

BCW / SD / L-5 / 805  
28.05.2024

To,

✓ The Deputy Director General of Forests (C),  
Ministry of Environment, Forest and Climate Change,  
Integrated Regional Office, Jaipur, B Wing – 213 & 214,  
Aranya Bhawan, Mahatma Gandhi Road,  
Jhalana Institutional Area, **Jaipur (Raj.) – 304002**

Sub. : Environment clearance compliance report of M/s Birla Cement Works,  
Limestone Mines, Chanderia.

Ref. : Environment Clearance no. J -11015 / 73 / 2014 – IA. II (M) dtd. 14.08.2020.


Sir,

Please find enclosed the Environment Clearance compliance report of our Birla Cement Limestone Mines (ML No.- 10/83) for the period – October, 2023 to March, 2024 for your kind perusal.

Soft copy of the same is also being sent on your email id: iro.jaipur-mefcc@gov.in.

Thanking you,

Yours faithfully,  
For: Birla Cement Works

  
(Vinod Paliwal)  
AVP (Sustainable Development)

Enclosed: as above

Cc to:

The Additional Director (Mining),  
Govt. of India,  
Ministry of Environment, Forests & Climate Change,  
Indira Paryavaran Bhavan, Jor Bagh Road,  
New Delhi - 110 003

The Central Pollution Control Board,  
Zonal office (Central),  
E-5, Link Rd Number 3,  
Ekant Park, Arera Colony,  
Bhopal- 462 016 (M.P.)

The Member Secretary,  
Rajasthan State Pollution Control Board,  
4, Institutional Area,  
Jhalana Doongari,  
JAIPUR - (Raj) 302 004

May/Jun 2024

**ENVIRONMENT CLEARANCE COMPLIANCE  
STATUS REPORT  
PERIOD: OCTOBER 2023 TO MARCH 2024**



**BIRLA CEMENT LIMESTONE MINES  
(UNIT OF M/S. BIRLA CORPORATION LIMITED)  
AT VILLAGE: BHERDA, JAI, SURJANA & NAGRI,  
DISTRICT: CHITTORGARH (RAJ.)**

## ENVIRONMENT CLEARANCE COMPLIANCE REPORT

Name & Location of the Mines : Birla Cement Limestone Mines  
(M/s Birla Corporation Limited)  
At Village: Bherda, Jai, Surjana & Nagri,  
PO: Semalpura, Teh & Distt: Chittorgarh (Raj.)


Mining Lease No.- and Area of ML : 10/83, Area – 588.59 Hectares

Environmental Clearance Letter No. : J -11015 / 73 / 2014 – IA – II (M) dated 14.08.2020

Period of the Compliance Report : **From 01<sup>st</sup> October 2023 to 31<sup>st</sup> March 2024**

A.	Specific Conditions	Compliance Status
1)	The project proponent shall implement the recommendation of the Chief Wildlife warden in respect of wildlife conservation plan in respect of 4 species namely Peafowl, Leopard, Python and Indian Lizard.	Our proposal for the approval of NBWL (FP/RJ/MIN/665/2016) was sanctioned on 30 <sup>th</sup> September 2020. After obtaining its final sanction, we are in the consultation with the office of Deputy Conservator of Forests-WL for the implementations of all the conditions and the recommendations as per the approval letter. Biodiversity Conservation Plan for our mines is also submitted to DFO (Wildlife) Chittorgarh. Dcf Chittorgarh had asked for reply on short coming again, raised by PCCF & Chief wild life warden and DCF Chittorgarh recommended our reply to CCF Udaipur on 6.11.2023.
2)	Plantation shall be carried out as per the mining plan, both concurrent and closer phase reclamation, inter alia, including plantation with not less than 12 feet height native species all along the boundary of the mining lease shall be completed in the ensuing monsoon (Monsoon of 2020), record keeping, gap plantation and grassing as per the directions of the Hon'ble Supreme Court.	Intensive plantation work was carried out by us and during 2023-24, 6000 saplings planted in the mine area, details and Photographs of the same attached for reference, as <b>Annexure - 1</b> .
3)	As committed by the project proponent, Rs. 275 Lakhs shall be allocated towards Corporate Environment Responsibility (CER) for the commitments made on the issues raised in PH to be implemented in a period of three years and record for the same shall be maintained and audited and reported to the Regional Office of the Ministry along with the compliance reports.	We have allocated ₹ 275 lakhs for CER as per the commitments made by us on the issues raised in PH.  Details of activity during the year 2023-24 is enclosed as <b>Annexure -2</b>
4)	Total excavation shall not be more than 6.660 Million TPA and corresponding ROM is 4.963 Million TPA including Crusher waste.	We would restrict to total excavation of 6.66 MTPA corresponding to ROM of 4.963 MTPA. The total excavation during April 2023 to March 2024 is <b>3.734 million tons</b> , including 0.0042 million tons crusher waste.



5)	No blasting shall be carried without permission from the Hon'ble Supreme Court and abide the interim orders of the Hon'ble Court, Meanwhile, shall carry out the mechanical excavation of rocks without blasting with ripper attached to excavators, Surface Miner, Terminator& Rock Breaker etc.	Blasting operations being stopped and against the Order of Hon'ble High Court of Jodhpur, Rajasthan dated 25.5.2012, SLP is filed in Hon'ble Supreme Court and in an interim decision, on 29.7.2013 mechanical mining without use of explosives has been permitted, no blasting will be carried out prior to permission from the Hon'ble Supreme Court.
6)	No groundwater intersection shall be made without permission from the CGWA.	We are having the NOC of CGWA ( <b>No.-CGWA / NOC / MIN / ORIG / 2021 / 12308</b> ) for dewatering seepage and ground water from mining pits. Apply for renewal application no. 21-4/9633/RJ/MIN/2018 dated 11.07.2022 as <b>Annexure 3</b> .
7)	Total water requirement for project after expansion shall not be more than 1505 KLD, which shall be met from the mine sump water thus there shall be no ground water abstraction except for drinking.	The complete water requirement at present of the mining project is up to 500 KLD which is being met from the mine sump water only.
8)	As per the EIA Report, the limestone shall transport only through the overland conveyor system from the crusher to the cement plant.	Crushed limestone is being sent to our own Cement plant through covered over-land conveyor system and it will be continued.
	 <p style="text-align: center;"><b>Covered OLBC for Transportation of Crushed Limestone</b></p>	
9)	Effective dust control measures shall be taken at the crusher and transfer points along the conveying system.	<p>Water spraying arrangement through nozzles has been provided at Hopper and Impactors, along conveyor belts and other material transfer points in the crusher. Dust suppression is done in crusher hopper and all material transfer points. Automatic dust suppression is in practice on loaded dumpers before unloading to crusher hopper. Flexible rubber curtains have been provided to cover the hopper, which helps in arresting the dust generated during unloading of limestone at crusher hopper.</p> <p>The crusher is housed in a specially designed chamber which prevents dispersal of dust in atmosphere. Dust extraction and collection system (BDC) is also installed. List of APCE installed is enclosed as <b>Annexure-4</b></p>

