



CIN L26942OR1985PLC001557

SHIVA CEMENT LIMITED

PLOT NO YY-5,
CIVIL TOWNSHIP
7&8 AREA, ROURKELA
ODISHA, INDIA. PIN - 769004.

SCL/6000-08

20.11.2020

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

Sub : Half yearly Compliance report of M/s Shiva Cement Limited for the period April-20- Sep-2020.

Ref: 1) Environmental Clearance No: F.NO. J-11011/84/2008-IA II(I), Dt: 23.05.2011

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 April-20 - September-20 for your kind reference. The Said Period compliance is also being E-mailed on 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.

Thanking you,
Yours Faithfully,

For SHIVA CEMENT LIMITED



(ANIL MISHRA)

UNIT HEAD

Encl: As above

- 1) HY Compliance report with Supportive Annexures
- 2) Environment Monitoring data for the period April-2020 to September-2020

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, Sundargarh-769002

Phone : (Off). 0661 - 2664168.

• Works : Village : Telegana, P.O. : Biringatoll, Kutra, Dist. - Sundargarh, Odisha - 770018

E-mail-id : corporate@shivacement.com

M/s SHIVA CEMENT LIMITED

AT. TELIGHANA, P.O. BIRINGATOLI, VIA. KUTRA, DIST. SUNDARGARH (ODISHA)

COMPLIANCE STATUS OF ENVIRONMENT CLEARANCE LETTER NO.J-11011/84/2008-IA-II (I) dated: May 23, 2011

Half Yearly Compliance for the period from April 2020 to Sep 2020

A	SPECIFIC CONDITIONS	COMPLIANCE STATUS
(i)	Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, particulate emissions shall be controlled within 50 mg/Nm ³ by installing adequate air pollution control system. Electrostatic precipitators to clinker cooler, bag house to raw mill/Kiln and bag filters to coal mill and cement mill	Continuous stack monitoring facilities were installed in the existing kiln, cement mill & coal mill stacks. Expansion project is not taken up till date and will be complied in the expansion project also.
(ii)	Possibilities shall be explored for the proper and full utilization of gases generated from the kiln in waste heat recovery boiler (WHRB) and a feasibility report should be prepared and submitted to the Ministry and its Regional Office at Bhubaneswar within 3 months from the date of issue of the letter	Expansion project has yet not taken up.
(iii)	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 should be followed.	Complying with the National Ambient Air Quality Standards issued by the Ministry in the present plant and will be complied in the expansion project also.
(iv)	Secondary fugitive emissions should be controlled and maintained within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard should be followed.	Fugitive emissions from all the sources will be maintained below the prescribed norms. Guidelines/code of practice issued by the CPCB will be followed. Same will be complied in the expansion project also.
(v)	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash shall be transported in the closed containers only and should not be overloaded. The company should have separate truck parking area. Vehicular emissions should be regularly monitored.	Wherever feasible transportation of raw materials will be done through conveyors/rail/road network. Raw materials have been transported with tarpaulin cover & fly ash has been transported in closed containers. We will have separate truck parking area and vehicular emissions will be monitored regularly.
(vi)	Total water requirement should not exceed 700 m ³ /day. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.	Currently, water consumption of plant is approx. 100 m ³ /day and necessary provision has been made in the project for the use of treated wastewater in the green belt development. However there is no waste water discharge now and in future also from the process.

(vii)	Efforts shall be made to make use of rain water harvested, if needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	In the present plant rain water harvesting structure has been made and will be suitably expanded during expansion project.
(viii)	Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, SPCB and CPCB.	There is no waste water generation during the cement manufacturing process. However, water / wastewater sample analysis is being carried out by third party and the reports were submitted to SPCB/CPCB/MoEF&CC on regular basis.
(ix)	All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries should be sold to authorized re-cyclers / re-processors only.	Being complied. All Bag filter dust is automatically recycled in the system and the same will be followed after expansion. Spent oil & batteries are being sold to authorized third party recyclers.
(x)	Efforts shall be made to use low-grade lime, more fly ash and solid waste in the cement manufacturing.	Being complied in the present plant and the same will be practiced for future expansion project also. Slag cement and PPC will be produced.
(xi)	An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision should be made accordingly.	Will be utilized after commissioning of expansion project.
(xii)	As proposed, green belt should be developed in at least 33 % area in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	Green belt is already developed in 11 acres so far utilized i.e. 40 acres and further Green belt development will be taken by us as per stipulated condition once expansion is over.
(xiii)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants should be implemented.	Complied.
(xiv)	All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 5th October, 2010 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar.	All the commitments made during Public Hearing shall be implemented and a separate budget will be allocated once expansion project activities were started.
(xv)	At least 5% of the total cost of the project shall be earmarked towards the enterprise social commitment based on Public Hearing & social responsibility and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program should be ensured accordingly in a time bound manner.	Rs. 20 Crores shall be earmarked towards enterprise social commitment and item-wise details alongwith time bound action plan shall be submitted to Ministry's Regional office, Bhubaneswar.

(xvi)	The company shall provide housing for construction labour within the site with all necessary and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Noted and will be complied wherever feasible during expansion project.
(xvii)	The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental law and regulations.	Noted and shall be complied once the expansion project activities were started.
B.	GENERAL CONDITIONS	COMPLIANCE
(i)	The project authority shall adhere to the stipulations made by Orissa Environment Conservation Board (OECB) and State Government.	We shall be strictly adhere to the stipulations made by Odisha State Pollution Control Board.
(ii)	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Noted and will be complied.
(iii)	At least four ambient air quality monitoring stations shall be established in the down wind direction as well as where maximum ground level concentration of PM10, SO2 and Nox are anticipated in consultation with the SPCB. Data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office and SPCB / CPCB once in six months.	Currently we are carrying out ambient air quality monitoring at three locations and monitoring results were submitted to SPCB/CPCB/MoEF&CC and the monitored results for the period April-20 to Sep-20 is attached as Annexure-1 . Necessary provisions has been made in the expansion project and shall be implemented accordingly.
(iv)	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	There is no waste water generation during the cement manufacturing process
(v)	The overall noise levels in and around the plant area shall be kept well within the standards 85 dBA by providing noise control measures including a acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment Protection Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Ambient noise levels are maintained within the prescribed norms. The monitored results for the period April-20 to Sep-20 is attached as Annexure-1 .
(vi)	Proper housekeeping and adequate occupational health programmes shall be taken up. Occupational Health Surveillance programme shall be done on a regular basis and records maintained properly for at least 30-40 years. The programme shall include lung function and sputum analysis tests once in six months. Sufficient	A dedicated housekeeping team has been deployed on regular basis for proper housekeeping and adequate occupational health programme is being taken up in & around plant premises. However elaborate planning

