



CIN L26942OR1985PLC001557

SHIVA CEMENT LIMITED

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

Date: 20.11.2020

SCL/MINES/ENV./(2)-2020-21

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

Ref: Final Order dated 04.03.2014 of National Green Tribunal, New Delhi in Application No.287 of 2013


Sub: Half Yearly Compliance Report (April-2020 to September-2020)

Dear Sir,

Under the reference and subject mentioned above, we are pleased to enclose herewith the half yearly compliance report for the period April-2020 to Sep-2020 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.


Shubhram Kumar Pradhan
Sr. Manager Mines
Khatkurbahal L/D Mines

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

Phone : (Off). 0661 - 2684188.

•Works : Village : Teleghana, P.O. : Biringatoli, Kutra, Dist. - Sundargarh, Odisha - 770018
E-mail-id : corporate@shivacement.com

<p style="text-align: center;">M/s SHIVA CEMENT LIMITED P/25, CIVIL TOWNSHIP, PO. ROURKELA, DIST. SUNDARGARH (ODISHA), PIN – 769004</p>		
<p style="text-align: center;">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)</p>		
<p style="text-align: center;">Half Yearly Compliance for the period from April 2020 to September 2020</p>		
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 mitigative 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	Over burden/waste rock is stacked at the earmarked areas as per approved mining plan.

	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.	The overburden has been stabilized without any risk of slope instability. There is no overburden generated for the Period of April-20 to Sep-20
(iv)	<p>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.</p> <p>Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be 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.</p>	<p>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 drained water is being used for watering in mine area, roads & also utilized for vegetation development in & around the mines.</p> <p>Appropriate size of garland drain & Settling tank has been constructed to prevent the runoff water & flow of sediments.</p> <p>The Garland drains & settling tanks are being maintained properly on regular basis. The photos are attached as Annexure-I</p>
(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 48.21 Acres (19.51 Ha.) out of 179 Acres of ML area. Plantation has been done in the mine lease area. 150 nos. of plantation have been carried out for the Period April-20 to Sep-20. 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	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

	regard.	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 April-20 to Sep-20 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 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.	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 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 recent visit on June 2017.
(xii)	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be	Vehicles are regularly maintained and the

	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.	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. The details already has been submitted in our last compliance report dt: 18.08.2020.
(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 the completion of the project.	Noted and will be complied wherever feasible during expansion 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 the same will be uploaded on 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 April-20 to Sep-20 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, Anogeios 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 Monitoring report for the period April-20 to Sep-20 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 Photo 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 April-20 to Sep-20 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.
(xxxi)	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
(xxxii)	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-20 to September-20 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.

	<p>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.</p> <p>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.</p>		
(xxxvi)	<p>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.</p>	Noted	
(xxxvii)	<p>The environmental statement for each financial year ending 31st March in Form-V as 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.</p>	Noted	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 19-20 was submitted to OSPCB on date : 20.06.2020 The Environment Statement is attached as Annexure-X
(xxxviii)	<p>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*.</p>		

For M/s. SHIVA-CEMENT LIMITED


(AUTHORISED SIGNATORY)
(S. K. PRADHAN)

