Under Jurisdiction of Nagpur Court Only

# वेस्टर्न कोलफ़िल्डस लिमिटेड Western Coalfields Limited

(मिनीरत्न कंपनी) (A Miniratna Company)

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

वस्तिव कुटुम्बकम् LEARTH - ONE FAMILY - ONE FUTURE

# CIN-U10100MH1975GOI018626 one caning क्षेत्रीय महाप्रबंधक कार्यालय, चंद्रपुर क्षेत्र / Office of Area General Manager, Chandrapur Area

पताः वेकोलि, चंद्रपुर क्षेत्र, पो. बाबुपेठ जि. चंद्रपुर, ∕ Address: WCL, Chandrapur Area, Po- Babupeth, महाराष्ट, पिनः 442403 Dist: Chandrapur, MS, Pin-442403

Email: anoenv.cha@coalindia.in

FAX:- 07172-255287

संदर्भ संख्या:वेकोलि/चक्षे/क्षेमप्र/पर्यावरण/2023-24/\$23\_\_\_\_\_\_ दिनांक: 29.10.2023 प्रति.

अतिरिक्त प्रधान मुख्य वन संरक्षक, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय,

क्षेत्रीय कार्यालय (WCZ),

भूतल, पूर्वी विंग, नया सचिवालय भवन,

सिविल लाइन्स, नागप्र- 440001

विषय: Six Monthly Report against Compliance of Conditions of Environmental Clearance letter for Hindustan Lalpeth Colliery 1&3 UG Mine of Chandrapur Area, WCL (As on 01.10.2023)

संदर्भ: EC letter No. J-11015/182/2006.IA.II(M) dtd: 17.10.2006

महोदय,

Please find enclosed herewith, Six Monthly Report against Compliance of Conditions of Environmental Clearance letter for <u>Hindustan Lalpeth Colliery 1&3 UG Mine</u> of Chandrapur Area, WCL (As on 01.10.2023)

This for your kind information & necessary action please.

भव दिय

(प्रशांत अश्विनकुमार ठाकर) क्षेत्रीयं केंद्रस्थ अधिकारी (पर्यावरण) वेकोलि, चंद्रपुर क्षेत्र

संलग्नः यथोपरी

प्रतिलिपी:

१. प्रादेशिक अधिकारी, महाराष्ट्र प्रदुषण नियंत्रण बोर्ड, उद्योग भवन, प्रथम तल, रेलवे स्टेशन रोड चंद्रपुर 442401

२. क्षेत्रीय महाप्रबंधक, वेकोलि, चंद्रपुर क्षेत्र

महाप्रबंधक (पर्यावरण), वेकोलि-मुख्यालय, नागपुर

४. ऑफिस कॉपी





# **E.M.P. COMPLIANCE REPORT**

# AS ON 01.10.2023

# HINDUSTAN LALPETH (I&III) UG EXPANSION PROJECT



# <u>WESTERN COALFIELD LIMITED</u> <u>CHANDRAPUR AREA</u>

# <u>SI.</u> <u>CONTENTS</u>

- 1. Present Status of Project Work Progress.(Part -I to Part-III)
- 2. Compliance Report against EC for Expansion of Hindusthan Lalpeth Colliery(I&III)UG (Part-IV)
- 3. Data Sheet

# ANNEXURES

- I. Copy of Environmental Clearance vide J-11015/182/2006.IA.II(M),dt; 17/10/2006 of MOC/GOI.
- II. Copy of Consent to Operate from Maharashtra Pollution control Board Consent No. BO/JD/(APC)/UAN No.1997/R/CC-0241DT.07/12/2017 Valid upto 31/03/2020
- III. Environmental Monitoring Report for the month of <u>April- 2023 to August-2023</u>
- IV. Copy of Environment Audit (Form-V)
- V. Ground water Monitoring Report for <u>period- Dec 2022 (post-monsoon)</u> <u>& Jan-Feb -2023 (winter) & May – 2023 (Pre-Monsoon)</u>
- VI. Key Surface plan showing infrastructure and monitoring station for Air, water etc.

