केवल नागपुर कोर्ट के अधिकार में

Under Jurisdiction of Nagpur Court Only

वेस्टर्न कोलफील्ड्स लिमिटेड
WESTERN COALFIELDS LIMITED

(मिनीरत्न कंपनी) (A Miniratna Company)
(कोल इंडिया लि. की अनुषंगी कंपनी)
(A Subsidiary of Coal India Limited

स्वच्छ भारत
एक कदम स्वच्छता की ओर

उपक्षेत्रिय प्रबन्धक का कार्यालय
कोलारपिंपरी-पिम्पलगांव उपक्षेत्र

कोलारपिंपरी- पिम्पलगांव उपक्षेत्र, वणी नॉर्थ क्षेत्र
Kolarpimpri-Pimpalgaon Sub Area,
Wani North Area

Office of the Sub Area Manager
Kolarpimpri-Pimpalgaon Sub Area.
www.westerncoal.nic.in

पंजी॰का: पो.रासा, तह. वनी, जि. यवतमाल (महाराष्ट्र)-445304/ Regd. Off Po. Ukni, Tah Wani , Dist. Yavatmal Mah- 445304

संदर्भ संख्या / Ref. No. WCL/WNA/KPOC-PPGSA/SAM/2025-26/ 1029 Date: 22/11/25

To,

Addl. Principal Chief Conservator of Forests,
Ministry of Environment, Forest & Climate Change,
Regional Office (WCZ),
Ground Floor, East Wing,
"New Secretariat Building",
Civil Lines, Nagpur – 440 001 (M.S.)

Sub: Six Monthly Compliance Report of Conditions Stipulated in Environmental Clearance for **Kolar Pimpri Open Cast Mine (1.50 MTPA)** of Wani North Area, WCL for the period **April 2025 to September 2025**.

Dear Sir,

With reference to above subject matter, please find enclosed herewith the Six Monthly Compliance Report of Conditions Stipulated in Environmental Clearance for **Kolar Pimpri Open Cast Mine (1.50 MTPA)** of Wani North Area, WCL for the period **April 2025 to September 2025** for your kind information please.

Thanking you Sir.

Yours faithfully

22.11.25

Sub Area Manager
Kolarpimpri-Pimpalgaon Sub Area

Copy:

1. AGM, WNA
2. GM Env/HOD, WCL HQ, Nagpur
3. Central Pollution Control Board, Delhi
4. Regional Officer, MPCB, 1st Floor, Udyog Bhawan, Railway Station Road, Chandrapur - 442401
5. ANO(Env), WNA
6. Office Copy

CONTENTS

- Environmental Clearance letter (from MoEF&CC)
- Consent to Operate letter (from MPCB)
- Data Sheet
- Status of Compliance Status of Environment Clearance Conditions

Annexures

- Environment Monitoring Report (for April 2025 to September 2025)
- Ground Water Level & Quality Analysis Report
- Environment Statement
- Land Restoration - Reclamation Monitoring Report (based on satellite Data)

No.J-11015/928/2007-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O.Complex,
New Delhi -110510.

Dated: 29th April 2010

To
Head of Department Env./CE(Civil),
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR – 440001.

Sub: Kolar Pimpri Extension OCP (Expansion from 511 ha to 1488.42 ha and production capacity from 1.05 MTPA to 1.50 MTPA) of M/s Western Coalfields Ltd. located in dist. Yavatmal, Maharashtra - environmental clearance – reg.

Sir,

This has reference to letter No. 43011/106/2007-CPAM dated 23.08.2007 of Ministry of Coal forwarding your application for Terms of Reference and this Misnitry's grant of TOR vide letter dated 17.12.2007 and your application vide letter No. CIL/DLI/ENV/1681 dated 13.01.2010 and dated 07.01.2010 on the above-mentioned subject. The Ministry of Environment & Forests has considered the application. It is noted that the existing Kolar Pimpri Opencast Project of 1.05 MTPA capacity in an ML area of 511 ha was granted EC on 20.05.2005 and the present proposal is for **expansion of the Kolar Pimpri Extension Opencast Coalmine Project from 1.05 MTPA to 1.50 MTPA production capacity and expansion in ML area from 511 ha to 1488.42 ha**. Of the total ML area, 1438.38 ha consist of agricultural land and 50.04 ha consist of wasteland. No forestland is involved. Of the ML area of 1438.38 ha, 479.46 ha of the ML is under possession and the balance 961 ha is yet to be acquired. Of the total lease area, area for excavation is 357.65 ha, 674.55 ha is for OB dumps, 5 ha is for infrastructure, 55 ha is for embankment, 356.22 ha is for danger zone, rationalisation area, roads and for diversion of nala. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 15 km buffer zone. River Wardha flows at distance of 100m from the ML. Major part of the ML is below the HFL of River Wardha (186.20mRL). An embankment has been constructed. The project involves modification of the natural drainage by diversion of a nala. Mining is opencast by mechanised method involving shovel-dumper. Mineral transportation of **4545 TPD** of coal is by road. Ultimate working depth of the mine is 200m below ground level (bgl). Present working depth is 95m bgl. Water table is in the range of 3.49-16.97m bgl during pre-monsoon and 1-9.34m bgl during post monsoon. Peak water requirement is 390 m3/d, which is met from mine pit water. No fresh source of water is proposed for use in the project operations. The estimated total OB generation over the life of mine is 282.303 Mm3 of which 37.337 Mm3 would be backfilled and the balance 244.964 Mm3 of OB is being dumped in 4 external OB dumps of a max. height of 60m of benches of 15m each, backfilling has begun from first year of mining operation. At the post mining stage, an area of 902.28 ha would be developed with plantation and a water body of 268.9 ha would be left in the decolaed void. R&R involves 512 PAFs to be displaced from 4 villages – Gowari, Aheri, Kolera and Pimpri of which Aheri, Kolera and Pimpri are yet to be resettled. Land oustees from the balance 961 ha of agricultural land yet to be acquired are to be enumerated. Balance life of the mine at 1.50 MTPA rated capacity is 27 years. Public Hearing was held on 23.12.2008. The project has been approved by M/s WCL on 14.07.2006. Capital cost of the project is **Rs. 7289.84 lakhs**.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned **expansion of the Kolar Pimpri Extension Opencast Coalmine Project from 1.05 MTPA to 1.50 MTPA production capacity and expansion in ML area from 511 ha to 1488.42 ha** under the Environmental Impact Assessment Notification,

File - 11-D

2006 and subsequent amendments and Circulars thereto subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

(i) The embankment constructed along the river boundary shall be of suitable dimensions and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.

(ii) The mining operations shall not extend in the balance 961 ha of the lease area until the R&R for all the villages has been completed and compensation paid to land oustees as per norms not less than that laid out under the National R&R Policy,

(iii) OB shall be stacked at four earmarked external OB dumpsite(s) only covering an area of 641.98 ha and shall not exceed the max. height of 65m consisting of benches of 15m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of the reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.

(iii) Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.

(iv) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.

(v) Crushers at the CHP of adequate capcity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.

(vi) Drills shall be wet operated.

(vii) The project authorities shall ensure that the roads used for mineral transportation are black topped and properly maintained. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads, and major haul roads.

(viii) Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.

(ix) A progressive afforestation plan shall be implemented covering an area not less than 902.28 ha, which includes reclaimed external OB dump (674.55 ha), backfilled area (88.73 ha), along ML boundary, along roads and infrastructure (5 ha), embankment (55 ha) and within vacant land (356.22 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and avenue plantation along the main approach roads to the mine.

(x) Of the total quarry area of 357.65 ha, the backfilled quarry area of 88.73 ha shall be reclaimed with plantation and a void of 268.90 ha which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.

(xi) No groundwater shall be used for mining operations.

(xii) Monitoring of ground water regime and river flow conjunctively on regular and long term basis shall be undertaken in view that the mine site is in the proximity of the river Wardha, through a close network of observation wells/piezometers & river gauging. Similarly, the hydrogeological impact on account of proposed expansion should also to be monitored regularly on long term perspectives.

(xiii) A comprehensive 'Ground Water Monitoring Plan' shall be submitted within a period of three months of grant of EC. The plan shall incorporate information on details of piezometer/well (depth, locations) site characteristics, monitoring parameters (quality and quality), time frame of implementation and budgetary provisions etc. Monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.

(xiv) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

(xv) Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.

(xvi) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.

(xvii) For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhopal.

(xviii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within six months from date of environmental clearance for approval.

(xix) The project authorities shall in consultation with the panchayat of the local villages identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine. A budgetary provision of Rs 5 per tonne of coal shall be earmarked for CSR activities.

B. General Conditions

(i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.

(ii) No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.

(iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.

(iv) Fugitive dust emissions (PM10 and PM 2.5) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.

(v) Data on ambient air quality (PM10, PM 2.5, SO2 and Nox) shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.

(vi) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.

(vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.

(viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.

(ix) Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.

(x) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.

(xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.

(xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.

(xiii) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.

(xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.

(xv) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.

(xvi) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.

3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

4. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

5. The above conditions will be enforced *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg., Madam Cama Road, MUMBAI – 400032..
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal – 462016.
4. Chairman, Maharsashtra State Pollution Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai – 400002.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Yavatmal, Government of Maharashtra.
9. Monitoring File 10. Guard File 11. Record File.

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: http://mpcb.gov.in
Email: cac-cell@mpcb.gov.in

Kalpataru Point, 2nd, 3rd and 4th floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai-400022

RED/L.S.I (R35)
No:- Format1.0/CAC/UAN No.MPCB-CONSENT-0000195255/CR/2504002421

Date: 22/04/2025

To,
M/s Western Coalfields Limited,
Kolar Pimpri Open Cast Mine Project,
Village – Aheri, At post-Ukni,
Tal-Wani, Dist-Yavatmal.

Your Service is Our Duty

Sub: Renewal of Consent to Operate.

Ref:
1. Earlier Consent granted by Board vide No. Format1.0/CAC/UAN No.MPCBCONSENT-0000160282/CR/2305000851 dated 12/05/2023
2. Minutes of 14th Consent Appraisal Committee (CAC) Meeting Part-I held on dtd. 07.01.2025.

Your application No.MPCB-CONSENT-0000195255 Dated 20.01.2024

For: Grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. **The consent to renewal is granted for a period up to 31/03/2026**
2. **The capital investment of the project is Rs.Rs. 313.61 Crs. (As per undertaking submitted by pp Existing C.I. is Rs. 316.17 Crs + Decreased by in C.I. is Rs. 2.56 Crs)**
3. **Consent is valid for the manufacture of:**

Sr No	Product	Maximum Quantity	UOM
Products			
1	Coal Mining (Mine Lease Area-1488.42 ha)	1.5	MTPA

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	3558	As per Schedule-I	Recycle to the maximum extent for Dust Suppression & Fire Fighting and remaining on land for plantation/Irrigation/Gardening.

Sr No	Description	Permitted	Standards to	Disposal
2.	Domestic effluent	14.0	As per Schedule-I	On land for gardening/plantation

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
NA				

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
1	Overburden	1500000	m3/month	Landfill	Backfilling and Reclamation of Land

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
1	5.1 Used or spent oil	2.0	KL/A	Recycler	Send to Authorised Reprocessor/Recycler
2	5.2 Wastes or residues containing oil	1.0	Ton/Y	Incineration	CHWTSDF
3	35.3 Chemical sludge from waste water treatment	5.0	Ton/Y	Landfill	CHWTSDF

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
10. The applicant shall not carry out any excess production without obtaining Consent of the Board and without obtaining Environmental Clearance wherever it applicable.
11. PP shall carry out over burden dump management as per CPCB guidelines.
12. PP shall carry out plantation as per EC condition before ensuing monsoon.
13. PP shall ensure time bound compliance of conditions as imposed as per BG regime.
14. The applicant shall comply with the conditions of the Environmental Clearance granted by MoEFCC,GoI vide letter J-11015/928/2007-IA.II(M) dated 29.04.2010.
15. This consent is issued pursuant to the decision of the 14th Consent Appraisal Committee (CAC) Meeting Part-I held on dtd. 07.01.2025.

16. The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent.
17. The industry shall create an Environment Cell by appointing an Environmental Engineer OR Expert for looking after day-to-day activities related to Environment OR Pollution control.

This consent is issued on the basis of information/documents submitted by the Applicant/Project Proponent, if it has been observed that the information submitted by the Applicant/Project Proponent is false, misleading or fraudulent, the Board reserves its right to revoke the consent & further legal action will be initiated against the Applicant/Project Proponent.

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Signed by: Dr.Avinash Dhakne
Member Secretary
For and on behalf of,
Maharashtra Pollution Control Board
ms@mpcb.gov.in
2025-04-22 17:32:35 IST

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	1222102.00	MPCB-DR-24052	25/01/2024	RTGS
2	1133753.00	MPCB-DR-33293	11/04/2025	NEFT

Total Paid Fee: Rs. 1222102.00 + Rs. 12,32,341/- (Previous Balance as per UAN 160282) = Rs 24,54,443. Calculation: Consent fee for two terms fee is Rs. 12,54,442.60/- + Mining Projects Fee 12,00,000 + 605 days late B.G. submission charges is Rs. 1133753/-. Previous balance consent fee is considered in this renewal of consent ,hence balance with Board is Nil.

Copy to:

1. Regional Officer, MPCB, Chandrapur and Sub-Regional Officer, MPCB, Chandrapur
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB,Sion, Mumbai
3. CAC Desk-for record and website updation purpose.

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] ETP having capacity 100 CMD comprises of pre-settling tank-O&G trap-Settling tank-Treated effluent sump & SDB provided for treatment of workshop effluent. Sedimentation tank of capacity 960 m3 provided for treatment of Mine water.

B] The Applicant shall operate the effluent treatment plant (ETP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent:

Sr.No	Parameters	Limiting concentration not to exceed in mg/l, except for pH
(1)	pH	5.5 to 8.5
(2)	Oil & Grease	10
(3)	BOD (3 days 27°C)	30
(4)	Total Suspended solids	100
(5)	Total Dissolved solids	2100
(6)	COD	250
(7)	Phenolic	1.0
(8)	Nitrate Nitrogen	10.0
(9)	Sulphate	1000
(10)	Chloride	600

C] The treated effluent shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise. In no case, effluent shall find its way to outside factory premises.

2. A] As per your application, you have provided decentralized Septic Tank followed by Soak pit for the treatment of 14 CMD of sewage.

B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)	
1	BOD (3 days 27°C)	Not to exceed	30 mg/l
2	COD	Not to exceed	100 mg/l
3	Suspended Solids	Not to exceed	50 mg/l

C] The treated domestic effluent shall be soaked in a soak pit, which shall be got cleaned periodically. Overflow, if any, shall be used on land for gardening /plantation only. In no case treated / untreated sewage shall find it's way outside the premises.

3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification there of & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	***Purpose for water consumed***	***Water consumption quantity (CMD)***
1.	Industrial Cooling, spraying in mine pits or boiler feed	450.00
2.	Domestic purpose	130.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	140.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	50

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
NA	NA		0.00	-	-	NA	-

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. Control Equipments
   a. Coal handling plant shall be provided with dust collector & automatic water sprinkler and it shall be operated continuously.
   b. Scientific spraying of water on all working area, dump area, stock piles with the help of appropriate dust suppression system.
   c. Coal transportation shall be done by installing conveyors wherever possible & mechanically covered closed trucks shall be used for transportation. Overloading of dumpers shall be avoided to prevent spillages
   d. The applicant shall carry out tree plantation along road side, around dumps or compulsory afforestation as per proposal approved by Forest Department. The tree plantation programme shall be taken up well in advance of the actual mining activity, so that green belt of sufficient width & height is developed between mining area/road and surrounding environment.
   e. Black topped metal roads shall be provided and it shall be well maintained to prevent dust formation.
   f. Slope of the over burden shall have slope not more than 28o to the horizontal. The overburden shall be covered by vegetation for stabilization.
   g. Correct type & quantity of explosive shall be used to avoid excess dust formation & vibration in the surrounding area.
6. Standards for Ambient Air Pollutants:

   The Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur dioxide (SO_2) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall not exceed the standards specified in the table given below:

   Dust Generating Sources:

   Loading or unloading, Haul Road, coal transportation road, Coal handling plant (CHP), Railway Sliding, Blasting, Drilling, Overburden dumps, or any other dust generating external sources like coke ovens (hard as well as soft), briquette industry, nearby road etc.

Pollutant	***Time weighted average***	***Concentration in Ambient Air***
Suspended Particulates Matter (SPM)	Annual Average	360 µg/m^3
	24 hours	500 µg/m^3
Respirable Particulate Matter (size less than 10 µm) (RPM)	Annual Average	180 µg/m^3
	24 hours	250 µg/m^3
Sulphur Dioxide (SO_2)	Annual Average	80 µg/m^3
	24 hours	120 µg/m^3
Oxides of Nitrogen as NO_x	Annual Average	80 µg/m^3
	24 hours	120 µg/m^3

i. In case of any residential or commercial or industrial place falls within 500 metres of any dust generating sources, the National Ambient Air Quality Standards notified vide MOEFCC GOI notification dtd 16.11.2009 as ammended shall be made applicable.

ii. The applicant shall provide minimum three ambient air quality monitoring stations within mining area which should be monitored for SPM, RSPM, SO_2, NOx, HC, CO etc. The Annual Arithmetic Mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval shall conform to the National Ambient Air Quality Standards prescribed under Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986. The records of results of monitoring done shall be made available for inspection to the officers of the Board.

7. The applicant shall take adequate measures for control of noise levels from its own sources as follows:

Sr. No	***Location***	***Permissible Norms [in dB (A)]***	***Desired minimum thickness of green belt (m)***
1.	Along Road side	65 (Commercial Area)	20
2.	In colonies	55 (Residential Area)	20
3.	Near Opencast Mines	75 (Industrial Area)	10
4.	Near CHPs	75	30
5.	Near Shaft	75	20
6.	Near Mine exhaust fan	75	> 50

8. Other conditions:

i Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess standards laid down, such information shall be forthwith reported to Board, concerned Police station, office of Directorate of Health services, Dept. of explosives, Inspectorate of Factories & Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.

SCHEDULE-III

Details of Bank Guarantees:

Sr. No.	Consent (C2E/ C2O /C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C2R	Rs. 2.0 Lakh	15 days	Regular monitoring of ground water level and quality should be carried out by establishing the network of existing wells and constructing new piezometers during mining operations	6 Monthly	31.03.2027
2	C2R	Rs.5.0 Lakh	15 days	Catch drain and siltation ponds of appropriate size should be constructed to arrest silt and sediment flow from soil, OB and mineral dumps. Water so collected should be utilized for watering of the mining area, roads green belt developers etc.	Regular Activity	31.03.2027
3	C2R	Rs.5.0 Lakh	15 days	Coal transportation shall be done by covered/closed trucks. Overloading of shall be avoided to prevent spillages.	Regular Activity	31.03.2027
4	C2R	Rs.5.0 Lakh	15 days	Convert existing water sprinkling arrangement into chemical fogging arrangement (M_gCl2)	3 Months	31.03.2027
5	C2R	Rs.5.0 Lakh	15 days	Adoption and installation of tyre wash system to mining transportation at entry and exit point of mining area.	3 Months	31.03.2027
6	C2R	Rs.5.0 Lakh	15 days	Adoption of Bioswales technology on the road sides. Bioswales is a land scape element of construction design, primarily a run off conveyance system by the sides of road, to remove dust ,silt and debris.	3 Months	31.03.2027
7	C2R	Rs.5.0 Lakh	15 days	Over burden (OB) should be stacked at earmarked dumpsites only and should not be kept active for long period. Proper terracing of OB should be carried out so that the overall slope will come down to 28°. Over Burden shall be disposed by way of backfilling.	Continuous	31.03.2027
8	C2R	Rs.25.0 Lakh	15 days	Towards Operation and Maintenance of pollution control system and compliance of Consent & Environment Clearance conditions.	Continuous	31.03.2027

Sr. No.	Consent (C2E/ C2O /C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date

The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days from the date of issue of Consent.

If the above Bank Guarantee is not submitted within stipulated period, then 12% interest will be levied as a penalty as per circular dtd 29/02/2024 No. BO/MPCB/AS(T)/Circular/B-240229FTS0122

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV

General Conditions:

1. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2. If the MIDC pipeline is broken/ overflowing chamber, in such cases industry shall not discharge their treated effluent into MIDC drain, it shall be sent to CETP by tanker.
3. Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
4. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
5. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipment, the production process connected to it shall be stopped.
6. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
7. The firm shall submit to this office, the 30th day of September every year, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
8. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the H&OW(M&TM) Rules 2016, which can be recycled/processed/ reused/ recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/ reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
9. The industry should comply with the Hazardous & Other Wastes (M & TM) Rules, 2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous & Other Wastes (M & TM) Rules, 2016 for the preceding year April to March in Form-IV by 30th June of every year.
10. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
11. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.

12. Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
13. The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.
14. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
15. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
16. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
17. Conditions for D.G. Set
    a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
    b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
    c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper sitting and control measures.
    d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
    e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
    f) D.G. Set shall be operated only in case of power failure.
    g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
    h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
18. The industry should not cause any nuisance in surrounding area.
19. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
20. The applicant shall maintain good housekeeping.
21. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end

22. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
23. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipment provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
24. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises
25. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
26. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dtd. 18.11.2009 as amended.

This certificate is digitally & electronically signed.

Ministry of Environment, Forests & Climate Change,
Regional Office (WCZ), Nagpur
MONITORING PROFORMA: PART – I (DATA SHEET)

Name of the Project	Kolar Pimpri Extension OC Coal Mine
Location and address	At-Kolar Pimpri, PO-Ukni, Tah-Wani ,Dist- Yavatmal, State- Maharashtra,445304
Address for correspondence	Sub Area Manager, Kolar Pimpri-Pimpalgaon Sub Area, At-Kolar Pimpri, PO-Ukni, Tah-Wani, Dist-Yavatmal, State- Maharashtra.
MoEF&CC Clearance Letter No. & Date	Letter No.J-11015/928/2007-IA.II(M) Dt.29.04.2010.
Period of Status Report	From **April 2025 to September 2025**
Date of commencement of the project work	22.04.1993

STATUS OF LAND ACQUISITION:-

Type of Land	**Required as per EMP (ha)**	**Acquired (ha) As on 30.09.2025**
Agriculture	1435.30 Ha	1435.30 Ha
Other (Govt.Land)	50.04	50.04
Forest	--	--
Total	**1488.42**	**1488.42**

STATUS OF LEGAL COMPLIANCES: -

a. Consent under Air (Prevention and control of Pollution) Act.	Consent to Operate has been granted by MPCB vide Consent order no. Forate1.0/CAC/UAN/MPCB CONSENT-0000195255/CR/2504002421 dated -22.04.2025 valid upto 31.03.2026
b. Consent under Water (Prevention and Control of Pollution) Act.	
c. Environment (Protection) Act.	Environment clearance accorded vide letter No. J-11015/928/2007-IA.II(M) dt.29.04.2010 Environment Audit statement for the year **2024-2025** has been submitted online on MPCB portal.
d. Forest (Conservation) Act	N.A.