	preventive measures shall be adopted to avoid direct exposures to dust etc.	shall be done during expansion project.
(vii)	The company shall undertake eco-development measures including community welfare measures in the project area.	Shall be taken care along with expansion project.
(viii)	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP.	Shall be taken care along with expansion project.
(ix)	A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	Shall be taken care along with expansion project.
(x)	Adequate funds shall be allocated to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. Time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted. The funds so provided shall not be diverted for any other purpose.	Implementation will start once the expansion project starts. Funds provided will not be diverted to any other purpose except for environment management.
(xi)	The Regional Office of this Ministry / CPCB / ASPCB shall monitor the stipulated conditions. The project authorities shall extend full co-operation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Noted and will be complied.
(xii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both on hard copies as well as e-mail) to the respective Regional Office of Moef, the respective Zonal Office of CPCB and the CECB.	Six monthly compliance reports shall be submitted to all the concerned regulatory authorities on regular basis as stipulated.
(xiii)	The Project Authorities 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 and the date of commencing the land development work.	Noted and will be informed.
(xiv)	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc. shall be provided with ear plugs/ muffs.	Adequate measures will be taken to control noise levels below 85 dBA. Workers were provided with ear plugs or ear muffs as applicable. In line to this Noise Monitoring is being carried out on regular basis by authorized third party. All the results are within the Prescribed Standards.
(xv)	Industry waste water (workshop and waste water from the Mine) shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19.05.1993 and 31 st December, 1993 or as amended from time	Presently we do not have workshop in mining areas and therefore no waste water is generated. However after expansion, workshop will be provided and trade

	to time. Oil and greases trapped shall be installed before discharge of workshop effluents.	effluent will be treated as prescribed.
(xvi)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures if needed.	Dust mask are provided to workers in plant area. Regular safety training is also provided. Occupational health surveillance program of the workers has been implemented. Regular health checkup of workers is also being done.
(xvii)	The project authorities shall inform to the Regional Office located regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Date of land development work - 22-10-2020
(xviii)	A copy of clearance letter shall be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation, if any, was received while processing the proposal.	No such suggestion/representations received as on date.
(xix)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations if any, were received while processing the proposal. The clearance letter shall be also put up on the website of the Company by the proponent.	We have sent the copy of our Environment Clearance to concerned panchayat, zillaparisad/municipal corporation. Copy of the Environment clearance letter has been uploaded on our company website and can be seen at the below link: www.shivacement.com
(xx)	The Project Authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the Orissa Environment Conservation Board and also at web site of the Ministry of Environment and Forests at "http://enfor.nic.in and a copy of the same shall be forwarded to the Regional Office of this Ministry.	The public notice was published in vernacular language (Odia) in "SAMAJA" and in English language in "BUSINESS STANDARD" on dated 9.6.2011.
(xxi)	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be put on the website of the Company along with the status of compliance of EC conditions and shall also be sent to the respective regional office of MoEF by e-mail.	Environmental Statement for each financial year ending 31 st March in Form-V is being submitted to Odisha State Pollution Control Board, Bhubaneswar and its Regional Office at Rourkela. Environment Statement for the FY 2019-20 was submitted on dt: 17.10.2020. The copy is attached as Annexure-2.
9.	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted and agreed.

10.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted and agreed.
11.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	Noted and agreed.

For SHIVA CEMENT LTD.



(AUTHORISED SIGNATORY)

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF MAY
2020**

At the request of:

M/S. SHIVA CEMENT LIMITED

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

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited

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Ref. No. BBL/ENV/1932


DATE: 22/06/2020

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants				
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (mg/m ³)
1	25/26.05.2020	Main Gate	69.6	38.3	7.0	21.5	0.34
2	25/26.05.2020	Office Building	74.3	41.4	6.8	20.5	0.31
3	25/26.05.2020	Ride Area.	81.5	45.2	7.4	22.4	0.42
Limit as per CPCB notification, New Delhi, 18th Nov, 2009, for Ambient air quality			100	60	80	90	2
Sampling and Analysis done according to			IS: 5182 (Part-23)-1999	USEPA CFR-40, Part-50, Appendix-L	IS: 5182 (Part-2) 2001	IS: 5182 (Part-6) -2006	IS 5182 : Part.10-1999
Barometric pressure (mm of Hg): 747			Temperature °C: 29-37		Climatic condition: Cloudy		

Checked by: 



For Mitra S. K. Private Limited

Authorised Signatory

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Dist. Keonjhar, Odisha - 751005
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Ref No./BBL/ENV/1933

Date: 22/06/2020

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. SHIVA CEMENT LIMITED


Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

SL. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher	24/25.05.2020	72.1	56.9	60.2
2.	Raw Mill	24/25.05.2020	71.7	54.6	59.5
3.	Coal mill	24/25.05.2020	70.4	53.3	57.4
4.	Cement Mill	25/26.05.2020	72.2	55.4	59.2
5.	Main Gate	25/26.05.2020	59.8	45.1	49.3
6.	Colony	25/26.05.2020	54.3	38.7	43.9

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


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

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

Checked by:- 



For Mitra S. K. Private Limited


Authorised Signatory

Mitra S. K. Private Limited

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Re: No. EBL/ENV/1934



Date: 22.06.2020

ANALYSIS REPORT OF FLUE GAS

Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telegghana, Katra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 25/05/2020 AT 09:30 AM	
A. General information about stack		
1. Stack connected to	: Rotary Kiln	
2. Emission due to	: Burning of Clinker	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 65.0 m	
2. Diameter of the stack at sampling point	: 1.25 m	
3. Height of the sampling point from Ground Level	: 33 m	
4. Area of Stack	: 1.2277m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: Coal	2. Fuel consumption : 3MT/Hrs
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 154	EPA Part 2
2. Barometric pressure (mm of Hg)	: 747	EPA Part 2
3. Velocity of gas (m/sec)	: 11.20	EPA Part 2
4. Quantity of gas flow (Nm ³ /m)	: 32401	EPA Part 2
5. Concentration of Carbon monoxide (%)	: <0.2	US EPA 18_25/09/1996
6. Concentration of Carbon dioxide (%)	: 9.4	IS 13270:1992, Ref 2009
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 906	GC
8. Concentration of Nitrogen dioxide (µg/Nm ³)	: 73.5	EPA Part-7
9. Concentration of Particulate Matters (mg/Nm ³)	: 25	EPA Part-5
E. Pollution control device		
Details of pollution control device: attached with the stack	: Bag Filter	

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

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Ref.No.BBL/ENV/1935

Date: 22.06.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the Industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleghana, Kutna, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 26/05/2020 AT 03:30 PM	
A. General information about stack		
1. Stack connected to	: Cement Mill Bag Filter	
2. Emission due to	: Grinding Process	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladders	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 33.0 m	
2. Diameter of the stack at sampling point	: 1.0 m	
3. Height of the sampling point from Ground Level	: 25m	
4. Area of Stack	: 0.7857 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: ---	
2. Fuel consumption	: ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 41	EPA Part 3
2. Barometric pressure (mm of Hg)	: 746	EPA Part 2
3. Velocity of gas (m/sec)	: 4.62	EPA Part 2
4. Quantity of gas flow (Nm ³ /ar.)	: 11926	EPA Part 2
5. Concentration of Particulate Matters (mg/Nm ³)	: 42	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	



For Mitra S. K. Private Limited

Checked by:

Authorized Signatory

H. O.: Shreechi Centre (5th Floor), 7/B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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Mitra S. K. Private Limited