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

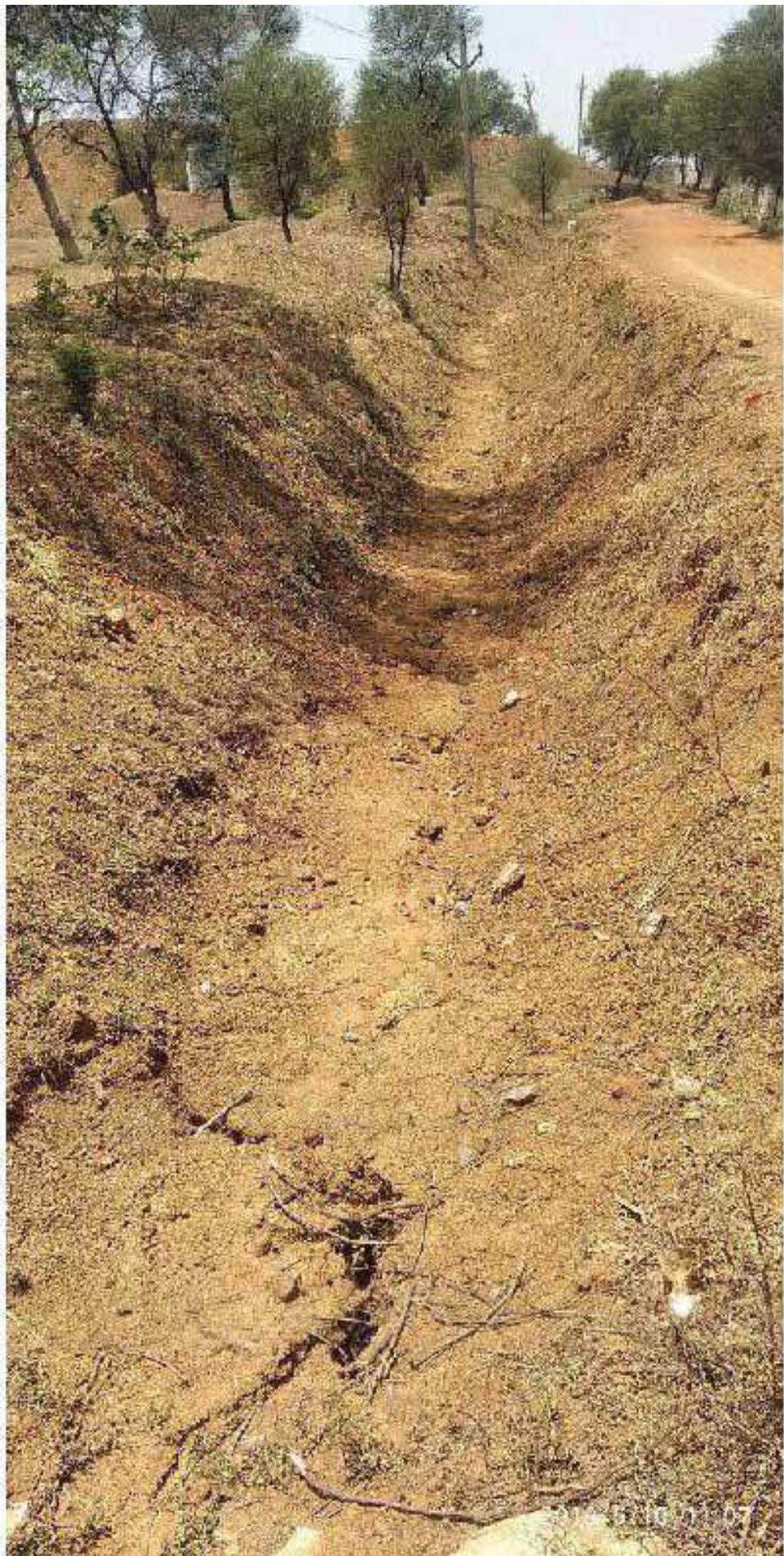


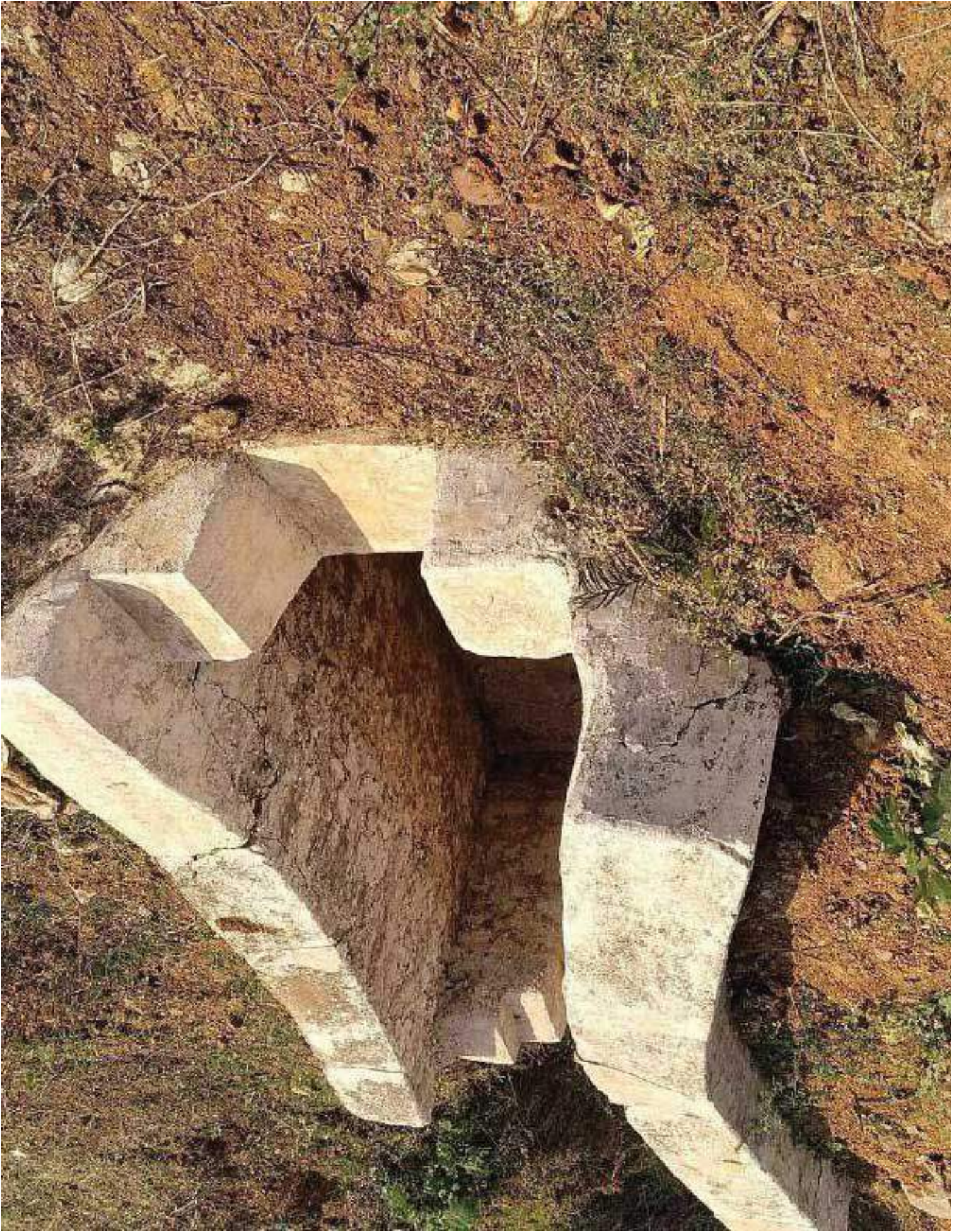
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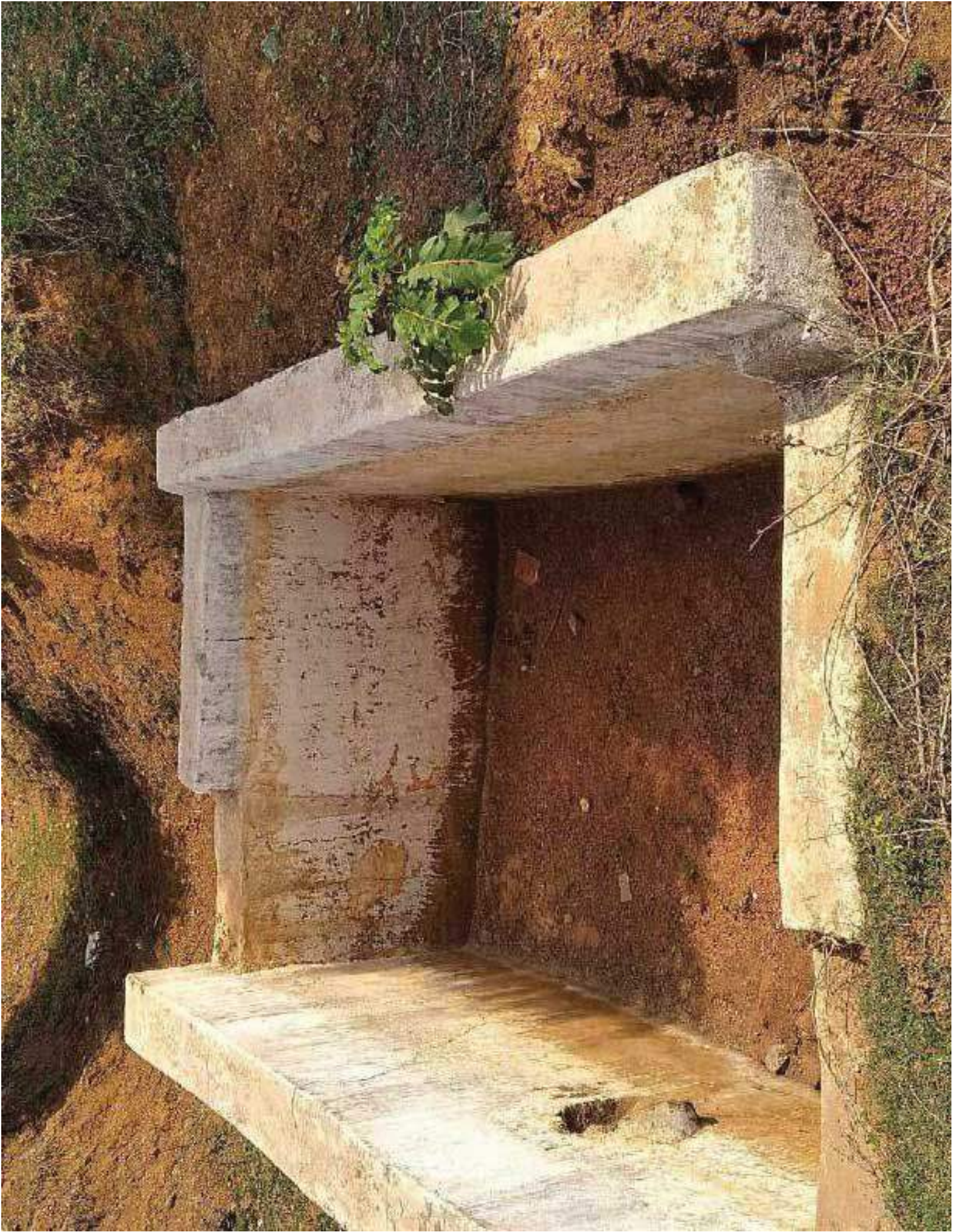