B.	Standard Conditions	Compliance Status
I.	<b>Statutory compliance :</b>	
1)	The EC granted to the project is strictly under the provisions of the EIA notification 2006 and its amendments. It does not tantamount / construe to approvals / consent / permissions, etc. required to be obtained under any other Acts / Rules / Subordinate legislations, etc., as may be applicable to the project.	Noted for compliance.
2)	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.	Noted
3)	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.	Noted
4)	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013 / 57 / 2014 IA. II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".	Noted
5)	A copy of EC letter will be marked to concerned Panchayat/local NGO etc. if any, from whom suggestion/representation has been received while processing the proposal.	Noted
6)	State Pollution Control Board / Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office / Tehsildar's Office for 30 days.	Noted
7)	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning	Complied with, EC granted by MoEF&CC has been published and widely circulated in newspapers, Dainik Bhasker and Rajasthan Patrika on 19.08.2020 and copy of the advertisement has been sent to MoEF&CC Regional office Lucknow vide letter no – BCW / Env / L-5 / 1014 dated 20.08.2020.

	that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board / Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement maybe forwarded to the concerned MoEFCC Regional Office for compliance and record.	
8)	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	Noted
<b>II.</b>	<b>Air quality monitoring and preservation</b>	
9)	The Project Proponent shall install a minimum of 3(three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PC1/1, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.	<p>We have installed 3 NOS, CAAQMS at mines and the data are continuously being transferred to SPCB &amp; CPCB as well as displayed at main gate of mine site.</p> <p>Also monitoring has been carried out by MoEF&amp;CC recognized laboratory at 10 established locations.</p> <p>Ambient air quality monitoring data are within the limits, data enclosed as <b>Annexure-5</b>.</p>
10)	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metaled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.	<p>For prevention of dust generation and fugitive emission Water sprinkling is done regularly at loading, unloading and transfer points.</p> <p>At haul and transport road water sprinkling is being done through mobile water tanker and at Crusher area two tanker are continuously deployed for dust suppression.</p> <p>Ambient air quality monitoring is carried out regularly and parameters are within the limits. Monitoring data enclosed as <b>Annexure - 5</b></p>



CONTROL OVER FUGITIVE DUST EMISSION AT  
CRUSHER CIRCUIT, BELT CONVEYOR & HAUL ROAD





<b>III.</b>	<b>Water quality monitoring and preservation</b>	
11)	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area	We are having the NOC of CGWA ( <b>No.- CGWA / NOC / MIN / ORIG / 2021 / 12308</b> ) for dewatering seepage and ground water from mining pits. Apply for renewal with application no. 21-4 / 9633 / RJ / MIN / 2018 dated 13.07.2023 enclosed as <b>Annexure-3</b> .
12)	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	Not applicable in our case as there is no springs and perennial nallahs flowing in and around the mine lease. Ground water is being monitored for the wells around the lease area by establishing a network. Four numbers piezometer wells have been installed for monitoring.  Monitoring of water level from wells surrounding mining lease is done 4 times in a year and chemical analysis has been carried out through Moef & CC recognized laboratory data enclosed as <b>Annexure-6</b> .








Ground water is being monitored for the wells around the lease area by establishing a network of four piezometer wells.





13)	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.	<p>Regular monitoring of water quality and ground water level is being carried out.</p> <p>Ground water is being monitored of the wells around the lease area by establishing a network. Four numbers piezometer wells have been installed for monitoring.</p> <p>Monitoring of water level from wells surrounding mining lease is done 4 times in a year and chemical analysis has been carried out through Moef &amp; CC recognized laboratory data enclosed as <b>Annexure-7</b>.</p>
14)	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.	<p>There is no springs and perennial nallahs existing and flowing in and around the mine lease. We are conducting regular monitoring of natural water course/ water resources and nallahs around the mine lease to ensure that no natural watercourse shall be obstructed due to any mining activity.</p> <p>Ground water is being monitored for the wells around the lease area by establishing a network.</p> <p>Monitoring is done 4 times in a year and chemical analysis of samples collected is carried out.</p> <p>Also installed Four number of Piezometers for ground water monitoring.</p>
15)	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board at a suitable location near the main gate of the Company. The circular No 20012 / 1 / 2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.	<p>No polluted water is being generated from the mines.</p> <p>The mine workshop is having zero discharge and there is no waste water generation from the mines hence treatment is not required. Oil and grease are regularly skimmed off and clean water is re-circulated.</p>

16)	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEF&CC annually.	<p>Rain water harvesting pit in around 18 hectares area is developed to store around 4.0 lac m<sup>3</sup> of water. Rain runoff water is being used in harvesting pits.</p> 
RAIN WATER HARVESTING PIT		
<div style="display: flex; flex-wrap: wrap;">     </div>		
17)	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.	There is no wastewater generated from mines. HEMM washing generates wastewater and to overcome this a system has been developed in which oil and grease are regularly skimmed off, and clean water is re-circulated, oil separator photo attached as <b>Annexure- 8</b> .
18)	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.	We are regularly conducting the Water auditing for the project area to reducing the consumption of water. We are taking technical consultancy of CII-Triveni Water Institute to carry out Water balancing & water auditing.