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Ref.No.DBL/ENV/1936

Date: 22.06.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the Industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telegaona, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 25/05/2020 AT 10:05AM	
A. General information about stack		
1 Stack connected to	: Coal Mill Bag Filter	
2 Emission due to	: Coal Graining	
3 Material of construction of Stack	: MS	
4 Shape of Stack	: Circular	
5 Whether stack is provided with permanent platform & Ladder	: Yes	
6 Generation Capacity	: ---	
B. Physical characteristics of stack		
1 Height of the stack from ground level	: 31.0 m	
2 Diameter of the stack at sampling point	: 0.68 m	
3 Height of the sampling point from Ground Level	: 24 m	
4 Area of Stack	: 0.3633 m ²	
C. Analysis/Characteristic of stack		
1 Fuel used : Kiln Hot Gas	2. Fuel consumption : ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1 Temperature of emission (°C)	: 58	EPA Part 2
2 Barometric pressure (mm of Hg)	: 746	EPA Part 2
3 Velocity of gas (m/sec)	: 10.10	EPA Part 2
4 Quantity of gas flow (Nm ³ /hr.)	: 11310	EPA Part 2
5 Concentration of Particulate Matters (mg/Nm ³)	: 47	EPA Part 5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

H. Q.: Shreeji Centre (5th Floor), 74B, Acharya Jagdish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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Ref.No.BBL/ENV/1937

Date: 22.06.2020

ANALYSIS REPORT OF FLUE GAS

Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleghana, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 25/05/2020 AT 04.00 PM	
A. General information about stack		
1 Stack connected to	: Raw Mill Bag Filter	
2 Emission due to	: Raw Mix Grinding	
3 Material of construction of Stack	: MS	
4 Shape of Stack	: Circular	
5 Stack is provided with permanent platform & Ladder	: Yes	
6 Generation Capacity	: ---	
B. Physical characteristics of stack		
1 Height of the stack from ground level	: 45.0 m	
2 Diameter of the stack at sampling point	: 1.05 m	
3 Height of the sampling point from Ground Level	: 34 m	
4 Area of Stack	: 8562 m ²	
C. Analysis/Characteristic of stack		
1 Fuel used : Kilo Hot Gas	2. Fuel consumption : ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1 Temperature of emission (°C)	: 74	EPA Part 2
2 Barometric pressure (mm of Hg)	: 747	EPA Part 2
3 Velocity of gas (m/sec)	: 5.61	EPA Part 2
4 Quantity of gas flow (Nm ³ /hr.)	: 74236	EPA Part 2
5 Concentration of Carbon monoxide [%]	: <0.2	USEPA 18-25/09/1996
6 Concentration of Carbon dioxide [%]	: 3.2	IS 13270:1992,Ref:2009
7 Concentration of Sulphur dioxide (mg/Nm ³)	: 39.4	GC
8 Concentration of Nitrogen dioxide (mg/Nm ³)	: 26.2	EPA Part-7
9 Concentration of Particulate Matters (mg/Nm ³)	: 28	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:-

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For Mitra S. K. Private Limited

Authorised Signatory

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Ref. No. BBL/ENV/1938

DATE: 22/06/2020

CERTIFICATE OF ANALYSIS

Name of the industry	: M/s. SHIVA CEMENT LIMITED
Address	: Telegana, Kutra, Dist. Sundargarh (Odisha)
Sampling Location	: Bore well Water Plant Site
Date of sampling	: 26/05/2020

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 1991

Sl. No.	Test Parameters	Norms as per IS:10500-1991	Results
1	Total Coliforms MPN/100ml	10 (MAX)	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 – 1991

Sl. No.	Test Parameters	IOM	Norms as per IS: 10500-1991		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hezen	5	25	<1.0
2	Odour	---	Unobjectionable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	8.58
4	Turbidity	NTU	5	10	<1.0
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	196.0
6	Aluminium (as Al)	mg/l	0.33	0.5	<0.01
7	Anionic Detergents (as MRAS)	mg/l	3.2	1.0	<0.02
8	Boron (as B)	mg/l	1.0	5.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	27.0
10	Chloride (as Cl)	mg/l	250	1000	10.2
11	Copper (as Cu)	mg/l	0.06	1.5	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.26
13	Free Residual Chlorine	mg/l	0.2(Min)	---	<0.1
14	Iron (as Fe)	mg/l	0.3	1.0	3.11
15	Magnesium (as Mg)	mg/l	30	100	4.8
16	Manganese (as Mn)	mg/l	0.1	0.5	<0.02
17	Nitrate (as NO ₃)	mg/l	45	100	3.2
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005
20	Sulphate (as SO ₄)	mg/l	200	400	15.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	30.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	92.0
23	Cadmium (as Cd)	mg/l	0.01	No Relaxation	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.05	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.05	No Relaxation	<0.01
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01
30	Nickel (Ni)	mg/l	---	---	<0.005
31	Poly nuclear Aromatic hydrocarbon	mg/l	---	---	<0.005

Checked by :




For Mitra S.K. Private Limited

Authorized Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF JUNE
2020**

At the request of:

M/S. SHIVA CEMENT LIMITED

Telegghana, P.o. – Kulra, Dist.- Sundargarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited

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Ref. No. BBL/ENV/2024

DATE: 18/07/2020

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address: Teleghana, Kutna, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants				
			PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
1	22/23.06.2020	Main Gate	59.3	32.4	6.8	19.2	0.30
2	22/23.06.2020	Office Building	65.2	36.5	6.4	20.6	0.33
3	22/23.06.2020	Kila Area.	69.4	39.6	7.0	21.6	0.39
Limit as per CPCB notification, New Delhi, 18th Nov, 2009. for Ambient air quality			100	60	80	80	2
Sampling and Analysis done according to			IS: 5182 (Part-23)-1999	USEPA CFR-40, Part-50, Appendix-L	IS: 5182 (Part-2)-2001	IS: 5182 (Part-6)-2006	IS 5182 : Part.10-1999
Barometric pressure (mm of Hg): 747			Temperature °C: 28-37		Climatic condition: Cloudy		

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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Ref No./BBL/ENV/2025

Date: 18/07/2020

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kotra, Dist. Sundargarh (Odisha)

SL. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher	22/23.06.2020	71.7	55.3	60.8
2.	Raw Mill	22/23.06.2020	70.6	54.8	58.5
3.	Coal mill	22/23.06.2020	69.5	52.6	56.9
4.	Cement Mill	23/24.06.2020	71.4	54.3	57.1
5.	Main Gate	23/24.06.2020	57.9	44.5	48.7
6.	Colony	23/24.06.2020	53.7	39.3	43.5

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

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

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

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

ISO 9001:2015 Certified
 ISO 14001:2015 Certified
 OHSAS 18001:2007 Certified

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Ref.No.BBI/ENV/2026



Date: 18.07.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telegharia, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 22/06/2020 AT 10.00 AM	
A. General information about stack		
1. Stack connected to	: Rotary Kiln	
2. Emission due to	: Burning of Clinker	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: --	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 45.0 m	
2. Diameter of the stack at sampling point	: 1.25 m	
3. Height of the sampling point from Ground Level	: 83 m	
4. Area of Stack	: 1.2277m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: Coal	
	2. Fuel consumption: 2MT/dts	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 152	EPA Part 2
2. Barometric pressure (mm of Hg)	: 746	EPA Part 2
3. Velocity of gas (m/sec)	: 10.76	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr)	: 31233	EPA Part 2
5. Concentration of Carbon monoxide(%)	: <0.2	USEPA 18-2539/1996
6. Concentration of Carbon dioxide(%)	: 9.2	15.13270.1592,Re-62009
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 93.4	GC
8. Concentration of Nitrogen dioxide (mg/Nm ³)	: 59.2	EPA Part-7
9. Concentration of Particulate Matters (mg/Nm ³)	: 28	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack		: Bag Filter

