



CIN L26942OR1985PLC001557

SHIVA CEMENT LIMITED

AT. : TELEGHANA
P.O. : BRINGATOLI
TEHSIL : KUTRA
DIST. : SUNDARGARH,
ODISHA. INDIA. PIN-770018

SCL/MINES/ENV./(4)-2021-22

Date: 20.11.2021

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


Ref: Final Order dated 04.03.2014 of National Green Tribunal, New Delhi in Application No.287 of 2013
Sub: HalfYearly Compliance Report (April-2021 to September-2021)

Dear Sir,

Under the reference and subject mentioned above, we are pleased to enclose herewith the half yearly compliance report for the period April-2021 to September-2021 to the conditions laid down by Hon'ble National Green Tribunal, New Delhi vide its final order dated 4th March 2014 in Application No. 287 of 2013 in favour of our Khatkurbahal Limestone & Dolomite Mines.

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 Khatkurbahal L/D Mines of
M/s Shiva Cement Ltd.


Shubhant Kumar Pradhan
AGM- Mines
Khatkurbahal L/D Mines



Encl: As above

- 1) HY Compliance report with Supportive Annexures
- 2) Environment Monitoring data for the period April-2021 to September-2021

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, PariveshBhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012
- 3) The Regional Officer, State Pollution Control Board, Odisha, Sector-5, Rourkela, Sundergarh- 756019

M/s SHIVA CEMENT LIMITED		
P/25, CIVIL TOWNSHIP, PO. ROURKELA, DIST. SUNDARGARH (ODISHA), PIN – 769004		
COMPLIANCE STATUS OF ORDER/JUDGMENT OF HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI VIDE ITS ORDER/JUDGMENT DATED 4th MARCH 2014 IN APPLICATION NO. 287 OF 2013 IN FAVOUR OF OUR KHATKURBAHAL LIMESTONE & DOLOMITE MINES, VILLAGE: KHATKURBAHAL, PO/TEHSIL. KUTRA, DIST. SUNDARGARH (ODISHA)		
Half Yearly Compliance for the period from April 2021 to September 2021		
Sl. No.	Specific Conditions	Compliance
(i)	Environmental Clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.	Not Applicable
(ii)	The project proponent shall obtain Consent to Establish and Consent to Operate from the Odisha State Pollution Control Board and effectively implement all the conditions stipulated therein.	Noted and will be complied
(iii)	Appropriate mitigate measures shall be taken to prevent pollution of the Sankh River in consultation with the State Pollution Control Board.	Noted and agreed
General Conditions		Compliance
(i)	The Project proponent shall ensure that no natural water course and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken for protection of the 1 st order and 2 nd order streams, if any emanating/passing through the mine lease during the course of mining operation.	As of now the expansion has not been effected however we shall comply with the said condition when the expansion project is started.
(ii)	The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.	The generated top soil is being stored in the earmarked area only. At present the top soil is being used for plantation purpose.
(iii)	The overburden (OB) generated during the mining operation shall be temporarily stacked at earmarked dump site (s) only for the purpose of backfilling. Monitoring and management of the rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar on six monthly basis.	Over burden/waste rock is stacked at the earmarked areas as per approved mining plan. There is no overburden generated for the Period of Apr-21 to Sep-21. However earlier generated overburden has been stabilized without any risk of slope stability.
(iv)	Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary OB and mineral dumps to arrest flow of silt and sediment directly into the Sankh River and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after the monsoon and maintained properly. Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be	Two nos. of settling tanks are available in mines to arrest the silt and sedimentation. There is no direct water from mine pit is going into the Sankh River which is 4 KM away from our mines. Mines surface runoff water is being used for watering in mine area, roads & also utilized for vegetation development in & around the mines.



	constructed both around the mine pit and temporary over burden dumps to prevent runoff water and flow of sediments directly into the Sankh river other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	Appropriate size of garland drain & Settling tank has been constructed to prevent the runoff water & flow of sediments. The Garland drains & settling tanks are being maintained properly on regular basis. The photos are attached as Annexure-I
(v)	Dimension of the retaining wall at the toe of the temporary OB dumps and the OB benches within the mine to check run-off and siltation should be based on the rain fall data.	Noted and agreed.
(vi)	Plantation shall be raised in a 7.5 m wide green belt in the safety zone around the mining lease backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO / Agriculture Department. The density of the tree should be around 1000 plants per ha. Green belt shall be developed all along the mine lease area in a phased manner and shall be completed with the first five years.	As of now, we have surface Rights in 75.83 Acres (30.687 Ha.) out of 179 Acres of ML area. Plantation has been done in the mine lease area. 300 nos. of plantation have been carried out for the Period Apr-21 to Sep-21. The Photos of the same are attached as Annexure-II .
(vii)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Dedicated water tanker has been deployed for spraying of water on haul roads and other dust prone areas to control fugitive emission in mining area. The same practice be continued after expansion project. The Photo is attached as Annexure- III . Environment Monitoring is being carried out on regular basis by NABL accredited agency. All the results are within the limit. The monitoring reports for the period Apr-21 to Sep-21 is attached as Annexure-IV .
(viii)	The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	Rain water harvesting to augment the ground water resources in mining area will be taken up after completion of expansion project. We have submitted a letter to CGWB in this regard. The copy of the letter is attached as Annexure-V
(ix)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring (at least four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season) shall be carried out in consultation with	Regular monitoring of ground water level and quality is being carried out by NABL accredited agency on regular basis and results are submitted to CGWA on quarterly basis. The same results are also sent to MoEF&CC in Half yearly basis along with compliance report. The Monitoring report is attached as



	the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubaneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	Annexure-IV.
(x)	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water required for the project	Permission Letter No. 21-4(304)/CGWA/SER/2011-166, Dated-14.02.2011 from Central Ground Water Authority, Quantity of 798 m3/day from mine pit and one bore well. The letter is attached as Annexure-VI
(xi)	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.	Rain water harvesting measures have been taken and the same have been inspected by CGWB officials during their visit on June 2017.
(xii)	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Vehicles are regularly maintained and the emissions are under control. Limestone is transported from Mines to Plant in covered vehicles.
(xiii)	Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Control blasting methods are being adopted
(xiv)	Drills shall either be operated with dust extractors or equipped with water injection system.	Wet drilling system is in practice now.
(xv)	Mineral handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Bag filter has been provided at Crusher. Water sprinklers have also been provided above the feeder. Bag filters has also been provided at screen and secondary crusher. Bag filters were properly maintained and operated.
(xvi)	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.	STP and ETP shall be provided after expansion project.
(xvii)	Pre-placement medical examination and periodical medical examination of the worker engage in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination and periodical medical examination of the worker engage in the project is being carried out as per mines rules and record maintained.
(xviii)	Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. the housing may be in the form of temporary structures to be removed after	Noted and will be complied wherever feasible during expansion project.