# (1)

# WESTERN COALFIELDS LIMITED CHANDRAPUR AREA ;ENVIRONMENT DEPARTMENT

# **COMPLIANCE OF ENVIRONMENTAL CLEARANCE CONDITIONS**

## SIX MONTHLY STATUS AS ON 01.10.2023

## **Environmental clearance details**

•	Name of Project /Area	:	Hindusthan Lalpeth Colliery No.1 & III (Expansion) W.C.LChandrapur Area
•	Location and Address	:	Sub Area Manager, Hindusthan Lalpeth Sub Area, P.O.Hindusthan Lalpeth Colliery, Dist. Chandrapur ( M.S.) PIN CODE: 442 507
•	Production	:	0.18 Million Te./Yr.
•	Total Lease Area	•	748.97 Ha.
•	Agricultural(Tenancy land)	•	67.96 На.
•	Waste Land (Govt. Land)	•	346.76 На.
•	Forest Land	:	334.25 На.
•	Capital Cost	:	24.27 Crore

- Environmental Clearance for 0.18 Million Te./Yr. Coal production vide letter no; J-11015/182/2006-IA-II(M), for expansion of Hindusthan Lalpeth Under Ground Coal Mine.
- Public Hearing Conducted on 20/10/2005
- a) Consent to operate obtained vide consent No. BO/JD/(APC)/UAN No.1997/R/CC-0241 DT.07/12/17 Valid upto 31/03/2020
- Environment Clearance for expansion for 0.18 Million Te./Yr. coal production vide letter No. J-11015/182/2006-IA-II(M) dtd.17/10/2006

# PRESENT STATUS OF PROJECT WORK

### PART - I

Name of the Project	HINDUSTHAN LALPETH I & III UG EXPANSION	
	MINE	
	At-P.O.Hindusthan Lalpeth Colliery,	
Location	Tahsil-Chandrapur, District-Chandrapur,	
	Maharashtra State.	
	Sub Area Manager, Hindusthan Lalpeth Sub Area,	
Address for correspondence	P.O. : Hindusthan Lalpeth Colliery, Distt. : Chandrapur	
	(M.S.) – 442507.	
MoEF's Clearance No. & Date	J-11015/182/2006-IA-II(M) dtd.17/10/2006.	
Period of Status Report	01/04/2023 to 30/09/2023	
Date of Submission of Last Report	30.05.2023 vide e-mail	
Year of Commencement of Project work	H.L.C.No.1 – 1924, H.L.C. No.3 - 1960	

## STATUS OF LAND ACQUISITION AS ON 01/04/2023

	REQUIRED AS PER EMP	ACTUAL AREA ACQUIRED	
TYPE OF LAND	(In Hectares)	(In Hectares)	
FOREST LAND	334.25	334.25 346.76	
WASTE LAND	346.76		
(GOVT. LAND)	340.70		
AGRICULTURAL LAND	67.96	67.96	
TOTAL	748.97	748.97	

## STATUS OF LEGAL COMPLIANCE AS ON 01/04/2023

A.	Consent under Water (Prevention & Control of Pollution) Act	Consent to Operate under Air & Water Act & for a production capacity of 0.18 Million Te./Yr. Granted vide consent No.BO/JD(APC)/ EIC No. CH-1180-13/R/CC-6825 dtd.16/08/2013 CTO Consent No. BO/JD/(APC)/UAN No. 1997/R/CC-0241 DT.07/12/2017 Valid Upto 31/03/2020 (Mine has stopped production since 12/10/2017)
B.	Consent Fees under Water (Prevention & Control of Pollution) Act	Water cess paid upto Dec2015. CGWA NOC under infrastructure category under process.
C.	Environment (Protection) Act	Environment Statement for the Year 2019-20 submitted online vide MPCB –ENVIRONMENT STATEMENT- 0000023618 Dtd.19/05/2020 (Mine has stopped production since 12/10/2017)
D.	Forest (Conservation) Act	Proposal for diversion of 216.25 Hectares of Forest Land has been submitted to MOEF vide our letter No. WCL/CHA/CGM/PLG/REV/ 10634 dtd.28/11/2005. The proposal was placed before FAC on 4/7/2007 and 1 <sup>st</sup> stage clearance done vide L. No. F. No.8-138/2006-FC dtd. 2/5/2008. Mine is now closed.