Checked by:-



For Mitra S. K. Private Limited

Authorized Signatory

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Ref.No.BBL/ENV/2027

Date: 18.07.2020

ANALYSIS REPORT OF FLUE GAS

Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleguana, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 25/06/2020 AT 03.15 PM	
A. General information about stack		
1. Stack connected to	: Cement Mill Bag Filter	
2. Emission due to	: Grinding Process	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & Ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 33.0 m	
2. Diameter of the stack at sampling point	: 1.0 m	
3. Height of the sampling point from Ground Level	: 25m	
4. Area of Stack	: 0.7857 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: ---	
2. Fuel consumption	: ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 39	EPA Part 2
2. Barometric pressure (mm of Hg)	: 746	EPA Part 2
3. Velocity of gas (m/sec)	: 5.61	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr)	: 14578	EPA Part 2
5. Concentration of Particulate Matters (mg/Nm ³)	: 46	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	



For Mitra S. K. Private Limited

Authorised Signatory

Checked by:-

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Ref.No.BBI/ENV/2020

Date: 18.07.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleghana, Kulru, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 23/06/2020 AT 09:45AM	
A. General information about stack		
1 Stack connected to	: Coal Mill Bag Filter	
2 Emission due to	: Coal Grinding	
3 Material of construction of Stack	: MS	
4 Shape of Stack	: Circular	
5 Whether stack is provided with permanent platform & Ladder	: Yes	
6 Generation Capacity	: ---	
B. Physical characteristics of stack		
1 Height of the stack from ground level	: 31.0 m	
2 Diameter of the stack at sampling point	: 0.68 m	
3 Height of the sampling point from Ground Level	: 24 m	
4 Area of Stack	: 0.3633 m ²	
C. Analysis/Characteristic of stack		
1 Fuel used	: Kiln Hot Gas	2. Fuel consumption : ---
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1 Temperature of emission (°C)	: 61	EPA Part 2
2 Barometric pressure (mm of Hg)	: 746	EPA Part 2
3 Velocity of gas (m/sec)	: 10.34	EPA Part 2
4 Quantity of gas flow (Nm ³ /hr)	: 11475	EPA Part 2
5 Concentration of Particulate Matters (mg/Nm ³)	: 63	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by-



For Mitra S. K. Private Limited

Authorized Signatory

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Ref.No.DBL/ENV/2029

Date: 18.07.2020

ANALYSIS REPORT OF FLUE GAS

Name of the Industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleghana, Kulia, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 23/06/2020 AT 04.30 PM	
A. General information about stack		
1. Stack connected to	:	Raw Mill Bag Filter
2. Emission due to	:	Raw Mix Grinding
3. Material of construction of Stack	:	MS
4. Shape of Stack	:	Circular
5. Stack is provided with permanent platform & Ladder	:	Yes
6. Generation Capacity	:	---
B. Physical characteristics of stack		
1. Height of the stack from ground level	:	45.0 m
2. Diameter of the stack at sampling point	:	1.05 m
3. Height of the sampling point from Ground Level	:	34 m
4. Area of Stack	:	0.652 m ²
C. Analysis/Characteristic of stack		
1. Fuel used	:	Kiln Hot Gas
2. Fuel consumption	:	---
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 71	EPA Part-2
2. Barometric pressure (mm of Hg)	: 746	EPA Part-2
3. Velocity of gas (m/sec)	: 6.06	EPA Part-2
4. Quantity of gas flow (Nm ³ /hr.)	: 15421	EPA Part-2
5. Concentration of Carbon monoxide (%)	: <0.2	USEPA 18-25/09/1996
6. Concentration of Carbon dioxide (%)	: 3.0	IS 13270:1992, Ref.2009
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 36.3	GC
8. Concentration of Nitrogen dioxide (mg/Nm ³)	: 24.5	EPA Part-7
9. Concentration of Particulate Matters (mg/Nm ³)	: 25	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	:	Bag Filter



For Mitra S. K. Private Limited

Checked by:

Authorised Signatory

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Ref. No. BBL/ENV/2030

DATE: 18/07/2020

CERTIFICATE OF ANALYSIS

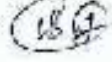
Name of the Industry	: M/s. SHIVA CEMENT LIMITED
Address	: Teleghana, Kurra, Dist. Sundargarh (Odisha)
Sampling Location	: Bore well Water Plant Site
Date of sampling	: 23/06/2020

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl No.	Test Parameters	Norms as per IS: 10500-1991	Results
1	Total Coliform (MPN/100ml)	10 (MAX)	< 10
2	Faecal Coliforms (MPN/10)	Not Detected	Not Detected
3	E. Coli (MPN/10)	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-1991		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	25	< 10
2	Odour	---	Unobjectionable	---	< 10
3	pH at 25°C	---	6.5-8.5	No Relaxation	6.53
4	Turbidity	NTU	5	10	< 10
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	160.0
6	Aluminium (as Al)	mg/l	0.03	0.2	< 0.01
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	< 0.02
8	Boron (as B)	mg/l	1.0	5.0	< 0.5
9	Calcium (as Ca)	mg/l	75	200	26.0
10	Chloride (as Cl)	mg/l	250	1000	9.0
11	Copper (as Cu)	mg/l	0.06	1.0	< 0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.24
13	Free Residual Chlorine	mg/l	0.2 (Min)	---	< 0.1
14	Iron (as Fe)	mg/l	0.3	1.0	0.15
15	Magnesium (as Mg)	mg/l	30	100	4.4
16	Manganese (as Mn)	mg/l	0.1	0.3	< 0.02
17	Nitrate (as NO ₃ -N)	mg/l	45	100	2.8
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	< 0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	< 0.005
20	Sulphate (as SO ₄ -N)	mg/l	200	400	15.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	70.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	86.0
23	Cadmium (as Cd)	mg/l	0.01	No Relaxation	< 0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	< 0.01
25	Lead (as Pb)	mg/l	0.05	No Relaxation	< 0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	< 0.001
27	Arsenic (as As)	mg/l	0.05	No Relaxation	< 0.01
28	Zinc (as Zn)	mg/l	3.0	15.0	< 0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	< 0.01
30	Nickel (Ni)	mg/l	---	---	< 0.005
31	Poly nuclear Aromatic hydrocarbon	mg/l	---	---	< 0.005

Checked by: 



For Mitra S.K. Private Limited

Authorised Signatory 

Mitra S. K. Private Limited

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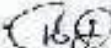


Ref. No. BBI/FNV/2031

Date: 18/07/2020


GROUND WATER LEVEL MONITORING

Name of the industry:	M/s. SHIVA CEMENT LIMITED	
Address:	Telegana, Kotra, Dist. Sundargarh, (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
23.06.2020	Bore well at Plant Site	0.2

Checked by: 



For Mitra S. K. Private Limited


Authorized Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF JULY
2020**

At the request of:

M/S. SHIVA CEMENT LIMITED

Telegghana, P.o. Kutra, Dist. - Sundargarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