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Annexure-II







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

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

Khatakurbahal, P.o. - Katra, Dist.- Sundargarh
(Odisha)

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited



A/P.O. BARDI, Ward No-8
Dist: Kandhamal, Orissa - 758035
CIN: U57909WB1806PTC023007

T : +91 94370 08815, 94370 08820, 94370 75209
E : bardi@mitrask.com
W : www.mitrask.com

Ref. No. BBL/ENV/1939

DATE: 22/06/2020

ANALYSIS REPORT OF AMBIENT AIR

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

Address : Khatkurbahal, 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	26/27.05.2020	Office Site (South)	58.4	32.5	6.8	20.4	0.41
2	26/27.05.2020	Mining Site (South)	63.6	35.8	6.6	19.5	0.32
Limit as per CPCB notification, New Delhi, 18th Nov, 2009, for Ambient air quality			100	60	80	00	2
Sampling and Analysis done according to			IS: 5102 (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: 29-34		Climatic condition: Clear & Sunny		

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited



MP C/ BARBIL Ward No-6
 Dist: Keonjhar, Odisha - 758036
 DIN: UC1909WB1958PT0023037

T : +91 91373 08815, 94373 08823, 94373 75259
 E : barbil@mitrask.com
 W : www.mitrask.com

Ref. No. BBL/ENV/1939

DATE: 22/06/2020

ANALYSIS REPORT OF AMBIENT AIR

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

Address : Khatkurbahal, Kutna, Dist. Sundergarh (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 (mg/m^3)
1	26/27.05.2020	Office Site (South)	58.4	32.5	6.6	20.4	0.41
2	26/27.05.2020	Mining Site (South)	63.6	35.0	6.6	19.5	0.32
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	IS: 5182 (Part-23)-1999	IS: 5182 (Part-2)-2001	IS: 5102 (Part-6)-2006	IS: 5182 (Part-10)-1999
Barometric pressure (mm of Hg): 747			Temperature °C: 28-33		Climate condition: Cloudy		

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



A: P.O. BARBARI, West Bengal
Dist: Keshonpur, Odisha - 753028
CIN: U51309WB1998PTC0023337

T: 91 94370 09815/94370 09820/94370 75208
E: barb@msk.in,sk.com
W: www.msk.com

Ref No./BBI/ENV/1940

Date: 22/06/2020

CERTIFICATE OF NOISE MONITORING

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

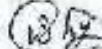
Address : Khatkurbahal, Kutra, Dist. Sundergarh (Odisha)

SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	26/27.05.2020	62.6	39.1	44.5
2.	Nearest Village	26/27.05.2020	57.2	38.7	41.8

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 CPM&B 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	SLEEP 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/1942

Date: 22/06/2020

GROUND WATER LEVEL MONITORING

Name of the Industry:	M/s. KHATKURBAHAL LIMES STONE MINES	
Address:	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
27.05.2020	Well at Village Site	6.2