### PART - II

	AIR POLLUTION CONTROL	STATUS OF ENVIRONMENT
А.	No. of Ambient Air Monitoring Stations	04 Nos.(Fortnightly)
В.	* Name of the Locations	
	CH1 UA-1/CH3 UA-1	Sub Station, H.Lalpeth Colliery UG.
	CH1 UA-2/CH3 UA-2	Pit Office, H.Lalpeth Colliery Incline.
	CH1 UA-3/CH3 UA-3	H.L.CIII Colony
	CH1 UA-4/CH3 UA-4	Babupeth Area Rajiv Gandhi Engineering
ļ		College.
C.	** Ambient Air Quality Status for the Parameters	Average 95% Time Weighted Values.
	prescribed by State Pollution Control Board.	
	CH1 UA-1/CH3 UA-1	As seen from the Environmental Monitoring
	CH1 UA-2/CH3 UA-2	Reports for the month of April 2023 to
	CH1 UA-3/CH3 UA-3	August-2023 the values of environmental
	CH1 UA-4/CH3 UA-4	parameters are within permissible limits

\* Location of the Sampling Stations have been delineated on the Working Mine Plan Enclosed

\*\* Detailed Report of Sampling & Analysis of Ambient Air Quality as per the Statute of Standard & Approved Laboratory : CMPDIL'S Report for the month of April-2023 to August -2023 is Enclosed.

	WATER POLLUTION CONTROL	
А.	No. of Stations & Frequency of Monitoring	02 (Fortnightly)
В.	*Description of Locations	
	CH1 UW-1	Mine Discharge (After Settlement) from Sand-HLC-1
	CH1 UW-2	stowing tank. Mine Discharge – HLC-III
C.	Average Concentrations of Major Pollutants	As seen from the Environmental Monitoring Reports
	prescribed by State Pollution control Board	for month of April-2023 to August -2023 the values
		of environmental parameters are within permissible
		limits

Environmental Monitoring Reports for month of April-2023 to August -2023 is enclosed.

D.	Quantity of Effluent discharged to Local Water	DRY SEASON : 2750 K.L.per day.
	Course from each course ( in $M^3 / day$ )	WET SEASON : 8054 K.L. per day.

Location of the Sampling Stations have been delineated on the Working Mine Plan : ENCLOSED
 \*\*Detailed Report of Sampling & Analysis of Effluent Quality as per the Statute of Standard & Approved Laboratory : Report for the month of April-2023 to August -2023 is enclosed.

	NOISE POLLUTION CONTROL	
А.	No. of Noise Monitoring Stations	03 No.
	* Description of Locations & dB (A)	1. Near Fan house – CH1-HLC-1 UN-1/CH3 UN-1
В.	Value	2. Fan House HLC-III
		3. Colony – CH1 UN-3/CH3 UN-3
C.	Average Concentrations of Major	As seen from the Environmental Monitoring Reports for
	Pollutants prescribed by State	the month of April-2023 to August -2023 values of
	Pollution control Board	environmental parameters are within permissible limits

\* Location Points have been delineated on the Working Mine Plan : ENCLOSED.

\*\* Detailed Report of Noise Monitoring as per the Statute to be Enclosed : Report for the month of April-2023 to August -2023 is enclosed.

### **REHABILITATION & RESETTLEMENT**

The Actual position as on 01/04/2023 is as follows.

## 1. COMPENSATION FOR LAND ACQUIRED : N.A.

### 2. COMPENSATION FOR HOUSES ACQUIRED : N.A.

	Shri, Tarun Devra, Sub Area Manager,
Organization action at Desirat Land	H'Lalpeth Sub Area.
Organisation set up at Project Level	Shri. Vinod Rao, MT ( Civil )
(Name & Designation of the Personnel to be given)	Nodal Officer ( Environment ), H'Lalpeth Sub
	Area.

