ADITYA BIRLA

UltraTech

UTCL/MCW/Mines/Env. Stat/25-26/62 **Dated 29 Sep 2025**

To,
The Member Secretary
MP Pollution Control Board
Paryawaran Parisar, E-5, Area Colony,
Bhopal -462016 (M.P.)

Dear Sir,

Sub : Submission of Environmental Statement Form-V for year 2024-25 of UltraTech Cement Limited Unit: Maihar Cement Works, Bhadanpur Limestone Mines (ML area 296.956 ha.)

Ref : 1) Air/Water Consent No: AW-59102 , dated 26/10/2023, valid till 30/11/2024 & AW-61275 dated 05.11.2024 valid upto 30/11/2027 for ML area 296.956 Ha

2) Hazardous waste Authorization No: AWH- 54833 , dated 14/12/2021 valid upto 30/11/2026 for UltraTech Cement limited, Unit Maihar Cement Works Bhadanpur Lime Stone Mines, ML area 296.956 ha.

This has reference to above mentioned subject & condition mentioned in Air & Water and Hazardous Waste Authorization, we are submitting herewith the Environmental Statement Report Form-V for the period FY-2024-2025 of UltraTech Cement Limited, Maihar Cement Works, Bhadanpur Limestone Mines Lease area 296.956 Ha, Maihar, Dist. Maihar (M.P.)

Submitting for your kind record perusal

Thanking you

Yours faithfully,
For UltraTech Cement Limited
Unit: Maihar Cement Works

for **Pratyendra Upadhyay**
(Authorised Signatory)

Copy To 1) Joint Director-S,
Regional office (Western Region), MoEF & CC
Kendriya Paryavaran Bhawan, E-5, Aera Colony.
Link Road-3, Ravishankar, Bhopal- 462016 (M.P)

2) The Regional Director , CPCB Regional office.
Paryavaran Bhawan, E-5, Aera Colony, Bhopal- 462016 (M.P)

3) Regional office, M.P Pollution Control Board ,
Maihar-Amarpatan Bypass Road, Satna-485001 (M.P)

Environmental Statement Report
Bhadanpur Limestone Mines (ML area 296.95 ha)
Maihar Cement Works

April-2024 to March-2025

UltraTech Cement Limited
Unit : Maihar Cement Works
Maihar, Dist- Maihar
Madhya Pradesh

(Bhadanpur Limestone Mine Lease area ML-296.95 Ha)

The Maihar cement works complex have four leases 217.681 ha, 296.956 ha, 217.681 ha & 663 & 193.252 ha. The limestone raised from the various mining leases is exclusively being used for catering the requirements of its two cement plants.
Geographically, it is located at Latitude: 24.1715 Longitude: 80.8575 The area covered under mining lease is comprised of 296.956 Ha. area speeded over the village of Bhadanpur, Satna district of Madhya Pradesh.

Mining: Mineral extraction is essential for the development and progress of a nation. However, mining operations in general have adverse environmental impacts if proper abatement measures are not taken. The magnitude and significance of the environmental degradation caused by mining depends on the type of minerals, method of mining, smoke and gases from beneficiation plants, processing plants, scale and concentration of mining activity, geological and geomorphological setting of the area, nature of mineral deposit, land use pattern before the commencement of mining operations, etc.

Method of Mining: Mining operations are being carried out by fully mechanized opencast method, utilizing Heavy Earth Moving Machinery (HEMM) in conjunction with drilling and blasting with the use of suitable explosives. Deep hole drilling & controlled blasting is being adopted. DTH drills of 115 mm diameter are being/will be used for drilling of blast holes. Slurry and detonators is being used for blasting. NONEL is also used for bottom initiation to reduce ground vibrations. A minimum width of 6-8m working bench will be maintained for safe operation of mining machinery. The limestone after blasting is being loaded by hydraulic excavators into dump trucks for its transportation to crusher.

Topography of area: Elongated plateaus and ridges with intervening valleys mark diverse picturesque physiographic features around Bhadanpur. These represent matured topography and structures showing various erosional landforms. The major sandstone horizons of the Kaimur, Rewa, and Bhander and Khenjua groups form elevated scarp giving rise to prominent plateaus. These scarps elongated north east-south west. Sarlanagar is situated on a wide slopping foot hills (450 m) of Rewa sandstones, which form structural ridges with escarpments, as well as wide sloping faces. Further, south of Sarlanagar the rocks of Kaimur and Semri groups form series of elongates structural valleys, ridges and escarpments. Bhadanpur valley (380 m) is occupied by shaly limestone and limestone.

The mines operation is being done using technology for low impact mining, it includes options that lead to minimum ground disturbances, avoid excessive fly rocks and provide a safe working environment. Occupational exposure is reduced through appropriate work practices and use of personal protective equipment's. Mine waste disposal follows ecological and safety criteria with progressive rehabilitation of the site during the active life of the mine through in pit dumping & plantation, slope stabilization. The mining department shows a good example of harmonious equilibrium between the imperatives of mineral development and those of preservation of the environment.

[FORM – V]

(See rule 14)

Environmental Statement for the financial year ending 31st March 2025

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	Bijneswar Mohanty President & Unit Head Maihar Cement Works (Bhadanpur Limestone Mine Lease area 296.95 ha P.O: Sarlanagar – 485772, Maihar Distt. Satna (M.P.)
(II)	Industry category Primary-(STC CODE) Secondary-(SIC CODE)	Limestone Mining
(III)	Production capacity	Mines Lease area & Production Capacity: 1) 1.297 Million Ton per Annum
(IV)	Year of establishment	296.95 ha - 23/04/1975
(V)	Date of last environmental statement submitted	28 September, 2024

PART – B

Water & Raw Material Consumption

1) Water consumption - M3/d

A) Industrial Use

i) Industrial Purpose (Process & Water Spray) – 37.90 M3/d

ii) Cooling – Nil

iii) Plantation – 8.43 M3/day

B) Domestic Use

Domestic Purpose **– 54.82 m3/d**

Name of product	Process Water Consumption Per Unit of Products (m3/MT of Limestone)	
	During the previous financial year 2023-24	During current financial year 2024-25
Limestone (MT)	0.0127	0.0107

Note*- No mineral processing is carried out, only crushing is being carried out.*

Raw Material Consumption			
Name of the raw materials	**Name of the products**	Consumption of raw material per unit of output (MT / MT)	
		During the previous financial year 2023-24	During current financial year 2024-25
Diesel	Limestone	0.9234	0.6817
Explosive:			
Detonator (in Nos)		6460 (in Nos)	13249 (in Nos)
Slurry Emulsion		0.0001	0.0001