PART –II
STATUS OF ENVIRONMENT

Air Pollution Control :-

a) No. of ambient air monitoring stations & frequency of monitoring	04 Nos. Ambient Air quality (Fortnightly Monitoring) 02 Nos. Fugitive Emission (monitoring in non-monsoon) 01 No of CAAQMS (Continuous monitoring)
b) Name of the location	**Ambient Air Quality Monitoring Stations** 1.Substation: WNKO-1(Core Zone) 2.Rest Shelter: WNKOA-2(Core Zone) 3.Pimpri Village: WNKOA-3(Buffer Zone) 4.Water Filter plant, Pragati Nagar:WNKOA-4 (Buffer Zone) **Fugitive Dust Monitoring stations** 1. CHP: WNKOAF-1 2. Weigh Bridge: WNKOAF-2
c) Ambient air quality status for the parameters prescribed by state pollution control board. (Average 95% time weighted value)	Location | SPM | RSPM | NO_x | SO_2 Environmental Monitoring reports from **April 2025 to September 2025** are enclosed.

Water Pollution Control:-

a. No. of stations and frequency of monitoring	One, Fortnightly
b. Description of locations	1) Mine Water discharge: WNKOW-1
c. Average concentrations of major pollutants prescribed by State Pollution Control Board (fig. in mg/lit except pH)	Location | Ph | TSS | COD | O&G Environmental Monitoring reports from **April 2025 to September 2025** are enclosed.

Noise Pollution Control :-

a) No. of noise monitoring stations & frequency of monitoring	: 2 No.(Fortnightly)
b)Description of locations	1.CHP: WNKON-1 2.Colony (Pragati Nagar): WNKON-2
c) Noise level status prescribed by state pollution control board.	Location | Day | Night Environmental Monitoring reports from **April 2025 to September 2025** are enclosed.

PART-III
STATUS OF IMPLEMENTATION OF PROVISIONS OF EMP

i). Land Use Status:

S.N.	Particulars	Current April 2025 to September 2025	Upto 30st Sept. 2025
1.	Area excavated (Ha)	9.600	304.776
2.	Top soil removed (MM3) BC	1.447	9.355
3.	O. B. removed (MM3) Hard	1.702	122.423
4.	O. B. back filled (MM3)	NIL	NIL
5.	O. B. dumped (MM3)	6.149	113.965
6.	Area recovered for reclamation (physical area)	NIL	NIL
7.	Area reclaimed biologically (tree plantation on backfilled area)	NIL	NIL

ii). Production: Approved Capacity 1.50 MTPA(As per EC letter).
The year wise production data are as follows :

Year	Coal Production (tons)
2019-20	784941.00
2020-21	1134975.00
2021-22	511377.00
2022-23	1500000.00
2023-24	1500000.00
2024-25	1500000.00
2025-26 (upto Sept. 2025)	820614.75

iii). Afforestation: (Figures in Numbers): 2,54,930 Nos.

S.N.	Locations	Current Period (April 2025 to September 2025)	Progressive upto 30st Sept. 2025
1.	OB dump & embankments	--	1,84,400
2.	Railway Siding (Outside Lease)	--	5,400
3.	Backfilled Area	--	--
4.	Other area 1. Transportation road } 2. Around CHP along } Nallah 3. Pragati Nagar (outside Lease.) 4. Near Brahmani village.	 -- -- -- --	 35,880 15,000 14,250
	TOTAL	--	2,54,930

Location are marked on the working mine plan.

Area under plantation (progressive)	**101.97** Ha
No. of plants per Hectare.	2500/Ha
Species planted up to date	Teak, Bamboo, Sivan, Khair, Nim, Sisam, Subabul, Gulmor, Fanas, Karanj, Casia, Glarasiea, Emli & Mango.

Rehabilitation and Resettlement:-

S. N.	Particulars	Total nos.
1.	No. of land oustees	**531 nos.**
2.	No. of land outstees rehabilited	**436 nos.**
3.	No. of PAPs/PAFs to be resettled	**749 nos.**
4.	No. of PAPs/PAFs resettled	**278 nos.**
5.	Area of new site (ha)	No.
6.	Status of development	No.

Organizational set up at Project level:-

Name and designation of the persons:

(1) Dr. Suresh D. Gharde, SAM, Kolarpimpri-Pimpalgaon Sub Area
(2) Shri Anand Ambedkar, Manager, Kolarpimpri OCM
(3) Shri Vinay Kumar, SAE (Civil)/ Nodal Officer (Env.), KP-PPG Sub Area

Vinay K. 21/11/25
SAE(Civil)/NO (Env)
Kolar Pimpri - Pimpalgaon Sub Area

21/11/25
Survey Officer
Kolar Pimpri OCM

21/11/25
Mine Manager
Kolar Pimpri OCM

21.11.25
Sub Area Manager
Kolar Pimpri - Pimpalgaon Sub Are

EXPENDITURE

Capital Head :-

Figures in Rs. Lakhs

Account Head	April 2025 to September 2025	Progressive upto Sept'25
Reclamation(HEMM)	Nil	Nil
Air Pollution Control	--	174.76
Water Pollution Control		
1. Fixed Sprinkler	--	24.76
2. ETP	--	13.72
3. Sedimentation Tank	--	1.90
TOTAL	--	**215.14**

Revenue Head: -

Figures in Rs. Lakhs

Account Head	April 2025 to September 2025	Progressive upto Sept'25
Afforestation	--	167.78
Monitoring (I) MPCB analysis charges	--	19.98
(II) CMPDIL	--	46.58
Legal expenses	--	4.88
Air Pollution (Sweeping, brooming, sprinkling,)	5.00	302.27
Mobile water tanker	8.50	226.03
Water pollution Sedimentation tank & ETP Operation	0.50	42.22
Hazardous waste disposal	--	3.48
Consent fees	--	86.64
Water Cess	--	4.04
TOTAL	**14.00**	**903.90**

Vinayk. 21/11/25

SAE (C) / No (Env)
Kolar Pimpri–Pimpalgaon SA,
Wani North Area.

21/11/25

Colliery Manager
KolarPimpri OCM
KP-PPG SA, WNA

Sub Area Manager
Kolar Pimpri–Pimpalgaon SA
Wani North Area.

STATUS OF COMPLIANCE OF ENVIRONMENTAL CLEARANCE CONDITIONS
(For the period April 2025 to September 2025)

Name of the Project : Kolarpimpri Extension Open Cast Mine (for production capacity from 1.05 MTPA to 1.50 MTPA

EC Letter No.: MoEF&CC vide letter no.J-11015/928/2007-IA.II(M) dated 29.04.2010

A. Special Conditions:-

Sr. No.	Conditions	Compliance
i)	The embankment constructed along the river boundary shall be of suitable dimensions and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	The embankment has been constructed along river boundary after taking due permission from Directorate General of Mines Safety (DGMS) and the height above the HFL is maintained as per the provisions of Coal Mines Regulation, 1957 and allied Technical Circulars issued by DGMS. The dimension and construction of embankment takes into account the peak water flow to prevent any danger to the mine from inundation due to inrush of surface water. Further, to increase the strength and stability of the embankment, plantation has been already done.
ii)	The mining operations shall not extend in the balance 961 ha of the lease area until the R& R for all the villages has been completed and compensation paid to land oustees as per norms not less than that laid out under the National R&R Policy.	Agreed, The mining operation shall be extended in the balance 961 Ha land only after the R&R for all the villages is completed and compensation is paid to land oustees as per R&R policy.
iii)	OB shall be stacked at four earmarked external OB dumpsite(s) only covering an area of 641.98 ha and shall not exceed the max. height of 65m consisting of benches of 15m each. The ultimate slope of the dump shall not exceed 28 degree. Monitoring and management of the reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.	Overburden will be dumped at earmarked sites only. The maximum height of internal OB dump will not exceed 65 m above ground level. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MoEF and its Regional Office on yearly basis.
iii)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be	Catch drain of size 3.5 m x 2 m has been provided around the periphery of OB dumps as well as soil dumps to arrest silt and sediment flows from the respective dump site. In case of OB benches in the quarry, cross drainage has been provided which carry silt and sediments into the main sump made at floor of the seam. These sumps accumulate all the silts and act as a primary stage of silting pond. Then the water is pumped out on the surface and discharge to surface sedimentation tank which is of size 40 x 16 x 1.5 mtr. The clear water from the sedimentation tank is discharged to nallah which ultimately

	designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper setting of silt material.	discharge to the Wardha river, some part of the water is used for sprinkling over mine roads, surface roads also for gardening. The catch drain around the OB dumps regularly de-silted before and during the monsoon. In addition, garland drain of size 4 x 2.5 mtr. Also made around periphery of the excavation area which carry the surface waters and these drains are regularly de-silted.
iv)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	As indicated above, the run off from the OB dumps are collected in the catch drains made around the periphery of the dumps (dimensions of catch drains given above). For collecting run off and siltation from OB benches, mine sump as detailed above, is in operation and acts as main settling / siltation pond. The capacity of this sump has been made to cater the entire peak rainfall in the catchment area .
v)	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	Crusher of adequate capacity is provided with water sprinkling system to check fugitive emissions from crushing operation etc.
vi)	Drills shall be wet operated.	Drills have been provided with dust extractors. Drills are operated only during day time.
vii)	The project authorities shall ensure that the roads used for mineral transportation are black topped and properly maintained. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads, and major haul roads.	The main approach road has been black topped and is being maintained properly. Plantation have been done along the arterial roads and over embankments.
viii)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Controlled blasting is carried out after due permission from DGMS so as to control ground vibrations and arrest fly rocks and strictly as per conditions laid down by DGMS. The blasting is carried out only in day time.
ix)	A progressive afforestation plan shall be implemented covering an area not less than 902.28 ha, which includes reclaimed external OB dump (674.55ha), backfilled area (88.73ha), along ML boundary, along roads and infrastructure (5 ha), embankment (55 ha) and within vacant land (356.22 ha) and in township located outside the lease by planting native species in consultation with the local DFO / Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and avenue plantation along the main approach	Progressive afforestation is being practiced. From 1994-95 to **2024-2025** total **101.97 Ha** area have been planted by **2,54,930** plants in embankment, dumps and non dumps area with the density of trees 2500 plants per hectare. The practice of plantation will be taken up as a due responsibility in the future also.

	roads to the mine.	
x)	Of the total quarry area of 357.65 ha, the backfilled quarry area of 88.73 ha shall be reclaimed with plantation and a void of 268.90 ha which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation/afforestation by planting native plant species in consultation with the local DFO / Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Agreed and will be taken up due course of time
xi)	No groundwater shall be used for mining operations.	No ground water is being used for the mining operations.
xii)	Monitoring of ground water regime and river flow conjunctively on regular and long term basis shall be undertaken in view that the mine site is in the proximity of the river Wardha, through a close network of observation wells / piezometers & river gauging. Similarly, the hydro geological impact on account of proposed expansion should also to be monitored regularly on long term perspectives.	Regular monitoring of ground water level and quality is being carried out four times in a year in pre-monsoon (May), monsoon(August), post-monsoon (November) and winter (January) and for quality in May. Data is being submitted regularly.
xiii)	A comprehensive 'Ground Water Monitoring Plan' shall be submitted within a period of three months of grant of EC. The plan shall incorporate information on details of piezometer / well (depth, locations) site characteristic, monitoring parameters (quality and quality), time frame of implementation and budgetary provisions etc. Monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	Agreed. Monitoring of Ground water level and quality is being monitored regularly and data is being submitted regularly.
xiv)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in	Water from mine discharge is passed through sedimentation tank (size of 40.0 m x 16.0 m x 1.5 m) & after proper settling the same is fed into local nallahs / streams to be used by nearby villagers for their agriculture etc. If wells in nearby village go dry, project authorities will supply water from the mine through water tankers as a prior responsibility.

	case the village wells go dry due to dewatering of mine.	
xv)	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	For treatment of domestic sewage Septic tank and soak pits have been provided. ETP equipped with oil skimmer, flash mixture, dozing chamber etc. is provided for workshop.
xvi)	Besides carrying out regular periodic healthy check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	Periodical medical examination/health checkup of workers are regularly done in WCL hospital.
xvii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its Regional office at Bhopal.	It is being complied. Land Restoration – Reclamation Monitoring based on Satellite Data carried out by CMPDIL, Ranchi. The reports are regularly being submitted to MoEF&CC besides uploading in the company website
xviii)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within six months from date of environmental clearance for approval.	Mine closure plan has been prepared and duly approved by WCL Board. The corpus fund has been deposited in following escrow account: Bank & Branch : Oriental Bank of Commerce, Jaripatka, Nagpur Escrow Acc. No. : 08973161002836 Balance as on 31.03.2025: Rs. 80,00,77,889.37 /-
xix)	The project authorities shall in consultation with the panchayat of the local villages identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine. A budgetary provision of Rs. 5 per tone of coal shall be earmarked for CSR activities.	The socio – economic developmental as well as welfare activities are being taken up under CSR through consultation with the neighboring villages. Similar works will be carried out during the balance life also. As per CSR policy of Coal India Limited Rs. 2/tonne of coal produced or 2% of the average net profits of the company made during the three immediately preceding financial years whichever is more is spent on Corporate Social Responsibility works

B. General Conditions :-

<table>
<tr><th>Sr. No.</th><th>Conditions</th><th>Compliance</th></tr>
<tr><td>i)</td><td>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.</td><td>Noted.
No change in mining technology and scope has been made</td></tr>
<tr><td>ii)</td><td>No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.</td><td>Noted, The year wise production data are as follows :
<table>
<tr><th>Year</th><th>Coal Production (tons)</th></tr>
<tr><td>2021-22</td><td>511377.00</td></tr>
<tr><td>2022-23</td><td>1500000.00</td></tr>
<tr><td>2023-24</td><td>1500000.00</td></tr>
<tr><td>2024-25</td><td>1500000.00</td></tr>
<tr><td>2025-26 (upto sept' 2025)</td><td>820614.75</td></tr>
</table></td></tr>
<tr><td>iii)</td><td>Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2 and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.</td><td>Following four ambient air quality monitoring stations have been established in the core zone and buffer zone for PM10, PM2.5 SO_2 and NO_x monitoring:-

1. Water filter plant (Pr. Nagar) : W_NKOA-1
2. Sub-Station Kolar Pimpri : W_NKOA-2
3. Rest shelter Kolar Pimpri OCM : W_NKOA -3
4. Pimpri village : W_NKOA -4

Reports are regularly being submitted. Environmental Monitoring reports from April 2025 to September 2025 are enclosed with this report.</td></tr>
<tr><td>iv)</td><td>Fugitive dust emissions (PM10 and PM 2.5) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.</td><td>Fugitive dust emissions (PM10 and PM 2.5) is being monitored at following locations:
1. Weigh bridge, 2. CHP, 3. Wani Railway siding
Fugitive Dust Emission from OB dumps have been controlled significantly by developing thick green belt/vegetation cover the OB dumps.
Similarly, dust emissions from other sources are being controlled by regular water spraying through installation of fixed type rain guns and mobile water tankers.</td></tr>
<tr><td>v)</td><td>Data on ambient air quality (PM10, PM2.5 and SO_2 and NO_x) shall be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.</td><td>Data on ambient air quality (PM 10, NOx, SOx and PM 2.5) is regularly submitted to MoEF&CC & its Regional Office
The reports from April 2025 to September 2025 are enclosed with this report.</td></tr>
<tr><td>vi)</td><td>Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling</td><td>In order to control excessive noise during operations regular maintenance of all HEMM as well as supply of protective gears like ear plugs and muffs are carried out. In addition, regular monitoring on every fortnight is being done. Reports from April 2025 to September 2025 are enclosed with this report.</td></tr>
</table>

	operations, operations of HEMM, etc shall be provided with ear plugs / muffs.	Noise Quality Monitoring Station. 1) CHP : W_NKON-1 2) Pragati Nagar : W_NKON-2
vii)	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19tyh May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Mine pumped out water after initial sedimentation in the mine sump is collected into surface sedimentation pond for further settlement. The quality of treated effluent from sedimentation point is monitored every fortnight. Similarly, the effluents from the workshop are treated in ETP fitted with oil and grease trap and Clear-water is also regularly monitored. It may be mentioned here that there is no discharge of effluent from workshop into any surface water body.
viii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	All the vehicles which are directly or indirectly related to the mining activity are having valid PUC Certificate from the authorized agencies.
ix)	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Monitoring of environmental quality parameters is being carried out by RI-IV Nagpur, CMPDIL. A fully fledged Environmental laboratory accredited by NABL already exists at CMPDI, Nagpur with qualified Engineers along with adequate number of field staff for carrying out all the environmental monitoring of WCL projects.
x)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and re cords maintained thereof.	Protective health & safety gears are provided to workmen exposed to dust. The workers are regularly given training on safety & health aspects (Statutory requirement under Mines Act). Periodical medical examination is carried out for each employee once in every 5 year to detect any disease so that, appropriate action can be taken.
xi)	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	At project level, environmental management cell is headed by Sub Area Manager and is assisted directly by project Nodal Officer (Environment). At Area level, AGM heads the cell assisted by GM (Operation) and ANO (Environment). GM (Environment) heads the Environment Department at HQ / Corporate level with a multidisciplinary team of qualified engineers, who directly report to DT, WCL.
xii)	The funds earmarked for environmental protection	The funds earmarked for environmental protection measures are not used for any other purpose. The expenditure both under

	measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.	capital & revenue for the current year as well as progressive is given in the Expenditure Statement. It is regularly reported to Regional Office, MoEF & CC along with Six Monthly Report.
xiii)	The Regional Office of the Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite date / information / monitoring reports.	Six monthly reports on compliance to environmental clearance conditions are regularly submitted to RO, MoEF & CC, Nagpur & full cooperation is being extended to them as and when they visit.
xiv)	A copy of the will be marked to concerned Panchayat / local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	A copy of environmental clearance letter has been sent to concern Sarpanch of village Panchayat.
xv)	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office / Tehsildar's Office for 30 days.	Not applicable.
xvi)	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forest at http://envfor.nic.in.	Complied.
3	The Ministry or any other competent authority may stipulate any further conditions for environmental protection.	Noted.
4	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986	Noted.

5	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.	Noted.

21/11/25

Sr. Survey Officer
Kolar Pimpri OCM

Vinay/c. 21/11/25

Sub Area Engineer (Civil)
Kolar Pimpri-Pimpalgaon Sub Area

21/11/25

Mine Manager
Kolar Pimpri OCM

21/11/25

Sub Area Manager
Kolar Pimpri-Pimpalgaon Sub Area

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ENVIRONMENTAL MONITORING REPORT

KOLARPIMPRI OC

WANI NORTH AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

APRIL 2025

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
CMPDI
REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/APRIL-25/25		DATE OF ISSUE	25-05-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
TEST REQUIRED	SPM: IS 5182 Part-4 , PM-10: IS-5182 Part 23, PM2.5: IS-5182 Part 24, NO2: IS 5182 Part-06, SO2:IS 5182 Part-2			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			16-04-25 TO 15-05-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
13-04-2025	14-04-2025	324	231	58	20	16	CLEAR/LIGHT BREEZE
27-04-2025	28-04-2025	297	201	47	18	12	CLEAR/CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
13-04-2025	14-04-2025	309	210	49	15	11	CLEAR/LIGHT BREEZE
27-04-2025	28-04-2025	281	190	40	13	10	CLEAR/CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
02-04-2025	03-04-2025	82	26	9	BDL	CLOUDY/LIGHT BREEZE
03-04-2025	04-04-2025	77	22	7	BDL	CLOUDY/LIGHT BREEZE
09-04-2025	10-04-2025	89	28	10	BDL	CLEAR/LIGHT BREEZE
10-04-2025	11-04-2025	70	24	9	BDL	CLEAR/LIGHT BREEZE
16-04-2025	17-04-2025	67	19	7	BDL	CLEAR/CALM
17-04-2025	18-04-2025	75	23	9	BDL	CLEAR/CALM
23-04-2025	24-04-2025	68	18	8	BDL	CLEAR/CALM
24-04-2025	25-04-2025	70	26	8	BDL	CLEAR/CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
02-04-2025	03-04-2025	89	30	9	BDL	CLOUDY/LIGHT BREEZE
03-04-2025	04-04-2025	92	34	10	BDL	CLOUDY/LIGHT BREEZE
09-04-2025	10-04-2025	84	27	10	BDL	CLEAR/LIGHT BREEZE
10-04-2025	11-04-2025	90	30	9	BDL	CLEAR/LIGHT BREEZE
16-04-2025	17-04-2025	75	24	8	BDL	CLEAR/CALM
17-04-2025	18-04-2025	83	28	10	BDL	CLEAR/CALM
23-04-2025	24-04-2025	71	25	9	BDL	CLEAR/CALM
24-04-2025	25-04-2025	88	29	11	BDL	CLEAR/CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

FUGITIVE DUST MONITORING

TEST REQUIRED	SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23 & PM2.5: IS-5182 Part 24		
SAMPLE DESCRIPTION	Air sample(Fugitive)		
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-04-25 TO 15-05-25

CHP		WNKOF1		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
22-04-2025	23-04-2025	453	321	CLEAR/CALM

WEIGH BRIDGE		WNKOF2		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
22-04-2025	23-04-2025	437	311	CLEAR/CALM

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -Part 11, TSS: IS 3025-Part 17, COD: APHA (24rd Edition) 5220 C , O&G: IS 3025-Part 39 & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-04-25 TO 15-05-25