#### **EXPENDITURE : CAPITAL**

### EXPENDITURE ON POLLUTION CONTROL MEASURES AT HINDUSTHAN LALPETH COLLIERY NO.I & III as on 01/10/2023

Ι	AIR POLLUTION		
A) Bl	ACK TOPPING OF ROADS/RCC PAVEMENT AT WI		
SI	Head	Period 01/04/2023 to 30/09/2023	Amount in Rs. Lakhs
1	Black Topping of road from Railway under bridge to Worker institute distance – 450 M.	Nil	5.91
	Black Topping near Over Bridge turning to Rly. Siding for distance of 380 M.	Nil	2.58
	TOTAL		8.49

## B)MIST SPRAY SYSTEM/FIXED SPRINKLERS INSTALLED/MOBILE TANKERS as on 01/10/2023

SI	Head	Period 01/04/2023 to 30/09/2023	Amount in Rs. Lakhs (Prog)
1	Fixed Sprinkler at CHP Pit No.2 – 6 Nos.	Nil	1.00
2	Fixed Sprinkler at H.L.C. Railway Siding and Mist Guns – 8 Nos.	Nil	2.47
	TOTAL		03.47
	TOTAL: I (A+B)		11.96

I	WATER POLLUTION		
SI	Head	Period 01/04/2023 to 30/09/2023	Amount in Rs. Lakhs (Prog)
1	Construction of Water Treatment Plant - III	Nil	14.00
2	Construction of Sedimentation pond for mine discharge at HLC No.3 Stowing	Nil	10.00
3	Construction of sedimentation pond for HLC-1	Nil	09.75
4	Making 01 No.of RCC Settling tank at HLC -1	Nil	09.14
5	Construction of clear water tank & installation of 5000 GPH pressure filter and pipe line	Nil	20.00
	Total: 11		62.89
	Grand Total : I & I I of HLC		74.85

# EXPENDITURE : REVENUE ( In Rupees )

ACCOUNT HEAD	CURRENT YEAR 01.04.23 to 30.09.23	PROGRESSIVE
Afforestation	Rs. NIL	Rs 4.78 Lakhs approx
Air Pollution Control(O & M of 1 Mobile Tankers)	Rs. NIL	Rs.169.36 Lakhs approx.
Water Pollution Control (O & M )(Filter Plant)	Rs. NIL	Rs.19. 25Lakhs approx.
Filter Plant	Rs. NIL	Rs.50.05 Lakhs
Monitoring	Rs. NIL	Rs.61.27 Lakhs.
Legal Expenses	Rs. NIL	Rs.15.00 Lakhs
Environmental Audit + Water Cess	Rs. NIL	Rs. 4.158 Lakhs
Others (JVs by MPCB)	Rs. NIL	Rs.1.1537 Lakhs
Side cladding of CHP & workshop at HLC-1 Civil	Rs. NIL	Rs. 1.68 Laichs
TOTAL	Rs. NIL	Rs. 326.70 Lakhs.

C COLLIERY MANAGER HINDUSTHAN LALPETH COLLIERY NO.I, CHANDRAPUR.

SUB AREA MANAGER HL- SUB AREA

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AREA NODAL OFFICER (ENV) CHANDRAPUR AREA.

# **Monitoring the Implementation of Environmental Safeguards** Ministry of Environment & Forests-Regional Office (W),Bhopal.

### **Monitoring Report**

#### DATA SHEET

DATE: 01/10/2023 1.Project type :River- valley/Mining/Industry/ : MINING Thermal/Nuclear/Other (Specify) 2. Name of the Project HINDUSTHAN LALPETH : COLLIERY NO.I & 3 3. Clearance letter (s)/ OM No. & date J-11015/182/2006-IA, II(M), : of Addl. Director, MoEF- NEW DELHI. Dt. 17/10/2006 (This supersedes all clearances granted earlier) 4. Location a) District **CHANDRAPUR** : MAHARASHTRA b) State : Latitude - 19°-53'-35" to 19°-33"N c) Latitude/Longitude : Longitude- 79°-18-04" to 79°- 19'30"E 5.Address for correspondence CHIEF GENERAL MANAGER : a) address for Concerned Project WESTERN COALFIELDS LTD. Chief Engineer ( with Pin. Code & **PO;BABUPETH** MAHARASHTRA. 07172-253322..23..24..25 Telephone No./telex/Fax. Numbers : 07172-256715,256124 Fax-07172-255287 b) Address of Executive Project SUB AREA MANAGER : Engineer /Manager( with Pin.Code H'LALPETH SUB AREA P.O.Hindusthan Lalpeth Colliery Dist-Chandrapur-Maharashtra & Fax numbers 07172-255287 : Pin No. - 442 507. 6. Salient features a) of the project Enclosed as A : b) of the Environmental management Enclosed as B : Plans