Name of product	During the previous financial year 2023-24	During current financial year 2024-25
Limestone (MT)	631349	1295245

PART – C

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

i) Water: (No water pollutants directly discharging to Environment.) -STP Treated water Quality result

Pollutants	**Prescribed Limit As per CTO**	**Result (2024-25)**	**Percentage (%) of variation from prescribed standards**	**Remarks**
pH	6.5 -9.0	7.56 to 8.12	-12.12	Sewage Treatment Plant has been installed having capacity of 150 cum/day Domestic Waste water generated from Colony is used for plantation and water spray
Suspended Solids (SS)	100 mg/l	33.70 to 53.83	-56.24	
Biological Oxygen Demand (BOD)	30 mg/l	9.78 to 15.90	-57.57	
Chemical Oxygen Demand (COD)	250 mg/l	38.98 to 50.02	-83.18	
Oil & Grease (mg/l)	10 mg/l	BDL (DL0.4 to 1.0)	-90.0	
Faecal Coliform	<1000	125 to 153	-86.53	

ii) Water: (No water pollutants directly discharging to Environment.) Mines Workshop Treated Quality result

Pollutants	Prescribed Limit As per CTO	Result (2024-25)	Percentage (%) of variation from prescribed standards	Remarks
pH	6.5 -9.0	7.13 to 7.47	-17.0	Wastewater generated from workshop has some traces of oil & grease separated through oil skimmer and filtered water is recycled and reused for again, washing purpose. Treated waste quality is being maintained as per standard
Suspended Solids (SS)	100 mg/l	11 to 23	-83.33	
Biological Oxygen Demand (BOD)	30 mg/l	4 to 7	-82.50	
Chemical Oxygen Demand (COD)	250 mg/l	14 to 20	-93.40	
Oil & Grease (mg/l)	10 mg/l	BDL (DL1.0)	-90.0	

(a) Ambient Air Quality Monitoring

Monitored Parameters	Permissible Limits (µg/m³)	Core Zone (24-25 Yearly Average)		
		Pit-D	Mines Colony	Godin Village
		Yearly Average		
PM10	100	52.37	46.18	41.76
PM2.5	60	29.49	28.53	23.05
SO2	80	10.38	9.34	7.09
NO2	80	16.18	14.08	13.34
CO	2000	BDL (DL 500)	BDL (DL 500)	BDL (DL 500)

Monitored Parameters	Permissible Limits (µg/m³)	Buffer Zone (24-25 Yearly Average)				
		Bhadanpur Village	Bhadanpur Office gate	Rewara Village	Kakra Village	Piprahat Mines
		Year Avg				
PM10	100	43.82	45.21	40.96	41.09	47.18
PM2.5	60	25.03	25.99	21.60	20.24	27.31
SO2	80	8.13	9.17	8.17	6.81	10.83
NO2	80	12.68	16.08	12.98	12.72	17.81

CO	2000	BDL (DL 500)	BDL (DL 500)	BDL (DL 500)	BDL (DL 500)	BDL (DL 500)

PART – D

Hazardous Wastes

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Hazardous Wastes	**Total Quantity (Kg.)**	
	During the previous financial Year 2023-2024	**During the Current financial Year 2024-2025**
a) From Process- (Maintenance of mining machineries)	Used Oil (Cat. 5.1)	Used Oil (Cat. 5.1)
ML area - 296.95 ha	1050 Kg	1910 Kg
b) From Pollution Control Facilities.	Nil	Nil

PART– E

Solid Wastes

Solid Waste		**Total quantity (MT)**	
		During the previous financial Year 2023-2024	**During the Current financial Year 2024-2025**
a)	From process (Over burden)	125615.6	390848
b)	Form pollution control facilities	Not Applicable	Not Applicable
c)	1) Qty. recycled or reused Within the unit.	125615.6	390848
		(During crushing process and transportation of Crushed Limestone fine dust collected at Bag Filters which is used in CPP Boiler for sulphur dioxide trapping.)	
	2) Sold	Not Applicable	
	3) Disposed:	NIL	NIL
d)	STP Sludge (MT)	0.18 Reused as manner in greenbelt development / Horticulture	0.20 Reused as manner in greenbelt development / Horticulture

PART – F

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

A. Hazardous Waste –	Quantity	Nature	Remark
Used Oil (Cat. 5.1)	1910 Kg	Black Liquid, PCBs, Heavy metals (like Pb, As, Cd, Cr, Ni) & PAH.	*

*** Hazardous Waste:**

Hazardous waste i.e. Used oil is generated during maintenance of Mining machineries / equipment's. Collected Used Oil sold to authorize recycler within 90 days as per Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2016, analysis repot of used oil Used Oil (Cat. 5.1) is enclosed.

J.M. ENVIROLAB PVT. LTD.

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Approved from MoEF&CC & Certified - ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

TEST REPORT

Name and address of unit:	M/s. UltraTech Cement Limited (Unit: Malhar Cement Works), P.O.- Sarla Nagar, District- Satna, Madhya Pradesh,485772	Report No.:	JME/O/241113001/N
		Reporting Date:	18/11/2024
		Analysis Completion Date:	18/11/2024
		Analysis Start Date:	13/11/2024
Sample Description:	Used Oil	Receipt Date:	13/11/2024
Sampling Location :	Hazardous Waste Covered Storage Room	Sampling Date:	12/11/2024
Sample Collected by:	JMEPL Team	Sampling Type:	Composite
Contact Person:	Mr. Manoj Lohakare (SH-Environment)	Packing Status :	Temporary Sealed

TEST REPORT

S. No.	Parameter	Protocol	Result	Unit	Limits
1.	Polychlorinated biphenyls (PCBs)	As Per CPCB Guidelines	BDL (DL 2.0)	ppm	<2.0
2.	Lead	As Per CPCB Guidelines	24.61	ppm	100
3.	Arsenic	As Per CPCB Guidelines	0.59	ppm	5
4.	Cadmium + Nickel + Chromium	As Per CPCB Guidelines	32.08	ppm	500
5.	Poly Aromatic Hydrocarbon (PAH)	As Per CPCB Guidelines	0.75	%	6

End of Report

Brishti Mehta
Tested by

Abhishek Tiwari
Checked by

Rajkumar Yadav
Authorized Signatory

Reg. Office & Lab:
424, Ground Floor, Udyog Vihar,
Phase-IV, Gurugram-122015 (Haryana)
E-mail: jmenvirolab@hotmail.com | www.jmenvironet.org

Corporate Office
Emaar Digital Greens, Tower-B, Unit No.1517,
Golf Course Ext. Road, Sector-61,
Gurugram-122011(Haryana)

Solid Waste:

The overburden comprises of Dark grey shally Limestone (impure Limestone). It contains high silica (SiO_2) percentage and low CaO percentage with intrusion of shale parting in laminar form; which has diluted the quality of Dark grey shally Limestone.