<b>IV.</b>	<b>Noise monitoring and prevention</b>	
19)	The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	We will comply it once the blasting activity will resume in our mining project. As per the restriction of Hon'ble Court, blasting operations being stopped and against the Order of Hon'ble High Court of Jodhpur, Rajasthan dated 25.5.2012, SLP is filed in Hon'ble Supreme Court and in interim decision, on 29.7.2013 mechanical mining without use of explosives has been permitted, final decision is awaited.
20)	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.	We are continuously monitoring illumination and sound at night as per DGMS parameters to insure no disturbances to the habitants due to mining operations.
21)	The Project Proponent shall take measures for control of noise levels below 85 dB in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.	All necessary PPEs are made available along with regular training & awareness program on safety & health aspects. Noise level monitoring is also being conducted regularly. Regular maintenance of HEMM is being ensured for smooth working. Lubrication and maintenance are routine activities for all HEMM.
<b>V.</b>	<b>Mining plan</b>	
22)	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.	Noted for compliance.



23)	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.	Noted for compliance.
<b>VI.</b>	<b>Land Reclamation</b>	
24)	The Overburden (O.B.) and waste generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	Noted for compliance.
25)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	Noted
26)	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.	Waste dumps are active; however, we are covering slope portion of dumps with grass seeding where ultimate dumping is being carried out. We are also using sand bags on rain cuts to prevent soil erosion. Photograph of stabilized dumps and bund is enclosed as <b>Annexure- 9</b>
27)	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.	Catch drains and siltation ponds of appropriate size have been constructed to arrest silt and sediment which may flow from soil, OB and mineral dumps. Dumps are small in size; hence this problem is not acute. The drains are being regularly de-silted. Garland drain of appropriate size, gradient and length has been constructed along all dumps.

28)	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.	Main dumps are rock dumps with associated clays. Dumps are small in dimensions and rain fall is less in this area, hence wash offs of dumps are not an acute problem. However, garland drain structures are constructed around overburden dumps to prevent storm runoff and sediment flow into surrounding water bodies.
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Garland drains structures are constructed around the over burden dumps



Garland Drain Along Dumps



Rain Water Flowing in Garland Drain




Settling Tanks in 1.50 Hect.



Settling Tanks Goggle Image

29)	The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation purpose.	In most of the lease area limestone is outcropping on surface and quantity of top soil is meager. However, whatever generating is being used directly at the lease boundary for plantation.
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<b>VII.</b>	<b>Transportation</b>	
30)	<p>The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. Should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.</p>	<p>Two water tankers of 15 KL capacity and one of 25 KL capacity are in operation and on each tanker pumps and rain guns have been provided for pressurized spray.</p> <p>Automatic dust suppression is in practice on loaded dumpers before unloading to crusher hopper. Dust suppression is done in crusher hopper and all material transfer points. Two tankers are continuously plying for dust suppression in each shift. Water spraying arrangement through nozzles has been provided at Hopper and Impactors, along conveyor belts and other material transfer points in the crusher and material conveying system to ensure that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Bag filters are installed at crusher.</p>
		
<b>VIII.</b>	<b>Green Belt</b>	
31)	<p>The Project Proponent shall carryout plantation/afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department / Agriculture Department / Rural development department / Tribal Welfare Department / Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.</p>	<p>Intensive plantation work was carried out by us and during 2023-24, 6000 saplings planted in the mine area, details and Photographs of the same attached for reference, as <b>Annexure - 1</b>.</p>
32)	<p>The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State</p>	<p>We have been permitted for mining on grazing land under Sec. 89 of Rajasthan Land Revenue Act, 1956 by the State Govt. vide order dated 5.7.1984 passed by Collector, Chittorgarh (Raj.) in Case. No.20/1983 and we are complying the conditions the said order.</p>



	Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should scrupulously guarded/protected against felling and plantation of such trees should be promoted.	
33)	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.	Our proposal for the approval of NBWL (FP/RJ/MIN/665/2016) was sanctioned on 30 <sup>th</sup> September 2020. After obtaining its final sanction, we are in the consultation with the office of Deputy Conservator of Forests-WL for the implementations of all the conditions and the recommendations as per the approval letter. Biodiversity Conservation Plan for our mines is also submitted to DFO (Wildlife) Chittorgarh. Dcf Chittorgarh had asked for reply on short coming again, raised by PCCF & Chief wild life warden and DCF Chittorgarh recommended our reply to CCF Udaipur on 6.11.2023.
<b>IX.</b>	<b>Public hearing and human health issues</b>	
34)	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.	We are continuously conducting Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines and maintaining its record properly. Routine health checkup is being done by qualified medical officers for all the workmen. During calendar year 2023, examination for 272 persons engaged in mines working is carried out. This includes initial examination of 67 workers and periodical examination of 16 workers and staff. <b>Annexure- 10.</b>
35)	The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anemia, Diarrhea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.	Unit is committed towards working for safe and healthy environment. Scheduled health assessment of every worker is being carried out. Company is undertaking Health Risk Assessment for various hazards. The hazards are identified as per the routine activities and sub activities. The Risk mitigation Measures are being undertaken as per the present risk matrix. External safety experts are available to further strengthen the system of zero harm across the company facilities.

36)	<p>The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminum, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).</p>	<p>A dedicated occupational health center being operated with qualified MBBS doctors. Besides this, medical staff is present round the clock. Annual medical checkup is being done for all the workers' health records are being maintained.</p> <p>A team of medical experts from MP Birla Hospital organizes regular camps in the premises of company. The medical team collects samples of all staff and workers for various parameters and after testing, a report is prepared. Expert medical practitioners are advising the deviation found in any as <b>Annexure-10.</b></p>
37)	<p>The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.</p>	<p>Routine health checkup is being done by qualified medical officers for all the workmen. During calendar year 2023, examination for 272 persons engaged in mines working is carried out. This includes initial examination of 67 workers and periodical examination of 16 workers and staff.</p> <p>A team of medical experts from MP Birla Hospital organizes regular camps in the premises of company. The medical team collects samples of all staff and workers for various parameters and after testing, a report is prepared. Expert medical practitioners are advising the deviation found in any as <b>Annexure-10</b></p>
38)	<p>The Project Proponent shall ensure that 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.</p>	<p>Workmen working in mining lease area are being using appropriate PPEs. The PPEs are provided as per DGMS rules. Adequate training-calendar exists and all workmen are have to undergone training.</p>
39)	<p>Project Proponent shall make provision for the housing for workers/labours or shall construct labor camps within/outside (company owned land) with</p>	<p>The expansion is within the existing mining lease area and the workers which are working in mines are residing in the well-developed</p>

	necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	existing housing colony, the housing colony has 500 KLD STP for treatment of domestic water.
40)	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.	The action plans has been prepared and concerns raised during public hearing are being implemented. Separate budget has been sanctioned from management. The progress of the same is being submitted on periodic basis.
<b>X. Miscellaneous</b>		
41)	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.	M/s. Compusence Automation, Ahmedabad prepared latest report of land use/land cover analysis for our mining lease Birla Cement Limestone Mine and its buffer zone by using remote sensing techniques, during December 2022 enclosed as <b>Annexure-11</b> .
42)	The Project Authorities should inform to the Regional Office 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 for compliance.
43)	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	Six monthly compliance reports are being prepared and progress of the same is shared to RO, MoEF&CC and SPCB. Previous six-monthly compliance submitted vide letter number BCW/SD/L-5/3433 dated 28 <sup>th</sup> November 2023.
44)	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.	A full-fledged Environment management SD cell with a dedicated lab with qualified manpower headed by AVP Environment exist and are involved in the environment management at site. Four Environmental managers and Geologist are engaged in various environmental improvement plans and program at sites as <b>Annexure- 12</b>
45)	The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data / information / monitoring reports.	Noted
46)	The mining lease holders shall, after ceasing mining operations, undertake re-grossing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	Noted

  
(Digendra Singh Solanki)  
Manager – Geology



**BIRLA CEMENT WORKS LIMESTONE MENES**  
**(Villages Bherda, Jai, Surjana and Nagri)**

**DETAILS OF PLANTATION AT MINES**  
**Within ML and Outside ML**

Sl. No.	Year	Within ML area	Outside ML area	Total	Survival %
1	Total Up To 2014-2015	90643	73547	164190	78%
2	2015-2016	2000	1000	3000	85%
3	2016-2017	2780	2250	5030	84%
4	2017-2018	1500	2600	4100	90%
5	2018-2019	1250	700	1950	91%
6	2019-2020	2250	640	2890	89%
7	2020-2021	29900	2500	32400	89%
8	2021-2022	6215	1785	8000	95%
9	2022-2023	1320	0	1320	92%
10	2023-2024	3000	3000	6000	92%
	<b>Total</b>	<b>140858</b>	<b>88022</b>	<b>228880</b>	

**Type of species Planted: -**

Neem  
Amaltash  
Anwala  
Pipal  
Ratanjot  
Shisham  
Amrood

Katchanar  
Billpatra  
Akasia  
Seethaphal  
Bargad &  
Other fruit bearing tree  
Bad



## Plantation Activity of FY 2023-24



**SITE PREPARATION WORK**



**FENCING AND GATE FOR PLANTATION SAFETY**



**बिरला सिमेन्ट वर्क्स, सदान क्षेत्र**

**• वृक्षारोपण क्षेत्र विवरण •**

1. प्रकार:- बरगद, नीम, आम, अमरुद, जामुन, ईमली, केशीया, कंज, शीशम, आदी
  2. वर्ष:- 2023-24
  3. रकबा:- 2.95 हेक्टेयर
  4. वृक्षोका संख्या:- 3000
  5. रखरखाव:- M/S मानवीर इंटरप्राइज, किशन लाल गुर्जर
- बिना अनुमति प्रवेश निषेध है

**PLANTATION  
DISPLAY  
BOARD**





**PLANTATION RECEIVED  
AT SITE**



**PRESENT  
STATUS**

### **Dump Site Plantation Activity 2023-24**





## CSR EXPENDITURE 2023-24 BUDGET AND ACTUAL

Annual Budget Plan, FY: 2023-24				
S.N	Theme/Programme	UoM	Budget (In Lacs)	Actual Expenses (in Lakhs)
<b>A</b>	<b>HEALTHCARE, HYGINE &amp; SANITATION</b>		<b>16.99</b>	<b>16.25</b>
A-1	Health & Nutrition Project (PECSS): Support on Health, Hygiene and Nutrition aspect to Mother & Child & Community including aganwadies	Project	12.49	11.89
A-2	Infrastrucutre Support to Anganwadi Centers-Renovation	No. of AWC	4.50	4.36
A-3	General/Eye Health Camp/Health Awareness programme	No. of Camp	-	0.00
<b>B</b>	<b>EDUCATION</b>		<b>22.43</b>	<b>24.08</b>
B-1	Support to Students on supplementary education as Coaching classes for competitive exams, Career counseling under NGO (PECSS) Project,	Project/SEC	7.46	7.13
B-2	School Infrastrucutre Support including repairing, Toilet & Water Facility, boundary wall, colouring etc in Govt. Schools	No. School	7.96	7.98
B-3	Digital Classroom setup for Digital Education	No. School	3.68	3.12
B-4	Furniture for student	No. of Furniture	3.00	5.52
B-5	Scholarship Support	Student	0.33	0.33
<b>C</b>	<b>LIVELIHOOD &amp; WOMEN EMPOWERMENT</b>		<b>47.32</b>	<b>48.24</b>
C-1	"Integrated Watershed Development Project for Livelihood Support to Farmers & Underprivileged Community (SMGVS)	Project	43.78	43.77
C-2	Skill Development Project (PECSS) Project (Bedside Nursing, Coaching on Job/Employement)	Project	3.54	4.46
<b>D</b>	<b>ENVIRONMENT &amp; ENERGY</b>		<b>10.05</b>	<b>9.34</b>
D-1	Solar Lights for Renewable Energy	No	5.03	4.41
D-2	Maintainance of Kapanan circle & Bherda Divider	No	2.10	2.10
D-3	Maintenance of garden at Sanwaria Govt Hospital, Chittorgarh	No	1.83	1.74
D-4	Plantation in Surrounding Area	No	0.615	0.63
D-5	Tree Guard	No	0.470	0.47
<b>E</b>	<b>RURAL INFRA &amp; WATER</b>		<b>19.71</b>	<b>19.02</b>
E-1	Drinking Water Supply through Tankers to Community in Summer season	No. village	2.46	2.46
E-2	Drinking Water Facility for Community/motor/boring/pipeline/Solar based water supply etc.	Area	4.25	2.90
E-5	Development of infrastructure as per Community & stakeholders Need (CC ROAD/Boundary Wall/Fencing/PashuKhel/Repairing of Health Centre/Cremation construction/Rural Infra. etc.)	L-Sum	13.00	13.67
<b>F</b>	<b>Community Outreach</b>		<b>7.50</b>	<b>7.42</b>
F-1	Community Outreach: To Cater to misc. requirements from local/near by stakeholders (around Mines-Chandaria & Chittorgarh.) To be decided on merit/buisness need by local management.	L-Sum	7.50	7.42
<b>Total (A+B+C+D+E+F+G)</b>			<b>124.00</b>	<b>124.36</b>