	the completion of the project.	
(xix)	The critical parameters such as SPM, RSPM (Particulate matter with size less than 10 micron i.e., PM10), NO _x in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a displayed board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	SPM, RSPM and NO _x are being carried out monthly basis by NABL accredited agency and results are being displayed outside mines office and it is uploaded in our company website. Peak particle velocity and quality of discharged water shall be monitored after completion of expansion project. Six monthly compliance report is being uploaded on company website. The Environment Monitoring Report for the period Apr-21 to Sep-21 is attached as Annexure-IV
(xx)	A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment and Forests 5 years in advance of final mine closure for approval.	Noted and agreed.
(xxi)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted and will be complied.
(xxii)	No change in the calendar plan including excavation, quantum of mineral and waste should be made.	Noted and agreed.
(xxiii)	Conservation measures for protection of flora and fauna in the core and buffer zone should be drawn up in consultation with the local forest and wildlife department and effectively implemented.	Common floras are Shorea Robusta, Adina, Cardifolia, Anogeious Latifolia and Mangifera Indica, so we are concentrating for planting local species as much as possible. For buffer zone we will contact the concern dept. The list of flora & fauna of 10 Km radius is attached as Annexure-VII
(xxiv)	Four ambient air quality – monitoring stations should be established in the core zone as well as in the buffer zone should for RSPM, SPM, SO ₂ and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Complied and regularly submitted to OSPCB/CPCB. The Environment Monitoring report for the period Apr-21 to Sep-21 is attached as Annexure-IV
(xxv)	Data on ambient air quality (RSPM, SPM, SO ₂ and NO _x) should be regularly submitted to the Ministry of Environment and Forests including its Regional office located at Bhubaneswar and the State Pollution Control Board/Central Pollution Control Board once in six months.	Complied and regularly submitted to OSPCB/CPCB. The Monitoring report is attached as Annexure-IV .
(xxvi)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Dedicated water tanker is being engaged for Water spraying on haul roads, loading and unloading areas is being done regularly. The same practice will be



		continued after expansion project. The Photograph is attached as Annexure-III
(xxvii)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs.	Noise levels are maintained below 85 dBA in work environment. Ear plugs are provided to the workers in Mines. The monitoring reports for the period Apr-21 to Sep-21 is attached as Annexure-IV
(xxviii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Presently we do not have workshop in mining areas and therefore no waste water is generated. However, after expansion project workshop will be provided and trade effluent will be treated as prescribed.
(xxix)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	Dust mask are provided to workers in mining area. Regular safety training is also provided.
(xxx)	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Occupational health surveillance program of the workers has been implemented. Regular health checkup of workers is also being done for the workers working in dust prone area.
(xxxii)	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Separate environment management cell with suitable qualified personnel is in place under the control of plant head. The Organogram is attached as Annexure-VIII
(xxxiii)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar.	Noted and agreed. Environment expenditure incurred for the period April-21 to September-21 is attached as Annexure- IX
(xxxiii)	The Project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Noted and will be informed.
(xxxiv)	The Regional Office of the Ministry located at Bhubaneswar 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 /information/monitoring reports.	Noted and will be complied.
(xxxv)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environmental and Forests, its Regional Office Bhubaneswar, the respective Zonal Office of CPCB and the SPCB. The proponent shall upload the status of	Six monthly compliance report of EC condition including the results of monitored data is regularly send to regional office, MoEF&CC.



	compliance of the EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar, the respective Zonal Office of CPCB and the SPCB.	
(xxxvi)	A copy of the 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 also be put on the website of the Company by the proponent.	Noted
(xxxvii)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and the Collector's office / Tehsildar's Office for 30 days.	Noted
(xxxviii)	The environmental statement for each financial year ending 31st 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 condition and shall also be sent to the Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.	The environmental statement for each financial year ending 31 st March in Form-V is regularly sent to the SPCB. The Environment Statement for the FY 20-21 was submitted to OSPCB on date : 22.09.2021 The Environment Statement is attached as Annexure-X
(xxxix)	The project authorities should 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 State Pollution Control Board and also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar".	----


 For M/s. SHIVA CEMENT LIMITED
 Manager
 Khatibahal L/D Mines
 (AUTHORISED SIGNATORY)
 Shiva Cement Ltd.

Garland Drain





Settling Tank







**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF APRIL
2021**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

Khatkurbahal, P.o. = Kutra, Dist.- Sundardarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

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

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W : www.mitrask.com

Ref. No. BBL/ENV/2560

DATE: 04/05/2021

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES


Address : Khatkurbahal, 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 (mg/m^3)
1	22/23.04.2021	Office Site (South)	61.4	33.5	6.8	20.4	0.29
2	22/23.04.2021	Mining Site (South)	64.6	36.3	6.6	19.6	0.28
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): 731			Temperature °C: 29-41		Climatic condition: Clear & Sunny		

Checked by: 



For Mitra S. K. Private Limited


Authorised Signatory

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CIN: U51909WB1956PTC023037

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Ref No./BBL/ENV/2561

Date: 04/05/2021

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES

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

SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	22/23.04.2021	65.3	42.6	44.6
2.	Nearest Village	22/23.04.2021	49.4	38.2	38.8

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

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

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

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

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Ref. No. BBL/ENV/2562

Date: 04/05/2021

CERTIFICATE OF ANALYSIS

Name of the Mines :		M/s. KHATKURBAHAL LIMESTONE MINES		
Address:		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)		
Sampling Location:		Jharina nala Up Stream		
Date of sampling:		23/04/2021		
Sl. No.	Test Parameters	Unite	Max. Tolerance Limit as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Colour	Hazen	5	<1.0
2	Odour	---	Unobjectionable	Unobjectionable
3	pH at 26°C	---	5.5-9.0	7.03
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F)	mg/l	2.0	0.34
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.72
8	Manganese (as Mn)	mg/l	2.0	<0.02
9	Nitrate (as NO ₃)	mg/l	10.0	0.68
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	<0.001
11	Selenium (as Se)	mg/l	0.05	<0.005
12	Cadmium (as Cd)	mg/l	2.0	<0.001
13	Cyanide (as CN)	mg/l	0.2	<0.01
14	Lead (as Pb)	mg/l	0.1	<0.005
15	Mercury (as Hg)	mg/l	0.01	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.01
17	Arsenic (as As)	mg/l	0.2	<0.01
18	Total Chromium (as Cr)	mg/l	2.0	<0.01
19	Zinc (as Zn)	mg/l	5.0	<0.02
20	Hexavalent Chromium (as Cr+6)	mg/l	0.1	<0.01
21	Vanadium as V	mg/l	0.2	<0.2
22	Total Suspended Solid (as TSS)	mg/l	100	16.0
23	Temperature	°C	---	25.0
24	Dissolved Oxygen	mg/l	---	5.7
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	4.6
26	Chemical Oxygen Demand (COD)	mg/l	250	20.0
27	Oil and Grease	mg/l	10	<1.4
28	Ammoniacal Nitrogen (as N)	mg/l	50	0.12
29	Total Kjeldahl Nitrogen	mg/l	100	0.56
30	Sulphide (as S)	mg/l	2.0	<0.1
31	Free Ammonia	mg/l	5.0	<0.1
32	Particle size of suspended solids	---	850 µm IS Sieve	Pass 850 µm IS Sieve
33	Dissolved Phosphate (as P)	mg/l	5	<0.05
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:-