MINE WATER DISCHARGE: WNKOW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
13-04-2025	7.90	24	40	BDL
23-04-2025	7.73	22	36	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	07-04-2025	68.2	65.5
APRIL'25	20-04-2025	69.0	67.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'25	07-04-2025	42.7	40.4
APRIL'25	20-04-2025	42.4	40.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

Yogesh Pidurkar
Reviewed by

Amol Kamble
Authoriesed by

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ENVIRONMENTAL MONITORING REPORT

KOLARPIMPRI OC

WANI NORTH AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

MAY 2025

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/MAY-25/25	DATE OF ISSUE	25.06.2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-05-25 TO 15-06-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
13.05.2025	14.05.2025	287	185	47	18	14	CLEAR/CALM
27.05.2025	28.05.2025	252	163	41	14	10	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
13.05.2025	14.05.2025	262	173	40	14	10	CLEAR/CALM
27.05.2025	28.05.2025	231	140	29	11	BDL	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
02.05.2025	03.05.2025	75	23	8	BDL	CLEAR/CALM
03.05.2025	04.05.2025	83	35	10	BDL	CLEAR/CALM
09.05.2025	10.05.2025	67	20	7	BDL	CLEAR/CALM
10.05.2025	11.05.2025	79	27	9	BDL	CLEAR/CALM
16.05.2025	17.05.2025	77	26	9	BDL	CLOUDY/LIGHT BREEZE
17.05.2025	18.05.2025	82	31	10	BDL	CLOUDY/LIGHT BREEZE
23.05.2025	24.05.2025	63	17	7	BDL	RAINY/MODERATE BREEZE
24.05.2025	25.05.2025	79	27	9	BDL	CLOUDY/LIGHT BREEZE
27.05.2025	28.05.2025	84	29	10	BDL	CLOUDY/LIGHT BREEZE
28.05.2025	29.05.2025	76	20	9	BDL	CLOUDY/LIGHT BREEZE
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
02.05.2025	03.05.2025	84	33	10	BDL	CLEAR/CALM
03.05.2025	04.05.2025	75	21	9	BDL	CLEAR/CALM
09.05.2025	10.05.2025	91	29	11	BDL	CLEAR/CALM
10.05.2025	11.05.2025	80	26	10	BDL	CLEAR/CALM
16.05.2025	17.05.2025	76	23	9	BDL	CLOUDY/LIGHT BREEZE
17.05.2025	18.05.2025	82	30	10	BDL	CLOUDY/LIGHT BREEZE
23.05.2025	24.05.2025	66	19	7	BDL	RAINY/MODERATE BREEZE
24.05.2025	25.05.2025	77	24	8	BDL	CLOUDY/LIGHT BREEZE
27.05.2025	28.05.2025	88	28	10	BDL	CLOUDY/LIGHT BREEZE
28.05.2025	29.05.2025	74	24	9	BDL	CLOUDY/LIGHT BREEZE
NAAQS, 2009		**100**	**60**	**80**	**80**	

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-05-25 TO 15-06-25

MINE WATER DISCHARGE:	WNKOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03.05.2025	7.69	36	48	BDL
18.05.2025	7.74	28	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'25	10.05.2025	67.9	66.7
MAY'25	26.05.2025	60.5	58.9
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'25	10.05.2025	45.4	43.1
MAY'25	26.05.2025	45.8	43.2
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

Yogesh Pidurkar
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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/JUNE-25/25	DATE OF ISSUE	7/25/2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-06-25 TO 15-07-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
6/14/2025	6/15/2025	304	192	59	21	15	CLOUDY/LIGHT BREEZE
6/27/2025	6/28/2025	279	178	52	18	12	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
6/14/2025	6/15/2025	264	156	38	14	10	CLEAR/CALM
6/27/2025	6/28/2025	279	167	53	16	12	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
6/2/2025	6/3/2025	60	22	9	BDL	Cloudy sky / Light breeze
6/3/2025	6/4/2025	82	34	12	BDL	Cloudy sky / Light breeze
6/9/2025	6/10/2025	69	32	12	BDL	Cloudy sky / Light breeze
6/10/2025	6/11/2025	73	34	11	BDL	Cloudy sky / Light breeze
6/18/2025	6/19/2025	67	36	9	BDL	Cloudy sky / Light breeze
6/19/2025	6/20/2025	82	30	8	BDL	Cloudy sky / Calm
6/25/2025	6/26/2025	70	21	11	BDL	Clear sky / Light breeze
6/26/2025	6/27/2025	70	29	10	BDL	Clear sky / Light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
6/2/2025	6/3/2025	82	37	13	BDL	Cloudy sky / Light breeze
6/3/2025	6/4/2025	79	32	10	BDL	Cloudy sky / Light breeze
6/9/2025	6/10/2025	68	39	12	BDL	Cloudy sky / Light breeze
6/10/2025	6/11/2025	91	23	7	BDL	Cloudy sky / Light breeze
6/18/2025	6/19/2025	76	27	8	BDL	Cloudy sky / Light breeze
6/19/2025	6/20/2025	80	35	12	BDL	Cloudy sky / Calm
6/25/2025	6/26/2025	81	38	11	BDL	Clear sky / Light breeze
6/26/2025	6/27/2025	88	21	9	BDL	Clear sky / Light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-06-25 TO 15-07-25

MINE WATER DISCHARGE:	WNKOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
6/14/2025	7.78	28	44	BDL
6/26/2025	7.76	28	52	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'25	6/12/2025	67.6	65.2
JUNE'25	6/28/2025	68.8	65.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'25	6/12/2025	42.0	40.5
JUNE'25	6/28/2025	42.7	40.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

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ENVIRONMENTAL MONITORING REPORT

KOLARPIMPRI OC

WANI NORTH AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

JULY 2025

Environment Laboratory
NABL Accredited vide Cert. No. TC-7102
CMPDI
REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/JULY-25/25		DATE OF ISSUE	25-08-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			16-07-25 TO 15-08-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
11-07-2025	12-07-2025	276	176	52	18	12	CLOUDY SKY/CALM
25-07-2025	26-07-2025	256	156	43	15	11	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
11-07-2025	12-07-2025	298	179	54	18	13	CLOUDY SKY/CALM
25-07-2025	26-07-2025	276	154	39	16	11	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-07-2025	02-07-2025	76	28	9	BDL	Cloudy sky / Light breeze
02-07-2025	03-07-2025	66	24	12	BDL	Cloudy sky / Light breeze
07-07-2025	08-07-2025	74	21	12	BDL	Cloudy sky / Light breeze
08-07-2025	09-07-2025	69	29	11	BDL	Cloudy sky / Light breeze
12-07-2025	13-07-2025	68	30	9	BDL	Cloudy sky / Light breeze
13-07-2025	14-07-2025	73	32	8	BDL	Cloudy sky / Calm
21-07-2025	22-07-2025	79	35	11	BDL	Clear sky / Light breeze
22-07-2025	23-07-2025	75	32	10	BDL	Clear sky / Light breeze
27-07-2025	28-07-2025	52	24	12	BDL	Rainy sky / Light breeze
28-07-2025	29-07-2025	59	18	11	BDL	Rainy sky / Light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-07-2025	02-07-2025	67	34	10	BDL	Cloudy sky / Light breeze
02-07-2025	03-07-2025	78	22	8	BDL	Cloudy sky / Light breeze
07-07-2025	08-07-2025	65	24	7	BDL	Cloudy sky / Light breeze
08-07-2025	09-07-2025	76	27	9	BDL	Cloudy sky / Light breeze
12-07-2025	13-07-2025	72	36	9	BDL	Cloudy sky / Light breeze
13-07-2025	14-07-2025	66	23	8	BDL	Cloudy sky / Calm
21-07-2025	22-07-2025	76	34	7	BDL	Clear sky / Light breeze
22-07-2025	23-07-2025	70	31	6	BDL	Clear sky / Light breeze
27-07-2025	28-07-2025	56	20	10	BDL	Rainy sky / Light breeze
28-07-2025	29-07-2025	52	18	8	BDL	Rainy sky / Light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

FUGITIVE DUST MONITORING

TEST REQUIRED	SPM: IS 5182 Part-4, PM-10: IS-5182 Part 23 & PM2.5: IS-5182 Part 24		
SAMPLE DESCRIPTION	Air sample(Fugitive)		
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-07-25 TO 15-08-25

CHP		WNKOF1		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
14-07-2025	15-07-2025	421	310	CLEAR/CALM

WEIGH BRIDGE		WNKOF2		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
14-07-2025	15-07-2025	399	254	CLEAR/CALM

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-07-25 TO 15-08-25

MINE WATER DISCHARGE:	WNKOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
12-07-2025	7.72	18	32	BDL
26-07-2025	7.86	24	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'25	14-07-2025	67.7	65.1
JULY'25	28-07-2025	68.9	67.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'25	14-07-2025	44.5	42.4
JULY'25	28-07-2025	43.6	42.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/AUG-25/25	DATE OF ISSUE	25-09-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-08-25 TO 15-09-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
09-08-2025	10-08-2025	278	192	55	19	14	clear sky / light breeze
23-08-2025	24-08-2025	245	153	32	14	10	rainy / light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
09-08-2025	10-08-2025	296	198	58	23	15	clear sky / light breeze
23-08-2025	24-08-2025	233	165	43	18	11	rainy / light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
03-08-2025	04-08-2025	69	22	8	BDL	clear sky /light breeze
04-08-2025	05-08-2025	79	34	11	BDL	clear sky /light breeze
10-08-2025	11-08-2025	82	37	9	BDL	clear sky /light breeze
11-08-2025	12-08-2025	75	33	8	BDL	clear sky /light breeze
19-08-2025	20-08-2025	60	21	8	BDL	rainy / light breeze
20-08-2025	21-08-2025	54	33	10	BDL	rainy / light breeze
26-08-2025	27-08-2025	60	24	7	BDL	rainy / light breeze
27-08-2025	28-08-2025	66	30	9	BDL	rainy / light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
03-08-2025	04-08-2025	84	30	9	BDL	clear sky /light breeze
04-08-2025	05-08-2025	79	34	8	BDL	clear sky /light breeze
10-08-2025	11-08-2025	81	36	9	BDL	clear sky /light breeze
11-08-2025	12-08-2025	67	30	10	BDL	clear sky /light breeze
19-08-2025	20-08-2025	60	25	12	BDL	rainy / light breeze
20-08-2025	21-08-2025	54	16	11	BDL	rainy / light breeze
26-08-2025	27-08-2025	57	18	6	BDL	rainy / light breeze
27-08-2025	28-08-2025	60	22	8	BDL	rainy / light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-08-25 TO 15-09-25

MINE WATER DISCHARGE:	WNKOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
10-08-2025	7.65	22	36	BDL
24-08-2025	7.86	26	48	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'25	12-08-2025	67.9	66.4
AUG'25	29-08-2025	68.5	67.1
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'25	12-08-2025	44.1	42.3
AUG'25	29-08-2025	41.6	40.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

TEST REPORT NO.	RIN/TR/SEPT-25/25	DATE OF ISSUE	25-10-2025
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 (Part-4), PM-10: IS-5182 (Part 23), PM2.5: IS 5182 (Part 24), NO2: IS 5182 (Part-06), SO2:IS 5182 (Part-2)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-09-25 TO 15-10-25

SUBSTATION KOLARPIMPRI		WNKOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
07-09-2025	08-09-2025	298	196	59	24	15	Cloudy sky /light breeze
25-09-2025	26-09-2025	212	136	30	16	BDL	rainy / light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

REST SHELTER		WNKOA2					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
07-09-2025	08-09-2025	314	204	60	26	16	Cloudy sky /light breeze
25-09-2025	26-09-2025	198	122	36	17	12	rainy / light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH DECember 2000		**600**	**300**	**-**	**120**	**120**	

PIMPRI VILLAGE		WNKOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-09-2025	02-09-2025	68	32	9	BDL	Cloudy sky / light breeze
02-09-2025	03-09-2025	70	30	8	BDL	Cloudy sky / light breeze
08-09-2025	09-09-2025	75	39	7	BDL	Cloudy sky / light breeze
09-09-2025	10-09-2025	69	24	10	BDL	Cloudy sky / light breeze
12-09-2025	13-09-2025	62	26	11	BDL	Cloudy sky / light breeze
13-09-2025	14-09-2025	73	30	9	BDL	Cloudy sky / light breeze
21-09-2025	22-09-2025	69	29	8	BDL	Cloudy sky / light breeze
22-09-2025	23-09-2025	74	28	6	BDL	Cloudy sky / light breeze
26-09-2025	27-09-2025	75	34	7	BDL	Cloudy sky / light breeze
27-09-2025	28-09-2025	69	32	11	BDL	Cloudy sky / light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

WATER FILTER PLANT PRAGATI NAGAR		WNKOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-09-2025	02-09-2025	87	39	10	BDL	Cloudy sky / light breeze
02-09-2025	03-09-2025	69	33	12	BDL	Cloudy sky / light breeze
08-09-2025	09-09-2025	75	32	10	BDL	Cloudy sky / light breeze
09-09-2025	10-09-2025	64	26	11	BDL	Cloudy sky / light breeze
12-09-2025	13-09-2025	75	25	14	BDL	Cloudy sky / light breeze
13-09-2025	14-09-2025	73	21	12	BDL	Cloudy sky / light breeze
21-09-2025	22-09-2025	69	22	10	BDL	Cloudy sky / light breeze
22-09-2025	23-09-2025	66	26	8	BDL	Cloudy sky / light breeze
26-09-2025	27-09-2025	72	35	9	BDL	Cloudy sky / light breeze
27-09-2025	28-09-2025	80	36	13	BDL	Cloudy sky / light breeze
NAAQS, 2009		**100**	**60**	**80**	**80**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -(Part 11), TSS: IS 3025-(Part 17), COD: APHA (24th Edition) 5220 C , O & G: IS 3025-(Part 39) & BOD: IS 3025 (Part 44)			
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-09-25 TO 15-10-25

MINE WATER DISCHARGE:	WNKOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-09-2025	7.55	14	28	BDL
25-09-2025	7.69	22	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102

NOISE LEVEL MONITORING DATA

SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT
SAMPLING METHOD	LSOP 6

CHP:		WNKON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'25	11-09-2025	69.0	67.8
SEPT'25	29-09-2025	67.9	65.7
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

COLONY PRAGATI NAGAR:		WNPON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'25	11-09-2025	43.1	41.3
SEPT'25	29-09-2025	42.1	40.2
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

Yogesh Pidurkar
Reviewed by

Amol Kamble
Authoriesed by

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2. Laboratory activities are performed at the Laboratory permanent facility that is ground floor, Environment Lab, CMPDI RI-IV, Nagpur.
3. This report refers to the values related to the items tested.

********** End of report **********

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ENVIRONMENTAL MONITORING REPORT w.r.t. HEAVY METALS IN AMBIENT AIR

WANI NORTH AREA

WESTERN COALFIELDS LTD.

HALF YEARLY (APR 25 - SEPT 25)

Environment Laboratory

NABL Accredited vide Cert. No. TC-7102

CMPDI

REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014

AN ISO 9001:2015 COMPANY

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Ambient Air Quality Monitoring Data For Heavy Metals	TC-7102

TEST REPORT NO.	RIN/TR/JUNE /HM86	DATE OF ISSUE	25-09-2025
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	AIR SAMPLE
CUSTOMER LETTER REFERENCE NO.	WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022		
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185)		
NAME OF AREA	WANI NORTH	SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	KOLARPIMPARI OC	SAMPLING PLAN : LQR 47	
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	SUBSTATION -KOLARPIMPARI	WNKOA-1	13-04-2025
2	REST SHELTER	WNKOA-2	13-04-2025
3	PIMPRI VILLAGE	WNKOA-3	02-04-2025

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value			National Ambient Air Quality Standard NAAQS, 2009
				WNKOA-1	WNKOA-2	WNKOA-3	
1	Arsenic, µg/m^3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL	BDL	0.006 µg/m^3 (Annual average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m^3	BDL	BDL	BDL	1.0 µg/m^3 (24 Hourly average)
3	Nickle, µg/m^3	ASTM D 4185	0.007 µg/m^3	BDL	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m^3	ASTM D 4185	0.0045 µg/m^3	BDL	BDL	BDL	**
5	Cadmium, µg/m^3	ASTM D 4185	0.0015 µg/m^3	BDL	BDL	BDL	**
6	Mercury, µg/m3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

SCIENTIFIC ASSISTANT

AMOL KAMBLE
AUTHORIZED SIGNATORY

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Ambient Air Quality Monitoring Data For Heavy Metals	TC-7102

TEST REPORT NO.	RIN/TR/JUNE /HM95	DATE OF ISSUE	25-09-2025
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	AIR SAMPLE
CUSTOMER LETTER REFERENCE NO.	WCL/HQ/ENV/14-I/206-220 DATED: 25.03.2022		
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185)		
NAME OF AREA	WANI NORTH	SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	KOLARPIMPRI OC	SAMPLING PLAN : LQR 47	
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	WEIGH BRIDGE	WNKOF-1	22-04-2025
2	CHP	WNKOF-2	22-04-2025

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value		National Ambient Air Quality Standard NAAQS, 2009
				WNKOF-1	WNKOF-2	
1	Arsenic, µg/m^3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL	0.006 µg/m^3 (Annual average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m^3	BDL	BDL	1.0 µg/m^3 (24 Hourly average)
3	Nickle, µg/m^3	ASTM D 4185	0.007 µg/m^3	0.0075	0.0078	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m^3	ASTM D 4185	0.0045 µg/m^3	BDL	BDL	**
5	Cadmium, µg/m^3	ASTM D 4185	0.0015 µg/m^3	BDL	BDL	**
6	Mercury, µg/m3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

SCIENTIFIC ASSISTANT

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REPORT ON

MONITORING OF GROUND WATER LEVEL

OF

KOLAR PIMPRI EXTN.OC MINE,

WANI NORTH AREA

WESTERN COALFIELDS LTD.

PERIOD- MAY 2025 (PRE MONSOON) & AUGUST 2025 (MONSOON)

M/s Anacon Laboratories Pvt. Ltd., Nagpur

MoEF&CC (GOI) Recognized Laboratory
ISO 9001:2015, ISO 14001:2015, ISO 45001:2018
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Mob: +91-9372960077
Email: ***ngp@anacon.in***
Website: ***www.anaconlaboratories.com***

Report No. ANqr /PD/20A/2023/199

2025-26

Certificate

Groundwater level monitoring has been conducted with due diligence, and a comprehensive report on the monitoring of groundwater levels in all observation wells has been prepared as per the scope of work outlined in work order no. वेकोलि/मुख्यालय/पर्यावरण/14-L/1122-1148, dated 19.04.2025 for the Aug 2025 (Monsoon) Period.

The report includes the monitoring of groundwater levels and water quality analysis of observation wells pertaining to the KOLAR PIMPRI EXTN.OC MINE, Wani North area of Yeotmal District, M.S.

The groundwater level monitoring was meticulously carried out by Anacon Laboratories Pvt. Ltd., and the analysis of the samples was performed by Anacon Laboratories Pvt. Ltd., a NABL Accredited Laboratory. (NABL Certificate no. TC-12998)

Anacon Laboratories Pvt. Ltd. gratefully acknowledges the full cooperation rendered by the concerned WCL officials, which facilitated the timely completion of the project.

Krupali Raut
(Geologist)

Gyanchand Bohra
NABET Accredited EIA Expert
for Hydrogeology & Geology

Nagpur
Aug -2025

ANACON LABORATORIES PVT. LTD. NAGPUR

(Dr. D. G. Garway)
Head of Organization
Anacon Laboratories Pvt. Ltd., Nagpur

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ANACON LABORATORIES PVT. LTD. NAGPUR

INTRODUCTION

Western Coalfields Limited (WCL) is one of the eight Subsidiary Companies of Coal India Limited (CIL) which is under administrative control of Ministry of Coal. The Company incorporated under the Companies Act, 1956 has its registered office at Coal Estate, Civil Lines, Nagpur–440001. WCL has been conferred "Mini-ratna" status on 15 March 2008. It has mining operation spread over the states of Maharashtra (in Nagpur, Chandrapur & Yeotmal Districts) and Madhya Pradesh (in Betul and Chhindwara Districts). It has been divided into 10 administrative areas. The Company is a major source of supplies of coal to the industries located in Western India in the States of Maharashtra, Madhya Pradesh, Gujarat and also in Southern India in the States of Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. A large numbers of Power Houses under Maharashtra, Madhya Pradesh, Gujarat, Karnataka, Punjab and Uttar Pradesh - Electricity Boards are major consumers of its coal along with cement, steel, chemical, fertilizer, paper and brick Industries in these states.

M/s Anacon Laboratories Pvt. Ltd. has been awarded the Work of "Groundwater level Monitoring (i.e. bore well / piezometer Water levels) and Water quality analysis (as per IS10500) for 76 projects / mines of WCL (situated in the state of Madhya Pradesh – Chhindwara & Betul districts and Maharashtra – Nagpur, Chandrapur & Yeotmal districts) for one year as per condition stipulated in Environmental Clearance letters issued by MoEF & CC & NOC issued by CGWA" vide work order वेकोलि/मुख्यालय/पर्यावरण/14-L/1122-1148, dated 19.04.2025 for the Aug 2025 (Monsoon) Period.

This Ground Water Level Monitoring report is prepared KOLAR PIMPRI EXTN.OC MINE,,of Wani North area of WCL for 2 seasons i.e. **PERIOD-MAY 2025(PRE MONSOON) & AUG 2025(MONSOON).** These mines are located in Wani North Area of Yeotmal District, Maharashtra.

GENERAL HYDROGEOLOGICAL CONDITION

Deccan Trap Basalt is the predominant water bearing formation, followed by Gondwana formation having Sandstone and Shale sequence. Penganga and Quaternary Alluvium aquifers are spread in limited areas. Archean aquifers are limited and have less significance in the area.

ARCHEAN

Achaeans, which comprise granites, granitic gneisses and schists, occur in Umarkhed taluka. These rocks as such have limited ground water potential. In these rocks only weathered portions and jointed zones possess water-bearing capacity and ground water occurs under unconfined condition in the area.

VINDHYAN

In Vindhyans, Limestones are water bearing formation while Sandstone, due to their hard and compact nature, have poor ground water potential and occur in southeastern peripheral parts of Wani taluka. The Limestones as such are massive but wherever they are cavernous they are capable of holding water. The ground water occurs under unconfined condition in the area.