At/Po - Barbi
Dist. - Keonjhar, (Odisha)
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Mitra S. K. Private Limited

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Ref. No. BBL/ENV/2089

DATE: 19/08/2020

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants				
			PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO ($\mu\text{g}/\text{m}^3$)
1	26/27.07.2020	Main Gate	52.5	29.3	6.6	19.4	0.20
2	26/27.07.2020	Office Building	56.7	31.8	6.2	20.2	0.31
3	25/27.07.2020	Kiln Area	61.6	34.4	6.3	21.7	0.35
Limit as per CPCB notification, New Delhi, 18th Nov. 2009, for Ambient air quality			100	60	80	80	2
Sampling and Analysis done according to			IS: 5182 (Part-23)-1999	USEPA CFR-40, Part-50, Appendix-L	IS: 5182 (Part-2)-2001	IS: 5102 (Part-6)-2006	IS 5182 : Part.10-1999
Barometric pressure (mm of Hg): 747			Temperature °C: 26-36		Climatic condition: Cloudy		

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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Ref No./BBL/ENV/2090

Date: 19/08/2020

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address: Teleghana, Kutra, Dist. Sundargarh (Odisha)

Sl. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher	26/27.07.2020	70.8	55.5	67.2
2.	Raw Mill	26/27.07.2020	57.3	53.3	56.5
3.	Coal mill	26/27.07.2020	68.6	54.4	57.2
4.	Cement Mill	26/27.07.2020	69.2	54.0	57.6
5.	Main Gate	26/27.07.2020	57.3	44.7	47.9
6.	Colony	26/27.07.2020	52.5	30.6	42.8

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

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

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

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

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Ref. No. BBL/ENV/2091

DATE: 19/08/2020

CERTIFICATE OF ANALYSIS

Name of the industry	: M/s. SHIVA CEMENT LIMITED
Address	: Telegghana, Kutra, Dist. Sundargarh (Odisha)
Sampling Location	: Bore well Water Plant Site
Date of sampling	: 27/07/2020

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	Norms as per IS: 10500-1991	Results
1	Total Coliform MPN/100ml	10 (MAX)	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-1991		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	20	<1.0
2	Odour	---	Unobjectionable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	6.57
4	Turbidity	NTU	5	10	<1.0
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	170.0
6	Aluminium (as Al)	mg/l	0.05	0.2	<0.01
7	Anionic Detergents (as MBAS)	mg/l	3.2	1.0	<0.02
8	Boron (as B)	mg/l	1.0	5.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	24.0
10	Chloride (as Cl)	mg/l	250	1000	3.2
11	Copper (as Cu)	mg/l	0.05	1.5	0.28
12	Fluoride (as F)	mg/l	1.5	1.5	0.28
13	Free Residual Chlorine	mg/l	0.2 (Min)	---	<0.1
14	Iron (as Fe)	mg/l	0.3	1.0	0.18
15	Magnesium (as Mg)	mg/l	30	100	4.3
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO3)	mg/l	45	100	2.4
18	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.02	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005
20	Sulphate (as SO4)	mg/l	200	400	12.0
21	Alkalinity (as CaCO3)	mg/l	200	500	70.0
22	Total Hardness (as CaCO3)	mg/l	300	500	30.6
23	Cadmium (as Cd)	mg/l	0.01	No Relaxation	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.05	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.01	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.05	No Relaxation	<0.01
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01
30	Nickel (Ni)	mg/l	---	---	<0.005
31	Poly nuclear Aromatic hydrocarbon	mg/l	---	---	<0.005

Checked by:



For Mitra S. K. Private Limited
Authorised Signatory

Mitra S. K. Private Limited

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Ref. No.BBL/ENV/2092

Date: 19/08/2020

GROUND WATER LEVEL MONITORING

Name of the Industry:	M/s. SHIVA CEMENT LIMITED	
Address:	Telghana, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
27.07.2020	Bore well at Plant Site	5.6

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

Mira S. K. Private Limited

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Ref No. BBL/ENV/2096



Date: 19/08/2020

ANALYSIS REPORT OF FLUE GAS		
Name of the Industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telegama, Kutra, Dist. Sondargarh (Odisha)	
Date & time of sampling	: 25/07/2020 AT 02:20 PM	
A. General information about stack		
1. Stack connected to	: Rotary Kiln	
2. Emission due to	: Turning of Choker	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & Ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 4.50 m	
2. Diameter of the stack at sampling point	: 1.25 m	
3. Height of the sampling point from Ground Level	: 3.8 m	
4. Area of Stack	: 1.2277 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: Coal	2. Fuel consumption : 3MT/Hrs
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 169	EPA Part 2
2. Barometric pressure (mm of Hg)	: 747	EPA Part 2
3. Velocity of gas (m/sec)	: 1.203	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr.)	: 35268	EPA Part 2
5. Concentration of Carbon monoxide (%)	: <0.2	USEPA 18-25/09/1996
6. Concentration of Carbon Dioxide (%)	: 9.0	IS 13270:1992, Ref: 3009
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 90.3	GC
8. Concentration of Nitrogen dioxide (mg/Nm ³)	: 67.6	EPA Part-2
9. Concentration of Particulate Matters (mg/Nm ³)	: 23	EPA Part 5
E. Pollution control device		
Details of pollution control devices attached with the stack		: Bag Filter

Checked by:



For Mira S. K. Private Limited

Authorised Signatory

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Mitra S. K. Private Limited

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Ref.No.BBL/ENV/2097

Date: 19.08.2020

ANALYSIS REPORT OF FLUE GAS

Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telaghana, Kulan, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 25/07/2020 AT 04.05 PM	
A. General information about stack		
1. Stack connected to	: Raw Mill Bag Filter	
2. Emission due to	: Raw Mix Grinding	
3. Material of reconstruction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Stack is provided with permanent platform & Ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 45.0 m	
2. Diameter of the stack at sampling point	: 1.05 m	
3. Height of the sampling point from Ground Level	: 34 m	
4. Area of Stack	: 8667 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: Kiln Hot Gas	2. Fuel consumption
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 59	EPA Part-2
2. Barometric pressure (mm of Hg)	: 747	EPA Part-2
3. Velocity of gas (m/sec)	: 12.43	EPA Part-2
4. Quantity of gas flow (Nm ³ /hr.)	: 31979	EPA Part-2
5. Concentration of Carbon monoxide(%)	: <0.2	USEPA 18-25/09/1995
6. Concentration of Carbon dioxide(%)	: 2.4	IS 13270:1992,Rel:2007
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 33.4	GC
8. Concentration of Nitrogen dioxide (mg/Nm ³)	: 21.8	EPA Part-7
9. Concentration of Particulate Matters (mg/Nm ³)	: 27	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:-



For Mitra S. K. Private Limited

Authorized Signatory

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Mitra S. K. Private Limited

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Ref.No.BRI/ENV/2098

Date: 19.08.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telegraphana, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 27/07/2020 AT 10:05AM	
A. General information about stack		
1. Stack connected to	: Co. 1 Mill Bag Filter	
2. Emission due to	: Coal Grinding	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & Ladder	: Yes	
6. Generating Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 31.0 m	
2. Diameter of the stack at sampling point	: 0.63 m	
3. Height of the sampling point from Ground Level	: 24 m	
4. Area of Stack	: 0.3633 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: Kln Hot Gas	2. Fuel consumption
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 47	EPA Part 2
2. Barometric pressure (mm of Hg)	: 747	EPA Part 2
3. Velocity of gas (m/sec)	: 10.01	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr.)	: 11754	EPA Part 2
5. Concentration of Particulate Matters (mg/Nm ³)	: 48	EPA Part 5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	