Checked by: 



For Mitra S. K. Private Limited


Authorised Signatory

Mitra S. K. Private Limited

ANF O. E. NPBI, Vol. I, No. 4
Dist. - Keonjhar, Odisha - 759035
CIN: U51909WB1998PT0203007



T : +91 84370 60810 / 84370 60820 / 84370 78260
E : baroil@mtrsk.co.in
W : www.mtrsk.co

Ref No. DBI/ENV/1941

Date: 22/06/2020

CERTIFICATE OF ANALYSIS

Name of the industry :		M/s. KHATKURBAHAL LIMESTONE MINES		
Address:		Khatkurbahal, Kurza, Dist. Sundergarh (Odisha)		
Sampling Location:		Jharin nala Up Stream		
Date of sampling:		23/05/2020		
Sl. No.	Test Parameters	Units	Max. Tolerance Limit as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Colour	Hzgen	5	< 1.0
2	Odour	--	Unobjectionable	Unobjectionable
3	pH at 26°C	--	5.5-9.0	8.03
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	2.0	< 0.1
7	Iron (as Fe)	mg/l	3.4	0.16
8	Manganese (as Mn)	mg/l	2.0	< 0.02
9	Nitrate (as NO ₃)	mg/l	100	< 0.5
10	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	1.0	< 0.001
11	Selenium (as Se)	mg/l	0.5	< 0.005
12	Calcium (as Ca)	mg/l	2.0	< 0.001
13	Cyanide (as CN)	mg/l	0.2	< 0.01
14	Lead (as Pb)	mg/l	0.1	< 0.05
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	0.0
23	Temperature	°C	--	25
24	Dissolved Oxygen	mg/l	--	5.2
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	6.4
26	Chemical Oxygen Demand (COD)	mg/l	250	24.0
27	Oil and Grease	mg/l	50	< 1.5
28	Ammonical Nitrogen (as N)	mg/l	50	< 0.1
29	Total Kjeldahl Nitrogen	mg/l	100	0.38
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

H. O.: Shree Chandra, Old Floor, 24B, Acharya Jagdish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
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**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF JUNE
2020**

At the request of:

M/s. KHATKURBAHAL LIMESTONE MINES

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

Conducted By:



M/s. MITRA S.K. PRIVATE LIMITED

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

Mitra S. K. Private Limited

ADD: BHARAIL Ward No-3
Dist: Keonjhar, Odisha - 756026
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Ref. No. BBI/ENV/2032

DATE: 18/07/2020

ANALYSIS REPORT OF AMBIENT AIR

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

Address : Khatkurbahal, Kutha, 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	23/24.05.2020	Office Site (South)	55.8	36.4	6.6	19.8	0.38
2	23/24.06.2020	Mining Site (South)	59.2	33.5	6.4	19.2	0.32
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	IS: EPA 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): 746			Temperature °C: 27-36		Climate condition: Cloudy		

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

AMF-01, BARBIL, West Bengal
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Ref No./BBL/KNV/2033

Date: 18/07/2020

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	22/23.05.2020	61.8	58.7	66.9
2.	Nearest Village	22/23.06.2020	56.6	38.2	41.3

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	SILENE ZONE	50	40

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

A.P.D. BAREIL Ward No. 5
Dist: Keshikpur, Odisha - 750035
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Ref. No. BDL/ENV/2034

Date: 10/07/2020

CERTIFICATE OF ANALYSIS

Sl. No.	Test Parameters	Units	Max. Tolerance Limit as per IS: 2400 and CPCB	Data Recorded from Current Analysis
1	Colour	Hazen	5	<1.0
2	Odour	---	Unobjectionable	Unobjectionable
3	pH at 25°C	---	5.5-9.0	7.94
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F ⁻)	mg/l	2.0	0.31
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.28
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 O ₂)	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 ⁶⁺)	mg/l	2.0	<0.1
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	<0.1
22	Total Suspended Solid (as TSS)	mg/l	100	31.0
23	Temperature	°C	---	26
24	Dissolved Oxygen	mg/l	---	5.8
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	4.2
26	Chemical Oxygen Demand (COD)	mg/l	250	21.0
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	0.34
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	---	950 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
2020**

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/To - Bhubil
Dist. - Konejhar, (Odisha)
Pin - 758055.

Mitra S. K. Private Limited



MP, U.BARBIL (Waste No-4)
Dist. Keonjhar, Odisha - 751005
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Ref. No. BBI/ENV/2093

DATE: 19/08/2020

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 (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (µg/m ³)
1.	27/28.07.2020	Office Site (South)	49.7	27.6	6.4	19.2	0.32
2.	21/28.07.2020	Mining Site (South)	54.3	30.4	6.6	21.2	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-1 & 2)-1999	USEPA CFR-40, Part-50, Appendix-1	IS: 5182 (Part-2)-2001	IS: 5182 (Part-6)-2006	IS: 5102 Part-10-1999
Barometric pressure (mm of Hg): 747			Temperature: 26.35		Climatic condition: Cloudy		

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

M/P.O. BARBIL (West No-4)
Dist. Keonjhar, Odisha - 751005
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Ref No./BIL/ENV/2094

Date: 19/08/2020

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	27/28.07.2020	60.2	38.8	44.6
2.	Nearest Village	27/28.07.2020	55.8	35.4	42.5

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

Mitra S. K. Private Limited

AIF: O-BAR/IL/Water No.6
Dist: Khatkulahal, Odisha - 754115
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Ref. No. DBL/ENV/2095