GONDWANA

The Gondwana consists of Kamthi and Barakar Sandstone and Shale and occupy north-south extending elongated stretch in parts of Maregaon and Wani talukas. Sandstone is usually friable and possesses primary porosity due to its granular nature. They are most productive water bearing formations in the district. The ground water occurs under semi confined to confined conditions in the area and water bearing zones have been encountered down to depth of 470 m.

DECCAN TRAP BASALT

Deccan Trap Basalt is widely spread and forms important water bearing formation, which occupies almost entire district except south eastern part. On the whole, Deccan Trap Basalt exhibits a multi aquifer system. Based on the Litholog of 51 exploratory wells and Piezometers, it is observed that weathered Vesicular Basalt mainly forms the predominant shallow aquifer down to the depth of 20 m bgl. Massive Basalt is also encountered at the top thereby forming poor yielding aquifer and also restricting the ground water recharge to the underlying porous Vesicular Basalt. Fractured Basalt is also observed in certain places with limited to significant thickness. In Deccan Trap Basalt phreatic aquifer generally occurs down to 25 m, however, fracture zones have occurred within 80 m range except at few places where it occurs down to 158 m also.

ALLUVIUM

Alluvium occurs in patches along the banks of Wardha and Penganga rivers and their major tributaries and consists of clay and silt with lenticular bodies of sand and gravel. In Ralegaon area, it is observed that sand zones are found in the depth range of 20-25 m bgl, while the top 15-16 m is full of clay and silt. Ground water in Alluvium occurs both under unconfined and 8 semi-confined conditions.

ANACON LABORATORIES PVT. LTD. NAGPUR

KOLAR PIMPRI EXTN.OC MINE,

WANI NORTH AREA

WESTERN COALFIELDS LTD.

PERIOD- MAY 2025 (PRE MONSOON) & AUG 2025 (MONSOON)

ANACON LABORATORIES PVT. LTD. NAGPUR

ANACON LABORATORIES PVT. LTD. NAGPUR

GROUNDWATER MONITORING REPORT FOR KOLAR PIMPRI EXTN.OC MINE

PLAN SHOWING LOCATION OF WELL MONITORING STATION IN BUFFER ZONE OF KOLAR PIMPRI EXTN.OC MINE

PREPARED BY ANACON LBORTORIES PVT.LTD.

0 2 4 km

FIGURE-I: GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF KOLAR PIMPRI EXTN. OC MINE)

Table-IVA: Groundwater level monitoring data of dugwells/piezometers in buffer zone of Kolar Pimpri Extn. OC, Wani North Area, WCL

Sr. No	Well No.	Name of village	Well location	Latitude	Longitude	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to Water Level (m bgl)		Utility / Owner	Formation Tapped
										May-25	Aug-25		
1	WN6	Nilapur	About 800 m W of village, adjacent to Wani road	20°3'47.1976829585572"	79°0'1.44635986976027"	197	4.95	9.2	0.34	4.20	1.30	D/I	__
2	WN8a	Bhalar	Near bus stop. Well of Sri. Arun Maruti Goble	20°1'56"	79°0'51"	215	1.55	8.6	0.73	5.50	1.90	D/I	__
3	WN13	Kesurli	N of village, near Hanuman Mandir	20°0'32.3905962013654"	79°0'4.78518515303108"	198	2.8	8.5	0.33	4.70	2.30	D/I	__
5	WN2	Wadgaon	About 400 m S of village, adjacent to nalla	20°6'52.3287444895587"	78°58'12.9702792106241"	224	4.75	7.01	0.85	4.20	1.80	D/I	__
6	WN5	Kolar (DCB)	E of village, adjacent to nalla well of Nilkant Pijurkar	20°4'36.126217532636"	79°1'46.4540126850829"	211	1.82	10.52	0.15	6.60	1.50	D/I	__
7	WN54	Ganeshpur	TW near the road junction of Wegaon & Ghonsa	20°3'6.59191990747701"	78°56'38.1777867760342"	214	1.58	7.04	GL	4.90	1.40	D/I	__
8	WN1	Wanjri	C of village in southern sector, about 60 m E of main road	20°6'34.8984334314579"	78°56'35.9709229812744"	210	2.74	7.16	0.88	6.40	2.90	D/I	__
9	M7	Wislon	200 m N of village in the field, adjacent to Nandori road, near to school.	20°10'25.7094627078914"	79°1'29.0456134946305"	215	2.21	6.36	0.65	4.40	3.1	DOMESTIC	SHELLY LIMESTONE
10	M10	Naglon TW	C of village near well No. 10 in the compound of owner house	20°8'53.2748543252183"	79°1'7.01494393898315"	198	1.82	15	0.55	6.50	3.3	IRRIGATION	BASALT
11	M10A	Naglon/Kuchna colony	In field near Kuchna colony	20°8'53.27"	79°1'7.01"	198	1.82	8.7	0.55	3.50	1.7	DOMESTIC	SHELLY LIMESTONE
12	M14B	Majri	SE of village , near GP office adjacent road	20°8'12.4582117911999"	79°2'36.6904412868496"	217	3.11	6.95	0.3	5.00	2.8	IRRIGATION	SHELLY LIMESTONE
13	M16B	Kondha (New)	E of village, N of main road	20°8'12.8215608360037"	79°4'5.88838707195464"	219	3.32	10.49	0.64	5.80	2.5	IRRIGATION	SHELLY LIMESTONE
14	M17B	Kandoli	N of village, near Hanuman Mandir	20°8'30.857006674367"	79°5'0.815059913458088"	212	2.56	11.68	0.54	6.00	2.3	IRRIGATION	BASALT
16	M23	Bhadravati Camp (GSI Drilling camp)	N of village (outside) , about 70 m E of Kesurli road after G.S.I drilling camp	20°6'48.6793512288855"	79°6'24.2987637521275"	221	2.68	12.25	0.82	6.10	4.1	DOMESTIC	SHELLY LIMESTONE
17	M23A	Bhadravati killa word	Vivekanand Madhyamik vidhalaya	20°6'31.3914312007597"	79°6'42.0275781246596"	224	2.49	17.74	0.54	8.00	3.2	IRRIGATION	SHELLY LIMESTONE
18	M26	Gaurala	C of village, near OHT	20°5'25.7271036416739"	79°6'47.6315362670925"	202	2.59	8.81	0.51	4.40	2.1	IRRIGATION	BASALT

Sr. No	Well No.	Name of village	Well location	Latitude	Longitude	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to Water Level (m bgl)		Utility / Owner	Formation Tapped
										May-25	Aug-25		
19	M27	Sumthana	About 50 m W of Nagpur - Chandrapur road, backside of Shivam Kirana	20°5'59.29"	79°7'56.65"	213	2.68	13.35	0.7	6.80	1.4	IRRIGATION	SHELLY LIMESTONE
20	M32B	Dhorwasa	W of village, adjacent to road & near to embankment	20°3'36"	79°5'28"	204	2.62	9.54	0.54	4.65	2.4	IRRIGATION	BASALT
21	M41B	Vijasan	Near ZP school of Balwadi	20°6'0.901283823739618"	79°5'48.9616271474631"	213	2.74	12.59	0.82	6.30	3.7	DOMESTIC	SHELLY LIMESTONE
22	M35	Pipri	1.5 km NE of village, adjacent to Bhadravati road, near to road culvart infield	20°2'17.27"	79°5'49.07"	215	1.98	9.38	GL	6.40	3.2	IRRIGATION	SHELLY LIMESTONE
23	M66	THORANA	IN THE AGRICCULTURE FIELD OUTSIDE THE VILLAGE ON NORTH SIDE OF THE VILLAGE	20°8'59.19"	78°59'7.63"	200	4.2	11	0.5	8.00	1.1	DOMESTIC	BASALT
24	M68	TARODA VILLAGE	OUT SIDE THE VILLAGE IN AGRICULTURE LAND	19°59'16.44"	79°3'47.46"	210	4	9.3	0.4	6.90	1.6	IRRIGATION	SHELLY LIMESTONE

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WN2-Wadgaon

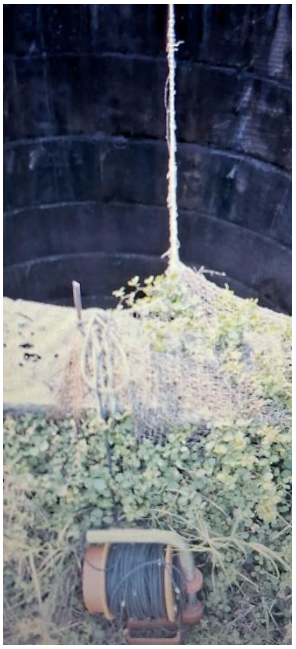
WN1-Wanjri

WN5-Kolar (DCB)

WN6-Nilapur

WN8A-Bhalar

WN13- Kesurli



M10-Naglon TW

WN54-Ganeshpur

M7-Wislon

M10A-Naglon/Kuchna colony

M17B-Kandoli

M14B-Majri

M16B-Kondha (New)

M23-Bhadravati Camp (GSI Drilling camp)

M23A-Bhadravati killa word

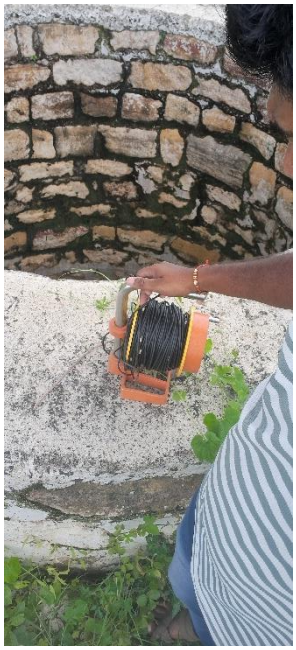
M32B-Dhorwasa

M26-Gaurala

M27- Sumthana

M41B-Vijasan

M35-Pipri



M66- THORANA

M68-TARODA VILLAGE

Anacon Laboratories

TC-12998

Test Report

ULR No.- TC129982500003064F
Test Report No.: ALPL/10062025/03-14 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-14 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	WANJARI (Well No.- WN1)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	180.57
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	137.97
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	56.8
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.43
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	24.3
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	8.03
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.84
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	45.97
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**536**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**242**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003064F
Test Report No.: ALPL/10062025/03-14

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-14 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	WANJARI (Well No.- WN1)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	BLQ(LOQ-0.02)
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------**END OF REPORT**----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003073F

Test Report No.: ALPL/10062025/03-23 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-23 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By	Sampling Date / Sampling Time	Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Wadgaon (Well No.- WN2)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	186.4
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	128.11
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	68
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.49
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.67
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	9.97
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.61
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	25.26
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**653**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**288**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003073F
Test Report No.: ALPL/10062025/03-23 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-23 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Wadgaon (Well No.- WN2)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.27
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003074F

Test Report No.: ALPL/10062025/03-24 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-24 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Kolar(DCB) (Well No.- WN5)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	168.92
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	157.68
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	65.6
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.37
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	26.73
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	8.94
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.44
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	41.03
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**619**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**274**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003074F
Test Report No.: ALPL/10062025/03-24 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-24 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Kolar(DCB) (Well No.- WN5)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.12
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Ganway
Deputy Quality Manager

----------END OF REPORT----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003087F
Test Report No.: ALPL/10062025/03-37 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-37 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01		Nilpur (Well No.- WN6)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	186.4
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	142.89
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**131.2**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.14
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	20.89
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	11.26
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	6.57
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	19.28
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**824**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**414**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003087F
Test Report No.: ALPL/10062025/03-37 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-37 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Nilpur (Well No.- WN6)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	BLQ(LOQ-0.02)
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 4,12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------**END OF REPORT**----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003088F
Test Report No.: ALPL/10062025/03-38 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-38 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By	Sampling Date / Sampling Time	Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Bhalar (Well No.- WN8a)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	180.57
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	131.07
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**92.8**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.70
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	**36.45**
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	7.81
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.14
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	6.74
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**798**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**382**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003088F
Test Report No.: ALPL/10062025/03-38 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-38 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By	Sampling Date / Sampling Time	Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Bhalar (Well No.- WN8a)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.15
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No.4,7, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------**END OF REPORT**----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003089F

Test Report No.: ALPL/10062025/03-39 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-39 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kesurli (Well No.- WN13)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	**244.65**
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	175.91
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**134.4**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.80
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	24.78
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	11.13
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	6.97
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	16.24
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**906**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**438**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003089F
Test Report No.: ALPL/10062025/03-39 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-39 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kesurli (Well No.- WN13)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.05
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 1,4,12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwaj
Deputy Quality Manager

----------**END OF REPORT**----------

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TC-12998

Test Report

ULR No.- TC129982500003062F
Test Report No.: ALPL/10062025/03-13 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-13 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	Ganeshpur (Well No.- WN54)

Tests Required: Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu), Cadmium (as Cd).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group- Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	168.92
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	103.47
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	59.2
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.33
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.67
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	6.05
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.63
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	44.07
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**581**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**266**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron (as B)	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)

● Please refer last Page for Note and remarks.

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. ~~Technical Assistant~~

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003063F
Test Report No.: ALPL/10062025/03-13 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-1/61-13 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 4	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Wani North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method- ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	Ganeshpur (Well No.- WN54)

Tests Required: Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.17
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------**END OF REPORT**----------

ORIGINAL TEST REPORT

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TC-12998

Test Report

ULR No.- TC129982500003177F
Test Report No.: ALPL/10062025/05-3 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-3	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Wislon (Well No.-M7)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	174.75
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	147.82
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	60
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.16
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.67
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	10.93
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.32
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	27.54
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**659**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**268**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003177F
Test Report No.: ALPL/10062025/05-3 **Dated 10.06.2025**

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-3	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Wislon (Well No.-M7)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.23
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003178F
Test Report No.: ALPL/10062025/05-4

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-4	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Naglon TW (Well No.-M10)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	163.1
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	152.75
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	60.8
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.24
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	25.75
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	7.10
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.56
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	27.26
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**579**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**258**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwar
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003178F
Test Report No.: ALPL/10062025/05-4 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-4	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Naglon TW (Well No.-M10)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.28
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14.**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003179F

Test Report No.: ALPL/10062025/05-5 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-5	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Naglon/Kuchna colony (Well No.-M10A)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	186.4
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	162.60
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	63.2
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.36
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.18
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	11.13
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.73
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	29.44
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**642**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**274**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003179F
Test Report No.: ALPL/10062025/05-5

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-5	**Analysis Start**	21.05.2025	
	Inward Date	21.05.2025	**Analysis End**	28.05.2025	
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025			
	Inv. No.	5			

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Naglon/Kuchna colony (Well No.-M10A)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**=Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.38
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003180F
Test Report No.: ALPL/10062025/05- 6

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-2/44-6 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 5	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025	

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Majri (Well No.-M14B)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity(as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	**244.65**
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	206.95
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	69.6
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.51
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.67
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	5.68
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.91
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	33.91
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**728**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**292**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003180F
Test Report No.: ALPL/10062025/05- 6

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-6	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Majri (Well No.-M14B)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.35
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 1, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003181F
Test Report No.: ALPL/10062025/05-7 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-7	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kondha(New) (Well No.-M16B)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	174.75
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	128.11
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	65.6
5	Free Residual Chlorine.	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.37
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.18
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	3.84
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.61
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	22.60
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**768**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**280**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003181F
Test Report No.: ALPL/10062025/05- 7

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-7	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kondha(New) (Well No.-M16B)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.26
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----------END OF REPORT----------

Original Test Report

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TC-12998

Test Report

ULR No.- TC129982500003182F
Test Report No.: ALPL/10062025/05- 8 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-8	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kandoli (Well No.-M17B)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	168.92
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	152.75
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	59.2
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.25
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	25.27
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	5.11
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.39
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	26.12
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**693**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**252**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003182F
Test Report No.: ALPL/10062025/05- 8

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-8	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 01.05.2025 **Sampling Time** Not Mentioned	Kandoli (Well No.-M17B)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.18
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003184F
Test Report No.: ALPL/10062025/05- 10

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-10	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Bhadravati Camp (GSI Drilling Camp) (Well No.-M23)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Alkalinity	mg/l	IS 3025 (Part 23)	200	600	192.22
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	172.46
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	68
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.37
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.18
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	6.24
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.03
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	30.39
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**619**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**286**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003184F
Test Report No.: ALPL/10062025/05- 10

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-10	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Bhadravati Camp (GSI Drilling Camp) (Well No.-M23)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.47
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003185F
Test Report No.: ALPL/10062025/05-11

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-11	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Bhadravati killa word (Well No.-M23A)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	**238.82**
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	197.10
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	69.6
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.49
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	28.64
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	7.78
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.19
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	33.62
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**667**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**292**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003185F
Test Report No.: ALPL/10062025/05-1 1 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-11	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Bhadravati killa word (Well No.-M23A)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.43
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 1, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003186F

Test Report No.: ALPL/10062025/05- 12 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-12	**Analysis Start**	21.05.2025	
	Inward Date	21.05.2025	**Analysis End**	28.05.2025	
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025			
	Inv. No.	5			

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Gaurala (Well No.-M26)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	168.92
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	162.60
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	59.2
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.25
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	23.32
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	8.73
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.46
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	23.65
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**543**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**244**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.- TC129982500003186F
Test Report No.: ALPL/10062025/05-12

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-12	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Gaurala (Well No.-M26)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.17
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003187F
Test Report No.: ALPL/10062025/05- 13

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-13	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Sumthana (Well No.-M27)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	174.75
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	5
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	152.75
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	61.6
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	0.22
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	27.21
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	7.52
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.11
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	23.65
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**572**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**266**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwar
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003187F
Test Report No.: ALPL/10062025/05- 13 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** **Inward Date** **Reference** **Inv. No.**	ALPL/21052025/W-2/44-13 21.05.2025 WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 5	**Analysis Start** **Analysis End**	21.05.2025 28.05.2025

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Sumthana (Well No.-M27)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.39
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

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REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwa
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003190F
Test Report No.: ALPL/10062025/05- 16

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-16	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Dhorwasa (Well No.-M32B)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	133.97
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	118.26
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**128.8**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	BLQ(LOQ-0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	23.32
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	9.80
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.24
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	21.65
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**794**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	BLQ(LOQ-0.1)
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**418**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003190F
Test Report No.: ALPL/10062025/05-16 **Dated 10.06.2025**

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-16	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 02.05.2025 **Sampling Time** Not Mentioned	Dhorwasa (Well No.-M32B)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.26
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 4, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT----------

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TC-12998

Test Report

ULR No.- TC129982500003207F
Test Report No.: ALPL/10062025/05-33

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-2/44-33 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 5	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025	

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	Pipri (Well No.-M35)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Alkalinity	mg/l	IS 3025 (Part 23)	200	600	**238.82**
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	140.92
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**148**
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	BLQ(LOQ-0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	10.20
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	6.93
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.16
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	26.59
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**756**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**412**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Ganway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003207F
Test Report No.: ALPL/10062025/05-33 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-33	**Analysis Start**	21.05.2025	
	Inward Date	21.05.2025	**Analysis End**	28.05.2025	
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025			
	Inv. No.	5			

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	Pipri (Well No.-M35)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.32
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 1, 4, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT---------

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TC-12998

Test Report

ULR No.- TC129982500003191F
Test Report No.: ALPL/10062025/05-17

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-2/44-17 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 5	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025	

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Vijasan (Well No.-M41B)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	122.32
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	128.60
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**131.2**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	BLQ(LOQ-0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	23.32
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	9.58
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.17
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	22.79
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**810**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**424**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003191F
Test Report No.: ALPL/10062025/05- 1 7 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-17	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 03.05.2025 **Sampling Time** Not Mentioned	Vijasan (Well No.-M41B)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.31
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No 4, 12 & 14**

.

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003212F
Test Report No.: ALPL/10062025/05-38

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-38	**Analysis Start**	21.05.2025	
	Inward Date	21.05.2025	**Analysis End**	28.05.2025	
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025			
	Inv. No.	5			

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri North Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	THORANA (Well No.-M66)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	180.57
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	120.72
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**158.4**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	BLQ(LOQ-0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	19.44
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	8.28
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	8.32
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	22.51
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	**664**
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**476**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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TC-12998

Test Report

ULR No.- TC129982500003212F
Test Report No.: ALPL/10062025/05-38 Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.** ALPL/21052025/W-2/44-38 **Inward Date** 21.05.2025 **Reference** WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025 **Inv. No.** 5	**Analysis Start** 21.05.2025 **Analysis End** 28.05.2025

Sample Description	Sample Details As Provided By Client	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Majri North Area)	Drinking	1 Ltr

Sampling By		Sampling Location
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	THORANA (Well No.-M66)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.18
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification. ● LOQ= limit of quantification. ● Environmental condition – Satisfactory & Clear ● Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05). ● pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 4, 12 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garwar
Deputy Quality Manager

----------END OF REPORT---------

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TC-12998

Test Report

ULR No.- TC129982500003214F
Test Report No.: ALPL/10062025/05-40

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-40	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	TARODA VILLAGE (Well No.-M68)

Tests Required Total Alkalinity(as Calcium carbonate), Colour, Chloride (as Cl), Calcium (as Ca), Free Residual Chlorine, Fluoride (as F), Magnesium (as Mg), Nitrate (as NO3), Odour, pH, Sulphate (as SO4), Total dissolved solids, Turbidity, Total hardness (as CaCO3), Phenolic compounds, Arsenic (as As), Aluminium (as Al), Boron (as B), Copper (as Cu).