For Mitra S. K. Private Limited

Authorised Signatory

Checked by:

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ReLNo.BBL/ENV/2099

Date: 19.08.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Teleghana, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 27/07/2020 AT 12.10 PM	
A. General information about stack		
1. Stack connected to	: Cement Mill Bag Filter	
2. Emission due to	: Grinding Process	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 23.0 m	
2. Diameter of the stack at sampling point	: 1.0 m	
3. Height of the sampling point from Ground Level	: 25m	
4. Area of Stack	: 0.7857 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: ---	
2. Fuel consumption	: ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 36	EPA Part 2
2. Barometric pressure (mm of Hg)	: 747	EPA Part 2
3. Velocity of gas (m/sec)	: 4.65	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr)	: 12447	EPA Part 2
5. Concentration of Particulate Matters (mg/Nm ³)	: 42	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

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**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF AUGUST
2020**

At the request of:

M/S. SHIVA CEMENT LIMITED

Telegana, P.O. - Kutra, Dist.- Suncardarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited

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Ref. No. BBI/ENV/2145

DATE: 24/09/2020

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants				
			PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)	CO ($\mu\text{g}/\text{m}^3$)
1	24/25.08.2020	Main Gate	42.2	23.8	6.4	18.8	0.25
2	24/25.08.2020	Office Building	45.7	24.6	6.2	18.4	0.24
3	24/25.08.2020	KIn Area	49.4	26.3	6.2	18.0	0.23
Limit as per CPCB notification, New Delhi, 18th Nov, 2009, for Ambient air quality			100	60	80	80	2
Sampling and Analysis done according to			IS: 5182 (Part-23)-1999	USEPA CFR-40, Part-50, Appendix-I.	IS: 5182 (Part-2) -2001	IS: 5182 (Part-6) -2006	IS: 5182; Part.10 1999
Barometric pressure (mm of Hg):747			Temperature °C: 25-35		Climate condition: Cloudy		

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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Ref No./BBL/ENV/2146

Date: 22/09/2020

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

SL. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher	24/25.08.2020	58.1	40.3	46.2
2.	Raw Mill	24/25.08.2020	59.8	41.6	47.4
3.	Coal mill	24/25.08.2020	59.2	41.4	47.8
4.	Cement Mill	24/25.08.2020	60.3	42.8	48.7
5.	Main Gate	24/25.08.2020	56.4	40.5	45.3
6.	Colony	24/25.08.2020	51.8	38.2	42.2

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

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

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

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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Ref. No. BBL/ENV/2151

DATE: 22/09/2020

CERTIFICATE OF ANALYSIS

Name of the Industry	: M/s. SHIVA CEMENT LIMITED
Address	: Telegama, Kutra, Dist. Sundargarh (Odisha)
Sampling Location	: Bore wall Water Plant Site
Date of sampling	: 25/08/2020

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl No.	Test Parameters	Norms as per IS: 10500-1991	Results
1	Total Coliform (MPN/100ml)	10 (MAX)	<2.0
2	Faecal Coliforms (MPN/10)	Not Detected	Not Detected
3	E. Coli (MPN/10)	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-1991		Results
			Desirable Limit	Permissible Limit	
1	Colour				
2	Odour	Hazen	5	25	<1.0
3	pH at 25°C		Unobjectionable		Unobjectionable
4	Turbidity	NTU	0.5-8.5	No Relaxation	6.54
5	Total Dissolved Solids (as TDS)	mg/l	5	10	<1.0
6	Aluminium (as Al)	mg/l	500	2000	100.0
7	Anionic Detergents (as MBAS)	mg/l	0.33	0.2	<0.01
8	Boron (as B)	mg/l	0.2	1.0	<0.02
9	Calcium (as Ca)	mg/l	1.0	5.0	<0.5
10	Chloride (as Cl)	mg/l	75	200	26.6
11	Copper (as Cu)	mg/l	250	1000	3.8
12	Fluoride (as F)	mg/l	0.05	1.5	<3.00
13	Free Residual Chlorine	mg/l	1.0	1.5	0.25
14	Iron (as Fe)	mg/l	0.2(Min)	—	<0.1
15	Magnesium (as Mg)	mg/l	0.3	1.0	<1.5
16	Manganese (as Mn)	mg/l	30	100	4.4
17	Nitrate (as NO ₃)	mg/l	0.1	6.3	<0.05
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	45	100	2.2
19	Selenium (as Se)	mg/l	0.001	0.002	<0.001
20	Sulphate (as SO ₄)	mg/l	0.01	No Relaxation	<0.005
21	Alkalinity (as CaCO ₃)	mg/l	200	400	11.0
22	Total Hardness (as CaCO ₃)	mg/l	200	600	72.0
23	Cadmium (as Cd)	mg/l	300	600	75.0
24	Cyanide (as CN)	mg/l	0.01	No Relaxation	<0.001
25	Lead (as Pb)	mg/l	0.05	No Relaxation	<0.01
26	Mercury (as Hg)	mg/l	0.05	No Relaxation	<0.005
27	Arsenic (as As)	mg/l	0.001	No Relaxation	<0.001
28	Zinc (as Zn)	mg/l	0.05	No Relaxation	<0.01
29	Hexavalent Chromium (as Cr+6)	mg/l	5.0	15.0	<0.02
30	Nickel (Ni)	mg/l	0.05	No Relaxation	<0.01
31	Poly nuclear Aromatic Hydrocarbon	mg/l	---	---	<0.005

Checked by:



For Mitra S.K. Private Limited
 Authorised Signatory

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**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF SEPTEMBER
2020**

At the request of:

M/S. SHIVA CEMENT LIMITED

Teleguna, P.O. - Kutra, Dist.- Sundargarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited

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Ref. No. BBI/ENV/2160


DATE: 15/10/2020

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants				
			PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)	CO ($\mu\text{g}/\text{m}^3$)
1	28/29.09.2020	Main Gate	49.7	26.6	6.6	19.2	0.28
2	28/29.09.2020	Office Building	53.5	28.3	6.8	19.8	0.31
3	28/29.09.2020	Kita Area	59.6	32.8	7.2	20.4	0.33
Limit as per CPCB notification, New Delhi, 18th Nov, 2009. for Ambient air quality			100	60	80	80	2
Sampling and Analysis done according to			IS: 5182 (Part-23)-1999	USEPA CFR-40, Part-50, Appendix-I	IS- 5182 (Part-2) -2001	IS: 5102 (Part-6) -2006	IS: 5182 (Part-10)-1999
Barometric pressure (mm of Hg): 744			Temperature °C: 25-35		Climate condition: Cloudy		

Checked by: 



For Mitra S. K. Private Limited


Authorised Signatory

Mitra S. K. Private Limited



AMF.O./B/IBIL/Ware/No.6
Dist. Keonjhar, Odisha - 755030
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Ref No./BBL/ENV/2169