Date: 19/08/2020

CERTIFICATE OF ANALYSIS

Sl. No.	Test Parameters	Unit	Max. Tolerance Limit as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Colour	Hexen	5	<1.0
2	Odour	---	Unobjectionable	Unobjectionable
3	pH at 25°C	---	5.5-5.0	7.74
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F)	mg/l	2.0	3.24
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.28
8	Manganese (as Mn)	mg/l	2.0	<0.02
9	Nitrate (as NO ₃ ⁻)	mg/l	10.0	<3.5
10	Phenolic Compounds (as C ₆ H ₅ O ₃)	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	<0.001
14	Lead (as Pb)	mg/l	0.1	<0.007
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	<0.01
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	21.0
23	Temperature	°C	---	25
24	Dissolved Oxygen	mg/l	---	5.8
25	Biochemical Oxygen Demand (as BOD)	mg/l	20	2.2
26	Chemical Oxygen Demand (COD)	mg/l	250	7.8
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	1.00	0.72
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

H. O.: Bhadrak Centre (5th Floor), 74E, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India.
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**ENVIRONMENTAL MONITORING REPORT
FOR THE MONTH OF AUGUST
2020**

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

A/Po – Babil
Dist - Keonjhar, (Odisha)
Pin - 758035.

Mitra S. K. Private Limited

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Ref. No. BBI./ENV/2153

DATE: 22/09/2020

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 (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)	CO (mg/m ³)
1	25/26.08.2020	Office Site (South)	43.4	22.4	6.2	18.3	0.28
2	25/26.08.2020	Mining Site (South)	45.5	23.8	6.4	19.8	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-I.	IS: 5182 (Part-2)-2001	IS: 5182 (Part-6)-2006	IS: 5182 (Part-10)-1999
Barometric pressure (mm of Hg): 747			Temperature (°C): 26.35		Climate condition: Cloudy		

Checked by:



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



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Dist. Sundargarh, Odisha - 756036
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E : barbh@msk.co.in
W : www.msksk.com

Ref No./BBI./ENV/2154

Date: 22/09/2020

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	25/26.08.2020	59.8	39.2	44.9
2.	Nearest Village	25/26.08.2020	55.2	39.6	42.8

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	SILENCE ZONE	50	40

Checked by:- 



For Mitra S. K. Private Limited


Authorized Signatory

Mitra S. K. Private Limited

ANF-D, BARBIL, Ward No. 8
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CIN: JB000961850PT0025007

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Ref. No. BRL/ENV/2152

Date: 22/09/2020

GROUND WATER LEVEL MONITORING

Name of the Industry:	M/s. KHATKURBAHAL LIMESTONE MINES	
Address:	Khatkurbahal, Kutra, Dist. Sundargarh (Odisha)	
Date of Monitoring	Location	Water Level below (in meters)
26.08.2020	Well at Village Site	3.2

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited

AMP DARBIL Ward No 6
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Ref. No. BBL/ENV/2155

Date: 23/09/2020

CERTIFICATE OF ANALYSIS

Sl. No.	Test Parameters	Units	Max. Tolerance Limit as per IS: 2490 and CPOU	Data Recorded from Current Analysis
Name of the Industry : M/s. KHATKURBAHAL LIMESTONE MINES				
Address: Khatkurhal, Katra, Dist. Sivasdargera (Cachar)				
Sampling Location: Iharia nala Up Stream				
Date of sampling: 20/08/2020				
1	Colour	Hazen	5	<1.0
2	Ocoul	---	---	<1.0
3	pH at 26°C	---	5.5-9.0	7.67
4	Copper (as Cu)	mg/l	2.0	<0.02
5	Fluoride (as F)	mg/l	2.0	3.26
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.24
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	<0.01
11	Selenium (as Se)	mg/l	0.05	<0.05
12	Cadmium (as Cd)	mg/l	2.0	<0.01
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	<0.02
22	Total suspended Solid (as TSS)	mg/l	100	8.2
23	Temperature	°C	---	25
24	Dissolved Oxygen	mg/l	---	6.0
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	<2.0
26	Chemical Oxygen Demand (COD)	mg/l	250	<1.0
27	Oil and Grease	mg/l	10	<0.4
28	Ammoniacal Nitrogen (as N)	mg/l	5.0	<0.1
29	Total Kjeldahl Nitrogen	mg/l	100	0.98
30	Sulphate (as S)	mg/l	2.0	<0.1
31	Free Ammonia	mg/l	5.0	<0.1
32	Particle size of suspended solids	---	100 um IS Sieve	Pass 100 um IS Sieve
33	Dissolved Phosphate (as P)	mg/l	5	<0.04
34	Bio-assay	---	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:

For Mitra S. K. Private Limited

Authorized Signatory:

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

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

A/Po - Barbel
Dist. - Keonjhar, (Odisha)
Pin - 758035.

Mitra S. K. Private Limited



A/P.O. BARBIL, Ward No-6
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Ref. No. RRI/ENV/2176

DATE: 15/10/2020

ANALYSIS REPORT OF AMBIENT AIR

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

Address : Khatkurbahal, 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 _x [µg/m ³]	CO [mg/m ³]
1	29/30.09.2020	Office Site (South)	45.3	23.2	6.4	19.2	0.31
2	29/30.09.2020	Mining Site (South)	48.4	25.8	6.6	19.6	0.39
Limit as per CPCB notification, New Delhi, 10th Nov. 2009, for Ambient air quality			100	60	80	80	2
Sampling and Analysis done according to			IS: 5182 (Part-23) -1999	ISMPA CFR-40, Part-50, Appendix-1.	IS: 5182 (Part-2) -2001	IS: 5182 (Part-6) -2006	IS 5182: Part.10-1999
Barometric pressure (mm of Hg): 748			Temperature (°C): 26.35		Climate condition: Cloudy		

Checked by:-



For Mitra S. K. Private Limited

Authorised Signatory

Mitra S. K. Private Limited



ANP D. BARBI, Ward No-6
Dist. Khamrhat, Orissa - 758035
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W: www.mitrask.com

