Distinguishing Number	5097219
4	Age of the Employee:	44
	Identification Mark	NA
	Nature of Job	SECURITY
5	Date of Employment	15-10-2020
6	Length Service in Year	02YR
7	General Survey	
	Health:	MEDIUM
	Height:	171CM
	Weight:	72.2KG
8	Blood Group	A +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	YES
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	39C.M.
	EXPIRATION	35C.M.
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	86/MIN
	B.P	138/90mmHg
	HEART SOUND	NOMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese if any	NO
21	Recommendation,if any further investigation	

Signature of Employee  
Date=

  
Signature of Medical Officer  
**Ay. Medical Officer**  
**G.A.D., Khatkurbahal**  
**Dist- Sundargarh**



**FORM No.31-A**  
**Health Record**  
**(Periodical Medical Examination)**  
**[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	RAVI KUMAR PATIL
3	Employee Distinguishing Number	5096997
4	Age of the Employee:	38/YR
	Identification Mark	NA
	Nature of Job	DEPUTY MANAGER
5	Date of Employment	27-07-2019
6	Length Service in Year	2 YR
7	General Survey	
	Health:	MEDIUM
	Height:	163 CM
	Weight:	69.0 KG
8	Blood Group	A +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	NO
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	39 INCH
	EXPIRATION	38 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	91/ MIN
	B.P	118/78mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NA
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese if any	NO
21	Recommendation,if any further investigation	

Signature of Employee  
Date=

  
Signature of Medical Officer  
**G.A.D., Khatkurbahal**  
Dist- Sundargarh

**Health Record  
(Periodical Medical Examination)  
[Prescribed Under Rule 62-I]**

1	Name of the Factory:	SHIVA CEMENT LTD
2	Name of the Employee:	SUSHIL PANI
3	Employee Distinguishing Number	5095031
4	Age of the Employee:	47YR
	Identification Mark	NA
	Nature of Job	SENIOR MANAGER
5	Date of Employment	23-02-2008
6	Length Service in Year	13YR
7	General Survey	
	Health:	MEDIUM
	Height:	171CM
	Weight:	74.7 KG
8	Blood Group	B +ve
9	Eye Vision:	
	Normal/Abnormal	NORMAL
	Use of Glass: YES/NO	YES
10	Hearing:	
11	Respiratory System and Chest Measurement	
	INSPIRATION	37 INCH
	EXPIRATION	38 INCH
	RESPIRATION RATE/MIN.	
	REMARKS IF ANY	
12	Cardiovascular System	
	PULSE RATE	89/MIN
	B.P	126/76mmHg
	HEART SOUND	NORMAL
	REMARKS IF ANY	
13	Abdomen Tenderness	NORMAL
14	Nervous System	
	History of Fits:	NO
	Epilepsy:	NO
	Remark on Mental Health:	SOUND
15	Locomotory System:	NORMAL
16	Skin Condition:	
	Remark on any Skin Diseses Noticed:	NO
17	Hernias:	ABSENT
18	Hydrocele;	ABSENT
19	Present Complain any:	
20	Summary of Findings	
	Heart Disease	NO
	Hypertension	NO
	Diabetes	NO
	T.B	NO
	Epilepsy:	NO
	Poisoning	NO
	Others	NO
	Occupational Disese if any	NO
21	Recommendation, if any further investigation	

Signature of Employee

Date=

  
 Signature of Medical Officer  
**Ay. Medical Officer**  
**G.A.D., Khatkurbahal**  
**Dist- Sundargarh**



## Annexure-IV

### Action plan as per MoEF&CC O.M. dated 30/09/2020

#### A. Public hearing commitments and action plan and budget:

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
Issue of displacement will be there	As there are no houses/ settlement in the land proposed to be acquired, there will be no displacement of people	Physical Target Budget: Rs. Lakh	- -	- -	- -	- -
Company should discuss with the local inhabitants in Panchayat level for consensus.	Company had a meeting with Sarpanch, Kandeimunda in presence of ADM, Sundargarh and Tehasildar Kutra on 23-08-2021. The Sarpanch demanded to comply with their requirement in the areas of pollution control, local employment and peripheral development	Physical Target: Env. & Pollution Control: SCL will install high efficiency pollution control systems for control of air, water and noise pollution and will strictly comply with the pollution norms of SPCB and MoEF Budget: Included in EMP cost				-
		Physical Target: Local Employment – There is a potential for employment to approx. 500 people for the proposed expansion. Local will be preferred and employment will be given based on qualification and eligibility Budget: Rs. Lakh	-	-	-	-
		Physical target: Peripheral development will be undertaken by SCL in the following areas: - Livelihood - Education - Health & sanitation - Rural development Budget: Rs. Lakh				-
Regarding increase in level of pollution, Poisonous gas emission, respiratory illness, Cement Dust deposits over houses and in agricultural lands, Los of soil fertility and crop productivity, water and noise pollution etc.	<ul style="list-style-type: none"> <li>• Adequate control measures like installation of ESP, Bag filters, dust suppression system, fume extraction system, sprinklers &amp; stacks of adequate height at relevant places will be installed.</li> <li>• Air borne dust shall be controlled by mobile water tanker inside the plant premises.</li> <li>• Maintenance and performance monitoring of air pollution control equipment shall be done at regular intervals.</li> <li>• All roads shall be paved on which movement of raw materials or products will take place inside the plant premises.</li> <li>• No waste water will be discharged outside the plant area. The plant is designed as a zero-discharge plant. The entire wastewater will be recirculated and recycled.</li> </ul>	Physical Target: Budget:	The physical targets for the entire activities shall be achieved in 3 years Included in EMP cost.			-

Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
	<ul style="list-style-type: none"> <li>Domestic waste water will be treated in STP and the treated water will be used for plantation.</li> <li>The equipment shall comply with the Statutory limit of 85 dB(A) (at 1 m. from the source).</li> <li>Noise Reduction Systems will be provided.</li> <li>Thick greenbelt will be developed around the periphery</li> </ul>					
Regarding ground water depletion and water scarcity in the locality due to drawl of ground water by company.	The fresh water requirement of the plant after the expansion is 1792 m <sup>3</sup> /day. 688 m <sup>3</sup> /day water will be sourced from bore wells and additional 1104 m <sup>3</sup> /day of water will be sourced from the mine pit after laying of water pipeline.	Physical target:	Rooftop rainwater harvesting within plant premises. This includes roof tops of CCR, stores, admin, workshop, packing plant and residential buildings as well as groundwater recharge of surface runoff.	Construction of a) 2 check dams in village Telighana and Kandeimunda b) deepening/ renovation of 2 ponds in Kandeimunda and Kutra c) Construction of Roof top RWH structures in 5 govt offices and school buildings.		
		Budget: Rs 50 Lakh	Included in EMP cost	Rs. 50 Lakh		<b>Rs. 50 Lakh</b>
	Supply of drinking water during summer	Physical target:	Drinking water supply through tankers in 3 villages, i.e. Telighana, Kutra and Kandeimunda as per requirement. Water supply will be continued even after 3 years and will also be extended to other villages based on their needs.			
		Budget: Rs. 18 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	Rs. 6 Lakh	<b>Rs. 18 Lakh</b>
	Development of drinking water facility	Physical target:	Bore well construction and provision of solar pumps (2 nos each in village Telighana, Kutra and Kandeimunda)			
Budget: Rs. 30 Lakh		Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	<b>Rs. 30 Lakh</b>	
Utilization of mine pit water to conserve groundwater	Physical target:	Laying of water pipeline from Khatkurbahal mine to plant for carrying mine pit water				
	Budget:	Included in project cost			-	
Regarding construction of dedicated road from State Highway to plant	The existing road is the only road connecting our plant to SH-10. The company proposes for widening and concreting of this road	Physical target:	Widening and concreting of approx. 1.5 km road will be completed by July 2022			
		Budget: Rs. 650 Lakh	Rs. 650 Lakh	-		<b>Rs. 650 Lakh</b>
Regarding employment to local people	Top most priority will be given to the local people based on their academic qualification and eligibility. In addition, skill development (SD) for unemployed local youths through National Skill Development Corporation and Odisha Skill Development Authority. Construction	Physical target:	Construction of Skill Development Centre/ Vocational training centre building with 6 AC rooms near plant premises. Installation of 20 nos. of sewing machines, 10 nos. of computer systems, 10 nos. of machines for making hand craft items along with necessary raw materials, organizing 6 workshops annually for practical training, provision of qualified trainers, approved course contents, independent 3 <sup>rd</sup> party assessment, equipment, machinery and necessary consumables/ raw materials based on the need of the local people			