For Mitra S. K. Private Limited

Authorized Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF JUNE
2021**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

Khatkurbahal, P.o. – Kutra, Dist.- Sundardarh
(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//20615

DATE: 05/07/2021

AMBIENT AIR QUALITY MONITORING REPORT

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES
Address : Khatkurbahal, Kutra, Dist. Sundergarh (Odisha)

Sl. No.	Date of Monitoring	Location	Concentration of Pollutants										Benzene (a) pyrene (ng/m ³)	
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)		
1	24/25.06.2021	Office Site (South)	56.7	31.2	6.6	19.8	0.30	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5
2	24/25.06.2021	Mining Site (South)	59.5	32.6	6.4	19.2	0.27	<20.0	<10.0	<0.01	<5.0	<1.0	<4.2	<0.5
Limit as per CPCB notification, New Delhi, 18th Nov, 2009. for Ambient air quality			100	60	80	80	2	180	4000	1	20	6	5	1
Sampling and Analysis done according to			IS: 5182 (Part-23) -1999	USEPA CFR-40, Part-50, Appendix-L	IS: 5182 (Part-2) -2001	IS: 5182 (Part-6) -2006	IS 5182:: Part. 10-1999	Air Sampling, 3 rd Edn. By James P. Lodge (Method-411)	Air Sampling, 3 rd Edn. By James P. Lodge (Method-401)	EPA IO-3.2	EPA IO-3.2	APHA 22nd. 3114 C	IS 5182: Part. 11	IS 5182: Part. 12
Barometric pressure (mm of Hg):			734	Temperature °C:			27 - 36	Climatic condition:			Cloudy			

Checked by:



For Mitra S. K. Private Limited
Authorised Signatory

H. O.: Shraichi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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CIN: U51909WB1956PTC023037

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Ref No./BBL/ENV/2616

Date: 05/07/2021

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES

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

SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	24/25.06.2021	64.8	38.1	51.1
2.	Mines Office Area	24/25.06.2021	55.9	38.3	42.8
3.	Nearest Village	24/25.06.2021	52.9	38.3	40.4

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

A/P.O.: BARBIL Ward No-6
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Ref. No. BBL/ENV/2618

DATE: 05/07/2021

CERTIFICATE OF ANALYSIS

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)
Sampling Location :	Tube well Water near Village
Type of Sample :	Ground Water (Buffer Zone)
Date of sampling :	24/06/2021

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

Sl No.	Test Parameters	Norms as per IS:10500-2012	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 – 2012

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	15	<1.0
2	Odour	---	Agreeable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	7.04
4	Turbidity	NTU	1	5	4.4
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	382.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.001
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	67.0
10	Chloride (as Cl)	mg/l	250	1000	37.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.28
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	0.12
15	Magnesium (as Mg)	mg/l	30	100	23.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO ₃)	mg/l	45	No Relaxation	12.0
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	<1.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	228.0
22	Total Hardness (as CaCO ₃)	mg/l	200	600	268.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	≤0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	≤0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.01	0.05	<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	Pesticide	mg/l	---	---	<0.005
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005

Checked by : 



For Mitra S.K. Private Limited

Authorised Signatory

CERTIFICATE OF ANALYSIS

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)
Sampling Location :	Bore well Water near Mines Office
Type of Sample :	Ground Water
Date of sampling :	24/06/2021

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

Sl No.	Test Parameters	Norms as per IS:10500-2012	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 – 2012

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	15	<1.0
2	Odour	---	Agreeable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	7.50
4	Turbidity	NTU	1	5	2.4
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	504.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.001
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	96.0
10	Chloride (as Cl)	mg/l	250	1000	108.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.14
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	≤0.05
15	Magnesium (as Mg)	mg/l	30	100	14.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO ₃)	mg/l	45	No Relaxation	4.2
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	8.6
21	Alkalinity (as CaCO ₃)	mg/l	200	600	272.0
22	Total Hardness (as CaCO ₃)	mg/l	200	600	300.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	≤0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic(as As)	mg/l	0.01	0.05	<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	Pesticide	mg/l	---	---	<0.005
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005

Checked by: 



For Mitra S.K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

A/P.O.: BARBIL Ward No-6
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Ref. No. BBL/ENV/2620

Date: 05/07/2021

GROUND WATER LEVEL MONITORING

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES	
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
25.06.2021	Well at Village Site	2.80
25.06.2021	Mines Bore well	6.20

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

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

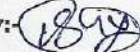
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Ref. No. BBL/ENV/2621

Date: 05/07/2021

CERTIFICATE OF ANALYSIS

Name of the Mines :		M/s. KHATKURBAHAL LIMESTONE MINES		
Address:		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)		
Sampling Location :		Jharia nala Up Stream		
Type of Sample :		Surface Water		
Date of sampling :		25/06/2021		
Sl. No.	Test Parameters	Unite	Max. Tolerance Limit as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Colour	Hazen	5	<1.0
2	Odour	---	Unobjectionable	Unobjectionable
3	pH at 26°C	---	5.5-9.0	7.30
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F)	mg/l	2.0	0.22
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.64
8	Manganese (as Mn)	mg/l	2.0	<0.02
9	Nitrate (as NO ₃)	mg/l	10.0	<0.5
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	<0.001
11	Selenium (as Se)	mg/l	0.05	≤0.005
12	Cadmium (as Cd)	mg/l	2.0	<0.001
13	Cyanide (as CN)	mg/l	0.2	<0.01
14	Lead (as Pb)	mg/l	0.1	<0.005
15	Mercury (as Hg)	mg/l	0.01	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.01
17	Arsenic (as As)	mg/l	0.2	<0.01
18	Total Chromium (as Cr)	mg/l	2.0	<0.01
19	Zinc (as Zn)	mg/l	5.0	≤0.02
20	Hexavalent Chromium (as Cr+6)	mg/l	0.1	≤0.01
21	Vanadium as V	mg/l	0.2	<0.2
22	Total Suspended Solid (as TSS)	mg/l	100	6.7
23	Temperature	°C	---	25.0
24	Dissolved Oxygen	mg/l	---	5.6
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	8.8
26	Chemical Oxygen Demand (COD)	mg/l	250	32.0
27	Oil and Grease	mg/l	10	<1.4
28	Ammoniacal Nitrogen (as N)	mg/l	50	≤0.1
29	Total Kjeldahl Nitrogen	mg/l	100	0.68
30	Sulphide (as S)	mg/l	2.0	<0.1
31	Free Ammonia	mg/l	5.0	<0.1
32	Particle size of suspended solids	---	850 µm IS Sieve	Pass 850 µm IS Sieve
33	Dissolved Phosphate (as P)	mg/l	5	<0.05
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent

Checked by: 



For Mitra S. K. Private Limited

Authorized Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF JULY
2021**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

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

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

A/P.O.: BARBIL Ward No-6
 Dist.: Keonjhar, Odisha - 758035
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Ref. No. BBL/ENV/2646


DATE: 02/08/2021

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES

Address : Khatkurbahal, 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 (mg/m^3)
1	20/21.07.2021	Office Site (South)	52.2	27.8	6.4	19.2	0.29
2	20/21.07.2021	Mining Site (South)	56.4	30.3	6.2	18.2	0.26
2	20/21.07.2021	Khaturbahal Village	44.5	21.8	6.4	18.6	0.27
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): 731			Temperature °C: 26-35		Climatic condition: Cloudy		

Checked by:- 



For Mitra S. K. Private Limited


 Authorised Signatory

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

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Ref No./BBL/ENV/2647

Date: 02/08/2021

CERTIFICATE OF NOISE MONITORING

Name of the Mines : M/s. KHATKURBAHAL LIMESTONE MINES


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

SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	20/21.07.2021	49.5	30.6	36.2
2.	Mines Office Area	20/21.07.2021	45.6	31.1	33.1
3.	Khatkurbahal Village	20/21.07.2021	39.5	31.3	29.7

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

A/P.O.: BARBIL Ward No-6
Dist.: Keonjhar, Odisha - 758035
GIN: UB1909WB1056PTC023037



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Ref. No.BBL/ENV/2648

Date: 02/08/2021

GROUND WATER LEVEL MONITORING

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES	
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
20.07.2021	Well at Khatkurbahal Village	5.1
20.07.2021	Near Mines Office Bore well	7.2

Checked by:-



For Mitra S. K. Private Limited

Authorized Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF AUGUST
2021**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

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

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

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Ref. No. BBL/ENV/2696


DATE: 02/09/2021

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines :			M/s. KHATKURBAHAL LIMESTONE MINES				
Address :			Khatkurbahal, 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 (mg/m^3)
1	16/17.08.2021	Office Site (South)	50.6	26.7	6.2	18.8	0.28
2	16/17.08.2021	Mining Site (South)	53.4	29.5	6.0	18.4	0.27
2	16/17.08.2021	Khaturbahal Village	42.2	21.3	6.2	18.2	0.25
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): 731			Temperature °C: 26-36		Climatic condition: Cloudy		

Checked by:- 

For Mitra S. K. Private Limited


 Authorised Signatory

Mitra S. K. Private Limited

A/P.O.: BARBIL Ward No-6
Dist.: Keonjhar, Odisha - 758035
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Ref No./BBL/ENV/2697

Date: 02/09/2021

CERTIFICATE OF NOISE MONITORING

Name of the Mines :		M/s. KHATKURBAHAL LIMESTONE MINES			
Address :		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)			
SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	18/19.08.2021	49.7	29.0	36.3
2.	Mines Office Area	18/19.08.2021	49.4	29.6	36.0
3.	Khatkurbahal Village	18/19.08.2021	39.3	30.6	29.5

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	SILENE ZONE	50	40

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

AVP.O.: BARBIL Ward No-6
Dist.: Keonjhar, Odisha - 758035
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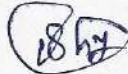
Ref. No. BBL/ENV/2698

DATE: 02/09/2021

ANALYSIS REPORT OF FUGITIVE AIR

Name of the Mines:		M/s. KHATKURBAHAL LIMESTONE MINES		
Address:		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)		
Sl.No.	Date of Sampling	Location	Concentration of Pollutants: $\mu\text{g}/\text{m}^3$	
			RPM	SPM
1	19.08.2021	Near Mines Pit	72.6	241.8
Sampling & Analysis done According to			2005IS: 5182 (Part-23)	IS: 5182 (Part-4) 1999 Rffm:
Barometric pressure (mm of Hg)				731
Temperature $^{\circ}\text{C}$				26 - 36
Climatic condition				Cloudy

Checked by:-



For Mitra S. K. Private Limited


Authorised Signatory

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

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W : www.mitrask.com

Ref No./BBL/ENV/2699

Date: 02/09/2021

CERTIFICATE OF WORK ZONE NOISE MONITORING

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES				
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)				
SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Near Mines Pit	18/19.08.2021	51.4	30.9	37.8

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

19.10.95 OCCUPATIONAL NOISE EXPOSURE AS PER OCCUPATIONAL SAFETY AND HELTH ADMINISTRATION

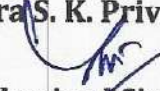
Duration per day, hours	Sound Level dB(A)
8	90
6	92
4	95
3	97
2	100
1 and 1/2	102
1	105
1/2	110
¼ or less	115

TABLE G-16 = PERMISSIBLE NOISE EXPOSURES (i)

Checked by:-



For Mitra S. K. Private Limited


Authorised Signatory

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

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Ref. No. BBL/ENV/2703

DATE: 02/09/2021

CERTIFICATE OF ANALYSIS

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)
Sampling Location :	Tube well Water at Khatkurbahal Village
Type of Sample :	Ground Water (Buffer Zone)
Date of sampling :	19/08/2021

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

Sl No.	Test Parameters	Norms as per IS:10500-2012	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 – 2012

Sl. No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	15	≤1.0
2	Odour	---	Agreeable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	6.77
4	Turbidity	NTU	1	5	4.8
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	356.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.001
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	96.0
10	Chloride (as Cl)	mg/l	250	1000	48.0
11	Copper (as Cu)	mg/l	0.05	1.5	≤0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.82
13	Free Residual Chlorine	mg/l	0.2	1.0	<0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	0.23
15	Magnesium (as Mg)	mg/l	30	100	12.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO ₃)	mg/l	45	No Relaxation	23.0
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	<1.0
21	Alkalinity (as CaCO ₃)	mg/l	200	600	212.0
22	Total Hardness (as CaCO ₃)	mg/l	200	600	290.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.01	0.05	<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	Pesticide	mg/l	---	---	≤0.005
31	Poly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	≤0.005

Checked by 



For Mitra S.K. Private Limited
 Authorised Signatory 

At/P.O.: BARBIL Ward No-6
 Dist.: Keonjhar, Odisha - 758036
 CIN: U51900WB1956PTC023037

T : +91 94370 09815, 94370 09820, 94370 75269
 E : barbil@mitrask.co.in
 W : www.mitrask.com

Ref. No. BBL/ENV/2700

DATE: 02/09/2021

CERTIFICATE OF ANALYSIS


Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)
Sampling Location :	Bore well Water near Mines Office
Type of Sample :	Ground Water
Date of sampling :	19/08/2021

MICROBIOLOGICAL ANALYSIS OF WATER AS PER IS: 10500 – 2012

SI No.	Test Parameters	Norms as per IS:10500-2012	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 – 2012