भारत सरकार  
जल संधि मंत्रालय  
जल संसाधन, नदी विकास  
और कृषि संरक्षण विभाग  
केंद्रीय भूमि जल प्राधिकरण  
Government of India  
Ministry of Jal Shakti  
Department of Water Resources,  
River Development & Ganga Rejuvenation  
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

### NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	M/s Birla Corporation Limited		
Project Address:	M/s Birla Corporation Limited, Birla Cement Limestone Mine		
Village:	Jai	Block:	Chittaurgarh
District:	Chittorgarh	State:	Rajasthan
Pin Code:			
Communication Address:	M/s Birla Corporation Limited, Birla Cement Limestone Mine, Chittaurgarh, Chittorgarh, Rajasthan - 312001		
Address of CGWB Regional Office :	Central Ground Water Board Western Region, 6-a, Jhalana Doongri, Jaipur, Rajasthan - 302004		

1. NOC No.:	CGWA/NOC/MIN/ORIG/2021/12308																		
2. Application No.:	21-4/9633/RJ/MIN/2018				3. Category: (GWRE 2017)	Over Exploited													
4. Project Status:	Existing Project				5. NOC Type:	New													
6. Valid from:	15/07/2021				7. Valid up to:	14/07/2023													
8. Ground Water Abstraction Permitted:																			
Fresh Water			Saline Water		Dewatering		Total												
m <sup>3</sup> /day	m <sup>3</sup> /year		m <sup>3</sup> /day	m <sup>3</sup> /year		m <sup>3</sup> /day	m <sup>3</sup> /year												
0.00	0.00					757.00	249810.00												
9. Details of ground water abstraction /Dewatering structures																			
Total Existing No.:4							Total Proposed No.:0												
							DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu	
Dewatering Structure*							0	0	0	0	4	0	0	0	0	0	0	0	0
*DW- Dug Well, DCB-Dug-cum-Bore Well, BW-Bore Well, TW-Tube Well, MP-Mine Pit,MPu-Mine Pumps																			
10. Ground Water Abstraction/Restoration Charges paid (Rs.):							2498100.00												
11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.							No. of Piezometers			Monitoring Mechanism									
										Manual	DWLR**	DWLR With Telemetry							
**DWLR - Digital Water Level Recorder							2			0	1	1							

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जयनगर हाउस, पानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jannagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23303561 Fax: 23302051, 23306743

Website: cgwa-noc.gov.in

पानी बचावें - जीवन बचावें  
SAVE WATER - SAVE LIFE

## RENEWAL APPLICATION

Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development and Ganga Rejuvenation  
Central Ground Water Authority (CGWA)  
Application for Issue of NOC to Abstract Ground Water (NOCAP)

### Application for Renewal of NOC to Dewater Ground Water for Mining Industry (Save As Draft Application for Renewal of NOC)

Application Number : 21-4/9633/RJ/MIN/2018

Applied For Renewal : 1st

1. General Information:	
Water Quality:	Fresh Water
Purpose of Renewal Application:	Existing with Additional Ground Water Requirement
Application Type Category/ Type of Application	Limestone
2. Name of Mine/Project:	M/S BIRLA CORPORATION LIMITED
3. Location Details of the Mining Unit- (Attach Site, Approved Mining Plan, Toposketch of Surrounding 10km Radius Outside) (\$) :	
Address Line 1 :	M/S BIRLA CORPORATION LIMITED
Address Line 2 :	BIRLA CEMENT LIMESTONE MINE
Address Line 3 :	
State:	RAJASTHAN
District:	CHITTORGARH
Sub-District:	CHITTAURGARH
Village/Town:	Jai
Latitude:	
Logitude:	
Area Type :	Notified
Area Type Category :	Over Exploited
4. Communication Address	
Address Line 1:	M/S BIRLA CORPORATION LIMITED
Address Line 2:	BIRLA CEMENT LIMESTONE MINE
Address Line 3:	
State:	RAJASTHAN
District:	CHITTORGARH
Sub-District:	CHITTAURGARH
Pincode:	312001
Phone Number with Area Code:	91 1472 259614
Mobile Number:	91 9829033162
Fax Number:	
E-Mail:	vinod.paliwal@birlacorp.com
5. Details of Existing NOC issued by CGWA (enclose copy)	
NOC Letter No:	CGWA/NOC/MIN/ORIG/2021/12308
Date of Issuance:	15/07/2021
Vailidity (Start):	15/07/2021



**DETAILS OF AIR POLLUTION CONTROL EQUIPMENT (A.P.C.E)**

Sr. No.	Section/ Location	APCE Installed	Total Numbers
1.	Mines	1. Water sprinklers	4
		2. In-built water Injection system in drill machines	4
		3. Hydraulic rock breakers & Splitters	11
2.	Crusher	Water spraying system	7
3.	OLBC	B.D Cs (Bag Dust Collectors)	2
<b>Total number of A.P.C.E.</b>			<b>28</b>