Concerns raised during PH	Physical activity & action plan	Particulars	Year of implementation			Total budget
			1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	
	of SD Centre with the necessary infrastructure	Budget:	Rs. 30 Lakh	Rs. 60 Lakh	Rs. 60 Lakh	<b>Rs. 150 Lakh</b>
Proper wages to Local labours,	Wages will be paid strictly as per statutory norms	Physical target:	-	-	-	
		Budget:	-	-	-	-
Regarding proper safety measures to be taken for workers to be deployed in company.	Company will strictly comply with all safety measures in accordance with State Factory Rules and other applicable health and safety rules.	Physical target:	All safety measures related to plant and machinery have been incorporated in plant design. Other measures such as provision of safe workplace, hand rails, toe guards, safe platforms, proper insulation, provision of sensors for equipment safety, required safety gadgets for workers, appointment of safety officers (in each shift), job safety analysis, regular safety training, ensuring good housekeeping in plant premises, regular health checkup of workers, provision of first aid and a health centre within the premises and implementation of Safety Management System in line with ISO 45001			
		Budget:	Included in project and EMP cost			-
Regarding peripheral development	Construction of hospital in the area	Physical target:	Construction of 20 bed hospital with doctors, paramedical staff, minor OT, Emergency, Pathology lab, gynecology and other required facilities near plant in village Telighana			
		Budget:	-	Rs. 150 Lakh	Rs. 150 Lakh	<b>Rs. 300 Lakh</b>
	Village infrastructure development	Physical target:	Construction of 400 Mtr CC road along with drainage (Backside of colony to Telighana village)	Construction of 800 Mtr CC road along with drainage (Road leading from plant backside to Telighana village)	Construction of 1 km CC road along with drainage (Road leading from plant gate to Kandeimunda a village)	
		Budget: Rs. 125 Lakh	Rs. 60 Lakh	Rs. 95 Lakh	Rs. 120 Lakh	<b>Rs. 275 Lakh</b>
	Sanitation (public toilets)	Physical target:	Construction of public toilets 5 nos each in village Telighana, Kandeimunda, Bringatoli and Kutra. Total 20 nos.			
		Budget: Rs. 15 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	<b>Rs. 15 Lakh</b>
	Development of building infrastructure, playground, class rooms, library facilities and providing computers in the Local schools	Physical target:	Construction of 4 extra rooms in govt school, village Telighana	Development of play ground in Kutra High School and providing sports kits to students	Computer labs and 2 nos of smart boards in village schools of Telighana and Kandeimunda	
		Budget: Rs. 32 Lakh	Rs. 12 Lakh	Rs. 10 Lakh	Rs. 10 Lakh	<b>Rs. 32 Lakh</b>
	Electrification through Solar LED Street lighting in villages	Physical target:	10 nos of solar street lights in Kutra village	10 nos of solar street lights in Telighana village	10 nos of solar street lights in Kandeimunda a village	
		Budget: Rs. Lakh	Rs. 7 Lakh	Rs. 7 Lakh	Rs. 7 Lakh	<b>Rs. 21 Lakh</b>
		<b>Total budget (A):</b>				<b>Rs. 1541 Lakh</b>

## B. Detailed action plan with physical targets for need based activities:

Need based activities	Particulars	Year of implementation		
		1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year
Supporting health, nutrition and sanitation	Physical target	Providing nutritious diet package to pregnant women and new mothers for their baby's physical and mental health, providing support for timely vaccination		
	Budget (Rs. 9 Lakh)	Rs. 3 Lakh	Rs. 3 Lakh	Rs. 3 Lakh
	Physical target	Arranging 2 health camps in a year for elderly persons. One camp for eye check-up and free cataract surgery whereas another camp for general health check-up including blood, urine and other tests.		
	Budget (Rs.15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh
	Physical target	Distribution of sanitary napkins to girls and women.		
	Budget (Rs. 3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
Renovation and augmentation of infrastructure	Physical target	Repairing of existing tube wells	Hand pump Installation – 2 nos	Hand pump Installation – 2 nos
	Budget (Rs.3 Lakh)	Rs. 1 lakh	Rs. 1 lakh	Rs. 1 lakh
	Physical target	Repair & maint, of 1 km road in the village	Repair & maint, of 1 km road in the village	Repair & maint, of 1 km road in the village
	Budget (Rs. 30 Lakh)	Rs. 10 Lakh	Rs. 10 Lakh	Rs. 10 Lakh
	Physical target	Supply of furniture and 2 computers in 2 village schools	Supply of medicines in CHC, Kutra	
Budget (Rs.15 Lakh)	Rs 5 Lakh	Rs 5 Lakh	Rs 5 Lakh	
Support children in education and sports	Physical target	Distribution of school bags, books, bicycles, stationery items to 50 students	Sponsoring 30 candidates for ITI training (fee & other educational expenses)	Providing sports kits to children (25 nos) and supporting them to participate in various sports tournaments etc.
	Budget (Rs. 17 Lakh)	Rs 2 Lakh	Rs 10 Lakh	Rs 5 Lakh
	Physical target	Scholarships to 10 meritorious students every year		
	Budget (Rs. 6 Lakh)	Rs 2 Lakh	Rs 2 Lakh	Rs 2 Lakh
Facilitate carrier-oriented programs to make youth eligible for various job opportunities	Physical target	Vocational training for self-employment in the field of auto mechanic, electrician, drill operator, loader operator, Maintenance Crew, excavator operator, HEMM Mechanic etc.		
	Budget (Rs. Lakh)	Covered in Public Hearing related issues		
	Physical target	Financial assistance to 10 students from PAFs towards coaching for competitive examinations		
Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	
Sustainable livelihood	Physical target	Organizing driving and vehicle maintenance workshops for PAFs (2 sessions in a year)		
	Budget (Rs.6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs through experts in the field of agriculture & livestock through workshop (2 sessions in a year)		
	Budget (Rs. 6 Lakh)	Rs. 2 Lakh	Rs. 2 Lakh	Rs. 2 Lakh
	Physical target	Training to PAFs for papad making, sanitary napkin making, sewing training through workshop by area expert (4 sessions in a year)		
Budget (Rs. 15 Lakh)	Rs. 5 Lakh	Rs. 5 Lakh	Rs. 5 Lakh	
		<b>Total budget (B) Rs. 140 Lakh</b>		
		<b>Total (A) + (B) = 1681 Lakhs</b>		