SI. No.	Test Parameters	UOM	Norms as per IS: 10500-2012		Results
			Desirable Limit	Permissible Limit	
1	Colour	Hazen	5	15	<1.0
2	Odour	---	Agreeable	---	Unobjectionable
3	pH at 25°C	---	6.5-8.5	No Relaxation	6.90
4	Turbidity	NTU	1	5	4.6
5	Total Dissolved Solids (as TDS)	mg/l	500	2000	412.0
6	Aluminium (as Al)	mg/l	0.03	0.2	<0.001
7	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	<0.02
8	Boron (as B)	mg/l	0.5	1.0	<0.5
9	Calcium (as Ca)	mg/l	75	200	100.0
10	Chloride (as Cl)	mg/l	250	1000	82.0
11	Copper (as Cu)	mg/l	0.05	1.5	<0.02
12	Fluoride (as F)	mg/l	1.0	1.5	0.52
13	Free Residual Chlorine	mg/l	0.2	1.0	≥0.1
14	Iron (as Fe)	mg/l	0.3	No Relaxation	0.28
15	Magnesium (as Mg)	mg/l	30	100	17.0
16	Manganese (as Mn)	mg/l	0.1	0.3	<0.02
17	Nitrate (as NO ₃)	mg/l	45	No Relaxation	6.1
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	9.8
21	Alkalinity (as CaCO ₃)	mg/l	200	600	252.0
22	Total Hardness (as CaCO ₃)	mg/l	200	600	321.0
23	Cadmium (as Cd)	mg/l	0.003	No Relaxation	≤0.001
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.005
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001
27	Arsenic (as As)	mg/l	0.01	0.05	<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	Pesticide	mg/l	---	---	<0.005
31	Polly nuclear Aromatic hydrocarbon	mg/l	0.0001	No Relaxation	<0.005

Checked by: 



For Mitra S.K. Private Limited

Authorised Signatory

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

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W : www.mitrask.co

Ref. No. BBL/ENV/2702

Date: 02/09/2021

CERTIFICATE OF ANALYSIS

Name of the Mines :		M/s. KHATKURBAHAL LIMESTONE MINES		
Address:		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)		
Sampling Location :		Jharia nala Up Stream		
Type of Sample :		Surface Water		
Date of sampling :		19/08/2021		
Sl. No.	Test Parameters	Unite	Max. Tolerance Limit as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Colour	Hazen	5	<1.0
2	Odour	---	Unobjectionable	Unobjectionable
3	pH at 26°C	---	5.5-9.0	8.12
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F)	mg/l	2.0	0.84
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.46
8	Manganese (as Mn)	mg/l	2.0	≤0.02
9	Nitrate (as NO ₃)	mg/l	10.0	0.59
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	<0.001
11	Selenium (as Se)	mg/l	0.05	<0.005
12	Cadmium (as Cd)	mg/l	2.0	<0.001
13	Cyanide (as CN)	mg/l	0.2	<0.01
14	Lead (as Pb)	mg/l	0.1	<0.005
15	Mercury (as Hg)	mg/l	0.01	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.01
17	Arsenic (as As)	mg/l	0.2	≤0.01
18	Total Chromium (as Cr)	mg/l	2.0	<0.01
19	Zinc (as Zn)	mg/l	5.0	<0.02
20	Hexavalent Chromium (as Cr+6)	mg/l	0.1	<0.01
21	Vanadium as V	mg/l	0.2	<0.2
22	Total Suspended Solid (as TSS)	mg/l	100	7.0
23	Temperature	°C	---	25.0
24	Dissolved Oxygen	mg/l	---	5.4
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	11.0
26	Chemical Oxygen Demand (COD)	mg/l	250	36.0
27	Oil and Grease	mg/l	10	<1.4
28	Ammoniacal Nitrogen (as N)	mg/l	50	<0.1
29	Total Kjeldahl Nitrogen	mg/l	100	0.3
30	Sulphide (as S)	mg/l	2.0	<0.1
31	Free Ammonia	mg/l	5.0	<0.1
32	Particle size of suspended solids	---	850 µm IS Sieve	Pass 850 µm IS Sieve
33	Dissolved Phosphate (as P)	mg/l	5	<0.05
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:-




For Mitra S. K. Private Limited

Authorized Signatory

A/P.O. : BARBIL Ward No - 6
Dist : Keonjhar, Odisha - 758035
CIN : U51909WB1956PTC023037
T : 06767 - 275209, 94370 75269
E : barbil@mitrask.co.in

Ref. No.BBL/ENV/2701

Date: 02/09/2021


GROUND WATER LEVEL MONITORING

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES	
Address :	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
19.08.2021	Well at Khatkurbahal Village	2.1
19.08.2021	Near Mines Office Bore well	7.6

Checked by:-



For Mitra S. K. Private Limited


Authorised Signatory

**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF SEPTEMBER
2021**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

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

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

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

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 E : barbil@mitrask.co.in
 W : www.mitrask.com

Ref. No. BBL/ENV/2760

DATE: 04/10/2021

ANALYSIS REPORT OF AMBIENT AIR

Name of the Mines :			M/s. KHATKURBAHAL LIMESTONE MINES				
Address :			Khatkurbahal, 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 (mg/m^3)
1	22/23.09.2021	Office Site (South)	47.3	24.4	6.4	19.2	0.27
2	22/23.09.2021	Mining Site (South)	51.8	27.2	6.2	18.8	0.26
2	22/23.09.2021	Khaturbahal Village	40.6	20.4	6.0	18.4	0.24
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): 730			Temperature °C: 25-34		Climatic condition: Cloudy		

Checked by:-




For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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

T : +91 94370 09815, 94370 09820, 94370 75269
E : barbil@mitrask.co.in
W : www.mitrask.com

Ref No./BBL/ENV/2761

Date: 04/10/2021

CERTIFICATE OF NOISE MONITORING

Name of the Mines :		M/s. KHATKURBAHAL LIMESTONE MINES			
Address :		Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)			
SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	22/23.09.2021	50.9	29.2	37.3
2.	Mines Office Area	22/23.09.2021	51.4	29.6	37.9
3.	Khatkurbahal Village	22/23.09.2021	48.0	30.4	34.9

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	SILENE ZONE	50	40

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

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

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E : barbil@mitrask.co.in
W : www.mitrask.com



Ref. No. BBL/ENV/2762

Date: 04/10/2021

GROUND WATER LEVEL MONITORING

Name of the Mines :	M/s. KHATKURBAHAL LIMESTONE MINES	
Address :	atkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
23.09.2021	Well at Khatkurbahal Village	1.2
23.09.2021	Near Mines Office Bore well	6.6

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory



CIN L26942OR1985PLC001557

SHIVA CEMENT LIMITED

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

Date – 04.08.2020

To,
The Regional Director
Central Ground water Board
South Eastern Region,
Bhujal Bhawan, Khandagiri
Bhubaneswar - 7510130

Sub: - Rain Water Harvesting & artificial Recharge Method

Dear Sir,

We would like to implement Rain Water Harvesting & artificial Recharge Method at our khatkurbahal Limestone & Dolomite Mines, M/s Shiva Cement Limited. You are therefore requested to guide us in this regard.