		(8)
7.Break up of the project area	:	748.97 Ha as on 01/10/2023
a)submergence area : forest & non forest	:	Not Applicable
b)others	:	Agricultural 67.96 Ha. Forest Land334.25 Ha. Waste Land 346.76 Ha (Govt. Land)
		T O T A L 748.97 Ha.
8.Break up of the project affected populatio with enumeration of those losing houses/ dwelling units only, agricultural land only, both dwelling units & Agricultural land & landless labourers /artisan		Not Applicable
a)SC , ST/ ADIWASI	:	-N.A
b)Others	:	-N.A
(Please indicate whether these figures are be on any scientific and systematic survey carr out or only provision figures, if as survey is carried out give details and years of Survey	ied	-N.A
<ul> <li>9. Financial details :</li> <li>a) Project cost as originally planned and subsequent revised estimates and year of price reference</li> </ul>	:	Rs.24.27 crores
b)Allocation made for environmental management plans with item wise and year wise break-up	:	Provision of Rs.74.85 Lakhs Details enclosed as B.
c)Benefit cost ratio/Internal Rate of Return and the year of assessment	:	
d)Whether © includes the cost of environmental management as shown in the above	:	
e)Actual expenditure incurred on the Project so far	:	<b>Rs.24.27</b> crores (as on 01/10/2023) ( H.L.C.No.I & III)
f)Actual expenditure incurred on the environmental management plans so far	:	Capital-Rs. 74.85 Lakhs (as on 01/10/2023) Revenue-Rs. 326.70 Lakhs (progressive) as on 01/10/2023. This expenditure has been incurred on existing HLC-I & III. (Details given on Page No.5 and page No.6)

10.Forest land requirement

 The status of approval for diversion of forest-land for non-forestry

- b) The status of clearing felling
- c) The status of compensatory afforestation , if any
- d)Comments on the viability & sustainability of compensatory afforestation programme in the light of actual field experience so far
- The status of clear felling in non-forest areas (such as reservoir, approach roads), if any with quantitative information
- 12 Status of construction
  - a)Date of commencement(Actual and/ or planned)
  - b)Date of completion (Actual and /or planned)
- Reasons for the delay if the project is yet to start.
- 14.Dates of site visits
   a)The dates on which the project was monitored by the Regional Office on previous occasions, if any.
  - b)Date of site visit for this monitoring report:

15.Details of correspondence with project authorities for obtaining action plans information on status of compliance to safeguards other than the routine letters for logistic support for site visits)

(The first monitoring report may contain the details of all the letters issued so far, but the later reports may cover only the letters issued subsequently)

COLLIERY MANAGER

HINDUSTHAN LALPETH COLLIERY NO.1, CHANDRAPUR. SUB AREA MANAGER HL SUB AREA

Forest land applied vide our letter No.WCL/CHA/CGM/PLG/REV10634 dtd.28/11/2005. The proposal was placed before FAC on 4-7-2007 and 1<sup>st</sup> stage clearance done vide letter No. F.No.8-138/2006-FC dtd.2-5-2008.

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

### NOT APPLICABLE

HLC-I-1924, HLC-3-1960

Existing mine

Not Applicable.

Not Done

-do-

No correspondence received till date.

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AREA NODAL OFFICER(ENV) CHANDRAPUR AREA.