**Monthly Average Results of AAQM October 2023 to December 2023**

**Birla Cement Limestone Mines (Villages - Bherda, Jai, Surjana and Nagri)**

	S No.	Station	Month	Average Values in $\mu\text{g}/\text{m}^3$			
				PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>
<b>CORE ZONE</b>	1	CA - 1	October, 2023	65.35	35.25	15.95	9.95
	2		November, 2023	69.25	33.35	16.60	10.35
	3		December, 2023	68.33	30.25	17.35	12.25
	4	CA - 2	October, 2023	70.25	38.25	19.25	9.45
	5		November, 2023	68.35	37.66	20.15	9.25
	6		December, 2023	66.25	39.33	16.35	8.25
	7	CA - 3	October, 2023	70.25	35.68	17.25	9.85
	8		November, 2023	69.95	39.25	19.20	10.15
	9		December, 2023	68.88	36.35	20.25	9.85
	10	CA - 4	October, 2023	70.15	30.85	19.35	8.95
	11		November, 2023	67.35	31.35	18.55	9.35
	12		December, 2023	66.35	36.25	19.35	10.15
	13	CA - 5	October, 2023	67.35	34.55	18.65	8.35
	14		November, 2023	69.66	37.25	20.45	9.95
	15		December, 2023	70.25	36.35	17.25	8.95
<b>BUFFER ZONE</b>	16	BA - 1	October, 2023	68.35	33.25	17.44	10.25
	17		November, 2023	66.25	35.35	15.34	8.65
	18		December, 2023	64.35	39.25	16.23	9.85
	19	BA - 2	October, 2023	69.35	34.20	18.35	8.95
	20		November, 2023	68.45	31.65	17.34	10.35
	21		December, 2023	66.65	39.30	19.25	10.45
	22	BA - 3	October, 2023	70.65	32.25	19.33	9.85
	23		November, 2023	68.25	38.35	18.45	9.55
	24		December, 2023	64.35	36.25	19.45	9.85
	25	BA - 4	October, 2023	69.25	33.22	18.25	8.95
	26		November, 2023	70.55	37.65	18.35	8.45
	27		December, 2023	68.35	38.25	17.35	10.25
	28	BA - 5	October, 2023	69.35	34.25	19.35	9.35
	29		November, 2023	70.12	36.35	19.65	10.35
	30		December, 2023	68.35	32.25	20.15	9.65

Station Code	Location
CA - 1	Rampur Water Pump
CA - 2	Surjana Pump
CA - 3	Near Crusher
CA - 4	Near Jai Temple
CA - 5	Pump House Bherda

Station Code	Location
BA - 1	New Sanwaria Nagar
BA - 2	Moonga ka Kheda
BA - 3	Higher Sec.School Nagri
BA - 4	Sub Station OLBC
BA - 5	Director Bunglow

## Monthly Average Results of AAQM January 2024 to March 2024

### Birla Cement Limestone Mines (Villages - Bherda, Jai, Surjana and Nagri)

	S No.	Station	Month	Average Values in $\mu\text{g}/\text{m}^3$			
				PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>
CORE ZONE	1	CA - 1	January, 2024	66.25	32.55	16.25	10.10
	2		February, 2024	68.66	34.66	17.45	9.65
	3		March, 2024	69.25	35.15	15.25	8.95
	4	CA - 2	January, 2024	65.85	37.25	20.55	9.45
	5		February, 2024	67.80	38.35	18.25	8.25
	6		March, 2024	69.22	39.55	17.21	8.95
	7	CA - 3	January, 2024	70.55	36.55	18.35	9.25
	8		February, 2024	68.25	38.85	20.25	10.25
	9		March, 2024	69.15	37.25	19.56	8.95
	10	CA - 4	January, 2024	68.35	34.25	18.25	9.45
	11		February, 2024	65.25	35.55	17.45	9.75
	12		March, 2024	68.35	37.65	20.65	9.90
	13	CA - 5	January, 2024	69.25	35.66	19.35	8.75
	14		February, 2024	68.55	38.25	18.55	9.75
	15		March, 2024	69.22	39.15	16.65	8.45
BUFFER ZONE	16	BA - 1	January, 2024	68.65	34.25	18.66	9.85
	17		February, 2024	67.35	36.45	16.55	9.55
	18		March, 2024	68.35	38.65	17.50	8.99
	19	BA - 2	January, 2024	70.15	35.70	17.45	9.10
	20		February, 2024	68.33	32.45	16.85	10.15
	21		March, 2024	67.25	38.85	18.55	9.85
	22	BA - 3	January, 2024	69.35	33.25	17.55	10.10
	23		February, 2024	68.55	39.65	16.95	9.35
	24		March, 2024	67.35	37.25	19.55	8.80
	25	BA - 4	January, 2024	70.45	34.55	18.45	9.65
	26		February, 2024	69.35	38.65	16.35	8.75
	27		March, 2024	67.25	39.26	19.65	10.10
	28	BA - 5	January, 2024	70.25	35.68	20.15	9.55
	29		February, 2024	68.65	37.45	18.55	10.22
	30		March, 2024	66.35	34.25	19.10	8.80

**Station  
Code**

**Location**

CA - 1      Rampuria Water Pump  
CA - 2      Surjana Pump  
CA - 3      Near Crusher  
CA - 4      Near Jai Temple  
CA - 5      Pump House Bherda

**Station  
Code**

**Location**

BA - 1      New Sanwaria Nagar  
BA - 2      Moonga ka Kheda  
BA - 3      Higher Sec. School Nagri  
BA - 4      Sub Station OLBC  
BA - 5      Director Bunglow



**AUTOMATIC WATER LEVEL RECORDER (AWLR) PIEZOMETER)**

October 2023 to March 2024 Monthly data

Report Name		Complete day wise sensor report	
project Name		Birla Cement Works	
Location		Chittorgarh 1 (Near mines Admin)	
Device Name		AWLR (fitted with Piezometer)	
Date	Time	Near mines Admin	
		Reading(m)	Voltage(V)
02.10.2023	09:05:59	23.14	12.23
05.11.2023	10:37:39	23.13	10.69
03.12.2023	08:46:57	23.19	12.19
06.01.2024	15:14:38	26.29	11.25
03.02.2024	08:20:32	26.30	12.22
03.03.2024	07:10:12	26.49	11.25