Overburden materials are being carried out in following manner:

- Dumps are designed within the maximum permissible heights and smooth angles. The top soil is being used to the maximum possible extent for plantation. The top soil of area is either the black cotton soil. The thickness of top soil in mineralized area varies from 0.1 m. to 1 m. with an average thickness of 0.3 m. The following practices used for topsoil management.
- Scraping the top soil by dozer till to expose the limestone/ overburden beds.
- Scraped soil shifted from working face to temporary storage yard by dumper
- Removed soil is being utilize for plantation purpose over the Overburden dump/ backfilled area.
- Matured dump is being stabilized through vegetation.
- During period from April 2024 to March 2025 overburden generated – 390848 MT

Top Generation and utilisation

Period	Top soil generated (Lakh Cum)	Top Soil Volume Utilized (Lakh cum)				
		Surface Dumps		Backfilled		Total top Soil spread
		Volume	Area (ha)	Volume	Area (ha)	
Up to Dec., 15	0.957	0.4075	7.66	0.8197	16.12	1.2272
Jan to June,16	0.009	0	0	0.009	0.50	1.2362
June to Dec., 16	0	0	0	0	0	1.2362
Jan. to June, 17	0.0194	0	7.66	0.0194	0.42	1.2556
July, 17 to Dec., 17	0	0	0	0	0	1.2556
Jan., 18 to June, 18	0	0	0	0	0	1.2556
June, to Dec.,18	0	0	0	0	0	1.2556
Jan., 19 to Jun, 19	0	0	0	0	0	1.2556
July, 19 to Dec., 19	0	0	0	0	0	1.2556
Jan20 to March, 2020	0	0	0	0	0	1.2556
April 2020 to Sep 2020	0	0	0	0	0	1.2556
Oct., 2020 to March, 2021	0.00050	0	0	0	0	1.2556
April 2021 to Sept 2021	0	0	0	0	0	1.2556
Oct 2021 to March 2022	0.47	0	0	0.47	1	2.2556
April 2022 to Sept 2022	0.027211	0	0	0.027211	0.25	2.282811
Oct 2022 to March 2023	0	0	0	0	0	2.282811
April 2023 to Sept 2023	0	0	0	0	0	2.282811
Oct 2023 to March 2024	0	0	0	0	0	2.426811
April 2024 to Sept 2024	0	0	0	0	0	2.426811
Oct-2024 to March-2025	0	0	0	0	0	2.426811

Photograph OB dumps with Plantation

PART – G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production:

1. MINE AND MINERAL MANAGEMENT

- Vehicle using for mineral limestone for internal transportation, water spray is regularly spray on haul roads.
- Permanently water sprinkler has been provided
- Dust generated during the crushing of Limestone is collected in Bag filters and being recycled in to the system to use in Cement manufacturing.
- Topsoil is being stored separately & utilized for plantation purpose at OB dump, backfilled area and green belt development within ML area.
- All the Drilling machines are equipped with water injection system for arresting the fugitive dust generation during the drilling operation.
- No secondary blasting is carried out and over size limestone boulder is being break by the rock breaker.

Mobile Water Tanker for water spary | **Permanent Water Sprinkler**

Wet Drilling Machine

Rubber curtains at Dump hopper and atomozed water spray

TT Bag Fitlers

Covered Limestone Belt conveyor

Mines Washing (workshop) Oil Separator

2 WATER RESOURCE MANAGEMENT

3. **Rainwater Harvesting & Roof top rain water harvesting**

Rain water Collecting channel to Reservoir & Recharge Shaft

Rain Water Harvesting

Unit has developed water recharge scheme

Details of Water recharge /Harvesting Structure			
Name of Water Recharge structures	**Area of Water Recharge structures**	**Depth of Water Recharge structures**	**Quantity of Water Recharge through water recharge structures**
Recharge well mines office	82.47 sq.mtr	10.25 mtr	74.73 cum/yr
Recharge well mines office	28.26 sqmtr	15.0 mtr	25.61 cum/yr
Recharge shaft 6 number	26100 sqmtr	15.0 mtr each	482500 cum/yr
Roof top area	16408 sqmtr		14867.89 cum/yr
Total	**42618.73 Sqmtr**		**497469.03 cum/yr**

Pollution Control Measures Adopted for Control of Pollution:

1. Wet drilling process adopted for control the fugitive dust emission.
2. Water sprinkling on roads by water tanker capacity of 20 KL for control of dust emission.
3. Blasting is done with used in Nonel to control the ground vibrations and AOP.
4. Top soil if any available is stack at earmarked location and used for plantation work.
5. Green Belt Development Measures: As a part of green belt development.

Following measures have been adopted for abatement of pollution, conservation of natural resources

1. **OVERBURDEN REMOVAL:**

Presently, excavated overburden consists of soil with scree materials (consists of pebbles to boulders of sandstone and limestone of various grades) are disposed of in overburden dumps. Top soil (0.5 m to 1.0 m thickness in scattered locations) has been removed and used for plantation purposes. Balance amount has been temporarily stacked in earmarked area but as its generation is of negligible amount permanent top soil dump is not created.

2. **Wet Drilling**-

Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling to avoid fugitive emission

Wet Drilling Machine

Water Spry on haul roads

3. CONTROLLED BLASTING:

Blasting is carried out as per the guideline of DGMS and only during the day time. Each and every blast is monitored for ground vibration and record is being maintained. The parameters are within limit

All necessary precautions as per statutory provision of MMR 1960 and DGMS guideline is being taken to ensure the safety of work persons and neighboring villagers. All precautions and provision under MMR 1960 have been strictly followed.

Following mitigation is being taken for controlled blasting:

- Nonel Shock tube with milli second delay detonator in every hole are used. The parameter is found well within limits.
- Regular monitoring of each blast.
- Covered blast hole before blasting to prevent fly rocks.
- Provision and use of siren and other warning system has implemented flags, barriers for entrances have been provided.
- Display the blasting operation of notices at Prominently location have been displayed.
- Posting of sentries is in practice during blasting time at all entry and critical placed.
- Precautions after blasting is being done strictly

4. LOADING ACTIVITY:

At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action

5. WATER SPRAYING BY TANKER ON HAULAGE ROAD:

Regular mobile Water tanker is being deployed for the water spraying on the haul roads. Atomized water sprinkler is installed

6. SILT CONTROL MEASURES FOR FORMATION OF GARLAND DRAINS AROUND THE OB DUMP:

Catch drains and siltation pond of appropriate size has been constructed, to avoid Soil, Mineral and OB dumps, to prevent water run off & sediments into the Andhiari Nallah. This is a seasonal nallah having water during post monsoon period.