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# PART-IV

Project	:	HINDUSTHAN LALPETH COLLIERY NO.1 & 3
Environmental Clearand	e:	FOR COAL PRODUCTION CAPACITY OF 0.18 M Te/Yr
Ref	:	No. J-11015/182/2006.IA.II(M) dt;17/10/2006

# COMPLIANCE REPORT AGAINST ENVIRONMENTAL CLEARANCE

S.No.	A. Specific Conditions	Compliance
i)	The lease areas of Hindusthan Lalpeth UG and of Mahakali UG shall be revised and recast before the mine working of the present project progresses into the lease area of the Mahakali UG Project.	The lease areas of Hindusthan Lalpeth U/G and of Mahakali UG is revised and recast. Presently the workings of Hindusthan Lalpeth Colliery within the common lease boundary of Mahakali Colliery is exhausted, sand stowed and sealed off.
ii)	All the conditions stipulated by the SPCB in their NOC shall be effectively implemented	<ul> <li>The following conditions stipulated in their NOC were implemented during the operation of mine.</li> <li>1) Coal handling plant provided with water sprinkler.</li> <li>2) Spraying of water on working areas, truck movement area is being done.</li> <li>3) Tree plantation done along boundary of mine area.</li> <li>4) Black top metal road provided for coal transportation. <ul> <li>(a) Black topping road from Railway under bridge to Worker Institute.</li> <li>(b) Black topping near Rajiv Gandhi Engineering College to Railway Siding.</li> <li>5) Coal transportation trucks are covered with tarpaulins.</li> </ul> </li> </ul>
		The mine has stopped production since 12-10-2017.
iii)	No mining operations shall be undertaken in the forestland until clearance has been obtained under the provision of FC Act, 1980	Vide our letter No. WCL/CHA/CGM/ PLG/REV/10634 dtd.28/11/05, proposals for ex-post facto approval for diversion of forest land under Section-2 of Forest (Conservation) Act-1980 for 216.25 ha. for mining lease including 46.90 ha. for surface for Hindusthan Lalpeth Colliery has already been submitted. Stage -I FC received in 2008. Mine has stopped operations since 12-10- 2017

iv)	Regular Monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structures, roads, surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material	The C.M.R.S. team Dhanbad investigated subsidence over Panel-E from 24/7/1985 to 26/4/1988 within a depth of cover 60.00 mtr. to 113.00 mtr. As per the record and observation of pillar no subsidence is found. However regular monitoring of subsidence shall be taken over the working panels and if any cracks is observed it shall be effectively plugged with ballast and clayey soil/suitable material. The subsidence prediction study carried out by CMRI, for U/G coal extraction with hydraulic sand stowing was incorporated in the EIA/EMP submitted to MOEF. The depillaring is carried out after taking due permission from DGMS. All conditions with respect to precautionary measured as well as monitoring, etc. are stipulated in the permission letter & are adhered to during actual depillaring operations in the mine. The implementation of the stipulated conditions are also monitored by DGMS.
v)	Garland drain (size, gradient & length) around the safety areas such as mineshaft and low lying areas and sump capacity should 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 should also provide adequate retention period to allow proper setting of silt material.	This is U/G mine hence not applicable
vi)	Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emission from crushing operations, haulage roads, transfer points etc.	Mine has stopped production since 12/10/2017
vii)	Drill should be wet operated only	Mine has stopped production since 12/10/2017
viii)	Controlled blasting should be practiced with the use of delay detonators.	Mine has stopped production since 12/10/2017
ix)	A Progressive afforestation plan shall be prepared and implemented for the undisturbed area and shall include areas under green belt development areas along roads, along ML boundary, township outside the lease area etc. by planting native plant species in consultation with the local DFO/Agriculture department. The density of the trees should be around 2500 plants per ha.	The mining lease within 216.25 ha. Forest land is covered by deep forest and other revenue land is covered by colony and hutments. Till date plantation of 600 nos carried out in 0.24 Ha in HLC UG mine