Date: 15/10/2020

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. SHIVA CEMENT LIMITED

Address : Teleghana, Kutra, Dist. Sundargarh (Odisha)

SL. NO.	Monitoring Location	Date Monitoring	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Crusher	28/29.09.2020	71.6	57.4	63.3
2.	Raw Mill	28/29.09.2020	67.8	55.2	57.6
3.	Coal mill	28/29.09.2020	69.4	55.8	58.5
4.	Cement Mill	28/29.09.2020	68.5	56.3	59.2
5.	Main Gate	28/29.09.2020	58.1	45.2	48.7
6.	Colony	28/29.09.2020	54.6	38.8	43.3

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

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

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

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

ISO 9001:2015 Certified
 Delhi No. 10644 / 2015
 DELHI State No. 18687 / 2015

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Ref.No BBL/ENV/2170



Date: 15.10.2020

ANALYSIS REPORT OF FLUE GAS

Name of the Industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Telenghara, Kurra, Dist. Sundergarh (Odisha)	
Date & time of sampling	: 23/09/2020 AT 02:30 PM	
A. General information about stack		
1. Stack connected to	: Rotary Kiln	
2. Emission due to	: Burning of Clinker	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & Ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 45.0 m	
2. Diameter of the stack at sampling point	: 1.25 m	
3. Height of the sampling point from Ground Level	: 35 m	
4. Area of Stack	: 1.2277m ²	
C. Analysis/Characteristic of stack		
1. Fuel Used	Coal	2. Fuel consumption : 3MT/Hrs
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 144	EPA Part 2
2. Barometric pressure (mm of Hg)	: 744	EPA Part 2
3. Velocity of gas (m/sec)	: 11.38	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr)	: 42747	EPA Part 2
5. Concentration of Carbon monoxide (%)	: < 0.2	IS 8589-15-25:09:090
6. Concentration of Carbon dioxide (%)	: 8.8	IS 13270-1992, Rev. 2009
7. Concentration of Sulphur dioxide (mg/Nm ³)	: 97.4	CC
8. Concentration of Nitrogen dioxide (mg/Nm ³)	: 69.4	EPA Part-7
9. Concentration of Particulate Matters (ug/Nm ³)	: 36	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

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Mitra S. K. Private Limited

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Ref.No.BHL/ENV/2171

Date: 15.10.2020

ANALYSIS REPORT OF FLUE GAS

Name of the industry	M/s. SHIVA CEMENT LIMITED	
Address	Telephara, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	28/09/2020 AT 04.15 PM	
A. General information about stack		
1. Stack connected to	Raw Mill Bag Filter	
2. Emission due to	Raw Mix Grinding	
3. Material of construction of Stack	MS	
4. Shape of Stack	Circular	
5. Stack is provided with permanent platform & Ladder	Yes	
6. Generation Capacity	-	
B. Physical characteristics of stack		
1. Height of the stack from ground level	45.0 m	
2. Diameter of the stack at sampling point	1.05 m	
3. Height of the sampling point from Ground Level	34 m	
4. Area of Stack	3.662 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	Kiln Hot Gas	2. Fuel consumption: --
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	66	EPA Part 2
2. Barometric pressure (mm of Hg)	94%	EPA Part 2
3. Velocity of gas (m/sec)	12.64	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr.)	32478	EPA Part 2
5. Concentration of Carbon monoxide (%)	80.2	USEPA 18-25/05/1996
6. Concentration of Carbon dioxide (%)	2.2	IS 3320:2002 Ref:2009
7. Concentration of Sulphur dioxide (mg/Nm ³)	31.3	CL
8. Concentration of Nitrogen dioxide (mg/Nm ³)	20.2	EPA Part 7
9. Concentration of Particulate Matters (mg/Nm ³)	29	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	Bag Filter	



For Mitra S. K. Private Limited

Checked by:

Authorized Signatory

H. G. Anvchi Centre (G.I. Floor), 74F, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India.
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Mitra S. K. Private Limited

APMO, BARBIL, Ward No.8
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Ref.No.BHH/ENV/2172

Date: 15.10.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Poteghana, Rutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 29/09/2020 AT 10:15AM	
A. General information about stack		
1. Stack connected to	: Coal Mill Bag Filter	
2. Emission due to	: Coal Grains, eg	
3. Material of construction of Stack	: MS	
4. Shape of Stack	: Circular	
5. Whether stack is provided with permanent platform & Ladder	: Yes	
6. Generation Capacity	: ---	
B. Physical characteristics of stack		
1. Height of the stack from ground level	: 31.0 m	
2. Diameter of the stack at sampling point	: 0.68 m	
3. Height of the sampling point from Ground Level	: 24 m	
4. Area of Stack	: 0.3532 m ²	
C. Analysis/Characteristic of stack		
1. Fuel used	: KJ.n Hot Gas	
2. Fuel consumption	: ---	
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1. Temperature of emission (°C)	: 48	EPA Part 2
2. Barometric pressure (mm of Hg)	: 748	EPA Part 2
3. Velocity of gas (m/sec)	: 9.55	EPA Part 2
4. Quantity of gas flow (Nm ³ /hr.)	: 10953	EPA Part 2
5. Concentration of Particulate Matters (mg/Nm ³)	: 44	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	



For Mitra S. K. Private Limited

Authorised Signatory

Checked by:

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Ref.No.BBL/ENV/2173

Date: 15.10.2020

ANALYSIS REPORT OF FLUE GAS		
Name of the industry	: M/s. SHIVA CEMENT LIMITED	
Address	: Tenghara, Kutra, Dist. Sundargarh (Odisha)	
Date & time of sampling	: 29/03/2020 AT 12.30 PM	
A. General information about stack		
1 Stack connected to	: Cement Mill Bag Filter	
2 Emission due to	: Grinding Process	
3 Material of construction of Stack	: MS	
4 Shape of Stack	: Circular	
5 Whether stack is provided with permanent platform & ladder	: Yes	
6 Generation Capacity	: ---	
B. Physical characteristics of stack		
1 Height of the stack from ground level	: 33.0 m	
2 Diameter of the stack at sampling point	: 1.0 m	
3 Height of the sampling point from ground level	: 25m	
4 Area of Stack	: 0.785 / m ²	
C. Analysis/Characteristic of stack		
1 Fuel used	: ---	2. Fuel consumption : ---
D. Results of sampling & analysis of gaseous emission		
	Result	Method
1 Temperature of emission (°C)	: 34	EPA Part 2
2 Barometric pressure (mm of Hg)	: 746	EPA Part 2
3 Velocity of gas (m/sec)	: 4.74	EPA Part 2
4 Quantity of gas flow [Nm ³ /hr.]	: 12514	EPA Part 2
5 Concentration of Particulate Matters (mg/Nm ³)	: 47	EPA Part-5
E. Pollution control device		
Details of pollution control devices attached with the stack	: Bag Filter	

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

H. O.: Service Centre (6th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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Mitra S. K. Private Limited



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Ref. No. BBL/ENV/2174

DATE: 15/10/2020

CERTIFICATE OF ANALYSIS

Name of the industry	: M/s. SHIVA CEMENT LIMITED
Address	: Teleghana, Kuma, Dist. Sundargarh (Odisha)
Sampling Location	: Bore well Water Plant Site
Date of sampling	: 29/09/2020