Report Name		Complete day wise sensor report	
project Name		Birla Cement Works	
Location		Chittorgarh 2 (Behind contractor camp)	
Device Name		AWLR (fitted with Piezometer)	
Date	Time	Behind contractor camp	
		Reading(m)	Voltage(V)
03.10.2023	15:16:38	22.18	11.49
02.11.2023	08:22:32	21.32	12.96
03.12.2023	07:12:12	21.92	12.67
06.01.2024	14:16:38	24.58	11.10
03.02.2024	11:22:32	24.55	11.50
04.03.2024	10:12:12	24.52	11.30

Report Name		Complete day wise sensor report	
project Name		Birla Cement Works	
Location		Chittorgarh 3 (Nagri pit)	
Device Name		AWLR (fitted with Piezometer)	
Date	Time	Nagri pit	
		Reading(m)	Voltage(V)
01.10.2023	09:59:55	19.65	10.23
04.11.2023	08:24:45	21.93	12.59
05.12.2023	10:26:58	19.87	11.41
04.01.2024	09:15:38	26.18	12.25
05.02.2024	10:20:32	26.17	10.35
06.03.2024	11:10:12	25.88	12.30

Report Name		Complete day wise sensor report	
project Name		Birla Cement Works	
Location		Chittorgarh 4 (Rampuriya substation)	
Device Name		AWLR (fitted with Piezometer)	
Date	Time	Rampuriya substation	
		Reading(m)	Voltage(V)
01.10.2023	08:42:29	14.24	11.55
03.11.2023	09:36:06	14.27	12.65
01.12.2023	10:18:32	14.91	13.25
02.01.2024	09:16:38	14.80	11.55
03.02.2024	07:22:32	14.77	11.39
05.03.2024	11:12:12	14.81	12.25

# CHEMICAL ANALYSIS OF GROUNDWATER SAMPLES FROM M.O.E.F. RECOGNISED LABORATORY



## APEX Enviro Laboratory

(Unit of Apex Mintech Consultants)



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TC - 7531

Date-02/10/2023

### Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

### TEST REPORT

: W-20230928059

: Birla Cement Works

: Madhav Nagar, Chanderia, Chittorgarh-312021

: Jai Mine Pit (Rampunya)

: 28/09/2023

: 28/09/2023

: 28/09/2023 to 02/10/2023

: Mine sump

: Bureau of Indian Standard

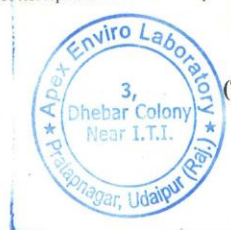
### RESULT

S. N.	Parameters	Observed Value	Test Methods
1.	pH at 25°C	7.8	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.2	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	180	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	270	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	49.6	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	13.44	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	120	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	27	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	APHA(PP3.18to3.20)

Note-

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Tested By



R. L. Agrawal  
(Technical Manager)

Pg. 1 of 1



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TC - 7531

Date-02/10/2023

## Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

## TEST REPORT

: W-20230928060

: Birla Cement Works

: Madhav Nagar, Chanderia, Chittorgarh-312021

: Surjana Mine Pit

: 28/09/2023

: 28/09/2023

: 28/09/2023 to 02/10/2023

: Mine sump

: Bureau of Indian Standard

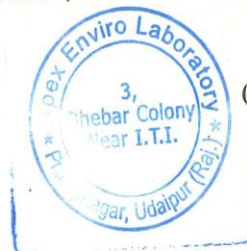
## RESULT

S. N.	Parameters	Observed Value	Test Methods
1.	pH at 25°C	7.4	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.3	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	160	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	275	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	39.2	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	14.88	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	120	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	30	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	APHA(PP3.18to3.20)

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Tested By



K.L. Agrawal  
(Technical Manager)

Pg. 1 of 1



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TC - 7531

Date-02/10/2023

## TEST REPORT

**Report No.** : W-20230928061  
**Issued to** : Birla Cement Works  
**Address** : Madhav Nagar, Chanderia, Chittorgarh-312021  
**Sampling Location** : Village Munga Kheda (24°56'46.7"N, 74°39'43.0"E)  
**Date of Sample Collection** : 28/09/2023  
**Date of Receipt** : 28/09/2023  
**Date of Testing** : 28/09/2023 to 02/10/2023  
**Type of Sample** : Well Water  
**Testing Protocol** : Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.2	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.1	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	530	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	950	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	164	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	28.8	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	350	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	180	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

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Tested By



  
K. L. Agrawal  
(Technical Manager)

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Date-02/10/2023

## TEST REPORT

Report No.

: W-20230928062

Issued to

: Birla Cement Works

Address

: Madhav Nagar, Chanderia, Chittorgarh-312021

Sampling Location

: Village Munga Kheda (24°56'41.6"N, 74°39'26.3"E)

Date of Sample Collection

: 28/09/2023

Date of Receipt

: 28/09/2023

Date of Testing

: 28/09/2023 to 02/10/2023

Type of Sample

: Well Water

Testing Protocol

: Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.5	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.1	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	480	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	890	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	136	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	33.6	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	320	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	160	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

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Tested By



K. D. Agrawal  
(Technical Manager)

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TC - 7531

Date-02/10/2023

## TEST REPORT

### Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

: W-20230928063

: Birla Cement Works

: Madhav Nagar, Chanderia, Chittorgarh-312021

: Village Munga Kheda (24°56'36.4"N, 74°39'25.2"E)

: 28/09/2023

: 28/09/2023

: 28/09/2023 to 02/10/2023

: Well Water

: Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.2	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.1	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	500	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	1005	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	152	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	28.8	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	380	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	195	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

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Tested By



K. L. Agrawal  
(Technical Manager)

Pg. 1 of 1



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TC - 7531

Date-02/10/2023

**Report No.** : W-20230928064  
**Issued to** : Birla Cement Works  
**Address** : Madhav Nagar, Chanderia, Chittorgarh-312021  
**Sampling Location** : Village- Damdama(24°56'46.7"N, 74°39'43.0"E)  
**Date of Sample Collection** : 28/09/2023  
**Date of Receipt** : 28/09/2023  
**Date of Testing** : 28/09/2023 to 02/10/2023  
**Type of Sample** : Well Water  
**Testing Protocol** : Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.0	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.2	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	420	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	940	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	110	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	34.8	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	380	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	120	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