RefNo./BDL/ENV/2177

Date: 15/10/2020

CERTIFICATE OF NOISE MONITORING

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

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

SL. NO.	Monitoring Location	Date & Time	Noise Level in dB (A)		
			Ld	Ln	Ldn
1.	Inside Lease Area	29/30.09.2020	59.2	39.4	46.3
2.	Nearest Village	29/30.09.2020	56.4	39.2	43.2

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

ARRA 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



APP O: BARRIL Water No-8
Dist.: Bhubaneswar, Odisha - 751005
GPR: US19K9WCU1958PTC022007

T: +91 64170 08815 64170 08870 64170 08829
E: baril@mitraszk.com
W: www.mitrask.com

Ref. No. BBL/ENV/2178

Date: 15/10/2020

CERTIFICATE OF ANALYSIS

Name of the industry :		M/s. KHATKURBAHAI LIMESTONE MINES		
Address:		Khatkuluhali, Raurkela, Dist. Sundargarh, (Odisha)		
Sampling Location:		Jhariala Up Stream		
Date of sampling:		30/09/2020		
Sl. No.	Test Parameters	Units	Max. Tolerance Limits as per IS: 2490 and CPCB	Data Recorded from Current Analysis
1	Turbidity	Hazen	5	<1.0
2	Odour	---	Undetectable	Undetectable
3	pH at 25°C	---	5.5-9.0	7.71
4	Copper (as Cu)	mg/l	3.0	<0.02
5	Fluoride (as F)	mg/l	2.0	0.25
6	Free Residual Chlorine	mg/l	1.0	<0.1
7	Iron (as Fe)	mg/l	3.0	0.21
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	<0.05
12	Cadmium (as Cd)	mg/l	0.1	<0.01
13	Cyanide (as CN)	mg/l	0.2	0.01
14	Lead (as Pb)	mg/l	0.1	<0.015
15	Mercury (as Hg)	mg/l	0.01	<0.001
16	Nickel (as Ni)	mg/l	3.0	<0.1
17	Arsenic (as As)	mg/l	0.3	<0.01
18	Total Chromium (as Cr)	mg/l	2.0	<0.01
19	Zinc (as Zn)	mg/l	5.0	<0.05
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 Solids (as TSS)	mg/l	100	114
23	Temperature	°C	---	25
24	Dissolved Oxygen	mg/l	---	6.0
25	Biochemical Oxygen Demand (as BOD)	mg/l	30	<2.0
26	Chemical Oxygen Demand (COD)	mg/l	250	<1.0
27	Oil and Grease	mg/l	10	<1.0
28	Ammonical Nitrogen (as N)	mg/l	50	<0.1
29	Total Kjeldahl Nitrogen	mg/l	100	0.80
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	---	350 µm IS Sieve	Pass 850 µm IS Sieve
33	Dissolved Phosphate (as P)	mg/l	3	<0.05
34	Bioassay	---	90% survival in 100% effluent	90% survival in 100% effluent

Checked by:



For Mitra S. K. Private Limited

Authorized Signatory

H. O. Chitochi Centre (S.I.) Floor, 7th, A-nerga Jagadish Chandra Bose Road, Kolkata - 700 015, West Bengal, India
T: 31 33 22 722*9 / 4314 3000 / 2065 0000 / 2285 0007 F: 91 33 2215 1000 E: baril@mitraszk.com W: www.mitrask.com



CIN L28942OR1985PLC001657

Annexure-V

SHIVA CEMENT LIMITED

PLOT NO. YY-6,
CIVIL TOWNSHIP
786 AREA, ROURKEE - A
ODISHA, INDIA, PIN - 769004.

Date - 04.08.2020

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

Subj: Rain Water Harvesting & artificial Recharge Method

Dear Sir,

We would like to implement Rain Water Harvesting & artificial Recharge Method at our Khaitkurbahal 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)

Khaitkurbahal L/D Mines
M/s Shiva Cement Limited

भारतीय डाक



India Post

कृषि विज्ञान केंद्र, काठमाडौं
सुदूरपश्चिम प्रदेश, नेपाल
काठमाडौं, नेपाल
सुदूरपश्चिम प्रदेश, नेपाल
काठमाडौं, नेपाल
सुदूरपश्चिम प्रदेश, नेपाल
काठमाडौं, नेपाल
(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-

0.

166

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

14.03.2011


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 Khathkurbahal, 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)
 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-111, 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, Bhubal Bhawan, Kharsigiri, 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) 23381080, 23394973; Fax: (011) 23385743

e-mail: bmad@cgwa.gov.in

web site: http://cgwa.gov.in

Mines (MOEF)

OFFICE OF THE DIVISIONAL COMMISSIONER, MINE SAFETY, HEALTH & ENVIRONMENT

No. 9/11 2073/2010-2011 dt. 25/08/2010

To:

The Manager,
Shiva Cement Ltd.
P-25, Civil Township
Ranchheli-769004
Dist.-Sambalpur

Subject: Authenticated map & list of Flora and Fauna found in Core & Buffer zone spreading over 10 KM radius east west of 179.60 acres of Khalkubahal Limestone & Dolomite Mines of M/s Shiva Cement Ltd.

Ref: Your Letter No. SCT/3001-80 dt. 17-08-2010


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) Khalkubahal Limestone & Dolomite Mines of M/s Shiva Cement Ltd under this Division are enclosed herewith 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 faithfully,

Yours faithfully,


The official of the Divisional Commissioner
Ranchheli, Sambalpur
Forest Department

LIST OF FLORA & FAUNA BY CORE ZONE OF THE
 KHATKURBAHAL LIME STONE AND CEMENT WORKS OF SHERKHA
 CEMENT CO.