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	Norms as per IS: 10500-1991	Results
1	Total Coliform MPN/100ml	10 (MAX)	<2.0
2	Faecal Coliforms MPN/10	Not Detected	Not Detected
3	E. Coli MPN/10	Not Detected	Not Detected

CHEMICAL ANALYSIS OF WATER AS PER IS: 10500 - 1991

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-1991		Results
			Desirable Limit	Permissible Limit	
1	Colour	pcu/cm	5	25	<1.0
2	Odour	---	Unobjectionable	---	Unobjectionable
3	pH at 23°C	---	6.5-8.5	No Relaxation	6.53
4	Turbidity	NTU	5	10	<1.0
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	152.0
6	Aluminium (as Al)	mg/l	0.33	0.2	<0.1
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02
8	Boron (as B)	mg/l	1.0	5.0	<0.6
9	Calcium (as Ca)	mg/l	75	200	21.0
10	Chloride (as Cl)	mg/l	250	1000	3.1
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.24
13	Free Residual Chlorine	mg/l	0.2(Min)	---	<0.1
14	Iron (as Fe)	mg/l	0.3	1.0	0.12
15	Magnesium (as Mg)	mg/l	30	100	4.2
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO ₃)	mg/l	45	100	2.6
18	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	<0.001
19	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.005
20	Sulphate (as SO ₄)	mg/l	200	400	72.1
21	Alkalinity (as CaCO ₃)	mg/l	200	600	58.0
22	Total Hardness (as CaCO ₃)	mg/l	300	600	72.0
23	Cadmium (as Cd)	mg/l	0.01	No Relaxation	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.05	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.05	No Relaxation	<0.01
28	Zinc (as Zn)	mg/l	5.0	15.0	<0.02
29	Hexavalent Chromium (as Cr+6)	mg/l	0.05	No Relaxation	<0.01
30	Nickel (Ni)	mg/l	---	---	<0.05
31	Fully halogenated Aromatic hydrocarbon	mg/l	---	---	<0.05

Checked by: 



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

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Ref. No.BBL/ENV/2175

Date: 15/10/2020

GROUND WATER LEVEL MONITORING

Name of the Industry:	M/s. SHIVA CEMENT LIMITED	
Address:	Teleghana, Kurva, Dist. Sundargarh (Odisha)	
Date of Monitoring:	Location	Water Level below (in meters)
29.09.2020	Bore well at Plant Site	6.2

Checked by:-



For Mitra S. K. Private Limited

Authorized Signatory



CIN L26842OR1985PLCO000557

Annexure-2

**SHIVA
CEMENT
LIMITED**

Plot No. YY-5,
Civil Township
T&B Area, Rourkela
Odisha, India. PIN - 769004.

Through Speed Post

SCL/6000-08

August 17, 2020

To
Sr. Environmental Engineer (C)
State Pollution Control Board, Odisha,
Department of Forest & Environment, Govt. of Odisha,
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit - VIII,
Bhubaneswar-751 012, Odisha

Sub : Submission of Annual Environmental Statement – Reg.

Dear Sir,

We shall like to submit herewith the **Annual Environmental Statement for the Year 2019-20** of our Shiva Cement Limited (Plant) in prescribed format **Form V**.

Kindly acknowledge the receipt.

Thanking you,

Yours faithfully

For & **SHIVA CEMENT LIMITED**


17/08/2020
(**DEBARTHA PANDIT**)
OPERATION HEAD

Enc:

Annual Environmental Statement for the Year 2019-20

Copy to :

Regional Officer, OSPCB, Sector - 5, Rourkela - 769002
Dist. Sundargarh (Odisha)

Phone : (Off) 0661 - 2664168

•Works : Village : Teleghana, P.O : Bringatoli, Kutra, Dist. - Sundargarh, Odisha - 770018

E-mail:rd_corporate@shivacement.com

[FORM - V]

(See Rule 14)

Environmental statement for the financial year ending the 31st March 2020**PART - A**

- (i) Name and address of the owner/occupier of the industry operation or process : **SRI MANOJ KUMAR RESTAGI**
M/s. Shiva Cement Limited
Vill : Telighana, P.O. Biringa Toli,
Via, Kutra, Dt. Sundargarh (Odisha)
PIN - 770018
- (ii) Industry category Primary - (STC Code) : **NA**
Secondary - (SIC Code) : **3241**
- (iii) Production Capacity - Units : **Cement : 0.252 MTPA**
- (iv) Year of Establishment : **1998**
- (v) Date of last environmental statement submitted : **22.06.2019**

PART - B**Water and Raw Material Consumption**

- (i) Water consumption m³/d :
- Process : **N.A.**
- Cooling : **75 m³/ Day**
- Domestic : **25 m³/ Day**

Name of Products	Cooling water consumption per unit of product output	
	During the previous financial year (KL/T Cement)	During the current financial year (KL/T Cement)
	(1)	(2)
CEMENT	Not Applicable	Not Applicable

Substituted by Rule 2 (b) of Environment (Protection) Amendment Rules, 1993 notified vide G.S.R. 386 (E) dated 21.04.1993.

(ii) Raw material consumption

Name of materials	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year
Limestone	Clinker	1.45	1.43
Additive	Clinker	0.07	0.09
Coal	Clinker	0.33	0.32
Slag	Cement	0.44	0.45
Gypsum	Cement	0.05	0.04

*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART - C

**Pollution discharged to environment / unit of out put
(Parameter as specified in the consent issued)**

(1) Pollutants	Quality of Pollutants discharged (mass/day)	Concentrations of pollutants discharges (Mass/volume) mg/No ³	Percentage of variation from prescribed standards with reasons.
(a) Water	Nil	NA	NA
(b) Air	Kiln Stack	18.72	Within the prescribed Limit
	Raw Mill Stack	26.24	
	Coal Mill Stack	26.40	
	Cement Mill - 1	25.80	
	Cement Mill - 2	26.50	

PART - D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
Used Oil	230 Ltrs.	220 Ltrs.

Hazardous wastes (Management, Handling and Transboundary Movements) Rules, 2008 notified vide S.O. 2265 (E)

**PART - E
Solid Wastes**

	Total Quantity	
	During the previous financial year	During the current financial year
	No Solid Waste is generated in the Plant	No Solid Waste is generated in the Plant

- (a) From process : Nil
- (b) From pollution control facilities : Dust collected by the Bag filters is automatically recycled in the process.
- (c) (1) Quantity recycled or re-utilized within the unit.
- (2) Sold
- (3) Disposed

PART - F

Please specify the characterizations (in terms of composition of quantum of categories of wastes as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

No Solid waste is generated from the process. Hazardous waste such as used oil used for Kiln light up and waste grease is sold to authorized recyclers.

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Pollution free atmosphere resulted in better working environment for higher plant productivity.

PART - H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

Upgradation of entire plant for increased productivity, reduction in energy consumption of industrial wastes like slag & fly ash, reduction in air pollution through improved technology.

PART - I

Any other particulars for improving the quality of the environment.

Following initiatives taken by M/s Shiva Cement Limited to improve the Environment:-

- **Concrete road developed in Coal Stock Yard.**
- **Water spraying is being done three times at inside and outside roads for reducing of fugitive emissions.**
- **Plantation done at vacant spaces.**

For Shiva Cement Limited

[Signature]
17/08/2020
Operation Head