Thanking You,

Your's Faithfully

S.K PRADHAN

(Mines Manager)

Khatkurbahal L/D Mines

M/s Shiva Cement Limited

Phone : (Off). 0661 - 2664168.

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

E-mail-id : corporate@shivacement.com

भारतीय डाक



EG553204604IN IVR:697955320460

SP ROURKELA RMS COUNTER (76900)

Counter No:3.04/08/2020.15:16

To:REGIONAL DIRECTOR,KHANDAGIRI

PIN:751030, Khondagiri S.O

From:S YU PRADHAN,K K BAHAL

Wt:120ms

amt:41.30(Cash)Tax:6.30

<Track on www.indiapost.gov.in>

Central Ground Water Authority
 Ministry of Water Resources
 Government of India

No. 21-4(304)/CGWA/SER/2011-

Dated-

o,

M/s Shiva Cement Ltd.
 (Limestone & Dolomite Mine)
 P-25, Civil Township, Rourkela
 Orissa 769004

166
14 FEB 2011

Sub: Request for Ground Water clearance in respect of M/s Shiva Cement Ltd. for the proposed expansion of Raisings of limestone production unit at village Khatkurbahal, Block Kutra, Tehsil Rajgangpur, District Sundargarh, Orissa-reg.

Sir,

The area where the project falls comes under safe category as per the ground water assessment carried out by Central Ground Water Board. Since the total requirement of ground water is 798 m³/day (including the existing ground water abstraction of 417 m³/day), NOC is not required for ground water withdrawal from Central Ground Water Authority. However, to neutralize the adverse impact of ground water withdrawal that may arise on a long term basis, the industry/ project is advised to undertake the following measures:

1. Total ground water withdrawal shall not exceed the proposed quantity of 798 m³/day from mine pit and one borewell.
2. The abstraction structures should be fitted with water meter by the industry and monitoring of ground water abstraction to be undertaken accordingly on regular basis, at least once in a month. The data may be submitted on a yearly basis to the Regional Director, Central Ground Water Board, South Eastern Region, Bhubaneswar for perusal and records.
3. The industry should adopt and implement artificial recharge measures/rain water harvesting measures for augmenting the ground water resources of the area as per the hydrogeological investigation.
4. The industry shall ensure proper conservation measures, recycling and reuse of waste water after adequate treatment.
5. The industry shall monitor the ambient ground water regime of the area through piezometers and submit the data on a yearly basis to the Regional Director, Central Ground Water Board, South Eastern Region, Bhubaneswar for perusal and records.

Yours faithfully,

S. Bhattacharya
 (S. Bhattacharya) *14.2.11*
 Scientist 'D'

for Member Secretary

Copy to:

1. The Member Secretary, State Pollution Control Board, Orissa, Department of Forest & Environment, Government of Orissa, Parivesh Bhawan, A-118, Nilakantha Nagar, Unit VIII, Bhubaneswar, Orissa-751012, with a request to ensure that Rain Water Harvesting and Artificial Recharge methods are being implemented by the firm and the total quantity of ground water withdrawal is not exceeding 798 m³/day.
2. The Regional Director, Central Ground Water Board, South Eastern Region, Bhujal Bhawan, Khandagiri, Bhubaneswar-751030, Orissa. This has reference to your letter No. 5-22/SER/ CGWA/2010-94 dated 18.01.2011.
3. The TS to Chairman, Central Ground Water Board, NH-IV, Faridabad.

(S. Bhattacharya)
 Scientist 'D'
 for Member Secretary

16/11, Jamnagar House, Mansingh Road, New Delhi- 110011

Tel: (011) 23381089, 23384973; Fax (011) 23386743

e-mail: smsrml-cowb@nic.inweb site: <http://cgwb.gov.in>

Mines (MOEF)

OFFICE OF THE DIVISIONAL FOREST OFFICER, SUNDARGARH DIVISION

No. 44/11 JF/Misc/125 of 2010 Dt. 25/08/2010

To

The Manager,
Shiva Cement Ltd,
P-25, Civil Township
Rourkela-769004
Dist:-Sundargarh

Subj - Authenticated map & list of Flora and Fauna found in Core & Buffer zone Spreading over 10 KM radius over an area of 179.66 Acres of Khatkurbahal Limestone & Dolomite Mines of M/s Shiva Cement Ltd.

Ref:- Your Letter No. SCL/3001-80 dt. 12.08.2010


Sir,

As requested vide your letter under reference the list of Flora and Fauna submitted by you is checked with records of this office and revised list of Flora and Fauna with their Botanical / Zoological name generally found within Core zone and Buffer zone (Within 10 Km radius of the mining area) Khatkurbahal Limestone & Dolomite Mines of M/s Shiva Cement Ltd under this Division are enclosed here with along with location map duly authenticated by the Undersigned.

After examining the location map of mining lease area submitted by you, it is found that, there is no National Park / Sanctuary / Biosphere Reserve / Elephant Reserve / Tiger Reserve & Wildlife Corridors

Yours above.

Yours faithfully


Divisional Forest Officer- Cum
Wildlife Warden, Sundargarh
Forest Division.

LIST OF FLORA & FAUNA IN CORE ZONE OF M.L. AREA OF
KHATKURBAHAL LIME STONE AND DOLOMITE MINES OF M/S SIVA
CEMENT LTD.


List of Flora in Core Zone.

SL. NO.	BOTANICAL NAME	FAMILY	LOCAL NAME
1	<i>Acacia auriculiformis</i>	Mimosaceae	Acassia
2	<i>Ailanthus Excelsa</i>	Simarubaceae	Mahalimb, Mahal
3	<i>Anacardium occidentale</i>	Anacardiaceae	Kaju
4	<i>Artocarpus heterophyllus</i>	Maraceae	Panasa
5	<i>Butea monosperma</i>	Fabaceae	Patas
6	<i>Cassia fistula</i>	Caesalpiniaceae	Sunari
7	<i>Cassia siama</i>	Caesalpiniaceae	Chakunda
8	<i>Dalbergia latifolia</i>	Papilionaceae	Pahadi Sissoo
9	<i>Dalbergia sisoo</i>	Fabaceae	Sissoo
10	<i>Emblica officinalis</i>	Papilionaceae	Amia
11	<i>Eucalyptus</i>	Euphorbiaceae	Eucalipatas (Patas)
12	<i>Ficus Bengalensis</i>	Myrtaceae	Bara
13	<i>F. religiosa</i>	Moraceae	Aswastha
14	<i>Gmelina arborea</i>	Moraceae	Gambhari
15	<i>Madhua indica</i>	Verbenaceae	Mohua, Mahul
16	<i>Magnifera indica</i>	Sapotaceae	Amra
17	<i>Pterocarpus marsupium</i>	Anacardiaceae	Bija, Piasal
18	<i>Tamarindus indicus</i>	Papilionaceae	Tentuli
19	<i>Tectona grandis</i>	Caesalpiniaceae	Saguan, Teak


Divisional Forest Officer,
Sundargarh Division.