\*\*\*\*\*



## Annexure-V

### Environment Management Cost Expenditure (October-22 to March-23)

Sl. No	Particulars	Expenditure in lacs
1	Air Pollution Control Equipment (ESP, Bag filter)	1849.57
2	Continuous Ambient Air Quality Monitoring Equipment	286.49
3	Continuous Emission Quality Monitoring Equipment	28.29
4	Server Connectivity Cost	5.85
5	Electronic display board	3.75
6	Road Sweeping Machine	57.00
7	Air Pollution Control (Construction of Concrete road & drainage system inside the plant)	1125.00
8	Air Pollution Control (Construction of Concrete road outside the plant)	350.00
9	Water Tanker for dust suppression	7.82
10	Environmental Monitoring	5.63
11	Housekeeping of Plant	60.44
12	Horticulture Expenses	3.5
13	World Environment Day Celebration	0.89
<b>Total</b>		<b>3784.23</b>

CSR Report of Shiva Cement Ltd.						
S. No.	Activities	Budget	YTD	Committ ed	Achievements	Remarks
	Targeted	(Rs. Lakh)	Spend	Expendit ure	(From Oct'22 to Mar'23 01- March to 15- March 2023)	
			(Rs.Lakh)	(Rs. Lakh)		
<b>Plant</b>						
<b>A</b>	<b>EDUCATION</b>	<b>20.00</b>	<b>20.00</b>	<b>0.00</b>		
A.1	Infrastructure development in Schools	10.00	10.00	0.00	200 beds were provided to Girls students of Sarbati Women's College and 100 beds to the Gomardhi girls' Hostel. Inauguration program organized with block & District administration.	Activity completed
A.2	Observing special days	5.00	5.00	0.00	Organized Block level and 6 school-level Science, math, and Environment exhibitions to enhance students' knowledge and skills. 570 new project models were developed by the students.	
A.3	Study Material Kit to student	5.00	5.00	0.00	Distributed study kits in 5 schools covering 489 students.	Activity completed
<b>B</b>	<b>HEALTHCARE</b>	<b>23.00</b>	<b>23.00</b>	<b>0.00</b>		
B.1	Infrastructure development at Hospital	10.00	10.00	-	Support to Kutra CHC for advanced laboratory lab out, side shade & patient toilet.	Activity completed
B.2	Anti malarial Fogging in DIZ Villages	3.00	3.00	-		Activity completed
B.3	Mobile Health Camps/Blood Donation Camps	10.00	10.00	-	Health awareness camps organized in 4 DIZ Village. Around 1023 villagers took the benefit of health check-ups and free medicine from the event. Organized world heart day, 70 elderly people participated in free health checks, BP, and blood sugar tests.	Activity completed
<b>C</b>	<b>LIVELIHOOD</b>	<b>23.00</b>	<b>23.00</b>	<b>0.00</b>		
C.1	Providing training on tailoring	6.00	6.00	-	6 new girls enrolled in embroidery training were provided to 15 new girls.	Activity completed
C.2	Pond cleaning and Fish farming	7.00	7.00	-	Fish farming with 12 farmers of DIZ village.	Activity completed

C.3	Training, Capacity building and Handholding support to the farmers	6.00	6.00		70 farmers ensured vegetable farming through Drip irrigation	Activity completed
C.4	Mushroom cultivation/Leaf Plate making unit	4.00	4.00		4 SHG members are continuing - Mushroom cultivation.	Activity completed
<b>D</b>	<b>RURAL DEVELOPMENT</b>	<b>87.00</b>	<b>87.00</b>	<b>0.00</b>		
D.2	Construction of Rural roads & Drainages	10.00	10.00		-	Activity completed
D.3	Construction of Community Hall	27.00	27.00		- One community hall with a kitchen constructed at Bringatoli village.	Activity completed
D.4	Solar water supply	30.00	30.00		- 05 numbers of tube wells and 5 solar water supplies have been installed in 5 villages, plants, and mines. This project provides benefits to more than 3000 people in the respective village.	Activity completed
D.5	Solar street lights	20.00	20.00		- Installed 140 nos. of solar street lights in 25 villages of 6 Gram Panchayats covering plants, mines, and railway sliding locations. 3000 people can access the road at night.	Activity completed
<b>E</b>	<b>SPORTS PROMOTION</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>		
E.1	Provide sports equipment to rural youth	4.00	4.00	0.00	Block-level 15 football championships are organized at High School, Kutra to encourage local young people to showcase their inherent talent. More than 1400 students and youths participated and showed their talent.	Activity completed

					Organized panchayat level Junior and senior Hockey & football trunaments. Support was provided for 25 school annual sports to increase confidence, mental alertness, and self-esteem. Around 7500 students participated and 2000 students were rewarded for their contribution to sports.	Activity completed
E.2	Conduct inter District/ village sports competitions	6.00	6.00	0.00		
<b>F</b>	<b>OVERHEADS</b>	<b>3.00</b>	<b>3.00</b>	<b>0.00</b>		
	<b>TOTAL</b>	<b>166.00</b>	<b>166.00</b>	<b>0.00</b>		



**SHIVA CEMENT LIMITED  
(SCL)**

**CORPORATE ENVIRONMENT POLICY**

## DOCUMENT CONTROL

### Document version:

This Corporate Environment Policy (Policy) document is version 1.0

### Preparation/Revision History

SR. No.	Date of preparation / modification	Version No.	Modified by	Reviewed by	Approved by
1	23-09-2020	1.0	Company Secretary	Executive Director	Board of Directors

### Issuing Authority

This policy is approved by the Board of the Company

### Author and Responsible Official

This policy is to be maintained and updated by way of additions, deletions and modifications only by the Company Secretary after approval of the Board of Directors. Every time the policy document is edited, the version increases by one unit and the version is to be mentioned on every page.