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	**Discipline – Chemical**		**Group - Water**			
1	Total Alkalinity (as Calcium carbonate)	mg/l	IS 3025 (Part 23)	200	600	151.45
2	Colour	Hazen	IS 3025 (Part 4) : clause 4	5	15	BLQ(LOQ-1)
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :clause 2	250	1000	139.94
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : clause 5	75	200	**86.4**
5	Free Residual Chlorine	mg/l	IS 3025 (Part 26) : clause 7	0.2	1	BLQ(LOQ-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60/sec1) : clause 6	1.0	1.5	BLQ(LOQ-0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : clause 6	30	100	15.06
8	Nitrate (as NO_3)	mg/l	IS 3025 (Part 34/Sec1) :clause 6.4	45	No relaxation	7.62
9	Odour	-	IS 3025 (Part 5)	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11)	6.5 to 8.5	No relaxation	7.24
11	Sulphate (as SO_4)	mg/l	IS 3025 (Part 24/Sec 1) : clause 5	200	400	27.16
12	Total dissolved solids	mg/l	IS 3025 (Part 16)	500	2000	398
13	Turbidity	NTU	IS 3025 (Part 10)	1	5	0.1
14	Total hardness (as $CaCO_3$)	mg/l	IS 3025 (Part 21) clause 5	200	600	**278**
15	Phenolic compounds	mg/l	IS 3025 (Part 43/Sec1) : clause 6	0.001	0.002	BLQ(LOQ-0.001)
II	**Discipline – Chemical**		**Group- Residues in Water**			
16	Arsenic (as As)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
17	Aluminium (as Al)	mg/l	IS 3025 (Part 2)	0.03	0.2	BLQ(LOQ-0.02)
18	Boron	mg/l	IS 3025 (Part 2)	0.5	2.4	BLQ(LOQ-0.02)
19	Copper (as Cu)	mg/l	IS 3025 (Part 2)	0.05	1.5	BLQ(LOQ-0.02)

● Please refer last Page for Note and remarks .

Verified By

Snehal Raut
Technical Manager

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

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Anacon Laboratories

TC-12998

Test Report

ULR No.- TC129982500003214F
Test Report No.: ALPL/10062025/05-40

Dated 10.06.2025

Issued To : **M/s Western Coalfields Limited (WCL)** Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	**Sample Inward No.**	ALPL/21052025/W-2/44-40	**Analysis Start**	21.05.2025
	Inward Date	21.05.2025	**Analysis End**	28.05.2025
	Reference	WCL/HQ/ENV/14-L/ 1122-1148 dt19 Apr 2025		
	Inv. No.	5		

Sample Description	**Sample Details As Provided By Client**	**Purpose of analysis**	**Quantity Received**
Ground Water	Ground Water (Majri Area)	Drinking	1 Ltr

Sampling By		**Sampling Location**
Anacon Representative - Mr.Kartik Shrivas Sampling Method:ANtd/7.2/MON-01	**Sampling Date** 04.05.2025 **Sampling Time** Not Mentioned	TARODA VILLAGE (Well No.-M68)

Tests Required Cadmium (as Cd),Iron (as Fe), Lead (as Pb), Manganese (as Mn), Nickel (as Ni), Selenium (as Se), Total Chromium (as Cr), Zinc (as Zn)

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Ground Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
II	**Discipline – Chemical**		**Group- Residues in Water**			
20	Cadmium (as Cd)	mg/l	IS 3025 (Part 2)	0.003	No relaxation	BLQ(LOQ-0.002)
21	Iron (as Fe)	mg/l	IS 3025 (Part 2)	1.0	No relaxation	0.32
22	Lead (as Pb)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
23	Manganese (as Mn)	mg/l	IS 3025 (Part 2)	0.1	0.3	BLQ(LOQ-0.02)
24	Nickel (as Ni)	mg/l	IS 3025 (Part 2)	0.02	No relaxation	BLQ(LOQ-0.01)
25	Selenium (as Se)	mg/l	IS 3025 (Part 2)	0.01	No relaxation	BLQ(LOQ-0.01)
26	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2)	0.05	No relaxation	BLQ(LOQ-0.02)
27	Zinc (as Zn)	mg/l	IS 3025 (Part 2)	5	15	BLQ(LOQ-0.02)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report.● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● **BLQ= below limit of quantification.** ● **LOQ= limit of quantification.** ● **Environmental condition – Satisfactory & Clear** ● **Statement of conformity issued on the basis of decision rule as per quality procedure (QP/7.8/05).** ● **pH Value was measured at 25°C.**

REMARKS : As requested by the client, the sample was tested for the above parameters only. **Sample bearing the details mentioned as above is not complying with IS 10500(2012) requirements for the tests Sr. No. 4 & 14**

Verified By

Dhanashree Hiwanj
Sr. Technical Assistant

Authorized Signatory

Chinmay Garway
Deputy Quality Manager

----------END OF REPORT---------

Thank you for instilling your trust and faith in our services. We cherish our relationship with you, and we put in a lot of hard work in making sure that you get a seamless experience at every stage of your interaction with us. In our constant endeavour towards ensuring that your next experience will be significantly better than the current one, we welcome your feedback on feedback@anacon.in.

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Land Restoration / Reclamation Monitoring of 26 opencast projects of Western Coalfield Limited producing More than 5 million Cu. M. (Coal+OB) per annum based on Satellite Data of the Year 2024

वेस्टर्न कोल्फील्ड्स लिमिटेड के ५ मिलियन घनमीटर (कोल+अधिभार) से अधिक उत्पादन क्षमतावाले २६ खुली खदानों के भूमि पुनरूद्धार हेतु २०२४ के उपग्रह डाटा के आधार पर निगरानी का वार्षिक प्रतिवेदन

Submitted to

Western Coalfields Limited

Land Restoration / Reclamation Monitoring of 26 opencast projects of Western Coalfield Limited producing More than 5 million Cu. M. (Coal+OB) per annum based on Satellite Data of the Year 2024

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March 2025

Remote Sensing Cell
Geomatics Division
CMPDI-HQ, Ranchi

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कार्यकारी सारांश

1.0 परियोजना

वेस्टर्न कोल्फील्ड्स लिमिटेड के ५ मिलियन घन मीटर (कोल+ अधिभार) से अधिक उत्पादन क्षमतावाली २६ खुली खदानों के पुनरुद्धार हेतु वर्ष २०२४ के उपग्रह डाटा पर आधारित पर सलाना नियमित निगरानी।

उपरोक्त २६ खुली में से १३ परियोजनाए जिन्हें भताड़ी, बेलोरा-नयागांव, बल्लारपुर, जुनाड ,कोलारपिम्प्री, हिंदुस्तान लाल्पेथ, गौरी-पौनी, गोंडेगाँव, अदासा (भूमिगत से खुली खदान) ,भानेगओं, गोकुल, इन्दर-कामठी एकीकृत और धुपतला खुली खदानों के नाम से जाना जाता है, इन्हें कार्य - आदेश के तहत ५ मिलियन घन मीटर (कोल+अधिभार) से अधिक क्षमता वाले खदानों के श्रेणी में पहली बार शामिल किया गया है|

2.0 उद्देश्य

भूमि पुनरुद्धार (लैंड रिक्लेमेशन) का उद्देश्य कुल पट्टाक्षेत्र में बैकफील, वृक्षारोपण, सामाजिक वानिकी, सक्रिय खनन क्षेत्र, जल निकाय (वाटर ड्रेनेज) बंजर भूमि, कृषि भूमि और जंगल के विभिन्न प्रकार के वितरण प्रणाली के क्षेत्र का आकलन करना है। यह अध्ययन न केवल उपरोक्त सभी खुली खदानों के भूमि पुनरुद्धार (लैंड रिक्लेमेशन) की प्रगति का आकलन में मदद करेगा बल्कि पर्यावरण संरक्षण के लिए आवश्यक उपचारात्मक उपायों को क्रियान्वित करने में भी सहायता करेगा।

3.0 मुख्य निष्कर्ष

- वर्ष २०२४-२०२५ के लिए भुमि पुनरूद्धार(लेंड रिक्लेमेंशन) की निगरानी हेतु डब्लू.सी.एल के २६ खुली परियोजनाए जिनका नाम सास्ती, दुर्गापुर, मुंगोली, उमरेड, उकनी, नीलजयी, न्यू माजरी, मकरधोकरा ३, पेनगंगा , एकोना १ और २ (एकीकृत), न्यू मजरी भूमिगत से खुली खदान, पौनी-२ (विस्तार), मकरधोकरा १ (विस्तार), भटाडी, गोकुल, इन्दर-कामठी एकीकृत तथा धुपतला है| इनका कुल पट्टा क्षेत्र २४२.७३ वर्ग किलोमीटर हैं, जिसमे से ६५.९९ वर्ग किलोमीटर उत्खनित क्षेत्र है जिसमें क्रमशः १९.२४ वर्ग किलोमीटर (२९.१६%) बैकफील क्षेत्र (तकनीकी पुनुरुद्धार), ६.०८ वर्ग किलोमीटर (९.२१%) वृक्षारोपण (जैविक पुनरुद्धार) का क्षेत्र तथा ४०.६७ वर्ग किलोमीटर (६१..६३%) सक्रिय खनन क्षेत्र के अंतर्गत पाया गया| इस विश्लेषण से स्पष्ट है कि कुल खुली खदानों के उत्खनित क्षेत्र में से ३८.३७ प्रतिशत का क्षेत्र जैविक और तकनिकी रूप से भूमि पुनरूद्धार का कार्य हो गया है और शेष ६१.६३ प्रतिशत का क्षेत्र सक्रिय खनन के अंतर्गत है| परियोजनावार विवरण तालिका -१ और चित्र-१ दर्शाया गया है (तुलनात्मक अध्ययन के उद्देष्य के लिए तालिका -१ देखें)

- विभिन्न परियोजनाओं के लिए वर्ष २०२३ के सापेक्ष में वर्ष २०२४ में किये गए भुमि पुनरूद्धार की स्थिति की तूलना करने के पश्चात विश्लेषण से यह स्पष्ट है कि भूमि पुनरुद्धार के अंतर्गत वर्ष २०२३ के कुल क्षेत्र २३.२४ वर्ग किलोमीटर से बढ़कर वर्ष २०२४ में २५.३२ वर्ग किलोमीटर हो गया है, २६ खुली परियोजनाओं में से बल्लारपुर खुली खदान में भुमि पुनरूद्धार का कार्य

अधिकतम ८५.९५ प्रतिशत हुआ है अतः इसे शीर्ष स्थान पर रखा गया है इसके बाद क्रमशः सास्ती खुली खदान (८०.७३ प्रतिशत) तथा उमरेड (६६.२५ प्रतिशत) खुली परियोजनाओं का स्थान है|

- वर्ष २०२३ के कुल जैविक भूमि पुनरूद्धार (बैकफ़िल पर वृक्षारोपण) के अंतर्गत का क्षेत्र ५.२६ वर्ग किलोमीटर के तूलना में वर्ष २०२४ में बढ़कर ६.०८ वर्ग किलोमीटर हो गया है जबकि वर्ष २०२३ के तकनीकी पुनरूद्धार (बैकफील के अंतर्गत क्षेत्र) का क्षेत्र १७.९५ वर्ग किलोमीटर से बढ़कर वर्ष २०२४ में १९.२४ वर्ग किलोमीटर हो गया है | भूमि पुनरूद्धार के अंतर्गत २.०८ वर्ग किलोमीटर की यह वृद्धि पर्यावरण सरंग्क्षण के दिशा में वेस्टर्न कोलफील्ड्स लिमिटेड के द्वारा उठाये गए सकारात्मक प्रयासों का परिणाम है|

Executive Summary

1.0 Project Land restoration / reclamation monitoring of 26 opencast coal mines of Western Coalfields Ltd. (WCL) producing 5 million cu.m. and more (Coal+OB) per year based on satellite data, regularly on annual basis. Among 26 opencast coal mines projects, 13 projects namely Bhatadi, Bellora-Naigaon, Ballarpur, Junad, Kolarpimpiri, Hindustan Lalpeth (HLOCM), Gauri- Pauni, Gondegaon, Adasa UG to OC, Bhanegaon, Gokul, Inder Kamptee Amal. and Dhuptala have been included in 2024 for the first time as per the work order, their capacity (Coal+OB) have been increased to category of more than 5 million cubic meter from category of less than 5 million cu.m. per year.

2.0 Objective Objective of the land restoration / reclamation monitoring is to assess the area of backfilled, plantation, social forestry, active mining area, water bodies, distribution of wasteland, agricultural land and forest in the leasehold area of the project. This will help in assessing the progressive status of mined land reclamation and to take up remedial measures, if any, required for environmental protection.

3.0 Salient Findings

- Out of total leasehold area of 242.73 Km2 of 26 projects of WCL viz. Sasti, Durgapur, Mungoli, Umrer, Ukni, Niljai, New Majri. Makardhokra-III, Penganga, Yekona-I & II (Amal), New Majri UG to OC, Pauni-II (Expn.), MKD-I (Expn.), Bhatadi, Bellora-Naigaon, Ballarpur, Junad, Kolarpimpiri, Hindustan Lalpeth (HLOCM), Gauri-Pauni, Gondegaon, Adasa UG to OC, Bhanegaon, Gokul, Inder-Kamptee Amal., and Dhuptala considered for monitoring during 2024-25; the total excavated area is 65.99 Km2 out of which 19.24 Km2 area (29.16%) is backfilled (Technical Reclamation), 6.08 Km2 area (9.21%) has been planted (Biological Reclamation) and 40.67 Km2 area (61.63%) is under active mining. It is evident from the analysis that 38.37% area of the OC projects has been reclaimed (biological and technical) and balance 61.63% area is under active mining. Project wise details are given in Table-1 & Fig-1. (For comparison purpose, refer Table-1).

- On comparing the status of land reclamation for the year 2024 with respect to the year 2023 in different projects, it is evident from the analysis that total area under land reclamation has increased from 23.24 Km2 (Yr. 2023) to 25.32 Km2 (Yr.2024). Out of 26 projects of WCL, Ballarpur OC ranks on top for land reclamation (85.95%) followed by Sasti OC (80.73%) and Umrer OC (66.25%).

- Area under biological reclamation (Plantation on backfill) has increased from 5.26 Km2 (Yr. 2023) to 6.08 Km2 (Yr. 2024) whereas area of technical reclamation (area under backfilling) has increased from 17.98 Km2 (Yr. 2023) to 19.24 Km2 (Yr. 2024) in WCL. The total increase of 2.08 Km2 under reclamation is the result of the efforts of the Western Coalfields Ltd. taken up towards environmental protection

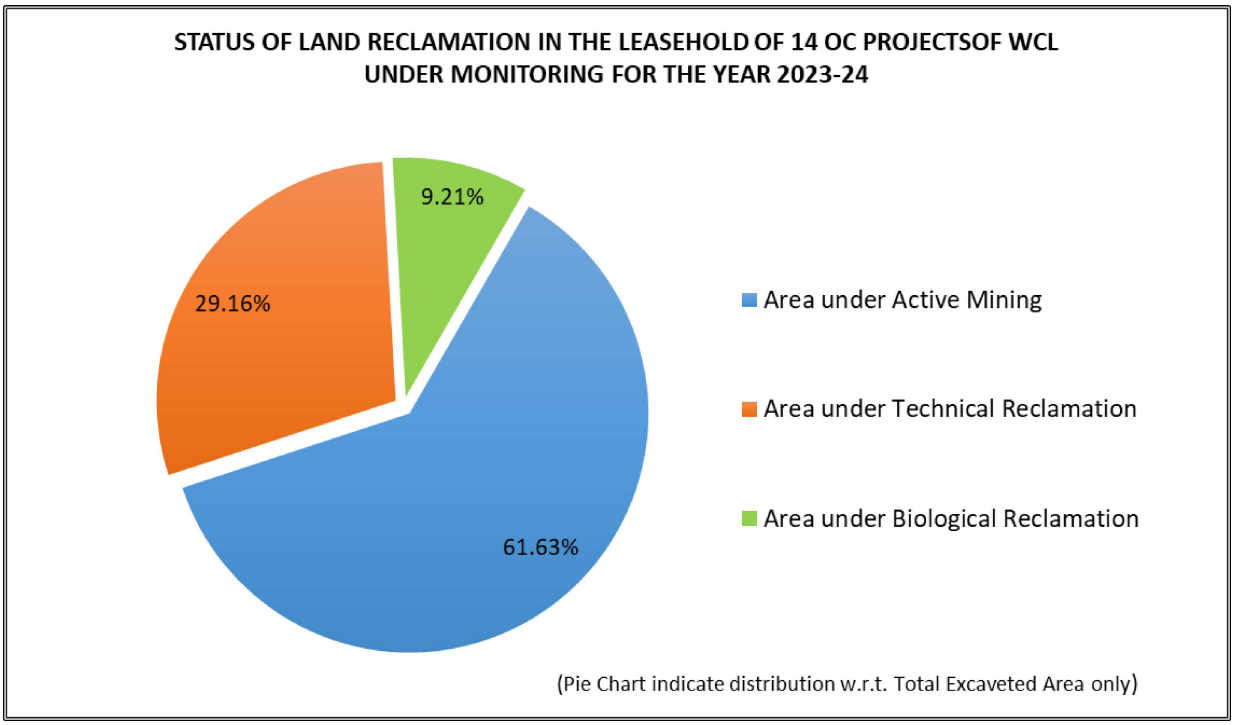


Fig.1: Pie Chart indicating distribution (%) of reclamation activities in 26 OC Mines of WCL

Table-1

Projectwise Land Reclamation Status in Opencast Projects of WCL

(>5 Million Cubic Metre Coal+OB) based on Satellite Data of the year 2024

(Area in Sq. Kms.)

Sl. No.	Project	Total Leasehold Area		Technical Reclamation		Plantation						Area under Active Mining		Total Excavated Area		Total Area under Plantation (% Green Cover Generated in Leasehold)		Total Area under Reclamation	
						Biological Reclamation		Other Plantations											
				Area under Backfilling		Plantation on Excavated / Backfilled Area		Plantation on External Over Burden Dumps		Social Forestry, Avanue Plantation Etc.									
1	*2*	*3*		*4*		*5*		*6*		*7*		*8*		*9 (=4+5+8)*		*10 (=5+6+7)*		*11(=4+5)*	
	A	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*	*2023*	*2024*
1	Sasti	9.20	11.12	2.72	2.90	0.73	0.62	1.68	1.92	0.68	0.71	0.50	0.84	3.95	4.36	3.09	3.25	3.45	3.52
				68.86%	66.51%	18.48%	14.22%					12.66%	19.27%			33.59%	29.23%	87.34%	80.73%
2	Durgapur	15.50	15.50	1.04	0.96	1.06	1.18	2.81	2.99	1.19	1.26	2.57	2.75	4.67	4.89	5.06	5.43	2.10	2.14
				22.27%	19.63%	22.70%	24.13%					55.03%	56.24%			32.65%	35.03%	44.97%	43.76%
3	Mugoli	12.55	12.55	1.53	1.70	0.17	0.2	1.9	1.98	0.61	0.65	1.95	2.23	3.65	4.13	2.68	2.83	1.70	1.90
				41.92%	41.16%	4.66%	4.84%					53.42%	54.00%			21.35%	22.55%	46.58%	46.00%
4	Umrer	9.45	9.45	1.51	1.47	1.63	1.73	1.45	1.45	2.32	2.32	1.69	1.63	4.83	4.83	5.40	5.50	3.14	3.20
				31.26%	30.43%	33.75%	35.82%					34.99%	33.75%			57.14%	58.20%	65.01%	66.25%
5	Ukni	12.85	12.85	0.54	0.65	0.00	0.00	1.74	1.81	0.86	0.98	2.15	2.15	2.69	2.80	2.60	2.79	0.54	0.65
				20.07%	23.21%	0.00%	0.00%					79.93%	76.79%			20.23%	21.71%	20.07%	23.21%
6	Niljai	17.61	17.61	1.46	1.75	0.13	0.13	2.11	2.23	1.25	1.31	2.99	3.09	4.58	4.97	3.49	3.67	1.59	1.88
				31.88%	35.21%	2.84%	2.62%					65.28%	62.17%			19.82%	20.84%	34.72%	37.83%
7	New Majri	7.74	7.74	1.64	1.82	0.24	0.28	0.97	1.04	1.47	1.47	2.22	2.27	4.10	4.37	2.68	2.79	1.88	2.10
				40.00%	41.65%	5.85%	6.41%					54.15%	51.95%			34.63%	36.05%	45.85%	48.05%
8	MKD-III	9.23	9.23	0.41	0.46	0.00	0.00	0.00	0.25	0.12	0.17	1.09	1.55	1.50	2.01	0.12	0.42	0.41	0.46
				27.33%	22.89%	0.00%	0.00%					72.67%	77.11%			1.30%	4.55%	27.33%	22.89%
9	Penganga	7.63	7.63	0.75	0.84	0.00	0.00	0.49	0.50	0.55	0.68	1.25	1.42	2.00	2.26	1.04	1.18	0.75	0.84
				37.50%	37.17%	0.00%	0.00%					62.50%	62.83%			13.63%	15.47%	37.50%	37.17%
10	Yekona-I&II(Amal)	16.79	16.79	0.01	0.20	0.00	0.00	0.00	0.00	0.03	0.08	1.29	1.64	1.30	1.84	0.03	0.08	0.01	0.20
				0.77%	10.87%	0.00%	0.00%					99.23%	89.13%			0.18%	0.48%	0.77%	10.87%
11	New Majri UG to OC	7.06	7.06	0.00	0.00	0.00	0.00	0.27	0.35	0.37	0.46	1.06	1.44	1.06	1.44	0.64	0.81	0.00	0.00
				0.00%	0.00%	0.00%	0.00%					100.00%	100.00%			9.07%	11.47%	0.00%	0.00%
12	Pauni -II (Expn)	10.95	10.95	0.00	0.00	0.00	0.00	0.18	0.25	0.22	0.30	1.34	1.74	1.34	1.74	0.40	0.55	0.00	0.00
				0.00%	0.00%	0.00%	0.00%					100.00%	100.00%			3.65%	5.02%	0.00%	0.00%
13	MKD -1 (Expn) OC	6.14	6.14	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	1.57	1.86	1.57	1.86	0.10	0.10	0.00	0.00
				0.00%	0.00%	0.00%	0.00%					100.00%	100.00%			1.63%	1.63%	0.00%	0.00%
	Total-A	**142.70**	**144.62**	**11.61**	**12.75**	**3.96**	**4.14**	**13.70**	**14.87**	**9.67**	**10.39**	**21.67**	**24.61**	**37.24**	**41.50**	**27.33**	**29.40**	**15.57**	**16.89**
				31.18%	30.72%	10.63%	9.98%					58.19%	59.30%			19.15%	20.33%	41.81%	40.70%

Note : In reference of the above Table-1, different parameters are classified as follows

1 Area under Biological Reclamation includes area under plantation done on backfilled area only.

2 Area under Technical Reclamation includes areas under barren backfill only.

3 Area under Active Mining includes coal quarry, advance quarry & quarry filled with water etc.

4 Social forestry and plantation on external OB dump are not included in biological reclamation and are put under other plantation.

5 % claculated in respect to total excaveted area except for "Total area under plantation" where % is in terms of leasehold area.