The garland drains, settling tanks, check dam & Siltation pond along the periphery of the mine pit is provided & maintained to arrest silt and sediments. Regular cleaning has been carried monsoon, Garland drains settling tank is provided of appropriate size having sum capacity is for 50 % safety margin over and sudden rainfall

Garland Drain

Siltation pond

7. **FENCING ALL AROUND WORKING PIT:** Fencing along with the working mines pit has been provided

- Mining area has been protected through wire fencing
- Boundary wall also constructed at some area
- Green belt has been developed for creating natural environment for conservation and protection.
- Food & Water pond has been developed for conservation and protection
- Provided Caution board for sensitization of the villagers.

Mines Fencing and Cautions Board

PLANTATION VIEW OF ML-296.95 HA

8. OTHER SOURCES OF DUST GENERATION AT QUARRY

Other sources of dust generation in the mines are the loading points, haul roads and the blasting operation. At loading points, muck pile wetting by sprinklers fitted on water tanker is tried to suppress the dust generated during digging action. It is found to be partly effective. Similarly, dust generation during blasting is only for a few minutes and is unavoidable. Hydraulic rock breaker is used which has eliminated the dust generation due to secondary blasting.

- **On haul roads:**

i) Dust suppression on haul roads is done by water sprinkling by truck mounted water.
ii) Permanent water sprinkler has been installed along 200 meters in length, 2 numbers

of Water tankers are also provided for dust suppression on haul roads

iii) Permanent water sprinkler has been installed at Crusher road and Water tankers are also provided for dust suppression on haul roads

- **Crushing Plant**
  Though it is out of mining lease, here also atomized water spray is provided in the hopper. Bag filter system is provided at Crusher and all the conveying and transfer points for limestone transfer belt conveyor to control the dust very effectively.

1. Water spray through tanker along the haul roads
2. Regular mobile Water tanker is being deployed for the water spraying on the haul roads
3. Adequate capacity of bag filter, water sprinkler and side curtains has been installed.
4. Bag filter has being installed at various transfer points to control dust emission.
5. Regular monitoring is being carried out through NABL certified laboratory
6. Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling
7. At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action

B) Other sources of dust generation at quarry:

Other sources of dust generation in the mines are the loading points, haul roads and the blasting operation. At loading points, muck pile wetting by sprinklers fitted on water tanker is tried to suppress the dust generated during digging action. It is found to be partly effective. Similarly, dust generation during blasting is only for a few minutes and is unavoidable. Hydraulic rock breaker is used which has eliminated the dust generation due to secondary blasting.

C) On haul roads:

Dust suppression on haul roads is done by water sprinkling by truck mounted water.

D) Crushing Plant

Though it is out of mining lease, here also atomized water spray is provided in the hopper. Bag filter system at all the conveying and transfer points provided to control the dust very effectively.

1. Permanent water sprinkler has been installed along the haul roads
2. Regular mobile Water tanker is being deployed for the water spraying on the haul roads
3. Adequate capacity of bag filter, water sprinkler and side curtains has been installed.
4. Bag filter has been installed at various transfer points to control dust emission.
5. Regular monitoring is being carried out through NABL certified laboratory
6. Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling
7. At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action

Fully Covered Crusher with mist water spray system

Crusher

Adequate Dust Collectors at

PART – H

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

We are conducting Environmental Monitoring as per the Guidelines of CPCB & M.P. Pollution Control Board, Bhopal and submitting reports on regular basis. Following steps has been adopted for haulage road design for minimum dust generation and a water tanker is dedicatedly deployed for watering on haulage road for suppression of dust.

Unit has made concrete road from mines to crusher and other mining lease road compacted with mines reject materials and impacted by road roller.

Following measure is being taken for the control of dust emission for the various mining activities i.e. haul road, loading and unloading points, transfer points and other transfer points:

1. Filter bags replaced 50 in the month of June-2024 of OLBC-1
2. Solenoid valve replace -20 Nos for better purging
3. Water sprinkler repaired/replaced-ML 296 Pit B1 & B2 haul roads, Existing water sprinklers repaired. in FY 2024-25
4. Boundary wall constructed- At Mines Colony (ML 296), 340 meter boundary wall constructed near the nursery and WTP. in FY 2024-25
5. Water tanker procurement- A new 10 KL capacity water tanker has been purchased. in FY 2024-25 with BS-6 engine, having mist generation based sprinklers to conserve more water.
6. Washing ramp/STP related work- Washing ramp work has been included and mentioned in the yearly maintenance activities. With mist generation based washing to conserve water. Water tank size enhance which conserve water, also waste oil is separated by multi-filter system
7. New Dumper procurement- 2 dumper has been purchased. In FY 2024-25 having more fuel efficient and environment friendly as compare to old dumper
8. Battery operated cabin AC is installed in 3 Nos of HEMM equipment's (Pay Loader WA 600, Pay Loader H 2071 and Excavator PC 300) in FY 2024-25
9. Green Belt development- 0.5 ha to 1.0 ha covered in each year at all Mines approx. 10000 sampling were planted
10. Distribution of 8000 sapling to nearby village to improve environment sustainability around Mines area FY 2024-25- ML 217.681, ML 663, ML 296.956 Ha, Ml 193.252 ha Four Mines surrounding village area covered under this drive
11. Pond deepening in villages- To recharge and collect more rainwater during monsoon for water conservation near ML 296.956 ha and ML 193.253 ha
12. Dust suppression on haul roads is done by water sprinkling by truck mounted water.
13. Permanent water sprinkler has been installed along 200 meters in length, 2 numbers of Water tankers are also provided for dust suppression on haul roads and is maintained
14. Permanent water sprinkler has been installed at Crusher road and Water tankers are also provided for dust suppression on haul roads
15. Permanent water sprinkler of two nozzle has been installed along the haul roads (300 meter) and is maintained
16. Stone pitching were carried out approx. 300 meters across the garland drains.
17. Fencing maintenance work were carried along hills side (North side of Pit)
18. Dump hopper all belt curtain replaced with new
19. In OLBC-2 (New) side belt curtain installed at both sides.
20. Dust collector modification work carried out at Old Crusher
21. New Dust collector installed at old Surge bin (Old OLBC) circuit belt
22. Conveyor belt 6000 meter is replaced of old OLBC

23. Return scrapper is installed at EV crusher discharge conveyor to minimize return dust spillage
24. Regular mobile Water tanker is being deployed for the water spraying on the haul roads
25. Adequate capacity of bag filter, water sprinkler and side curtains has been installed.
26. Bag filter (20 Nos) has been installed at various transfer points to control dust emission.
27. Belt conveyors are fully covered and maintained
28. Regular monitoring is being carried out through NABL certified laboratory
29. Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling.
30. At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action.
31. Hydraulic rock breaker is used which has eliminated the dust generation due to secondary blasting.