x)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring for water levels should be done at least 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 should be submitted to the MOEF & CGWB, Regional Office quarterly within one month of monitoring.	Complied. The ground water level are being monitored four times in a year i.e. in the month of May, August, November and January and the reports are submitted to MOEF & CGWB Regional Office. Copy of the last report <u>period- Dec-2022</u> (post-monsoon) & Jan-Feb -2023 (winter) & <u>May-2023 (Pre-monsoon)</u> is enclosed.
xi)	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to de-watering of the mine.	In the U/G Mines there is no adverse impact on shallow aquifer being harnessed by surrounding population. Rooftop rainwater harvesting has been proposed for office premises in line with CGWA guidelines. However most of the mine discharge water is re-circulated for sand stowing purpose and balance is used for filter plant. From the filter plant the water is supplied to local population viz-residential colony, Chandrapur Engineering College and Babupeth Railway Station.
xii)	The Company shall obtain approval of CGWA/CGWB Regional Office for use of ground water for mining operation.	Application submitted to Reginal Director (CGWB) Vide letter No. WCL/ENV/HQ/17- U&20-J/55 Dtd. 16.03.2017. Revised application has been submitted Application Number: 21-4/7863/MH/INF/2022 under infrastructure category as the mining operations has stopped. The application is under process with CGWA
xiii)	Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP waste water	Soak pit & Septic tank is already provided to existing colony. Since it is an underground mine there is no need of E.T.P. for workshop and Mini C.H.P.
xiv)	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, Ahemedabad within a period of one year and the results reported to this Ministry and to DGMS.	Complied PME details :- 2016-2017 - 138 2017-2018 - 078 2018-2019 - 042 2019-2020 - 031 2020-2021 - 041 2021-2022 - 022 2022-2023 - 032
xv)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MOEF and its Regional Office at Bhopal.	Done by CMPDIL through remote sensing every 3 year

xvi)	A final mine closure plan along with details of corpus fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	A final mine closure plan 5 years in advance shall be submitted to the Ministry of Environment and Forest for approval.
xvii)	Consent to operate shall be obtained before starting mining operation.	Mine has stopped production since 12/10/2017. CTO Consent No. BO/JD/(APC)/UAN No. 1997/R/CC-0241 DT.07/12/2017 Valid Upto 31/03/2020

SI.	<b>B.</b> General Conditions	Compliance
i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forest.	Noted for compliance
ii)	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Mine has stopped production since 12/10/2017
iii)	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO2, Nox & CO monitoring location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultations with the State Pollution Control Board.	Ambient Air quality monitoring stations are fixed within mining lease area in consultations with the State Pollution Control Board. The locations are given below. <u>S.No. Location Details Location code</u> 1. Sub station - CH1 UA-1/CH3 UA-1 Hindusthan Lalpeth Colliery-UG 2. Pit Office HLC-1 CH1 UA-2/CH3 UA-2 3. HLC-III Colony CH1 UA-3/CH3 UA-3 4. Babupeth Area/ CH1 UA-4/CH3 UA-4 Regular monitoring is done by authorized Agency Central Mine Planning & Design Institute Ltd. Kasturba Nagar, Jaripatka, Nagpur and quarterly reports are submitted to State Pollution Control Board.
iv)	Data on ambient air quality (RPM, SPM, SO2, NOx & CO) should be regularly submitted to the Minstry including its Regional Office at Bhopal and the State Pollution Control Board/Central Pollution Control Board once in a six months.	Quarterly data on ambient air quality (RPM, SPM, SO2, Nox & CO) is regularly submitted to State Pollution Control Board. The same report is being submitted to the Ministry including its Regional Office at Bhopal and Central Pollution Control Board once in a six months. The report for April-2023 to August- 2023 is enclosed.
v)	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dump trucks, (loading & unloading) should be provided and properly maintained.	Complied

vi)	Adequate measures should be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc should be provided with ear plugs/muffs,	Complied
vii)	Industrial waste water (Workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil & grease trap should be installed before discharge of workshop effluents.	U/G mine hence no ETP required
viii	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting and mineral should be covered with tarpaulin and optimally loaded.	NA.
ix)	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Well established environmental laboratory exists at CMPDI
x)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillances program of the workers should be undertaken periodically to observe any contradictions due to exposure to coal dust and take corrective measures, if needed	Mining operations closed since 12/10/2017 Every worker is subjected to periodic medical examination once in 5 years and workers engaged in U/G mines and having age above 50 years are examined once in 2 years. Based on the results of periodic medical examination, appropriate medical care & assistance is given to the affected worker.
xi)	A separate environmental management cell with suitable qualified personnel should be set - up under the control of a Senior Executive, who will report directly to the Head of the Company.	At project level, Environmental management cell is headed by Sub Area Manager and is assisted directly by Project Nodal Officer (ENV)/SE (C) at area level, Chief General Manager heads the cell assisted by Area Nodal Officer (ENV). At WCL H.Q./Corporate level HOD (ENV) heads the environmental department assisted by multi disciplinary team & qualified and trained engineers.
xii)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bhopal.	Funds for environmental protection measures are kept separate and year-wise expenditure is reported through six monthly EMP compliance reports