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Tested By



  
K. L. Agrawal  
(Technical Manager)

Pg. 1 of 1



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TC - 7531

Date-27/01/2024

## Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

## TEST REPORT

: W-20240123137

: Birla Cement Works

: Madhavnagar, Chanderia, Chittorgarh-312021

: Surjan Mine Pit

: 23/01/2024

: 23/01/2024

: 23/01/2024 to 27/01/2024

: Mine sump

: Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	Test Methods
1.	pH at 25°C	8.1	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.3	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	200	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	315	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	50.4	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	17.76	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	150	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	39	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	APHA(PP3.18to3.20)

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Tested By



K. L. Agrawal  
(Technical Manager)

Pg. 1 of 1

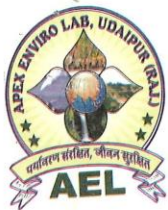


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TC - 7531

Date-27/01/2024

## Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

## TEST REPORT

: W-20240123138

: Birla Cement Works

: Madhavnagar, Chanderia, Chittorgarh-312021

: Village Munga Kheda (24°56'46.7"N, 74°39'43.0"E)

: 23/01/2024

: 23/01/2024

: 23/01/2024 to 27/01/2024

: Well Water

: Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.6	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.2	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	510	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	888	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	150	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	32.4	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	335	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	176	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

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Tested By



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TC - 7531

Date-27/01/2024

## Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

## TEST REPORT

: W-20240123139

: Birla Cement Works

: Madhavnagar, Chanderia, Chittorgarh-312021

: Village Munga Kheda(24°56'41.6"N, 74°39'26.3"E)

: 23/01/2024

: 23/01/2024

: 23/01/2024 to 27/01/2024

: Well Water

: Bureau of Indian Standard

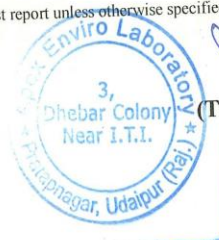
## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.9	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.1	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	500	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	928	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	138	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	37.2	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	340	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	178	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

### Note-

- The results listed refer only to the tested sample (s) & parameters (s). Endorsement of Product is neither inferred nor implied.
- This report is not to be reproduced wholly or in part and cannot be used evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.

Tested By



K. L. Agrawal  
(Technical Manager)

Pg. 1 of 1



9511588380, 9829161803  
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# APEX Enviro Laboratory

(Unit of Apex Mintech Consultants)



NABL Accredited, OHSAS Certified & Recognized by MoEF&CC, GOI,  
Under Environment (Protection) Act, 1986 Vide F.No. 15018/16/2017-CPW

TC - 7531

Date-27/01/2024

## Report No.

Issued to

Address

Sampling Location

Date of Sample Collection

Date of Receipt

Date of Testing

Type of Sample

Testing Protocol

## TEST REPORT

: W-20240123140

: Birla Cement Works

: Madhavnagar, Chanderia, Chittorgarh-312021

: Village Munga Kheda(24°56'36.4"N, 74°39'25.2"E)

: 23/01/2024

: 23/01/2024

: 23/01/2024 to 27/01/2024

: Well Water

: Bureau of Indian Standard

## RESULT

S. N.	Parameters	Observed Value	IS 10500: 2012		Test Methods
			Acceptable Limit	Permissible Limit	
1.	pH at 25°C	7.8	6.5-8.5	-	IS-3025(Part-11):1983(RA2002)
2.	Turbidity (NTU)	0.1	1	5	IS-3025(Part-10):1984(RA2002)
3.	Total Hardness (CaCO <sub>3</sub> ) (mg/l)	525	200	600	IS-3025(Part-21):1983(RA2009)
4.	Total dissolved solids (mg/l)	1070	500	2000	IS-3025(Part-16):1984(RA2006)
5.	Calcium as Ca (mg/l)	156	75	200	IS-3025(Part-40):1991(RA2003)
6.	Magnesium as mg (mg/l)	32.4	30	100	IS-3025(Part-46):1994(RA2003)
7.	Alkalinity as CaCO <sub>3</sub> (mg/l)	390	200	600	IS-3025(Part-23):1986(RA2006)
8.	Sulphate as SO <sub>4</sub> (mg/l)	205	200	400	IS-3025(Part-24):1986(RA2003)
9.	Lead as Pb (mg/l)	<0.01	0.01	-	APHA(PP3.18to3.20)

### Note-

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K. L. Agrawal  
(Technical Manager)

Pg. 1 of 1



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9160300850, 9352505728



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## Annexure – 8



### Washing PIT:

The oil water separator is specially designed to separate sludge & oil from dirty water. Enhanced Zero Water Discharge at washing point.

Oil and grease are regularly skimmed off and clean water is re-circulated.

## Annexure- 9

### Stone Pitching for Dumps and Bund Stabilization



We have done dump Stabilization through proper benching system in our active dump area and Stone pitching along the haul road to prevent collapse.

**MEDICAL EXAMINATION 2023-24**

DETAILS OF MEDICAL EXAMINATION 2023-24			
Sr.no.	Category	Initial Examination	Periodical Examination
	<b>CONTRACTORS /A.M.C / F.M..C</b>		
1	M/S APEKSHA ENGINEERS	12	
2	M/S SANWARIA STONE CARRIER	11	
3	M/S L&T	5	16
4	M/S D.C.S	4	
5	M/S LIBHERR -1	14	
6	M/S LIBHERR-2	4	
7	M/S EPIROC	2	
8	M/S BIRLACORP.LTD .	15	256
	<b>GRAND TOTAL</b>	<b>67</b>	<b>272</b>





**Land Use / Land Cover Analysis for Mine Lease and Buffer Zones of Birla Cement Limestone Mine of Birla Corporation Ltd. using Remote Sensing Techniques.**



**Client :**  
**Birla Corporation Limited**  
**(Unit : Birla Cement Works)**

**Prepared By :**  
**CompuSense Automation, Ahmedabad**

**December 2022**



## Environment Management SD Cell