Fugitive Emission Control measures

Fully covered Crusher with water spray

Mist type water spray

Crusher Bag Filter

Wet drilling

Fully covered Conveyor belt (OLBC)

Permanent Water Sprinkler

Mobile Water Tanker

Mist type water spray tanker.

Noise is being controlled by adopting various measures like:

- Noise generated by mine machinery is minimized by adopting advanced maintenance practices.
- Manpower involved in operation of heavy earth moving machineries, provided earmuff and earplug.
- Providing air conditioner cabin in HEMM.
- During year 2024-25 Approx 10,000 sapling planted total tree plantation carried out 27, 8901 Nos in and around mines lease area.

Tree Plantation Photograph

Occupational Health & Safety Management:

30 bed hospital is available with Two doctors along with staff for rendering medical services to the employees and population in and around the local villages. Once in a weekly paediatrician doctor are visiting outside.

Occupational health check-up of workers has been carried out on 02 type of working area i.e. Normal area ECG, CBC, LFT, KFT, Urine REM, Chest X-Ray, Audiometer Spirometry and 2nd type of area i.e. Dust Prone and Noise prone area Audiometry, Spirometry, Eye test, PFT test, Sputum test etc. was done and in last three Months Occupational Health check-up of 3661 employees was done and Mines area 99 employees were benefitted.

Maihar Cement has provided with occupational health centre functioning round the clock. Qualified doctor and 24 Hrs. availability of pharmacist and ambulance has been ensured at site to render the medical assistance. Tie up arrangements is also there with nearest hospital and nursing home for the plant. First aid boxes have been kept at 58 identified locations for emergency. Maihar Cement Works has also operated full flagged hospital in the vicinity of Plant which also covering Captive Limestone Mines.

- Periodical medical examination is being done as per guidelines of MMR 1961 for occupational health monitoring of the employees.
- Earplugs and earmuffs are provided to the workers working in high noise zone.
- Trained operators are being deployed to operate machines.

Occupational Health Check-up

<table>
<tr><th colspan="4">Occupational Health Check-up Report - April 2024 to March 2025 (Mines Area) ML-296.95 HA</th></tr>
<tr><td colspan="4">Category of Manpower</td></tr>
<tr><td>Type of test Carried Out</td><td colspan="2">Nos. of employees</td><td>49</td></tr>
<tr><td>Normal area</td><td colspan="3">ECG, CBC, LFT, KFT, URIN R/M CHEST X-RAY, Audiometery, Spirometry</td></tr>
<tr><td>Dust Prone area</td><td colspan="3">Audiometery, Spirometry</td></tr>
<tr><td>High Noise area</td><td colspan="3">Audiometery</td></tr>
<tr><td>PFT</td><td></td><td></td><td></td></tr>
<tr><td>Audiometry</td><td>Sr No</td><td>Employees</td><td>Numbers</td></tr>
<tr><td>Eye Test</td><td>1</td><td>W/B</td><td>36</td></tr>
<tr><td>Blood Test</td><td>2</td><td>Contractor</td><td>13</td></tr>
<tr><td>X-Ray</td><td>Total</td><td></td><td>49</td></tr>
<tr><td>ECG</td><td colspan="3" rowspan="2">Note:- Total nos. of AMC.= Company Employees</td></tr>
<tr><td>Sptum Test</td></tr>
</table>

Funds are earmarked for Environmental Protection Measures in a separate account and are utilized for this purpose only. Expenditure on environmental protection is common for all four Mines leases and during the year is as under:

The recurring Cost towards the environment protection is about Rs. 710.52 Lakhs.

S. N	Heads	Total in Rs for FY-24-25
A	**Pollution Control Operational and maintenance exp.-**	
1	Boundary Wall for Lease wise cost	0
2	Flow Meter for Lease Area	53612
3	Civil cost for Lease Area	368880.39
4	Water Filtration Treatment Plant	0
5	Study Report for compliance	2932104.731
6	Environmental Expenses	1781400
7	Dust suppression operation cost/Water Sprinkler/water tanker	321310.07
8	Garland Drain & bunds Repairing /Cleaning maintenance	190234
9	Housekeeping	738290.34
10	Road repairing cost if any	1306054.613
11	Rehabilitation & Reclamation	8097229.744
12	Water recharge repairing cost /cleaning charges	96,200
Total in Rs A		15885315.89
Total in Lacs - A		**158.85**

Recurring cost for Environment protection incurred
[Common for all M.L namely 296.956 Ha, 217.681 ha, 663.0 ha & 193.252 ha]

Sr. No	Heads	Cost in Rs for FY-24-25
B	**Recurring cost for Environment protection incurred [Common for all M.L namely 296.956 Ha, 217.681 ha, 663.0 ha & 193.252 ha]**	
1	Maintenance Dust Collector at belt Conveyers existing belt/Crusher House/at EV crusher house	898742.64
	Dust Suppression system at EV crusher house (F-Harley System)	
2	Modification Bag Filter of Crusher	.
3	Water Treatment Plant (Filtration) Operational & Maintenance cost	759641.46
4	STP Operation & Maintenance Cost	1541880
5	Consultancy Services for Environment Monitoring	567500
6	Consultancy Services for CGWA	150000
7	Online CAAQMS Maint. & Calibration /Spares consumed /	993113
8	Water recharge repairing cost /cleaning charges	200000
9	Plantation/Green belt	502832.5
10	Welfare, Community Development /Health Education	48446500
11	Occupational Health (Fire Fighting Equipment's (Portable)/PPE's)	368715.27
12	E&I Mines Expenses (CGWA)	737299.25
Total (B) - In Rs		5,51,66,224.12
Total (B) - In Lacs		551.66
Grand Total (A+B) - In Lacs		**710.52**

CSR activities:

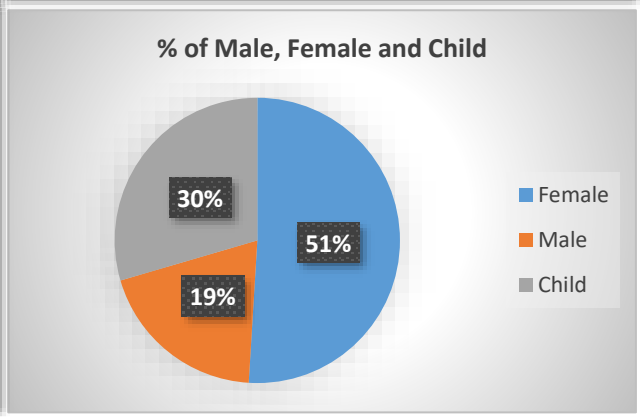
A dedicated team is working for CSR activities at surrounding area covering nearby villages Panchayats:

Expenditure on CSR Activities during period 2024-25	
Particulars	**Expenses in Lakh**
Education & Capability Building	432.23
Health Care & Family Welfare	111.02
Sustainable Livelihood	28.40
Infrastructure Development	121.99
Social Empowerment & Welfare	31.21
Others	
Total	**724.85**

List of CSR activities completed in FY-2024-25

Health Initiative

Health: Summary of Activities			
S.L	**Activities**	**Area/Village**	**Beneficiaries**
1	Distribution of Water through tanker at nearby village at 10 nos. of villages.	Nearby Village	15000
2	12 nos. of Organize General medical health camp at nearby village.	Nearby village	1246
3	Organize "Healthy Baby Show" at 10 no. of Anganwadi at nearby village.	Nearby Village	187
4	10 nos. of Mother and child health awareness session by Govt. ANM at nearby village.	Nearby Village	274
5	10 nos. of Breast feeding awareness camp with collaboration of Dr. Smriti Singh (MCST Hospital).	Nearby Village	126
6	Organized Eye Health Checkup camp with collaboration of Shayam Sah Medical College Rewa at Sarlanagar Hospital.	Nearby Village	600
7	Cataract Surgery done for selected patients for Eye Health checkup camp at Shyam Sah Medical Collage.	Nearby Village	97
8	4 nos. of borewell installation and 8 nos. of Borewell repairing at nearby villages.	Nearby Village	3200



Education Initiative

Education: Summary of Activities			
S.L	**Activities**	**Area/Village**	**Beneficiaries**
1	Teaching Learning Materials Distribution Program For 10 nos. of Anganwadis.	Nearby Village	400
2	Educational Kit Distribution program to 12 of schools.	Nearby Village	436
3	Blazer distribution program at Govt. College Badera in presence of MLA Maihar.	Shrinagar	455
4	Road Safety Awareness Session organized at various govt. schools at nearby villages	Nearby schools	1140
5	8 nos. of schools supported with Gift items for National day celebration Sweets (Biscuits) distribution program at schools and anganwadi during republic Day in more than 5600 students.	Nearby Village	5600
6	Purchase of 10 nos. of water cooler for distribution in various Govt schools at nearby villages.	Nearby Schools	4000
7	Purchase of 4 nos. of sanitary pad vending machine for high schools.	Nearby Village	1200

8	Distribution of repaired furniture to Govt. High School Tiloura (100 nos. of Bench Desk)	Tiloura	600
9	Organized 10 nos. of "Swatchata Hi Seva" program with poster and slogan competition at nearby schools of Mines and plants.	Nearby Village	1500
	Total		**11053**






Sustainable Livelihood

S Livelihood: Summary of Activities			
S.L	**Activities**	**Area/Village**	**Beneficiaries**
1	Distribution of 5 nos. of Tailoring Machine to women entrepreneur at Banka Village Satna	Bhaka	5
2	Distribution of 10 nos. Self Business Starting Kit the VTC trainee for their income generation activities	Sarlanagar	10
3	Exposure Visit at Artisan from Bhadanpur Village at Uchehara for the Bamboo Craft	Bhadanpur	15
4	Inauguration of Beauty parlor and Tailoring Service Point at Cooperative Store Sarlanagar	Sarlanagar	60
5	Farmer Education Tour for modern agricultural practice at KVK majhganwana.	Tiloura, Umari-Fifri, Shrinagar, Patehara, Gondin	38

6	Pilot Project for Mushroom Cultivation at Silounti Village under income generation activities	Silounti	15
7	VTC Training Program (Tailoring and Cutting, Beauty Parlor, Electrical and Electronic, Diesel Engine & Tractor Repairing)	Nearby Village	135
8	5 nos. of Pond Deepening work done for water conservation and ground water recharge at nearby villages	Nearby Village	6000

Infrastructure Initiative

Infrastructure: Summary of Activities			
S.L	**Activities**	**Area/Village**	**Beneficiaries**
1	Inauguration of Newly constructed Anganwadi Centre and 2 nos. of additional Classroom at Baihar Village	Baihar	200
2	Construction of 725 Mtr CC Road at Devraj village (Panchayat Deori)	Deroi	3500
3	Construction of 2 nos. of Muktidham at the village Bamhani and Bhadanpur N	Bhadanpur N, Bamhani	4500
4	Construction of School Toilets at Govt. Primary School Bhadanpur South	Bhadanpur S	135
5	Leveling and cleaning work done at various schools ground, Roads, and Drains at nearby villages	Nearby Village	3500
6	2 nos. of Barat Ghar at under construction stage at Village Umarour and Bhadanpur South	Bhadanpur S, Umrour	7000

Social Empowerment

Social Empowerment: Summary of Activities			
S.L	**Activities**	**Area/Village**	**Beneficiaries**
1	10 nos. of Environment Awareness program at Nearby Village with Plant distribution	Nearby Village	150
2	Plantation Drive conducted at nearby village like Umari-fifri, Bhadanpur S, Piprabarband Village and others	Nearby Village	450
3	World Population Days celebrated at VTC with VTC trainee	Sarlanagar	45
4	Organizing of Village Level Cricket Tournament at Ramleela Ground and sports Kit distribution program	Nearby Village	300
5	Faishon Show competition for VTC trainee at Sarlanagar Mahavidyalaya	Sarlanagar	150
6	Blanket distribution program for older person during the session of Winer	Sagmaniya	40
7	Musical Instrument distributed to Prabhat Feri Group at Tiloura Village	Tiloura	15
8	Maihar Railway station is supported with Mobile Charging Point during the Mahakumbh session	Maihar	
9	Organized the Educational Tour for the VTC trainee at Mukundpur Tiger Reserve	Nearby Village	55
10	Organizing "Umang Khel Mahotasava For Anganwadi workers and Community women's	Nearby Village	700
11	Purchase of LED bulb for the distribution in the Piprabarbad village	Piprabarband Village	3500
	Total		**5405**

As part of the environmental sustainability initiative, a Plantation Drive was conducted at nearby villages including Umari-Fifri, Bhadanpur South, Piprabarband, and others under the CSR Department of UltraTech Maihar Cement Works. The drive focused on enhancing green cover in the region by planting saplings at school premises, community spaces, and other public areas. More than 2,000 saplings including Neem, Peepal, Ashok, and Jamun were planted with active participation from school children, local panchayat members, and community volunteers

PART – I

Miscellaneous:

Any other particulars inrespect of Environmental protection and abatement of pollution.