List of Flora in Core Zone

SL. NO.	BOTANICAL NAME	FAMILY	LOCAL NAME
1	<i>Ischaemum ariculiferum</i>	Gramineae	Acacia
2	<i>Alagaria hexepta</i>	Simarubaceae	Mishambi, Madai
3	<i>Amorpha occidentalis</i>	Amorphaeaceae	Kaja
4	<i>Albizia leucacantha</i>	Mimosaceae	Palu
5	<i>Styris mangroveana</i>	Fabaceae	Sugar
6	<i>Cassia fistula</i>	Leguminosae	Itakania
7	<i>Cassia senna</i>	Leguminosae	Katchi Senna
8	<i>Dalbergia latifolia</i>	Fabaceae	Suro
9	<i>Dalbergia strob</i>	Papilionaceae	Amli
10	<i>Embotia affinata</i>	Euphorbiaceae	Fuchipatus (Patus)
11	<i>Eusolymis</i>	Myrsinaceae	Kara
12	<i>Ficus Bengolensis</i>	Moraceae	Jawashi
13	<i>F. religiosa</i>	Moraceae	Chandani
14	<i>Glaphys arborea</i>	Verbenaceae	Nama Madul
15	<i>Glaphys indica</i>	Sapotaceae	Amli
16	<i>Graptophyllum indicum</i>	Imbricaceae	Rip, Pinal
17	<i>Pterocarpus marsiprum</i>	Fabaceae	Lemali
18	<i>Tamarindus indica</i>	Caesalpiniaceae	Sugan, Teak
19	<i>Tectona grandis</i>	Verbenaceae	

[Signature]
 Divisional Forest Officer,
 Bantargari Division.

List of Fauna in Core Zone

Sl No	Scientific Name	Family	English Name	Common Name	Status	Wildlife Schedule
1	Canis aurous	Canidae	Jakhal	Bilwa	Common	I
2	Hyaena hyena	Hyaenidae	Hyaena	Hata Bagha	Rare	III
3	Birds of different species					
4	Raptile					


 Divisional Forest Officer,
 Bawalgarh Division.

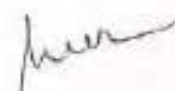
List of Flora in Buffer Zone (within 10 KM)

SL. NO.	BOTANICAL NAME	FAMILY	LOCAL NAME
1	<i>Acacia auriculiformis</i>	Mimosaceae	Acacia
2	<i>Albizia excelsa</i>	Strobilaceae	Mohanti, Mahal
3	<i>Asplenium occidentale</i>	Anacardiaceae	Kari
4	<i>Artocarpus heterophyllus</i>	Moraceae	Purasa
5	<i>Antea monosperma</i>	Papilionaceae Fabaceae	Chala
6	<i>Cassia fistula</i>	Caesalpiniaceae	Samai
7	<i>Cassia siamea</i>	Caesalpiniaceae	Chakundo
8	<i>Dalbergia latifolia</i>	Fagaceae Fabiaceae	Falandi, Sirovi
9	<i>Dalbergia sisam</i>	Fagaceae	Sisam
10	<i>Eubonia edernalis</i>	Familiaceae	Amo
11	<i>Eucalyptus</i>	Myrtaceae	Localitas (Patas)
12	<i>Ficus Benghalensis</i>	Moraceae	Pata
13	<i>F. religiosa</i>	Moraceae	Anwaslia
14	<i>Gmelina arborea</i>	Verbenaceae	Gambhari
15	<i>Gmelina arborea</i>	Euphorbiaceae	Mohua, Mahul
16	<i>Muellina indica</i>	Amorcanthaceae	Amba
17	<i>Nerocarpus muricatus</i>	Paludicaceae Fabaceae	Dija, Pinal
18	<i>Tamarindus indica</i>	Caesalpiniaceae	Tantu
19	<i>Tectona grandis</i>	Verbenaceae	Sagun, Teak
20	<i>Acacia catechu</i>	Manoraceae	Khair
21	<i>Aegle marmelos</i>	Rutaceae	Bel
22	<i>A. Lebbak</i>	Anacardiaceae	Sris
23	<i>Asclepias indica</i>	Melastomaceae	Neem
24	<i>Bambusa culba</i>	Alphitaceae	Sindhi
25	<i>Bauhinia serrata</i>	Leguminosae	Safai
26	<i>Bauhinia rotunda</i>	Leguminosae	Kasi
27	<i>Bauhinia cordata</i>	Leguminosae	Karum
28	<i>Schinus molle</i>	Sapindaceae	Kasum
29	<i>Shorea robusta</i>	Leguminosae	Sai
30	<i>Sesbania sesban</i>	Leguminosae	Robini
31	<i>Sesbania sesban</i>	Leguminosae	Chidhni, genduli
32	<i>Sesbania sesban</i>	Leguminosae	Jambu or Jamun