### Applicability and Usage

This policy applies to **Shiva Cement Limited**. The Executive Director of the organization shall be authorised by Board to ensure the proper use of this document.



## PREFACE

- The company, Shiva Cement Ltd. recognises its joint responsibility with the Government and the Public to protect environment and is committed to regulate all its activities so as to follow best practicable means for minimising adverse environmental impact arising out of its operations.
- The company is committed in making its products environmentally acceptable, on a scientifically established basis, while fulfilling consumers' requirements for excellent quality, performance and safety.
- The aim of the Policy is to do all that is reasonably practicable to prevent or minimise, encompassing all available knowledge, technology and information, the risk of an adverse environmental impact arising from manufacturing and supply of our products.
- This Policy document reflects the continuing commitment of the Board for sound Environment Management of its operations. The Policy is applicable to all company operations covering manufacturing, mining, sales & distribution and other offices. This document defines the aims and scope of the Policy as well as responsibilities for the achievement of the objectives laid down.

## The Vision

Our vision is to continue to be an environmentally responsible organisation making continuous improvements in the management of the environmental impact of our operations.

We will achieve this through an Integrated Environment Management approach which focuses on Technology & Best Practices and is supported by Management Commitment as the prime driver.

## Environment Policy

Shiva Cement Ltd. (SCL) is committed to meeting the needs of customers and other stakeholders at large in an environmentally sound manner, through continuous improvement in environmental performance in all its activities. Management at all levels, jointly with employees, are responsible and will be held accountable for company's environmental performance.

Accordingly, SCL aims to:

- Compliance to all the applicable rules, regulations, permits and authorizations.
- Protect the environment and prevent pollution through implementing Best Available technologies and practices
- Ensure safety of its products and operations for the environment by using standards of environmental safety, which are scientifically sustainable and commonly acceptable.
- Develop, introduce and maintain environmental management systems across the company to meet the company standards as well as statutory requirements relating to environment and verify compliance with these standards through regular auditing.

- Assess environmental impact of all its activities and set continual improvement objectives and targets and review these periodically to ensure that these are being met at the individual unit and corporate level.
- Reduce waste, conserve energy and explore opportunities for reuse and recycle.
- Maximise utilization of industrial waste as alternative raw materials and fuels to conserve natural resources
- Encourage efficient use of natural resources including energy, water and utilities, fuels, raw materials and food.
- Promote use of renewable energy
- Adopt rainwater harvesting in and around the facilities
- Integrate the consideration of environmental concerns and impacts at the design, planning and operational stages of our activities.
- Develop and maintain procedures/ processes to bring into focus any infringement/ deviation/ violation of the environmental or forest norms/ conditions to the Board of Directors and stakeholders at large
- Involve all employees in the implementation of this Policy and provide appropriate training. Dissemination of information to employees on environmental objectives and performance through suitable communication networks
- Encourage suppliers & service providers to develop and employ environmentally superior processes and co-operate with other members of the supply chain to improve overall environmental performance.
- Work in partnership with external bodies and Government agencies to promote environmental care, increase understanding of environmental issues and disseminate good practices.

### CORPORATE RESPONSIBILITIES

The Executive Director of the Company is responsible for the Compliance of the Policy. The Executive Director may constitute a Committee called as Corporate Environment Committee (hereinafter called as Committee). The Committee is committed to conduct the company operations in an environmentally sound manner. The Committee will:

- Set standards and establish environmental improvement objectives and targets for SCL as a whole and for individual units, and ensure these are included in the annual operating plans.
- Formally review environment performance of the company once every quarter.
- Review environment performance when visiting units and recognise exemplary performance.
- Nominate a unit head or senior employee as coordinator for compliance of environmental performance at the site





The Committee, through the nominated coordinator will:

- Ensure implementation of Policy on environment and compliance with the Company's environmental standards and the standards stipulated under relevant national / local legislation. Where appropriate, apply more stringent criteria than those required by law.
- Assess environmental impact of SCL operations and establish strategies for sound environment management and key implementation steps.
- Encourage development of cleaner manufacturing processes to further raise the standards of environment performance.
- Establish appropriate management systems for environment management and ensure regular auditing to verify compliance.
- Establish systems for appropriate training in implementation of Environment Management Systems at work
- Ensure that all employees are made aware of individual and collective responsibilities towards environment.
- Arrange for expert advice on all aspects of environment management.
- Participate, wherever possible, with appropriate industry and Government bodies advising on environmental legislation and interact with national and local authorities concerned with protection of environment.