The unit is acknowledged ISO certification by Bureau of Indian Standards for cement plant for- ISO-9001, ISO-14001, ISO-45001 ISO 50001, certifying agency is SGS, UK.

We have adopted management systems are as under:

Particulars	ISO 9001	ISO 14001	ISO 45001	ISO 50001
Year of Certification	7-Apr'2025	7-Apr'2025	7-Apr'2025	14 May 2025
Certifying Agency	SGS, UK	SGS, UK	SGS, UK	SGS, Italy

Measures Taken to Abate/ Mitigate Environmental Pollution:

Environment Monitoring and Measurement Facilities at Maihar Cement Works

Environment Cell of Maihar Cement works is carrying out monitoring and measurement of various Environment parameters within the premises of Plant, TPP and Mines and nearby villages covered in 10 km radius. We have established the monitoring stations in Core Zone (Mines premises) and buffer zone (nearby villages). To conduct the monitoring & also to generate awareness among the local community, we have Environment monitoring Van. We have PM 2.5 Sampler, Respirable Dust Sample, High Volume Sampler, Noise Monitor, Piezometer and various equipment for water testing & measurement.

Ambient Air Quality Monitoring is being carried out in core zone as well as buffer zone

We have installed (20 no's) Bag filters are provided at various transfer points for crusher and transfer points of materials to avoid fugitive dust emission from process. Apart from these Pollution Control Equipment's, we have taken various steps & Good practices adopted are as under:

1. Filter bags replaced 50 in the month of June-2024 of OLBC-1
2. Solenoid valves replace -20 Nos for better purging
3. Water sprinkler repaired/replaced ML 296 Pit B1 & B2 haul roads, Existing water sprinklers repaired. in FY 2024-25
4. Boundary wall constructed- At Mines Colony (ML 296), 340 meter boundary wall constructed near the nursery and WTP. in FY 2024-25
5. Water tanker procurement- A new 10 KL capacity water tanker has been purchased. in FY 2024-25 with BS-6 engine, having mist generation-based sprinklers to conserve more water.
6. Washing ramp/STP related work- Washing ramp work has been included and mentioned in the yearly maintenance activities. With mist generation based washing to conserve water. Water tank size enhance which conserve water, also waste oil is separated by multi-filter system
7. New Dumper procurement- 2 dumper has been purchased. In FY 2024-25 having more fuel efficient and environment friendly as compare to old dumper
8. Battery operated cabin AC is installed in 3 Nos of HEMM equipment's (Pay Loader WA 600, Pay Loader H 2071 and Excavator PC 300) in FY 2024-25
9. Green Belt development- 0.5 ha to 1.0 ha covered in each year at all Mines approx. 10000 saplings were planted
10. Lubrication room constructed for the storage of Oil and grease.
11. At crusher hopper F-Harley atomized water spray is provided in the crusher hopper.
12. Permanent water sprinkler has been installed along the haul roads
13. Regular mobile Water tanker is being deployed for the water spraying on the haul roads
14. Adequate capacity of bag filter, water sprinkler and side curtains has been installed.

15. Damaged road repaired from Laterite shed to new Crusher, approx. 1.1 KM
16. Permanent water sprinkler of two nozzle has been installed along the haul roads (300 meter)
17. Stone pitching were carried out across the garland drains.
18. Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling.
19. At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action.
20. Hydraulic rock breaker is used which has eliminated the dust generation due to secondary blasting.
21. Fully covered belt conveyors (6-7 KM) for limestone transportation and is maintained
22. Developed & Maintaining water reservoir at Mines area. Water reservoir with water recharge shaft.
23. STP (Design 150 kld) installed at Mines area

Permanent Water Sprinkler at haul Road

Water reservoir in ML Area

Water tanker for spraying on haul roads

Roof top water harvesting

Ground water Level Monitoring

Environment Monitoring Van

Corporate Environment policy and organization is as under:

ADITYA BIRLA

UltraTech

Corporate Environment Policy

UltraTech Cement Ltd. has always been conscious about the impact of our activities in spheres of employee welfare measures, social and community initiatives and environment sustainability. This environmental policy represents our general position on environmental issues, the policies and practices we apply in conducting our business. We make continuous efforts to be compliant with all applicable local environmental laws and regulations.

We will proactively commit towards:

1. Conducting all operations in accordance to new and recent environmental and statutory laws and regulations.
2. Efficient and sustainable extraction and utilization of natural resources.
3. Adoption and application of state of the art technology to minimize environmental impacts of our operation.
4. Waste minimization through focus on end-of-life management by incorporating waste to energy/fuel systems through safe and approved methods and ensuring to become Plastic Positive.
5. Influence our suppliers to adopt practices for resource conservation and waste reduction.
6. Limiting the dependency on coal-based power by increasing the share of renewable energy and Waste Heat Recover Systems (WHRS).
7. Make continuous efforts to minimize fresh water consumption by increased use of harvested/ recycled water in our operations across all UTCL units and contributing towards becoming Water Positive.
8. Implement and continually improve the Environmental Management System across all our operations.
9. Monitor and report the environmental performance of all our units through regular inspections and audits for corrective actions and continual improvement.
10. Reporting of compliances and non-compliances to the concerned regulatory authorities and other stakeholders with measures to address non-compliances on priority.

Kailash Jhanwar
Managing Director

November 2020

For the effective implementation of the environment policy, we shall:

a) Set objective-targets, develop, implement and maintain management standards and systems, and go beyond compliance of the relevant industry standards, legal and other requirements.
b) Commit to monitoring resource consumption on a regular basis and seek opportunities to reduce use of materials, energy, waste etc. through efficiency measures wherever possible.
c) Develop and propagate environmental awareness amongst employees and other stakeholders including surrounding communities.
d) Undertake the review of the Environmental Policy and Environmental Management Plan periodically.
e) Communicate the environmental commitment and performance of the organization to our stakeholders.
f) Abide to follow the Environment Policy through a robust Organizational Structure, given as follows:

Figure 1: Hierarchical System to address Environmental Issues

We, hereby declare that we are responsible and accountable for the deployment of this policy. We shall remain committed at all times for its effective implementation.