Table-1

Projectwise Land Reclamation Status in Opencast Projects of WCL

(>5 Million Cubic Metre Coal+OB) based on Satellite Data of the year 2024

(Area in Sq. Kms.)

Sl. No.	Project	Total Leasehold Area		Technical Reclamation		Plantation						Area under Active Mining		Total Excavated Area		Total Area under Plantation (% Green Cover Generated in Leasehold)		Total Area under Reclamation	
						Biological Reclamation		Other Plantations											
				Area under Backfilling		Plantation on Excavated / Backfilled Area		Plantation on External Over Burden Dumps		Social Forestry, Avenue Plantation Etc.									
1	2	3		4		5		6		7		8		9(=4+5+8)		10(=5+6+7)		11(=4+5)	
		Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024	Prev cycle	2024
14	Bhatadi	8.47	8.47	0.39	0.44	0.00	0.00	0.50	0.59	0.43	0.48	0.97	1.12	1.36	1.56	0.93	1.07	0.39	0.44
				28.68%	28.21%	0.00%	0.00%					71.32%	71.79%			10.98%	12.63%	28.68%	28.21%
15	Bellora Naigaon	6.65	6.65	0.73	0.83	0.18	0.20	0.48	0.57	0.32	0.45	1.15	1.20	2.06	2.23	0.98	1.22	0.91	1.03
				35.44%	37.22%	8.74%	8.97%					55.83%	53.81%			14.74%	18.35%	44.17%	46.19%
16	Ballarpur	2.43	2.43	0.76	0.76	0.24	0.28	0.74	0.78	0.10	0.13	0.17	0.17	1.17	1.21	1.08	1.19	1.00	1.04
				64.96%	62.81%	20.51%	23.14%					14.53%	14.05%			44.44%	48.97%	85.47%	85.95%
17	Junad	4.50	4.50	0.37	0.41	0.05	0.12	0.75	0.81	0.34	0.38	0.66	0.67	1.08	1.20	1.14	1.31	0.42	0.53
				34.26%	34.17%	4.63%	10.00%					61.11%	55.83%			25.33%	29.11%	38.89%	44.17%
18	Kolarpimpiri	14.89	14.89	0.15	0.21	0.08	0.11	1.35	1.43	0.12	0.16	1.72	1.79	1.95	2.11	1.55	1.70	0.23	0.32
				7.69%	9.95%	4.10%	5.21%					88.21%	84.83%			10.41%	11.42%	11.79%	15.17%
19	HLOCM	3.12	3.12	0.64	0.65	0.06	0.10	0.74	0.76	0.31	0.37	0.48	0.54	1.18	1.29	1.11	1.23	0.70	0.75
				54.24%	50.39%	5.08%	7.75%					40.68%	41.86%			35.58%	39.42%	59.32%	58.14%
20	Gouri pouni	6.77	12.91	0.89	0.91	0.60	0.79	2.06	2.55	0.62	0.64	0.95	1.70	2.44	3.40	3.28	3.98	1.49	1.70
				36.48%	26.76%	24.59%	23.24%					38.93%	50.00%			48.45%	30.83%	61.07%	50.00%
21	Gondegaon	7.91	7.91	0.56	0.62	0.00	0.00	0.96	1.22	0.51	0.57	1.49	1.90	2.05	2.52	1.47	1.79	0.56	0.62
				27.32%	24.60%	0.00%	0.00%					72.68%	75.40%			18.58%	22.63%	27.32%	24.60%
22	Adasa UG to OC	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.27	0.57	0.80	0.57	0.80	0.14	0.27	0.00	0.00
				0.00%	0.00%	0.00%	0.00%					######	######			2.48%	4.79%	0.00%	0.00%
23	Bhanegaon	3.48	3.48	0.01	0.02	0.00	0.00	0.16	0.33	0.20	0.24	0.35	0.69	0.36	0.71	0.36	0.57	0.01	0.02
				2.78%	2.82%	0.00%	0.00%					97.22%	97.18%			10.34%	16.38%	2.78%	2.82%
24	Gokul	7.57	10.02	0.75	0.89	0.00	0.00	0.00	0.00	0.30	0.92	1.78	2.12	2.53	3.01	0.30	0.92	0.75	0.89
				29.64%	29.57%	0.00%	0.00%					70.36%	70.43%			3.96%	9.18%	29.64%	29.57%
25	Inder Kamptee Ama	11.25	7.95	1.12	0.75	0.09	0.34	0.76	1.41	0.85	0.31	1.47	1.62	2.68	2.71	1.70	2.06	1.21	1.09
				41.79%	27.68%	3.36%	12.55%					54.85%	59.78%			15.11%	25.91%	45.15%	40.22%
26	Dhuptala	-	10.14	-	0.00	-	0.00	-	0.25	-	0.30	-	1.74	-	1.74	-	0.55	-	0.00
				-	0.00%	-	0.00%					-	######			-	5.42%	-	0.00%
	Total-B	**82.68**	**98.11**	**6.37**	**6.49**	**1.30**	**1.94**	**8.50**	**10.70**	**4.24**	**5.22**	**11.76**	**16.06**	**19.43**	**24.49**	**14.04**	**17.86**	**7.67**	**8.43**
				32.78%	26.50%	6.69%	7.92%					60.52%	65.58%			16.98%	18.20%	39.48%	34.42%
	Total- (A+B)	**225.38**	**242.73**	**17.98**	**19.24**	**5.26**	**6.08**	**22.20**	**25.57**	**13.91**	**15.61**	**33.43**	**40.67**	**56.67**	**65.99**	**41.37**	**47.26**	**23.24**	**25.32**
				31.73%	29.16%	9.28%	9.21%					58.99%	61.63%			18.36%	19.47%	41.01%	38.37%

Note : In reference of the above Table-1, different parameters are classified as follows

1 Area under Biological Reclamation includes area under plantation done on backfilled area only.

2 Area under Technical Reclamation includes areas under barren backfill only.

3 Area under Active Mining includes coal quarry, advance quarry & quarry filled with water etc.

4 Social forestry and plantation on external OB dump are not included in biological reclamation and are put under other plantation.

5 % claculated in respect to total excaveted area except for "Total area under plantation" where % is in terms of leasehold area.

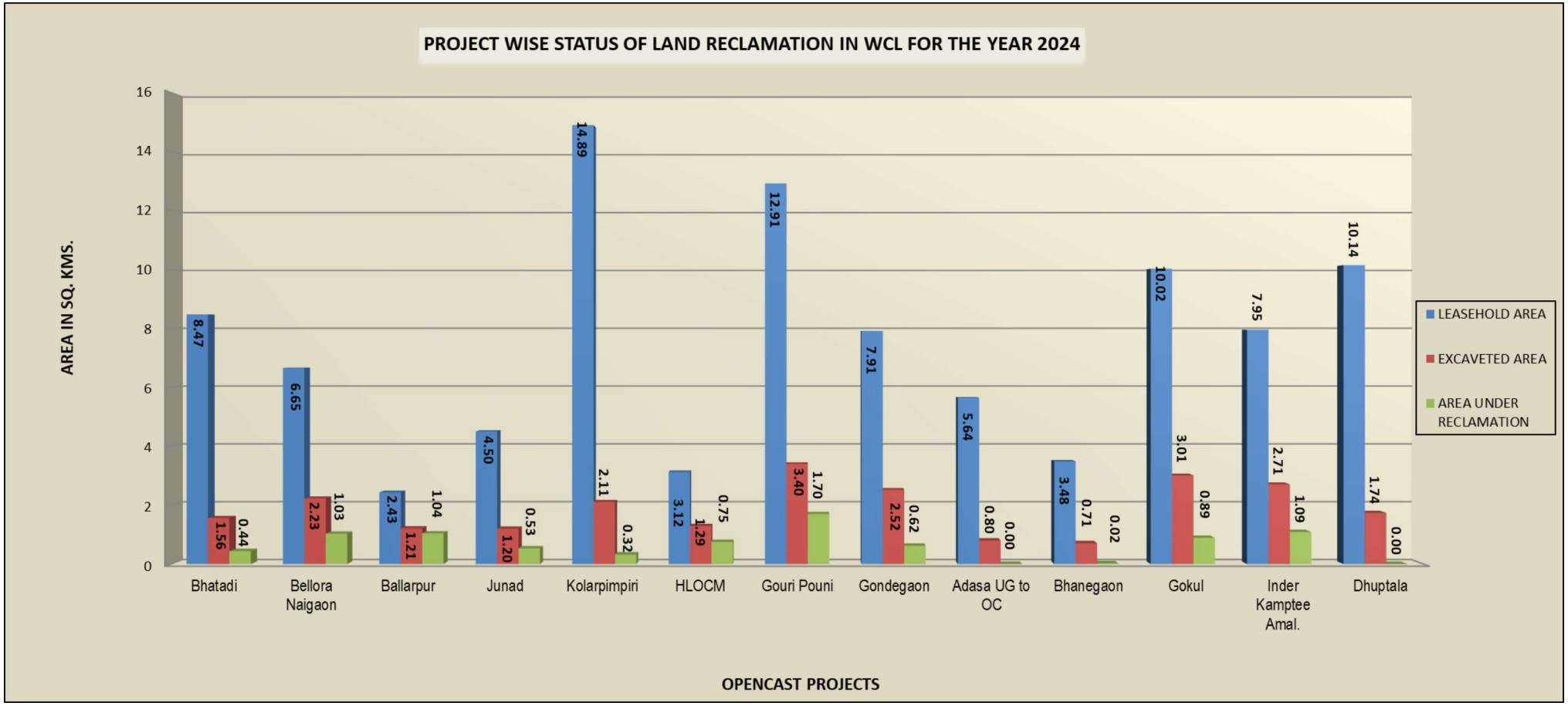


Fig.2: Land reclamation status in 14OC projects of WCL for the year 2024

1.0 Background

1.1 Land is the most important natural resource which embodies soil, water, flora, fauna and total ecosystem. All human activities are based on the land which is the scarcest natural resource in our country. Mining is a site specific industry and it could not be shifted anywhere else from the location where mineral occurs. It is a fact that surface mining activities do effect the land environment due to ground breaking. Therefore, there is an urgent need to reclaim and restore the mined out land for its productive use for sustainable development of mining. This will not only mitigate environmental degradation, but would also help in creating a more congenial environment for land acquisition by coal companies in future.

1.2 Keeping above in view, Coal India Ltd. (CIL) issued a work order vide letter no. CIL/WBP/Env/2009/2428dated 29.12.2009 to Central Mine Planning & Design Institute (CMPDI), Ranchi, for monitoring land reclamation. status of all the opencast coal mines having production of more than 5 million m^3 per annum (coal + OB taken together per annum) based on remote sensing satellite data, regularly on annual basis for sustainable development of mining. Further, another work order vide letter no. CIL/WBP/ENV./2011dated23/08/11was issued by CIL for monitoring of less than 5 million m^3 per annum capacity (Coal +OB) projects from the year 2011 at interval of three years. This order has been renewed in CIL letter no. CIL/WBP/Env/2011/4706dated 12.10.2012 for the next five years. Again this work order has been renewed vide letter no. CIL/WBP/Env/2017/DP/8391 dated 22.06.2017 for a period next five years starting from 2017-18 to 2021-22. The work order was renewed vide letter no. CIL/ ENVT/2022-23/W. O/10899 dated 06.07.2022 for a period of 2 more years from 2022-23 to 2023-24. Again the above work order has been renewed vide letter no. CIL/ ENV/11463 dated 03.07.2024 for a period of 3 more years for 2024-25, 2025-26 and 2026-27. The result of land reclamation status of all such mines is put on the websites of **CIL**, (www.coalindia.in), **CMPDI** (www.cmpdi.co.in) and the concerned

coal companies in public domain. Detailed report is submitted to Coal India and respective subsidiaries.

1.3 Land reclamation monitoring of all opencast coal mining projects would also comply the statutory requirements of Ministry of Environment & Forest (MoEF). Such monitoring would not only facilitate in taking timely mitigation measures against environmental degradation, but would also enable coal companies to utilize the reclaimed land for larger socio-economic benefits in a planned way.

1.4 Present report is embodying the finding of the study based on satellite data of the year 2024 carried out for all the OC projects producing more than 5 mcm (Coal+OB) for Western Coalfields Ltd.

2.0 Objective

Objective of the land reclamation/restoration monitoring is to assess the area of backfilled, plantation, OB dumps, social forestry, active mining area, settlements and water bodies, distribution of wasteland, agricultural land and forest land in the leasehold area of the project. This is an important step taken up for assessing the progressive status of mined land reclamation and for taking up remedial measures, if any, required for environmental protection.

3.0 Methodology

There are number of steps involved between raw satellite data procurement and preparation of final map. Bhoonidhi Portal of ISRO alongside National Remote Sensing Centre (NRSC) Hyderabad, being the nodal agency for satellite data supply in India, provides only raw digital satellite data, which needs further digital image processing for extracting the information and map preparation before uploading the same in the website. Methodology for land reclamation monitoring

is given in given in figure-3. Following steps are involved in land reclamation /restoration monitoring:

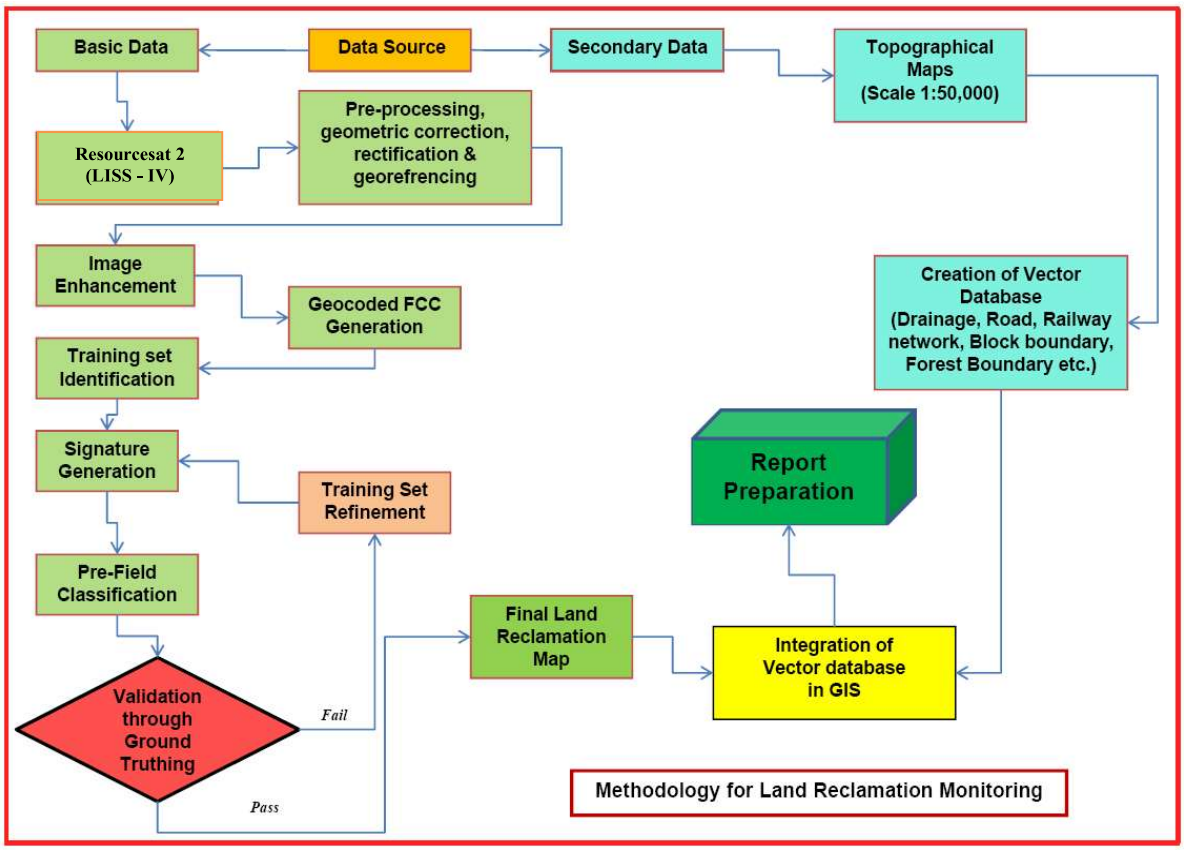


Figure: 3- ***Methodology for Land Reclamation Monitoring***

3.1 Data Procurement: After browsing the data quality and date of pass on internet, supply order for data is placed to NRSC or if available downloaded directly from the Bhoonidhi portal. Secondary data like leasehold boundary, topo sheets are procured for creation of vector database.

3.2 Satellite Data Processing: Satellite data are processed using ERDAS IMAGINE 2022 digital image processing s/w and ArcGIS. Methodology involves the following major steps:

- **Rectification & Georeferencing:** Inaccuracies in digital imagery may occur due to 'systematic errors' attributed to earth curvature and rotation as well as 'non-systematic errors' attributed to satellite receiving station itself. Raw digital

images contain geometric distortions, which make them unusable as maps. Therefore, georeferencing is required for correction of image data using ground control points (GCP) to make it compatible to SoI toposheet.

- **Image enhancement:**

  To improve the interpretability of the raw data, image enhancement is necessary. Local operations modify the value of each pixel based on brightness value of neighbouring pixels using ERDAS IMAGINE 2022 s/w. and enhance the image quality for interpretation.

- **Training set selection**

  Training set requires to be selected, so that software can classify the image data accurately. The image data are analysed based on the interpretation keys. These keys are evolved from certain fundamental image-elements such as tone/colour, size, shape, texture, pattern, location, association and shadow. Based on the image-elements and other geo-technical elements like land form, drainage pattern and physiography; training sets were selected/identified for each land use/cover class. Field survey was carried out by taking selective traverses in order to collect the ground information (or reference data) so that training sets are selected accurately in the image. This was intended to serve as an aid for classification.

- **Classification and Accuracy assessment**

  Image classification is carried out using the maximum likelihood algorithm. The classification proceeds through the following steps: (a) calculation of statistics [i.e. signature generation] for the identified training areas, and (b) the decision boundary of maximum probability based on the mean vector, variance, covariance and correlation matrix of the pixels. After evaluating the statistical parameters of the training sets, reliability test of training sets is conducted by measuring the statistical separation between the classes that resulted from

computing divergence matrix. The overall accuracy of the classification was finally assessed with reference to ground truth data.

- **Area calculation**

  The area of each land use class in the leasehold is determined using ERDAS IMAGINE v.2022software.

- **Overlay of Vector data base**

  Vector data base created based on secondary data. Vector layer like drainage, railway line, leasehold boundary, forest boundary etc. are superimposed on the image as vector layer in the ArcGIS Pro 3.4 database.

- **Pre-field map preparation**

  Pre-field map is prepared for validation of the classification result

3.3 Ground Truthing:

Selective ground verification of the land use classes is carried out in the field and necessary corrections if required, are incorporated before map finalization.

3.4 Land reclamation database on GIS:

Land reclamation database is created on GIS platform to identify the temporal changes identified from satellite data of different cut-of dates.

4.0 Work Plan

Twenty-six opencast projects of WCL producing more than 5 million cubic m. (Coal + OB together) have been taken up for land reclamation/ restoration monitoring in 2023-24, based on the Resoursesat-2/2A(L-IV) Satellite data, using

ERDAS Imaging digital image processing s/w, ArcGIS 10.2 and ArcGIS Pro 3.4 platform. Land reclamation monitoring will be carried out regularly on annual basis to assess the progressive status of land reclamation/ restoration in the above OC mines. The report of this study has been uploaded on the websites of CMPDI, CIL & WCL in public domain.

5.0 Land Reclamation Status in Western Coalfields Limited

5.1 Following 26 OC projects producing more than 5 million cubic m. (Coal + OB together) of Western Coalfields Ltd. have been taken up for land reclamation monitoring based on Satellite Data of the year 2024:

- Sasti
- Durgapur
- Mungoli
- Umrer
- Ukni
- Niljai
- New Majri
- MKD-III
- Penganga
- Yekona I&II Amal
- New Majri UG to OC
- Pauni-II (Expn.)
- MKD-I Expn.
- Bhatadi
- Bellora Naigaon
- Ballarpur
- Junad
- Kolarpimpiri
- HLOCM)
- Gauri Pauni
- Gondegaon
- Adasa UG to OC
- Bhanegaon
- Gokul
- Inder Kamptee Amal
- Dhuptala

5.2 Project wise Land Reclamation status in WCL for the year 2024 is given in Table 1 and also shown graphically in Fig 1. Area statistics of different land use class present in the mine leasehold of the above projects for the year 2024 are shown in the Table 2. Land use maps derived from satellite data are shown in Plate 1-26. This time both local grid and UTM grid is used for map preparation along with all essential

boundaries shape file such as Quarry limit line, Sump, OB Dump, EC Boundary, Plantation area etc. as per the work order from CIL. Year wise changes in the different land use classes based on satellite data are depicted in Bar Charts in Fig.4–29 for the last three years only excluding Dhuptala OC (Sasti UG to OC) as this mine been consider for the land reclamation for the first time in Yr. 2024-25.

5.3 Study reveals that 25.32 Km^2 (38.37%) of excavated area has been under reclamation in the above mentioned mines of WCL out of which 6.08 Km^2(9.21%) area has been revegetated and 19.24 Km^2 (29.16%) area is under backfilling. There is an overall increase of 2.08 Km^2 in area under reclamation in WCL in the year 2024 with respect to the year 2023, out of which there is an increase of 1.26 Km^2 in area under technical reclamation (Barren Backfilling) and an increase of 0.82 Km^2 in area under biological reclamation (Plantation on Backfilled Areas) (Refer Table-1).

In Sasti OC project, plantation on OB has been reduced by 0.11 Km^2 on account of tree felling and re-handling of backfill for the purpose of coal mining. In Durgapur OC and Umrer OC projects backfill has been reduced by 0.08 Km^2 and 0.04 Km^2 respectively as backfill has been converted to biological reclamation. In Inder Kamptee Amalgamated OC project total lease hold area have been decreased from 11.25 Km^2 to 7.95 Km^2. In previous cycle Inder OC project and Kamptee OC project had been analyzed separately in different year.

5.4 Analysis of satellite data also indicates that total area under active mining has increased from 33.43 Km^2 (Yr.2023) to 40.67 Km^2 (Yr.2024). In Umrer OC project area under active mining has reduced due to increase in area under backfilling.