### INDIVIDUAL UNIT'S RESPONSIBILITIES

The overall responsibility for environment management at each unit will rest with the unit head or senior employee, who will ensure implementation of Policy on environment at unit level and report to Executive Director or Committee as the case may be. Concerned line managers / heads of departments are responsible for environmental performance at department levels

In order to fulfil the requirements of the Policy at each site, the Unit Head will:

- Designate a unit environment coordinator who will be responsible for co-ordinating environmental activities at unit, collating environmental data and providing / arranging for expert advice
- Specific environmental improvement objectives and targets for the unit and ensure that these are incorporated in the annual objectives of the concerned managers and officers and are reviewed periodically.
- Ensure that the unit complies with SCL's environmental standards and the relevant national and state regulations with respect to environment.
- Ensure formal environmental risk assessment to identify associated environmental aspects and take appropriate steps to control risks at acceptable levels.

- Ensure that all new operations are subjected to a systematic and formal analysis to assess environmental impact. Findings of such exercises should be implemented prior to commencement of the activity.
- Manage change in people, technology and processes through a planned approach based on training, risk assessment, pre-commissioning audits and adherence to design norms.
- Regularly review environment performance of the unit against set objectives and targets and strive for continual improvement.
- Sustain a high degree of environmental awareness through regular promotional campaigns and employee participation through training, safety committees, emergency drills etc.
- Ensure dissemination of relevant information on environment within the unit and to outside bodies, and regularly interact with Government authorities concerned for protection of environment.
- Maintain appropriate emergency procedures consistent with available technologies to prevent / control environmental incidents.
- Provide appropriate training to all employees.
- Ensure periodic audits to verify compliance with environment management systems.
- Also ensure periodic 3<sup>rd</sup> party environment audits to check efficacy of the Environment Management Systems.
- Report environmental performance to committee on a monthly basis.

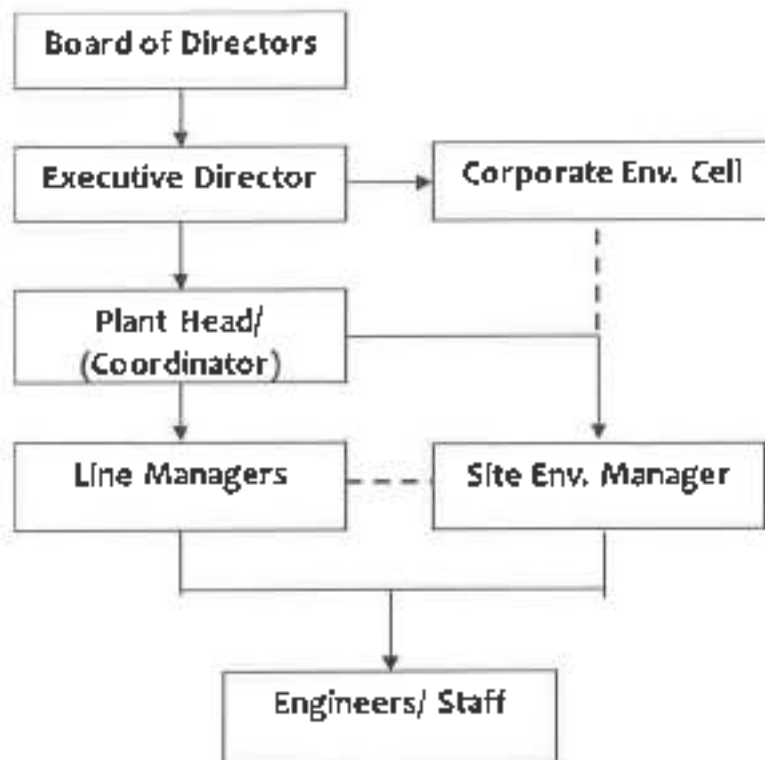
### **Procedure for reporting of Environmental non-compliance or violations**

1. Environmental Nonconforming / noncomplying situation may arise due to:
  - (a) Deviation from key characteristics of operations or other activities significantly affecting the environment.
  - (b) Non-fulfillment of the Legislation and/or Regulatory or Company's requirements.
  - (c) Non-fulfillment of/deviation from the documented requirements
2. Any Environmental Nonconformity (NC) in the plant premises detected is to be reported to Env. Cell. Env. Cell shall subsequently investigate the root cause & take appropriate corrective & preventive actions consistent with the nature of the NC.
3. Daily review meetings are conducted by the Unit Head and reported to the CEO and Wholetime Director. In case any non-compliance or violation of environmental parameters/norms/regulations etc., is observed or reported, the same is brought to the notice of the Unit Head (during the daily review meeting). In case the non-compliance or violation is of manageable nature, Unit Head issues instructions and sanctions appropriate budget and resources to rectify the same. If the problem is of higher magnitude, Unit head seeks financial approval from the CEO & Wholetime Director. All the instances of non-compliance and violations are brought to the notice

of the CEO & Wholetime Director and action taken report submitted on regular basis. The CEO is appraised regularly till the problem is resolved.

4. All non-compliances/ violations are subject to root cause analysis and accordingly a corrective action plan is prepared and implemented within the agreed time frame. Till the time a permanent solution / corrective action is implemented, the task is carried out under constant supervision.