Kailash Jhanwar
Managing Director

November 2020

We have an organizational structure for Environment Management to carry out implementation of Environment measures envisaged at site in enclosed guidance of Corporate Environment Head and under direct supervision of Unit Head.

Environment Cell			
TECHNICAL STAFF			
1.	Name	:	**Mr. Bijneswar Mohanty**
	Designation	:	President & Unit Head
	Qualifications	:	B. E. (Electrical) & PG Diploma in Operation Management
2.	Name	:	**Mr. Pratyendra Upadhyay**
	Designation	:	Sr. Vice President (FH - Mines)
	Qualifications	:	B. E. (Mining Engineering) & Ist Class Mines Manager
3.	Name	:	**Mr. Rajendra Ambhorkar**
	Designation	:	Sr. General Manager (Mine Operation) (Bhadanpur Limestone Mines ML Area 296.95 a & 217.68 ha)
	Qualifications	:	B. E. (Mining Engineering) & Ist Class Mines Manager
4	Name	:	**Dr. Ratnesh Srivastava**
	Designation	:	General Manager & Zonal Head (Environment)
	Qualifications	:	M. Sc. & PhD (Environment)
5	Name	:	**Mr. Manoj W Lohakare**
	Designation	:	Sr. Manager & SH – (Environment)
	Qualification	:	B.Sc. (Chemistry) & Advanced Diploma in Industrial Safety
6	Name		Ms. Ayushi Singh
	Designation		Assistant Manager- Environment
	Qualification		M.S.c – Environment Science & Resource Management & SERB- Research from NIO Goa
SUPPORTING TECHNICAL STAFF			
Environment Monitoring Team (Third Party)			
7	Name	:	**Mr. Anuj Chaturvedi**
	Designation	:	Field Co-ordination
8	Name	:	**Mr. Shivank Singh**
	Designation	:	Field Co-ordination
9	Name	:	**Mr. Sandeep Singh**
	Designation	:	Field Assistant

POLLUTION MONITORING EQUIPMENTS AND FACILITIES

S. No.	Name of Equipment's	Mode/Type	Make	Quantity
1.	Fine Particulate Sampler	APM – 172 & APM- 172 mini	ETCL Greater Noida & ECOTECH,	5 Nos.
2.	Respirable Dust Sampler	APM – 460 & APM -- 415 BL	Envirotech, New Delhi & ETCL Greater Noida	5 Nos.
3.	Personal Sampler with cyclone system	ETCL	ETCL Greater Noida	1 Nos.
4.	Stack Monitoring Kit	APM – 901	ETCL	1 Nos.
5.	Pitot Tube (3 m Length)	S Type	ETCL, Greater Noida	1 No
6.	Noise level meter	SL-4010	Envirotech, New Delhi	1 Nos.
7.	Flue Gas Analyser	Seitron-Nova 4S	Seitron	01 No.
8.	Weighing Balance	Mettlar-AB204S	Mettler Toledo	01 No.

Month wise Limestone production: FY-2024-2025

Bhadanpur Mines ML-296.956 Ha	
Month & Year	**Production Details in MT**
April. 2024	61318
May. 2024	82109
June. 2024	56113
July. 2024	89776
Aug. 2024	129074
Sept. 2024	100997
Oct. 2024	105960
Nov. 2024	124927
Dec.2024	158733
Jan.2025	137839
Feb. 2025	108499
March.2025	139900
Total : -	**1295245**

1. Recharge structure has been developed in the existing mining pit for better water recharge
2. Roof top water harvesting structure has been developed and regularly maintenance is carried out at ML-296.95 Ha
3. Pakka Haul road has been provided
4. At crusher hopper atomized water spray is provided in the crusher hopper
5. Regular mobile Water tanker is being deployed for the water spraying on the haul roads

6. Adequate capacity of bag filter, water sprinkler and side curtains has been installed for common crusher
7. Regular monitoring is being carried out through NABL certified laboratory
8. Inbuilt water injection system is adopted on all drills to ensure 100% dust free wet drilling.
9. At loading points, muck pile wetting by sprinklers fitted on water tanker is used to suppress the dust generated during digging action.
10. Hydraulic rock breaker is used which has eliminated the dust generation due to secondary blasting.
11. Developed water reservoir at Mines area.

Water Reservoir

Water Management: : Unit has developed water recharge scheme

Water Recharge Shaft

Rain Water Harvesting

Details of Sewage Treatment Plant (STP) are as under:

PROCESS DESCRIPTION

Sewage Treatment Plant for mines colony installed in the year of Jan, 2011, having design capacity of 150 m3/day, which has been supplied by the M/s Reva Enviro Services, Nagpur. Treated waste water is being reused for plant process.

Details of the STP process description is as under:

SCREEN CHAMBER - The sewage will pass through the screen chamber for the removal of floating objects and bigger-sized particles which may otherwise hamper the functioning of the subsequent units

SUMP - The sewage is first taken into a sump after passing through the screen chamber. This sump will also act as an equalization tank, where the sewage will be equalized in order to have a uniform flow for the subsequent units.

GRIT CHAMBER - From the sump, the sewage is passed through the Grit chamber to ensure the removal of grit material.

AERATION TANK - After the removal of grit, the sewage is taken into the aeration tank. This unit is provided for biological treatment of the sewage to remove dissolved and suspended organic matter. In this unit, the soluble organics are degraded by the aerobic bacteria.

The oxygen required for the aerobic process is supplied by a fixed type slow speed surface aerator.

CLARIFIER- The sewage is then taken into the clarifier for setting of the generated sludge. The scrapper mechanism of the clarifier ensures a good collection of settled solids at the bottom sludge pit, from where the sludge is taken to the sludge sump. A part of the sludge is re-circulated to the aeration tank and the remaining is sent to the sludge drying beds for drying

.

CHLORINE CONTACT TANK- The chlorine contact tank is provided for achieving disinfection of the sewage by chlorination. The treated sewage is taken into the chlorine contact tank where chlorine is added, to ensure disinfection

.

SLUDGE DRYING BED - The sludge collected at the clarifier is partly re-circulated to the aeration tank and the remaining is sent to the sludge drying bed

OUTLET TANK Finally, the treated sewage is taken into the outlet tank from where the treated sewage is lifted for use for gardening purpose

Mines STP