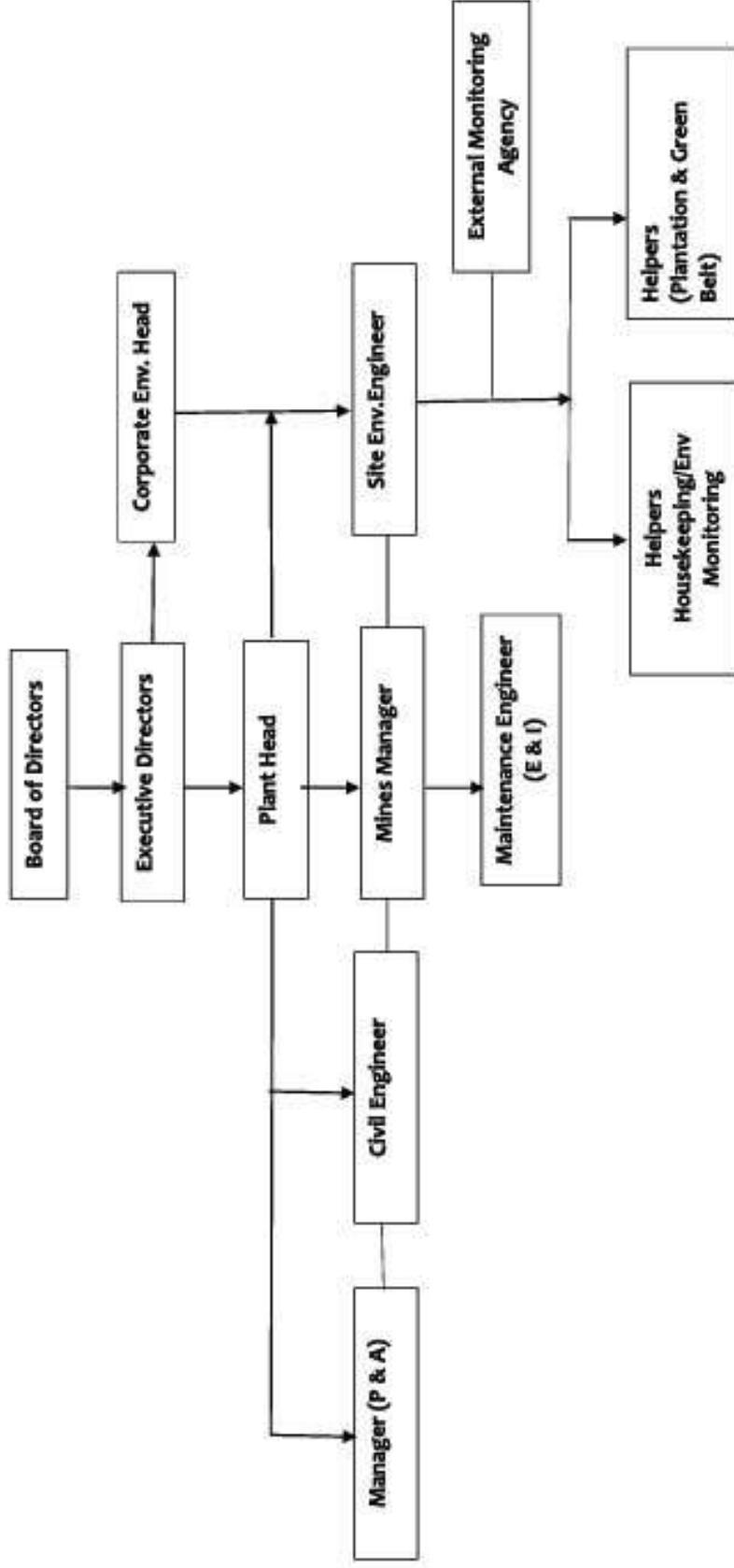
[Signature]
 Divisional Forest Officer,
 Sandargach Division.

List of Fauna in Buffer Zone.

Sl No	Scientific Name	Family	English Name	Common Name	Status	Wildlife Schedule
1	Canis auratus	Canidae	Jackal	Bihar	Common	II
2	Hyaena hyaena	Hyaenidae	Spotted	Haza Bagha	Rare	III
3	Felis chusaffinis	Felidae	Jungle cat	Bahnabirahi (Katas)	Rare	II
4	Funambulus pennanti	Sciuridae	Squirrel	Gundachinasa	Common	IV
5	Herpestes auropunctatus	Viverridae	Small Indian Mongoose	Neular (Kuji)	Occasional	IV
6	Presbytis pardalis	Cercopithecidae	Monkey	Mankada (Hani)	Common	II
7	Pteropus giganteus	Pteropodidae	Flying Fox Bat	Bandi	Rare	IV
8	Mus musculus	Muridae	House mouse	Musa	Common	V
9	Birds of different species.					
10	Raptile					


 Divisional Forest Officer,
 Sandbagah Division.

ORGANIZATION STRUCTURE OF EMC – Shiva Cement Ltd.



Annexure-IX

Environment Expenditure Details April' 2020-Sep' 2020

S.no	Activity/Category	Expenditure in lacs
01	Environmental Monitoring Services	1.83
02	Horticulture Expenses	0.32
03	Dust Suppression	1.54
04	Housekeeping	0.12
04	Environment Display Board	0.07
	Total	3.86



CIN L26942OR1985PLC001557

SHIVA CEMENT LIMITED

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

SCL/KXBL/2019-20/Form V

20.08.2020

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 - 751012, Odisha.

Sub : Submission of Annual Environmental Statement.

Dear Sir

Submit herewith the Annual Environmental Statement for the year 2019-20 of our Khatkurbahal L/D Mines in prescribed format Form V.

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)

Copy to : Regional Officer, OSPCB, Sector - 5, Rourkela - 769002, Dist. Sundergarh (Odisha)

Phone : (Off). 0661 - 2664168

•Work : Village : Telegghana, P.O. : Bringatoli, Kulra, Dist. - Sundergarh, Odisha - 770018
E-mail-id : 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. : Manoj Kumar Rustagi (Whole Time Director)
Khatkurbahal L/D Mines
At. Khatkurbahal, PO. Biringatoli
Dist. Sundargarh, Odisha, PIN - 770018
- (ii) Industry category Primary -
(SIC Code) Secondary - (SIC Code) :
- (iii) Production capacity - Units : 1,20,000 MT Year
- (iv) Year of Establishment : :
- (v) Date of last environmental statement submitted : 16.08.2019

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.

PART - C

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

(1)	Pollutants	Quantity of Pollutants discharges (in mass/day)	Concentrations of pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons.
(a)	Water	NA	NA	NA
(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	120	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	1,27,56,000	Nil
2.	Top soil	Nil	2,27,18,000

- (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 or 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.

Pollution abatement measure like water sprinkling, plantation and environmental monitoring.

PART - H

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

Environmental monitoring display board installed.

PART - I

Any other particulars for improving the quality of the environment.

415 numbers of saplings planted in the safety zone area of Mines.


20/08/20

(S. K. PRADHAN)
Mines Manager
Khatkurbahal L&D Mines
M/s. Shiva Cement Ltd.