The hierarchical system of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions is given below:







**BHUBANESWAR, TUESDAY, MARCH 29, 2022**

**THE PIONEER**

**PUBLIC INFORMATION**

This is to inform the public that M/s Shiva Cement Limited has been accorded Environment Clearance (EC) by the Ministry of Environment Forest & Climate Change (MoEF& CC), New Delhi vide letter No. J-11011/84/2008- IA II (I), dated 23-03-2022 in accordance with S.O.1533 (E) dated 14th Sept, 2006 of Govt for Expansion of cement plant with increase of clinker production from 0.165 MTPA to 3.0 MTPA and Cement production from 0.252 MTPA to 2.0 MTPA (OPC/PPC/PSC/COMPOSITE CEMENT/GGBS) along with installation of 12 MW WHRS at village- Teleghana, PO- Biringatoli, Tehasil Kutra, District Sundergarh, Odisha by Shiva Cement Limited. Copy of the Environment Clearance (EC) letter is available with the State Pollution Control Board, Odisha and website of the Ministry of Environment, Forests & Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)) and also on the website of M/s Shiva Cement Limited ([www.shivacement.com](http://www.shivacement.com))

**TUESDAY, MARCH 29, 2022**

**PRAMEYA**

**ପ୍ରବନ୍ଧଧାରଣ ବିଜ୍ଞପ୍ତି**

ଏହା ଦ୍ଵାରା ସମସ୍ତ ଜନସାଧାରଣଙ୍କୁ ଜଣାଇ ଦିଆଯାଇଛି ଯେ ଉତ୍ତର ଉତ୍ତରାଖଣ୍ଡ ପରିଷଦ, ବନ ଏବଂ ଜଳବାୟୁ ପରିଚାଳନା ବିଭାଗ, ନୂଆଦିଲ୍ଲୀରୁ ତାରିଖ ନଂ J-11011/84/2008-IA-II (I) ତାରିଖ ୨୩.୦୩.୨୦୨୨ ଏବଂ S.O.1533 (E) dated 14th Sept, 2006 ଉତ୍ତର ଉତ୍ତରାଖଣ୍ଡ, ଅନୁଯାୟୀ ଶିବା ସିମେଣ୍ଟ ଲିମିଟେଡ୍ କାରଖାନା -ଉତ୍ତରାଖଣ୍ଡ ଦୁଇ ବର୍ଦ୍ଧିତ କ୍ଷମତା : 0.165 ମିଲିଅନ ଟନରୁ ବୃଦ୍ଧି ହେବ 3.00 ମିଲିଅନ ଟନରୁ ବୃଦ୍ଧି ହେବ : 0.252 ମିଲିଅନ ଟନରୁ ବୃଦ୍ଧି ହେବ 2.00 ମିଲିଅନ ଟନ (OPC/PPC/PSC/COMPOSITE CEMENT/ GGBS) ଏହା ସହିତ ବ୍ୟସ୍ତାନ 12 MW ବର୍ଦ୍ଧନକୁ ଉପର ଶକ୍ତି ଘର ଗ୍ରାମ- ଟେଲିହାନା, ଚନ୍ଦ୍ରପୁର ଜିଲ୍ଲା, ଉତ୍ତରାଖଣ୍ଡର ଶିବା ସିମେଣ୍ଟ ଲିମିଟେଡ୍ କୁ ଉତ୍ତରାଖଣ୍ଡ ଦୁଇ ବର୍ଦ୍ଧିତ କ୍ଷମତା ପ୍ରଦାନ କରାଯାଇଛି ।

ଉପରୋକ୍ତ ପତ୍ର ଉ ନକଲ ତାଙ୍କ ପୁସ୍ତକ ବୋର୍ଡ, ଡିପ୍ଟିଂ ହାଉସ ଓ ପରିଷଦ, ବନ ଏବଂ ଜଳବାୟୁ ପରିଚାଳନା ବିଭାଗର [website \(www.parivesh.nic.in\)](http://www.parivesh.nic.in) ଓ ଶିବା ସିମେଣ୍ଟ ଲିମିଟେଡ୍ [website \(www.shivacement.com\)](http://www.shivacement.com) ଉପରେ ଅଛି ।



CIN: L26942OR1985PLC001557

012  
= Annexure-VIII

# SHIVA CEMENT LIMITED

AT : TELIGHANA  
P.O. : BIRINGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018  
Dt: 25.03.2022

Shiva/SCL-Plant/EC/2022

To,  
The District Collector  
Office of collector cum District Magistrate,  
Collectorate, Sundergarh  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001

Subject: Environment Clearance of expansion of cement plant with increase of clinker production from 0.252 MTPA to 3.0 MTPA Cement from 0,252 MTPA to 2.0 MTPA (OPC/PPC/PSC/COMPOSITE CEMENT/GGBS) along with installation of 12 MW WHRS at villages- Teleghana. PO- Biringatoli, Tehasil Kutra, District Sundergarh Odisha by M/s. Shiva Cement Ltd. - Submission of copy of Environment Clearance reg.

Ref: Environment clearance issued by MOEF& CC, New Delhi vide letter No. File No. - J-11011/84/2008- IA II (I) Date of Issue EC - 23/03/2022.