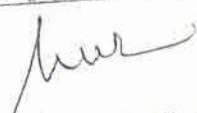
List of Fauna in Core Zone.

Sl No.	Scientific Name	Family	English Name	Common Name	Status	Wildlife Schedule
1	Canis aurous	Canidae	Jackal	Bilua	Common	II
2	Hyaena hyena	Hyaenidae	Hyaena	Heta Bagha	Rare	III
3	Birds of different species.					
4	Raptile					


Divisional Forest Officer,
Sundargarh Division.

List of Flora in Buffer Zone (within 10 KM)

SL. NO.	BOTANICAL NAME	FAMILY	LOCAL NAME
1	<i>Acacia auriculiformis</i>	Mimosaceae	Acassia
2	<i>Alanthus Excelsa</i>	Simarubaceae	Mahalimb, Mahal
3	<i>Anacardium occidentale</i>	Anacardiaceae	Kaju
4	<i>Artocarpus heterophyllus</i>	Maraceae	Panasa
5	<i>Butea monosperma</i>	Papilionaceae/ Fabaceae	Patas
6	<i>Cassia fistula</i>	Caesalpiniaceae	Sunari
7	<i>Cassia siama</i>	Caesalpiniaceae	Chakunda
8	<i>Dalbergia latifolia</i>	Papilionaceae/ Fabaceae	Pahadi Sissoo
9	<i>Dalbergia sissoo</i>	Papilionaceae	Sissoo
10	<i>Emblica officinalis</i>	Euphorbiaceae	Amra
11	<i>Eucalyptus</i>	Myrtaceae	Eucalipatas (Patas)
12	<i>Ficus Bengalensis</i>	Moraceae	Bara
13	<i>F. religiosa</i>	Moraceae	Aswastha
14	<i>Gmelina arborea</i>	Verbenaceae	Gambhari
15	<i>Madhua indica</i>	Sapotaceae	Mohua, Mahul
16	<i>Magnifera indica</i>	Anacardiaceae	Amba
17	<i>Pterocarpus marsupium</i>	Papilionaceae/ Fabaceae	Dija, Piasal
18	<i>Tamarindus indicus</i>	Caesalpiniaceae	Tentuli
19	<i>Tectona grandis</i>	Verbenaceae	Saguan, Teak
20	<i>Acacia catechu</i>	Mimosaceae	Khair
21	<i>Aegel mermelos</i>	Rutaceae	Bel
22	<i>A. Lebbeek</i>	Mimosaceae	Siris
23	<i>Azadirachta indica</i>	Meliaceae	Neem
24	<i>Bombax ceiba</i>	Mahvaceae	Simili
25	<i>Boswellia Serrata</i>	Burseraceae	Salai
26	<i>Bredelia retusa</i>	Euphrbiaceae	Kasi
27	<i>Haldina cordifolia</i>	Rubiaceae	Kurum
28	<i>Schleichera oleosa</i>	Sapindaceae	Kusum
29	<i>Shorea robusta</i>	Dipterocarpaceae	Sal
30	<i>Soymda febrifuga</i>	Meliaceae	Rohini
31	<i>Sterculia urens</i>	Sterculiaceae	Giridhini, genduli
32	<i>Syzygium cumini</i>	Myrtaceae	Jambu or jamun.

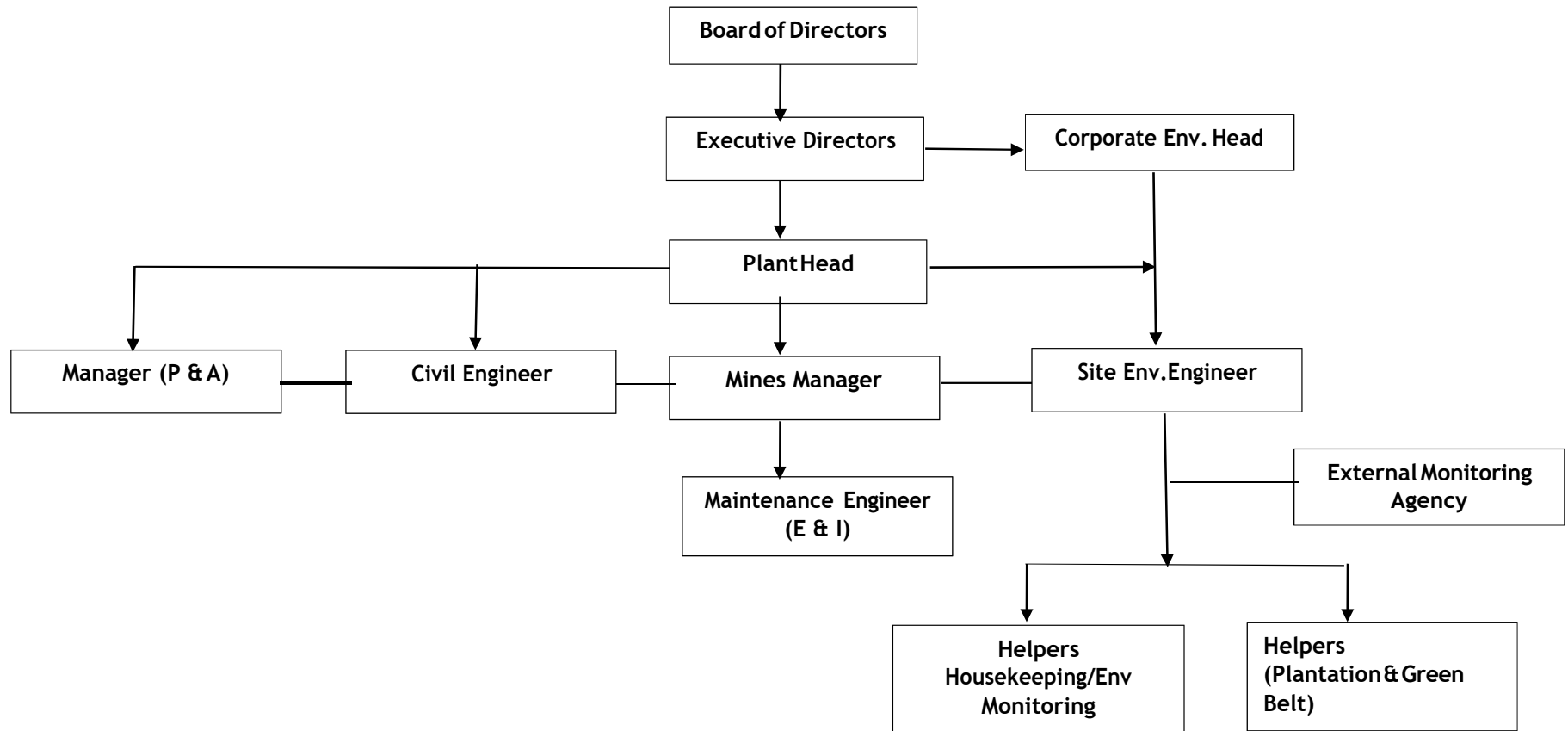

 Divisional Forest Officer,
 Sundargarh Division.