5.5 After comparing the satellite data of year 2024 vs. 2023, study also reveals that area under backfilling has increased from 17.98 Km^2 (Yr.2023) to 19.24 Km^2 (Yr.2024).

5.6 Total area under biological reclamation has increased from 5.26 Km^2 (Yr.2023) to 6.08 Km^2 (Yr.2024). There is no biological reclamation in Yekona-I&II (Amal.), New Majri UG to OC, Pauni-II (Expn.), Bhatadi, MKD-I and MKD-III OC, Gondegaon, Adasa UG to OC, Bhanegaon, Gokul, Dhuptala & Penganga OC.

5.7 Analysis of satellite data also indicates that total area under plantation (Green Cover) has increased from 41.37 Km^2 (Yr.2023) to 47.26 Km^2 (Yr.2024). The increase of 5.89 Km^2 area under Green Cover areas may be attributed to continuous effort of WCL towards environmental protection.

5.8 After comparing the satellite data of year 2024 vs. 2023, it is evident that total area under plantation (Green Cover) in all 26 Opencast Projects has increased. It has been also observed in some of the projects natural vegetation has also started growing on stabilized old backfilled areas and overburden dumps due to high soil fertility.

5.9 On comparing the status of land reclamation for the year 2024 with respect to the year 2023 in different projects, it is evident that the total area under reclamation has increased from 23.24 Km^2 (Yr. 2023) to 25.32 Km^2 (Yr. 2023).

5.10 Out of 26 projects of WCL, maximum area under reclamation is in Ballarpur Opencast Project (85.95%) followed by Sasti OC (80.73%) and Umrer OC (66.25%).

TABLE - 2

Status of Land Use / Reclamation in OC Mines(>5mcu.m) of Western Coalfields Ltd based on Satellite data of the Year 2024

(Area in Sq.Km)

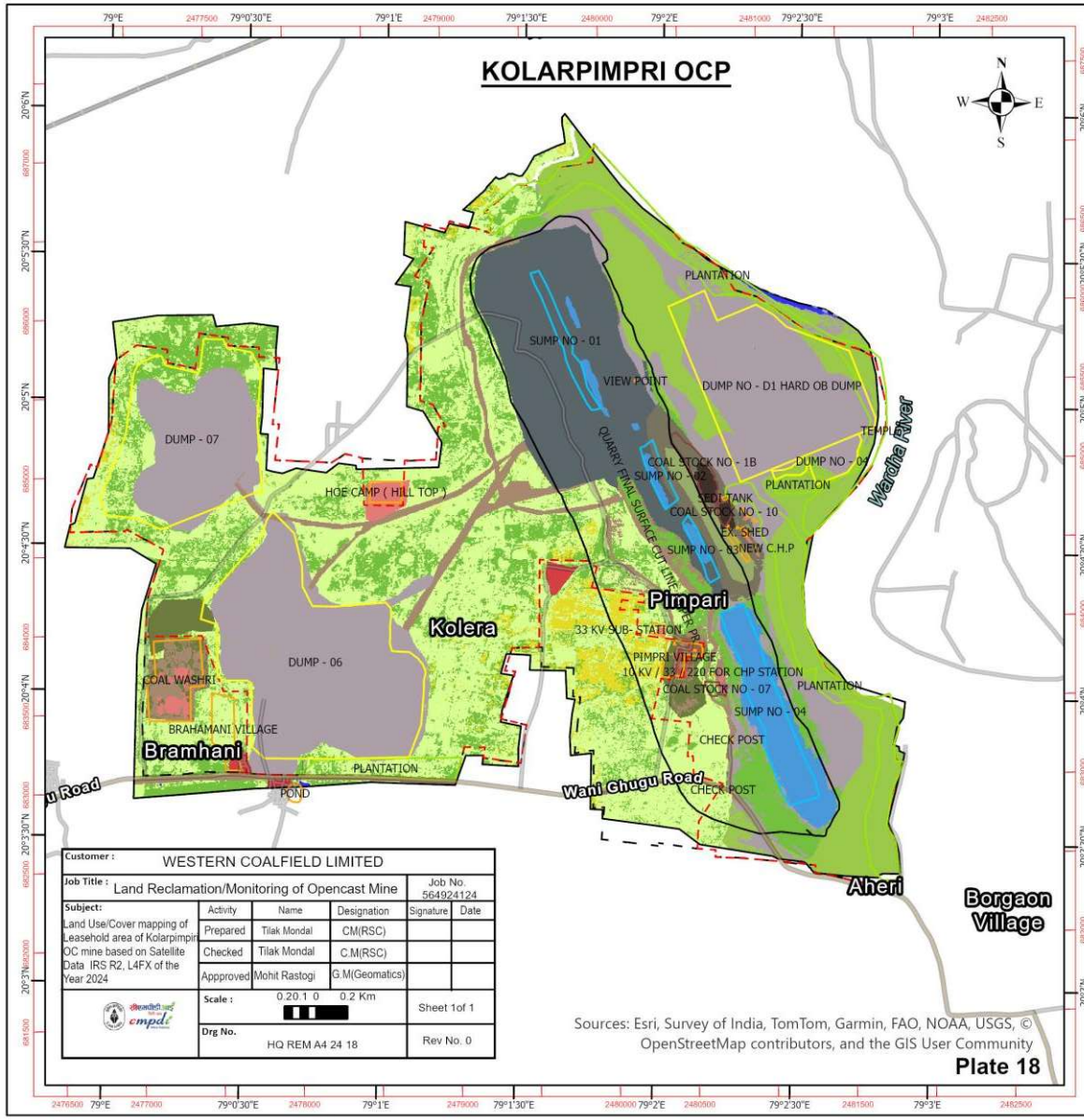
		Sasti		Durgapur		Mungoli		Umrer		Ukni		Niljai		New Majri		MKD-III		Penganga		Yekona-I&II (Amal)		New Majri Ug to OC		Pauni -II (Expn)		MKD-I (Expn.)		Total	
		Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
FORESTS	Dense Forest	0.00	0.00	1.27	8.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.88
	Open Forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Forest	0.00	0.00	1.27	8.19	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	**0.00**	**0.00**	**0.00**	0.00	**0.00**	**1.27**	**0.88**
SCRUBS	Scrubs	**0.51**	**5.00**	**0.48**	**3.10**	**1.62**	**12.91**	**0.00**	**0.00**	**1.53**	**11.91**	**1.34**	**7.61**	**0.06**	**0.78**	**0.54**	**5.85**	**0.71**	**9.31**	**1.99**	**11.85**	**0.68**	**9.63**	**0.97**	**8.86**	**0.75**	**12.21**	**11.18**	**7.78**
PLANTATION	Social Forestry	0.71	6.95	1.26	8.13	0.65	5.18	2.32	24.55	0.98	7.63	1.31	7.44	1.47	18.99	0.17	1.84	0.68	8.91	0.08	0.48	0.46	6.52	0.30	2.74	0.00	0.00	10.39	7.23
	Plantation on OB Dump	1.92	18.81	2.99	19.29	1.98	15.78	1.45	15.34	1.81	14.09	2.23	12.66	1.04	13.44	0.25	2.71	0.50	6.55	0.00	0.00	0.35	4.96	0.25	2.28	0.10	1.63	14.87	10.35
	Plantation on Backfill (Biological Reclamation)	0.62	6.07	1.18	7.61	0.20	1.59	1.73	18.31	0.00	0.00	0.13	0.74	0.28	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	2.88
	Total Plantation	**3.25**	**31.83**	**5.43**	**35.03**	**2.83**	**22.55**	**5.50**	**58.20**	**2.79**	**21.71**	**3.67**	**20.84**	**2.79**	**36.05**	**0.42**	**4.55**	**1.18**	**15.47**	**0.08**	**0.48**	**0.81**	**11.47**	**0.55**	**5.02**	**0.10**	**1.63**	**29.40**	**20.46**
	Total Vegetation	**3.76**	**36.83**	**7.18**	**46.32**	**4.45**	**35.46**	**5.50**	**58.20**	**4.32**	**33.62**	**5.01**	**28.45**	**2.85**	**36.82**	**0.96**	**10.40**	**1.89**	**24.77**	**2.07**	**12.33**	**1.49**	**21.10**	**1.52**	**13.88**	**0.85**	**13.84**	**41.85**	**29.12**
ACTIVE MINING	Coal Quarry	0.78	7.64	2.25	14.52	2.23	17.77	1.52	16.08	1.99	15.49	3.00	17.04	2.27	29.33	1.55	16.79	1.19	15.60	1.43	8.52	1.31	18.56	1.54	14.06	1.86	30.29	22.92	15.95
	Coal Dump	0.06	0.59	0.05	0.32	0.00	0.00	0.10	1.06	0.10	0.78	0.05	0.28	0.00	0.00	0.00	0.00	0.23	3.01	0.21	1.25	0.13	1.84	0.20	1.83	0.00	0.00	1.13	0.79
	Advance Quarry Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Quarry Filled With Water	0.00	0.00	0.45	2.90	0.00	0.00	0.01	0.11	0.06	0.47	0.04	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.39
	Total Area under *Active Mining*	**0.84**	**8.23**	**2.75**	**17.74**	**2.23**	**17.77**	**1.63**	**17.25**	**2.15**	**16.73**	**3.09**	**17.55**	**2.27**	**29.33**	**1.55**	**16.79**	**1.42**	**18.61**	**1.64**	**9.77**	**1.44**	**20.40**	**1.74**	**15.89**	**1.86**	**30.29**	**24.61**	**17.12**
	Barren OB Dump	0.69	6.76	1.77	11.42	2.15	17.13	0.12	1.27	3.73	29.03	4.46	25.33	0.31	4.01	2.55	27.63	1.35	17.69	2.04	12.15	0.84	11.90	3.17	28.95	0.78	12.70	23.96	16.67
	Barren Backfilled Area (Technical Reclamation)	2.90	28.40	0.96	6.19	1.70	13.55	1.47	15.56	0.65	5.06	1.75	9.94	1.82	23.51	0.46	4.98	0.84	11.01	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	12.58	8.75
	Total Area	**3.59**	**35.16**	**2.73**	**17.61**	**3.85**	**30.68**	**1.59**	**16.83**	**4.38**	**34.09**	**6.21**	**35.26**	**2.13**	**27.52**	**3.01**	**32.61**	**2.19**	**28.70**	2.07	12.33	0.84	11.90	3.17	28.95	0.78	12.70	36.54	25.43
	Total Area Under Mine Operation	**4.43**	**43.39**	**5.48**	**35.35**	**6.08**	**48.45**	**3.22**	**34.07**	**6.53**	**50.82**	**9.30**	**52.81**	**4.40**	**56.85**	**4.56**	**49.40**	**3.61**	**47.31**	**3.71**	**22.10**	**2.28**	**32.29**	**4.91**	**44.84**	**2.64**	**43.00**	**61.15**	**42.55**
WASTELANDS	Waste Lands	0.53	5.19	1.16	7.48	0.23	1.83	0.27	2.86	0.75	5.84	0.79	4.49	0.10	1.29	0.15	1.63	1.65	21.63	1.26	7.50	0.26	3.68	0.33	3.01	0.11	1.79	7.59	5.28
	Fly Ash Pond / Sand Body	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.71	0.05	0.46	0.00	0.00	0.10	0.07
	Total Wasteland	**0.53**	**5.19**	**1.16**	**7.48**	**0.23**	**1.83**	**0.27**	**2.86**	**0.75**	**5.84**	**0.79**	**4.49**	**0.10**	**1.29**	**0.15**	**1.63**	**1.65**	**21.63**	**1.26**	**7.50**	**0.31**	**4.39**	**0.38**	**3.47**	**0.11**	**1.79**	**7.69**	**5.35**
WATERBODIES	Reservoir, nallah, ponds	0.07	0.69	0.05	0.32	0.00	0.00	0.20	2.12	0.00	0.00	0.03	0.17	0.01	0.13	0.00	0.00	0.12	1.57	0.10	0.60	0.03	0.42	0.22	2.01	0.07	1.14	0.90	0.63
	Total Waterbodies	**0.07**	**0.69**	**0.05**	**0.32**	**0.00**	**0.00**	**0.20**	**2.12**	**0.00**	**0.00**	**0.03**	**0.17**	**0.01**	**0.13**	**0.00**	**0.00**	**0.12**	**1.57**	**0.10**	**0.60**	**0.03**	**0.42**	**0.22**	**2.01**	**0.07**	**1.14**	0.90	0.63
AGRICULTURE	Crop Lands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	10.08	0.00	0.00	3.26	19.42	0.87	12.32	0.46	4.20	0.51	8.31	6.03	4.20
	Fallow Lands	1.08	10.58	1.04	6.71	1.46	11.63	0.00	0.00	1.05	8.17	1.45	8.23	0.00	0.00	2.42	26.22	0.21	2.75	6.34	37.76	2.00	28.33	3.33	30.41	1.96	31.92	22.34	15.55
	Total Agriculture	**1.08**	**10.58**	**1.04**	**6.71**	**1.46**	**11.63**	**0.00**	**0.00**	**1.05**	**8.17**	**1.45**	**8.23**	**0.00**	**0.00**	**3.35**	**36.29**	**0.21**	**2.75**	**9.60**	**57.18**	**2.87**	**40.65**	**3.79**	**34.61**	**2.47**	**40.23**	**28.37**	**19.74**
SETTLEMENTS	Urban Settlement	0.08	0.78	0.39	2.52	0.12	0.96	0.15	1.59	0.00	0.00	0.34	1.93	0.34	4.39	0.00	0.00	0.00	0.00	0.01	0.06	0.07	0.99	0.00	0.00	0.00	0.00	1.50	1.04
	Rural Settlement	0.00	0.00	0.05	0.32	0.03	0.24	0.00	0.00	0.02	0.16	0.20	1.14	0.00	0.00	0.00	0.00	0.03	0.39	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.25
	Industrial Settlement	0.26	2.55	0.15	0.97	0.18	1.43	0.11	1.16	0.18	1.40	0.49	2.78	0.04	0.52	0.21	2.28	0.12	1.57	0.01	0.06	0.01	0.14	0.13	1.19	0.00	0.00	1.89	1.32
	Total Settlement	**0.34**	**3.33**	**0.59**	**3.81**	**0.33**	**2.63**	**0.26**	**2.75**	**0.20**	**1.56**	**1.03**	**5.85**	**0.38**	**4.91**	**0.21**	**2.28**	**0.15**	**1.97**	**0.05**	**0.30**	**0.08**	**1.13**	**0.13**	**1.19**	0.00	**0.00**	3.75	2.61
	Grand Total	**10.21**	**100.00**	**15.50**	**100.00**	**12.55**	**100.00**	**9.45**	**100.00**	**12.85**	**100.00**	**17.61**	**100.00**	**7.74**	**100.00**	**9.23**	**100.00**	**7.63**	**100.00**	**16.79**	**100.00**	**7.06**	**100.00**	**10.95**	**100.00**	**6.14**	**100.00**	**143.71**	**100.00**

TABLE - 2

Status of Land Use / Reclamation in OC Mines(>5mcu.m) of Western Coalfields Ltd based on Satellite data of the Year 2024

(Area in Sq.Km)

		Bhatadi		Bellora Naigaon		Ballarpur		Junad		Kolar Pimpiri		HLOCM		Gauri-Pouni		Gondegaon		Adasa UG to OC		Dhuptala		Gokul		Bhanegaon		Inder Kamptee		Total	
		Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
FORESTS	Dense Forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Open Forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Forest	0.00	0.00	0.00	0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	**0.00**	**0.00**	**0.00**	0.00	**0.00**	**0.00**	**0.00**
SCRUBS	Scrubs	**0.97**	**11.45**	**0.53**	**7.97**	**0.01**	**0.41**	**0.51**	**11.33**	**2.40**	**16.12**	**0.02**	**0.64**	**0.86**	**6.66**	**0.33**	**4.17**	**0.82**	**14.54**	**1.07**	**10.55**	**1.06**	**10.58**	**0.13**	**3.74**	**0.75**	**12.21**	**9.46**	**9.82**
PLANTATION	Social Forestry	0.48	5.67	0.45	6.77	0.13	5.35	0.38	8.44	0.16	1.07	0.37	11.86	0.64	4.96	0.57	7.21	0.27	4.79	0.41	4.04	0.92	9.18	0.24	6.90	0.00	0.00	5.02	5.21
	Plantation on OB Dump	0.59	6.97	0.57	8.57	0.78	32.10	0.81	18.00	1.43	9.60	0.76	24.36	2.55	19.75	1.22	15.42	0.00	0.00	0.78	7.69	0.00	0.00	0.33	9.48	0.10	1.63	9.92	10.30
	Plantation on Backfill (Biological Reclamation)	0.00	0.00	0.20	3.01	0.28	11.52	0.12	2.67	0.11	0.74	0.10	3.21	0.79	6.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.66
	Total Plantation	**1.07**	**12.63**	**1.22**	**18.35**	**1.19**	**48.97**	**1.31**	**29.11**	**1.70**	**11.42**	**1.23**	**39.42**	**3.98**	**30.83**	**1.79**	**22.63**	**0.27**	**4.79**	**1.19**	**11.74**	**0.92**	**9.18**	**0.57**	**16.38**	**0.10**	**1.63**	**16.54**	**17.18**
	Total Vegetation	**2.04**	**24.09**	**1.75**	**26.32**	**1.20**	**49.38**	**1.82**	**40.44**	**4.10**	**27.54**	**1.25**	**40.06**	**4.84**	**37.49**	**2.12**	**26.80**	**1.09**	**19.33**	**2.26**	**22.29**	**1.98**	**19.76**	**0.70**	**20.11**	**0.85**	**13.84**	**26.00**	**27.00**
ACTIVE MINING	Coal Quarry	0.97	11.45	1.17	17.59	0.13	5.35	0.65	14.44	1.33	8.93	0.49	15.71	1.08	8.37	1.59	20.10	0.74	13.12	0.29	2.86	1.81	18.06	0.64	18.39	1.86	30.29	12.75	13.24
	Coal Dump	0.13	1.53	0.03	0.45	0.04	1.65	0.02	0.44	0.04	0.27	0.05	1.60	0.15	1.16	0.07	0.88	0.06	1.06	0.04	0.39	0.26	2.59	0.02	0.57	0.00	0.00	0.91	0.94
	Advance Quarry Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09
	Quarry Filled With Water	0.02	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.42	2.82	0.00	0.00	0.47	3.64	0.24	3.03	0.00	0.00	0.04	0.39	0.05	0.50	0.03	0.86	0.00	0.00	1.27	1.32
	Total Area under *Active Mining*	**1.12**	**13.22**	**1.20**	**18.05**	**0.17**	**7.00**	**0.67**	**14.89**	**1.79**	**12.02**	**0.54**	**17.31**	**1.70**	**13.17**	**1.90**	**24.02**	**0.80**	**14.18**	**0.46**	**4.54**	**2.12**	**21.16**	**0.69**	**19.83**	**1.86**	**30.29**	**15.02**	**15.60**
	Barren OB Dump	1.77	20.90	0.45	6.77	0.19	7.82	1.15	25.56	3.58	24.04	0.31	9.94	0.90	6.97	1.62	20.48	0.97	17.20	1.18	11.64	1.52	15.17	0.96	27.59	0.78	12.70	15.38	15.97
	Barren Backfilled Area (Technical Reclamation)	0.44	5.19	0.83	12.48	0.76	31.28	0.41	9.11	0.21	1.41	0.65	20.83	0.91	7.05	0.62	7.84	0.00	0.00	0.00	0.00	0.89	8.88	0.02	0.57	0.00	0.00	5.74	5.96
	Total Area	**2.21**	**26.09**	**1.28**	**19.25**	**0.95**	**39.09**	**1.56**	**34.67**	**3.79**	**25.45**	**0.96**	**30.77**	**1.81**	**14.02**	**2.24**	**28.32**	**0.97**	**17.20**	1.18	11.64	2.41	24.05	0.98	28.16	0.78	12.70	21.12	21.93
	Total Area Under Mine Operation	**3.33**	**39.32**	**2.48**	**37.29**	**1.12**	**46.09**	**2.23**	**49.56**	**5.58**	**37.47**	**1.50**	**48.08**	**3.51**	**27.19**	**4.14**	**52.34**	**1.77**	**31.38**	**1.64**	**16.17**	**4.53**	**45.21**	**1.67**	**47.99**	**2.64**	**43.00**	**36.14**	**37.53**
WASTELANDS	Waste Lands	0.57	6.73	0.27	4.06	0.03	1.23	0.22	4.89	0.65	4.37	0.11	3.53	0.41	3.18	0.50	6.32	0.46	8.16	0.68	6.71	0.47	4.69	0.25	7.18	0.11	1.79	4.73	4.91
	Fly Ash Pond / Sand Body	0.05	0.59	0.05	0.75	0.02	0.00	0.04	0.89	0.03	0.20	0.00	0.00	0.06	0.46	0.00	0.00	0.04	0.71	0.05	0.49	0.00	0.00	0.03	0.86	0.00	0.00	0.37	0.38
	Total Wasteland	**0.62**	**7.32**	**0.32**	**4.81**	**0.05**	**1.23**	**0.26**	**5.78**	**0.68**	**4.57**	**0.11**	**3.53**	**0.47**	**3.64**	**0.50**	**6.32**	**0.50**	**8.87**	**0.73**	**7.20**	**0.47**	**4.69**	**0.28**	**8.05**	**0.11**	**1.79**	**5.10**	**5.30**
WATERBODIES	Reservoir, nallah, ponds	0.15	1.77	0.02	0.30	0.02	0.82	0.04	0.89	0.02	0.13	0.08	2.56	0.02	0.15	0.00	0.00	0.05	0.89	0.11	1.08	0.02	0.20	0.08	2.30	0.07	1.14	0.68	0.71
	Total Waterbodies	**0.15**	**1.77**	**0.02**	**0.30**	**0.02**	**0.82**	**0.04**	**0.89**	**0.02**	**0.13**	**0.08**	**2.56**	**0.02**	**0.15**	**0.00**	**0.00**	**0.05**	**0.89**	**0.11**	**1.08**	**0.02**	**0.20**	**0.08**	**2.30**	**0.07**	**1.14**	0.68	0.71
AGRICULTURE	Crop Lands	0.00	0.00	0.50	7.52	0.00	0.00	0.00	0.00	0.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.70	12.41	1.67	16.47	0.00	0.00	0.00	0.00	0.51	8.31	3.73	3.87
	Fallow Lands	2.25	26.56	1.58	23.76	0.02	0.82	0.12	2.67	3.99	26.80	0.04	1.28	3.94	30.52	1.08	13.65	1.45	25.71	3.56	35.11	2.80	27.94	0.67	19.25	1.96	31.92	23.46	24.36
	Total Agriculture	**2.25**	**26.56**	**2.08**	**31.28**	**0.02**	**0.82**	**0.12**	**2.67**	**4.34**	**29.15**	**0.04**	**1.28**	**3.94**	**30.52**	**1.08**	**13.65**	**2.15**	**38.12**	**5.23**	**51.58**	**2.80**	**27.94**	**0.67**	**19.25**	**2.47**	**40.23**	**27.19**	**28.23**
SETTLEMENTS	Urban Settlement	0.02	0.24	0.00	0.00	0.01	0.41	0.01	0.22	0.01	0.07	0.13	4.17	0.00	0.00	0.04	0.51	0.04	0.71	0.07	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.34
	Rural Settlement	0.04	0.47	0.00	0.00	0.00	0.00	0.01	0.22	0.06	0.40	0.00	0.00	0.05	0.39	0.00	0.00	0.03	0.53	0.02	0.20	0.16	1.60	0.00	0.00	0.00	0.00	0.37	0.38
	Industrial Settlement	0.02	0.24	0.00	0.00	0.01	0.41	0.01	0.22	0.10	0.67	0.01	0.32	0.08	0.62	0.03	0.38	0.01	0.18	0.08	0.79	0.06	0.60	0.08	2.30	0.00	0.00	0.49	0.51
	Total Settlement	**0.08**	**0.94**	**0.00**	**0.00**	**0.02**	**0.82**	**0.03**	**0.67**	**0.17**	**1.14**	**0.14**	**4.49**	**0.13**	**1.01**	**0.07**	**0.88**	**0.08**	**1.42**	**0.17**	**1.68**	**0.22**	**2.20**	**0.08**	**2.30**	0.00	**0.00**	1.19	1.24
	Grand Total	**8.47**	**100.00**	**6.65**	**100.00**	**2.43**	**99.18**	**4.50**	**100.00**	**14.89**	**100.00**	**3.12**	**100.00**	**12.91**	**100.00**	**7.91**	**100.00**	**5.64**	**100.00**	**10.14**	**100.00**	**10.02**	**100.00**	**3.48**	**100.00**	**6.14**	**100.00**	**96.30**	**100.00**