Dear Sir,

With reference to the aforesaid subject, we would like to inform you that the Environment Clearance for the above cited project has been issued by MOEF & CC, New Delhi vide letter No. File No. - J-11011/84/2008- IA II (I) Date of Issue EC - 23/03/2022.

We are hereby submitting herewith a copy of the same for your reference and record.


Please acknowledge the receipt of the document.

1. Copy of Environment Clearance letter issued by MOEF & CC

Thanking you,

Yours faithfully,

For Shiva Cement Ltd.

  
Anil Mishra  
(Authorized Signatory)

Encl.: As above

  
E-mail - id : corporate@shivacement.com, Phone : (Off) 0661 - 2664168  
Website : www.shivacement.com

Contd...P/

**SHIVA**

CIN: L26942OR198SPLC001557

# SHIVA CEMENT LIMITED

AT : TEUGHANA  
P.O. : BIRANGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018

Copy to:

:: 2 ::

- 1) The office of the Divisional Forest Officer  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 2) The General Manager  
District Industries Centre  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 3) The Tehsilkar  
Tehsil- Kutra,  
Dist- Sundergarh, Odisha  
Pin-770018





CIN: L26942OR1985PLC001557

# SHIVA CEMENT LIMITED

AT : TELGHANA  
P.O. : BIRNGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018  
Dt: 25.03.2022

Shiva/SCL-Plant/EC/2022

To,  
The District Collector  
Office of collector cum District Magistrate,  
Collectorate, Sundergarh  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001

Subject: Environment Clearance of expansion of cement plant with increase of clinker production from 0.252 MTPA to 3.0 MTPA Cement from 0,252 MTPA to 2.0 MTPA (OPC/PPC/PSC/COMPOSITE CEMENT/GGBS) with installation of 12 MW WHRS at villages- Teleghana. PO- Biringatoli, Tehasil Kutra, District Sundergarh Odisha by M/s. Shiva Cement Ltd. - Submission of copy of Environment Clearance reg.

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1. Copy of Environment Clearance letter issued by MOEF & CC

Thanking you,

Yours faithfully,  
For Shiva Cement Ltd.

Anil Mishra  
(Authorized Signatory)

Encl.: As above

E-mail - id : corporate@shivacement.com, Phone : (Off) 0661 - 2664168  
Website : www.shivacement.com

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Received  
30.3.22





**SHIVA**

CIN: L26942OR1985PLC001557

# SHIVA CEMENT LIMITED

AT : TELIGHANA  
P.O. : BIRINGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018

:: 2 ::

Copy to:

- 1) The office of the Divisional Forest Officer  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 2) The General Manager  
District Industries Centre  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 3) The Tehesildar  
Tehsil- Kutra,  
Dist- Sundergarh, Odisha  
Pin-770018



CIN: L26942OR19B5PLC001557

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2

# SHIVA CEMENT LIMITED

AT : TELIGHANA  
P.O. : BIRINGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018  
Dt: 25.03.2022

Shiva/SCL-Plant/EC/2022

To,  
The District Collector  
Office of collector cum District Magistrate,  
Collectorate, Sundergarh  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001

**Subject:** Environment Clearance of expansion of cement plant with increase of clinker production from 0.165 MTPA to 3.0 MTPA Cement from 0,252 MTPA to 2.0 MTPA (OPC/PPC/PSC/COMPOSITE CEMENT/GGBS) along with installation of 12 MW WHRS at villages- Teleghana. PO- Biringatoli, Tehasil Kutra, District Sundergarh, Odisha by M/s. Shiva Cement Ltd - **Submission of copy of Environment Clearance reg.**

**Ref:** Environment clearance Issued by MOEF& CC, New Delhi vide letter No. File No. - J-11011/84/2008- IA II (I) Date of Issue EC - 23/03/2022.

Dear Sir,

With reference to the aforesaid subject, we would like to inform you that the Environment Clearance for the above cited project has been issued by MOEF & CC, New Delhi vide letter No. File No. - J-11011/84/2008- IA II (I) Date of Issue EC - 23/03/2022.

We are hereby submitting herewith a copy of the same for your reference and record.

Please acknowledge the receipt of the document.

1. Copy of Environment Clearance letter issued by MOEF & CC

Thanking you,

Yours faithfully,  
For Shiva Cement Ltd.

Anil Mishra  
(Authorized Signatory)

Encl.: As above



\* E-mail - id : corporate@shivacement.com, Phone : (Off) 0661 - 2664168  
Website : www.shivacement.com

Contd....P/2

Received  
05.04.2022

**SHIVA**

CIN: L26942OR1985PLC001557

# SHIVA CEMENT LIMITED

AT : TELGHANA  
P.O. : BIRINGATOLI  
TEHSIL : KUTRA  
DIST. : SUNDARGARH  
ODISHA, INDIA,  
PIN-770018

:: 2 ::

Copy to:

- 1) The office of the Divisional Forest Officer  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 2) The General Manager  
District Industries Centre  
At/Po- Sundergarh  
Dist-Sundergarh, Odisha  
Pin-770001
- 3) The Tehesildar  
Tehesil- Kutra,  
Dist- Sundergarh, Odisha  
Pin-770018