List of Fauna in Buffer Zone.

Sl No.	Scientific Name	Family	English Name	Common Name	Status	Wildlife Schedule
1	Canis aurous	Canidae	Jackal	Bilua	Common	II
2	Hyaena hyaena	Hyaenidae	Hyaena	Heta Bagha	Rare	III
3	Felis chusaffinis	Felidae	Jungle cat	Babnabiradi (Katas)	Rare	II
4	Funambulus pennanti	Scuturidea	Squirrel	Gunduchimusa	Common	IV
5	Herpestes auropunctatus	Viverridae	Small Indian Mongoose	Neular (Kuji)	Occasional	IV
6	Presbytis entellus	Cercopithecidae	Monkey	Mankada (Ham)	Common	II
7	Pteropus giganteus	Pteropodidae	Flying fox Bat	Badudi	Rare	IV
8	Mus musculus	Muridae	House mouse	Musa.	Common	V
9	Birds of different species.					
10	Raptile					


 Divisional Forest Officer,
 Sundargarh Division.

ORGANIZATION STRUCTURE OF EMC - Shiva Cement Ltd.



Environment Expenditure details for the period April-2021 to September-2021

S.no	Activity/Category	Expenditure in lacs
01	Environment Monitoring Services	1.07
02	Plantation	1.64
03	Dust Suppression	0.77
04	Housekeeping & Maintenance	1.29
05	Environment Display Board	0.05
Total		4.82



CIN L26942OR1985PLC001557

**SHIVA
CEMENT
LIMITED**PLOT NO. YY-5,
CIVIL TOWNSHIP
7&8 AREA, ROURKELA
ODISHA, INDIA. PIN - 769012.**22.09.2021****SCL/KKBL/2020-21/Form V**

To

Sr. Environmental Engineer (C)
State Pollution Control Board, Odisha
Department of Forest & Environment, Govt. of Odisha
ParibeshBhawan, A/118, Nilakantha Nagar, Unit – VIII
Bhubaneswar – 751012, Odisha.

**Sub:Environmental Statement for the financial year ending 31st March, 2021 forKhatkurbahal
L/D Mines of M/s Shiva cement Limited.**

Dear Sir

With reference to the above mentioned subject, please find enclosed Environmental Statement in Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, forKhatkurbahal L/D Mines of M/s Shiva cement Limited for the financial year ending 31st March 2021.

Kindly acknowledge the receipt.

Thanking You,

Yours faithfully

For Khatkurbahal L/D Mines
Of M/s SHIVA CEMENT LIMITED


(SHUBHRANT KUMAR PRADHAN)
Sr. Manager (Mines)

Encl:

Annual Environment Statement for the FY 2020-21

Copy to :

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

Phone : (Off). 0661 - 2664168.

●Works : Village : Teleghana, P.O. : Biringatoli, Kutra, Dist. - Sundargarh, Odisha - 770018

E-mail-id : corporate@shivacement.com

[FORM – V]

(See Rule 14)

Environmental statement for the *financial* year ending the 31st March 2021

PART – A

- (i) Name and address of the owner/occupier of the industry operation or process. **Khatkurbahal L/D Mines** : **Manoj Kumar Rustagi (Whole Time Director)**
At. Khatkurbahal, PO. Biringatoli
Dist. Sundargarh, Odisha, PIN - 770018
- (ii) Industry category Primary – (STC Code) Secondary – (SIC Code) :
- (iii) Production capacity – Units : 1,20,000 MT Year
- (iv) Year of Establishment : 1997
- (v) Date of last environmental statement submitted : 20.08.2020

PART – B

Water and Raw Material Consumption

- (i) Water consumption m³/d
Process: **N.A.**
Cooling : **20 KLD (Water Sprinkling)**
Domestic : **05 KLD**

Sl. No.	Name of Products	Process water consumption per unit of product output.	
		During the previous financial year	During the current financial year
(1)	Limestone	N.A.	N.A.
(2)			
(3)			

- (ii) Raw Material consumption

Sl. No.	*Name of raw Materials	Name of Products	Consumption of raw materials per unit of out put	
			During the previous financial year	During the current financial year
(1)	LIMESTONE	LIMESTONE	NA	NA
(2)				
(3)				
(4)				
(5)				
(6)				

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

Contd....P/2

PART – C

Pollution discharges to environment/unit of output (Parameter as specified in the consent issued)

(1)	Pollutants	Quality of Pollutants discharges (mass/day)	Concentrations of pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons.
(a)	Water	Nil	Nil	Nil
(b)	Air	NA	NA	NA

PART – D

HAZARDOUS WASTES

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

Sl. No.	Hazardous Wastes	Total Quantity (Kg.)	
		During the previous financial year	During the current financial year
	USED/SPENT OIL	Nil	Nil

- (a) From process : **NIL**
 (b) From pollution control facilities : **NIL**

PART – E

Solid Waste

Sl. No.	Solid Wastes	Total Quantity (Kg.)	
		During the previous financial year	During the current financial year
1.	Overburden	Nil	Nil
2.	Top soil	2,27,18,000	2,98,27,830

- (a) From process : **Nil**
 (b) From pollution control facilities : **Nil**
 (c) (1) Quantity recycled or re-utilized within the unit : **Nil**
 (2) Sold : **Nil**
 (3) Disposed : **Nil**

PART - F

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

NA

PART - G

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

- ✓ Two nos. of settling tanks are available in mines to arrest the silt and sedimentation.
- ✓ Mines surface runoff water is being used for watering in mine area, roads & also utilized for vegetation development in & around the mines.
- ✓ Appropriate size of garland drain & Settling tank has been constructed to prevent the runoff water & flow of sediments.
- ✓ Dedicated water tanker has been deployed for spraying of water on haul roads and other dust prone areas to control fugitive emission in mining area.
- ✓ Plantation is being carried out inside the mines as well as periphery of the mines.
- ✓ Monthly Environment Monitoring has been carried out by an NABL accredited agency.

PART - H

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

- ✓ Environmental monitoring display board has been installed at the main gate of the Mines.
- ✓ Appropriate size of garland drain & Settling tank has been constructed to prevent the runoff water & flow of sediments.
- ✓ Water Sprinkling is being carried out on daily basis through a dedicated Water tanker.
- ✓ Vehicles are regularly maintained and the emissions are under control. Limestone is transported from Mines to Plant through vehicles which is covered with tarpaulin.

PART - I

Any other particulars for improving the quality of the environment.

Total 550 numbers of saplings planted in both inside Mine lease area & outside lease area.

Dt: 22.09.2021

For Khatkurbahal L/D Mines
M/s Shiva Cement Limited


Shubrant Kumar Pradhan

Sr. Manager (Mines)
(S. K. PRADHAN)

Mines Manager
Khatkurbahal L&D Mines
M/s. Shiva Cement Ltd.