AREA STATISTICS

Classes			Area Statistics	
Level -I	Level -II	RGB Colour	Sq.Km.	% age
Scrubs	*Scrubs(A)*		2.40	16.12
Plantation	*Social Forestry*		0.16	01.07
	Plantation on OB		1.43	09.60
	Plantation on Backfill		0.11	00.74
	Total Plantation(B)		**1.70**	**11.42**
	Total Vegetation(A+B)		**4.10**	**27.54**
Agriculture	*Crop Land*		0.35	02.35
	Fallow Land		3.99	26.80
	Total Agriculture		**4.34**	**29.15**
Mining Area	*Coal Quarry*		1.33	08.93
	Water filled Quarry		0.42	02.82
	Barren OB Dump		3.58	24.04
	Area under backfilling		0.21	01.41
	Coal Dump		0.04	00.27
	Total Mining Area		**5.58**	**37.47**
Settlement	*Rural*		0.06	00.40
	Urban		0.01	00.07
	Industrial		0.10	00.67
	Total Settlement		**0.17**	**01.14**
Wasteland	*Waste Land*		0.65	04.37
	Sand Body		0.03	00.20
	Total Waste Land		**0.68**	**04.57**
	Water Body		0.02	00.13
	Total Leasehold area		**14.89**	**100.00**

Legend

- QUARRY LIMIT LINE BOUNDARY
- SUMP BOUNDARY
- DUMP BOUNDARY
- PLANTATION BOUNDARY
- MINE BOUNDARY
- LEASE HOLD BOUNDARY
- COAL STOCK BOUNDARY
- ALL MAJOR INFRASTRUCTURE

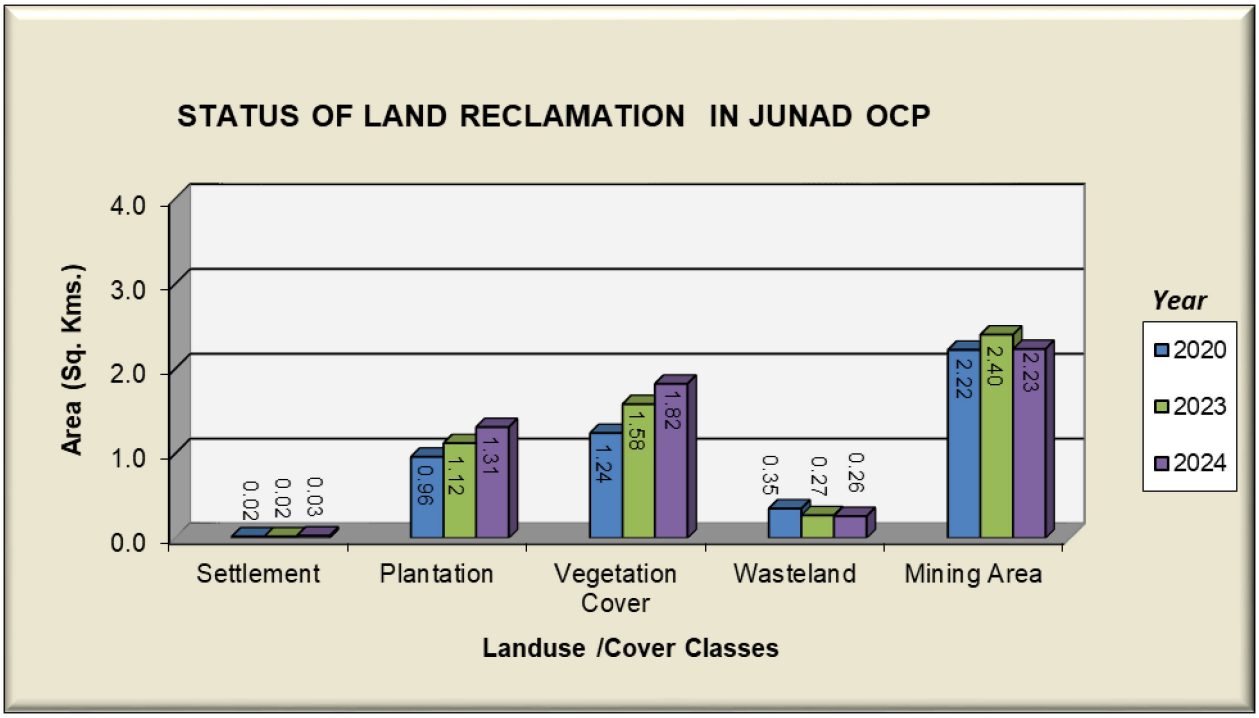


Figure 20

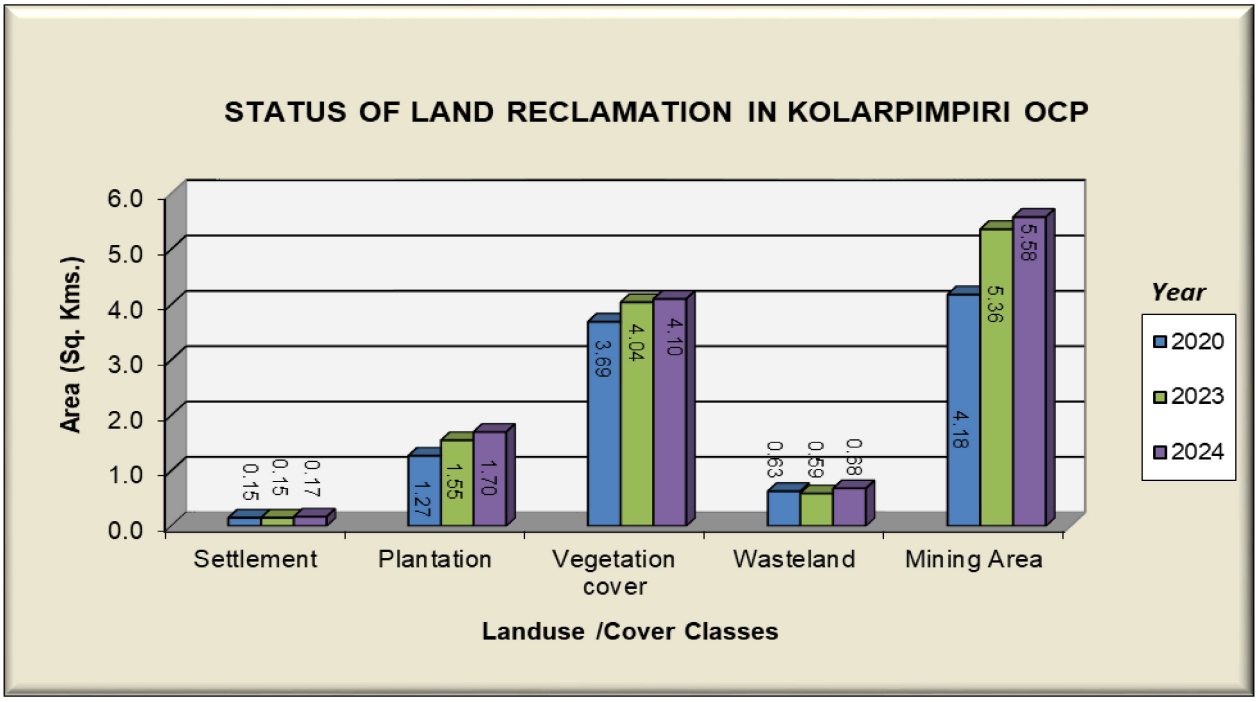
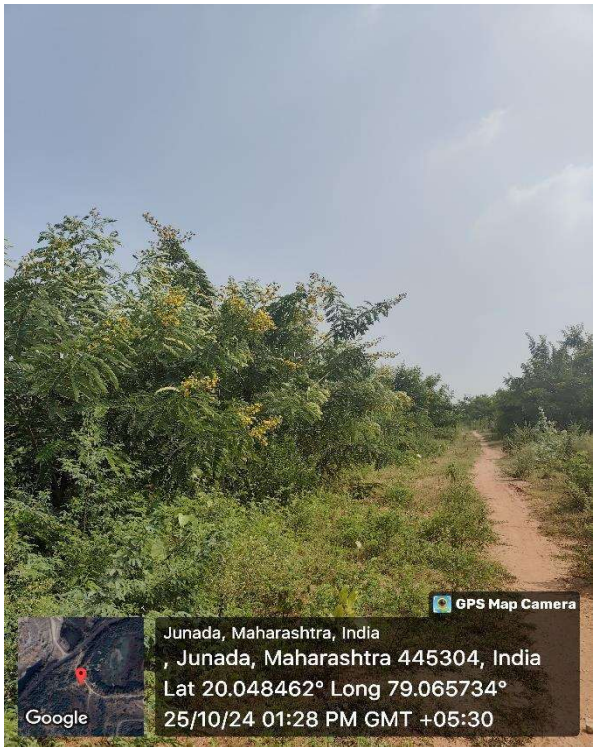


Figure 21



Photograph-17: Social Forestry (Junad OCP)

Photograph-18: Avenue plantation (Kolarpimpiri OCP)

शब्द-कोष

1	Land Reclamation	भूमि पुनरुद्धार
2	Over Burden	अधिभार
3	Monitoring	निगरानी
4	Report	प्रतिवेदन
5	Executive Summary	कार्यकारी सारांश
6	Opencast Mine	खुली खदान
7	Objective	उद्देश्य
8	Methodology	कार्य प्रणाली अथवा प्रक्रिया
9	Table	तालिका
10	List of Tables	तालिकाओं की सूची
11	Map	मानचित्र
12	Social Forestry	सामाजिक वानिकी
13	Plantation	पौधारोपण
14	Million	घनमीटर
15	Background	पृष्टभूमि
16	Planning	योजनाबद्ध
17	Asses	आकलन
18	Status	स्थिति
19	Regularly	निरंतर
20	Satellite	उपग्रह
21	Subsidiary	अनुषांगिक
22	Production	उत्पादन
23	Biological Reclamation	जैविक पुनरुद्धार
24	Technical Reclamation	तकनिकी पुनरुधार

25	Leasehold Area	पट्टा क्षेत्र
26	Excavated Area	उत्खनन क्षेत्र
27	Active mining	सक्रिय खनन
28	Environmental Protection	पर्यावरण संरक्षण
29	Remedial Measure	उपचारात्मक उपाय
30	Interval	अंतराल
31	Systematic Error	व्यवस्थित त्रुटियँ।
32	Error	अशुद्धियाँ
33	Curvature	वक्रता
34	Geometric	ज्यामितिक
35	Distortion	विरुपण
36	Plantation	पौधारोपण
37	Capacity	क्षमता
38	Software	सॉफ्टवेयर
39	Class	वर्ग
40	Accuracy	सटीकता
41	Statistical Separation	सांख्यिकीय पृथक्करण
42	Cubic meter	घनमीटर
43	Depicted	दर्शाया गया
44	Percentage	प्रतिशत
45	Salient Findings	मुख्य निष्कर्ष
46	Methodology	पद्धति
47	Data Procurement	डाटा क्रय
48	Satellite data Processing	उपग्रह डेटा प्रसंस्करण
49	Rectification and geo-referencing	सुधार और भूसन्दर्भ-

50	Image enhancement	छविगुण - बृद्धि
51	Training set selection	प्रशिक्षण सेट का चयन
52	Classification and Accuracy assessment	वर्गीकरण और मूल्यांकन की सटीकत
53	Area calculation	क्षेत्र गण-ना
54	Temporal	लौकिक
55	Processing	प्रसंस्करण
56	Overlay of Vector data base	वेक्टर डेटा बेस का अरोपन
57	Area calculation	क्षेत्रगणना-
58	Pre-field map preparation	क्षेत्र जाने के पहले नक्शे की तैयारी
59	Ground Truthing	भू-सत्यापन
60	Ground Information	भू-सुचना
61	Interpretation	व्याख्या
62	Eco-system	पारिस्थितिकी तंत्र
63	Minor	मामुली
64	Water Drainage	जल निकाय
65	Interval	अंतराल
66	Maximum	अधिकतम
67	Coal field	कोयला क्षेत्र
68	Design	परिकल्पना
69	Superimpose	आरोपित
70	Update	अद्यतनीकरण/नवीनीकरण
71	Cumulative	संचयित
72	Embankment	तटबंध
73	Cluster	खुली तथा भूमिगत खदानों के समूह

ABBREVIATIONS

SoI	Survey of India
MoEF&CC	Ministry of Environment, Forest & Climate Change
CIL	Coal India Limited
ECL	Eastern Coalfields Limited
BCCL	Bharat Coking Coal Limited
CCL	Central Coalfields Limited
WCL	Western Coalfields Limited
SECL	South Eastern Coalfields Limited
NCL	Northern Coalfields Limited
MCL	Mahanadi Coalfields Limited
NEC	North Eastern Coalfields
CMPDIL	Central Mine Planning & Design Institute Ltd
NRSC	National Remote Sensing Centre
R2/ R2A	ResourceSat Satellites
LISS - 4	Linear Imaging and Self Scanning Sensor
FCC	False Colour Composite
OCP	Opencast Project
UGP	Underground Project
OB	Over Burden
GCP	Ground Control points
GIS	Geographic Information System
WGS-84	World Geodetic System
UTM	Universal Transverse Mercator

GLOSSARY

Sl.	Term	Definition
1.	Land Reclamation	To manage, reclaim and restore mined out/ degraded land as close as possible to its original stage.
2.	Over Burden	The material that lies above the coal seam/ deposit
3.	Monitoring	A process of evaluation to check or keep record for a period of time.
4.	Opencast Coal Mine	Open-pit mining, also known as opencast mining, is a surface mining technique that extracts minerals from an open pit in the ground.
5.	Social Forestry	Social forestry is the management and protection of forests and afforestation of barren and deforested lands with the purpose of helping environmental, social and rural development. Plantation (Social/ Avenue or other) carried out outside mining area.
6.	Biological Reclamation	Plantation on Backfilled areas (Stabilized Internal Dumps)
7.	Technical Reclamation	Area under backfilling (Over burden dumped inside the mine voids) in mining area.
8.	Green Cover Generated	Total Plantation carried out in the lease area of Project. This includes Plantation on Backfill, Plantation on OB and Social Forestry.
9.	Leasehold Area	The area, for which lease is granted for the purpose of undertaking mining and allied operations.
10.	Excavated area	Mined out area which includes active mining, area under backfilling and plantation on backfilled areas
11.	Active Mining	Mining areas which include Coal Quarry, Advance Quarry, Quarry Filled with Water etc.
12.	Environmental Protection	It is the practice of protecting the natural environment by individuals, organizations and governments. Its objectives are to conserve natural resources and the existing natural environment and, where possible, to mitigate damage and reverse trends.
13.	Remedial Measure	Any measure or action required or undertaken to investigate, monitor, clean up, remove, treat, prevent, contain or otherwise remediate the presence or release of any hazardous substance or activity.
14.	Systematic Error	Every measurement differing from the true measurement in the same direction, and even by the same amount in some cases.

15.	Geometric Distortion	It refers to the improper positioning of any image with respect to their true geographic position when viewed in a properly scaled common image display plane.
16.	Land Use/Cover Class	Land cover is what covers the surface of the earth and land use describes how the land is used.
17.	Accuracy	The closeness of agreement between a measured quantity value and a true quantity value.
18.	Environmental Clearance	Environmental Clearance (EC) for any developmental projects like coal mining projects etc. has been made mandatory by the Ministry of Environment, Forests and Climate Change (MoEF& CC) through its Notification issued on 27.01.1994 under the provisions of Environment (Protection) Act, 1986.
19.	Rectification and Geo-referencing	Geo-referencing is the assigning of absolute location of a data point or data points. Geo-rectification refers to the removal of geometric distortions between sets of data points, most often the removal of terrain, platform, and sensor induced distortions from remote sensing imagery.
20.	Image Enhancement	It is the process of modifying digital images so that the results are more suitable for processing or further image analysis.
21.	Training set selection	It is a portion of a data set used to fit or train a model for prediction or classification of values that are known in the training set, but unknown in other (future) data.
22.	Image Classification	It refers to the task of extracting information classes from a multiband raster image. The resulting raster from image classification can be used to create thematic maps.
23.	Temporal Changes	The 'temporal change' means the change in any entity with a period of time.
24.	Ground Truthing	Collection of primary/ basic information from ground realities for satellite image interpretation and thematic mapping.
25.	Cluster	Group of opencast and/ or underground mines clubbed together for administrative purposes.
26.	Arc GIS	GIS Software used for Map preparation
27.	ERDAS IMAGINE	Satellite Image Data Classification Software

Central Mine Planning & Design Institute Ltd.
(A Subsidiary of Coal India Ltd.)
Gondwana Place, Kanke Road, Ranchi 834031, Jharkhand
Phone : (+91) 651 2230001, 2230002, 2230483, FAX (+91) 651 2231447, 2231851
Website : www.cmpdi.co.in, Email : cmpdihq@cmpdi.co.in

Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2025

Unique Application Number	Submitted Date
MPCB-ENVIRONMENT_STATEMENT-0000088184	30-09-2025

PART A

Company Information

Company Name	Application UAN number
Western Coalfields Limited, Kolar Pimpri Open Cast Mine	-

Address

Office of the Sub Area Manager, Kolar PimpriPimpalgaon Sub Area, Po.- Ukni, Tal.- Wani, Distt. - Yavatmal, Maharashtra

Plot no	Taluka	Village
79	Wani	-
Capital Investment (In lakhs)	**Scale**	**City**
31361	L.S.I	Wani
Pincode	**Person Name**	**Designation**
445304	Dr. Suresh D Gharde	Sub Area Manager, Kolar pimpri-Pimpalgaon Sub Area
Telephone Number	**Fax Number**	**Email**
9223001410	07239241357	wclsamkolarpimpri@gmail.com
Region	**Industry Category**	**Industry Type**
SRO-Chandrapur	Red	R35 Mining and ore beneficiation
Last Environmental statement submitted online	**Consent Number**	**Consent Issue Date**
yes	MPCB-CONSENT-0000195255/CR/2504002421	2025-04-22
Consent Valid Upto	**Establishment Year**	**Date of last environment statement submitted**
2026-03-31	1993	Sep 28 2024 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name	Consent Quantity	Actual Quantity	UOM
Coal	1.5	1.5	MT/A

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
-	0	0	No/Minutes

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for	Consent Quantity in m3/day	Actual Quantity in m3/day
Process	450.00	450.00
Cooling	0.00	0.00
Domestic	130.00	18.00
All others	190.00	0.00
Total	770.00	468.00

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Mine Discharge	3558	3458	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Coal (Cubic Meter per day/Tonnes)	0.11388	0.11388	

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Explosives	3.130	3.6526	Kg/Annum

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Diesel	0	174	KL/A

Part-C

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

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
-	0	0	0	0	0

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
NA	0	0	0	0	0

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
5.1 Used or spent oil	0.2	1.23	Ton/Y

5.2 Wastes or residues containing oil	0	0	Ton/Y

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
35.3 Chemical sludge from waste water treatment	0	0	Ton/Y

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
-	0	0	MT/M

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
-	0	0	MT/M

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/M

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.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
5.1 Used or spent oil	1.23		-
5.2 Wastes or residues containing oil	0	KL/A	-
35.3 Chemical sludge from waste water treatment	0	KL/A	-

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
-	0	KL/Mnc	-

Part-G

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Impact of the pollution Control measures taken	0	0	0	0	0	0

Part-H

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	***Environmental Protection Measures***	***Capital Investment (Lacks)***
Revenue expenditure for Pollution control works	-	20.11

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	***Environmental Protection Measures***	***Capital Investment (Lacks)***
Miscellaneous Environment protection works	-	10

Part-I

Any other particulars for improving the quality of the environment.

Particulars

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Name & Designation

Dr. Suresh Gharde, Sub Area Manager, Kolar pimpri-Pimpalgaon Sub Area

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000088184

Submitted On:

30-09-2025