	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Full co-operation to the officer(s) of the Regional office shall be done by furnishing the requisite data/information/monitoring reports.	
1	A copy of clearance letter will be marked to concerned panchayat/local NGO. If any from whom and suggestion/representation has been received while processing the proposal.	Already Complied	
22)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office; District Industry Centre and Collector's office/Tahsildar's office for 30 days.	Not Applicable.	
xvi	The Project authorities should advertise at lease in two local news papers 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 web site of the Ministry of Environment & Forests at http://envfor.nic.in.	Already Complied.	
3	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted	
4	Failure to comply with any of the conditions mentioned above may result withdrawal of this clearance and attract action under the provisions of 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	

COLLIERY MANAGER HINDUSTHAN LALPETH COLLIERY NO.1, CHANDRAPUR

SUB AREA MANAGER

Jacha

SUB ÅREA MANAGER HL SUB AREA AREA NODAL OFFICER (ENV.) CHANDRAPUR AREA.

# **SALIENT FEATURES OF THE PROJECT**

Name of project	:	Hindusthan Lalpeth Colliery No.I & III
Capacity of project	:	0.18 Million Te./Yr.
Capital Investment	:	24.27 Crore
Life of project	:	18 years
Land Required	:	748.97 Ha.
No. of Seams/Seam thickness	:	15.45 m to 17.45 m.
Depth of Working (Maximum)	:	27.00 m. to 310.00 m.
Total Coal Production	:	10.640 Million Te. (Since 1973)
Environment Provision Including R & R	:	Enclose Annexure-'C' (Chapter V, Page No.76, 97, 98, 99)

# SALIENT FEATURES OF ENVIRONMENT MANAGEMENT PLAN

Sl	Environmental issues	Already practiced	Proposed
1	Air Pollution	Green belt, Water Spraying ,Black topping of roads	Mine Closed
2.	Water Pollution	Sedimentation ponds.	Mine Closed
3.	Water conservation	Excess mine water pumped out after treatment is let off into surface drainage system,	To be continued.
4.	Noise Pollution	Green Belt, use of personal protective gears, proper maintenance of machinery, training of workmen & PME.	Mine Closed
5.	Solid Waste	Not Applicable	Not applicable
6.	Land degradation	Not applicable	Not applicable
7.	Erosion & sediment	Not applicable	Not applicable
8.	Top soil	Not applicable	Not applicable
9.	Ground vibration	Not applicable	Mine Closed
10	Wildlife conservation	Not applicable	Not applicable
11	Forest Protection	As specified in approved letter	To be continued.
12	Others (specify)	Social welfare/community development works already carried out in nearby villages	To be continued.

# PHOTOGRAPHS OF ENVIRONMENTAL WORKS AT HINDUSTAN LALPETH (1& III) UG

# **A) PLANTATION AT HLC**





# B) BLACK TOPPED SAND TRANPORT ROAD





# C) CHP AT HLC



# D) FIXED SPRINKLERS AT HLC RLY SIDING





#### No.J-11015/182/2006-IA.II(M) Government of India Ministry of Environment & Forests

Paryavaran Bhawan, C.G.O.Complex, Lodi Road, New Delhi -110003.

Dated: 17th October 2006

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

Sub: Expansion of Hindustan Lalpeth Underground (I & III) Coalmine Project (0.14 MTPA to 0.18 MTPA.) of M/s Western Coalfields Ltd. (WCL), located in village Babupeth, Tehsil & District Chandrapur, Maharashtra- environmental clearance - reg.

Sit,

This has reference to letter No. 43011/80/2006-CPAM dated 21.06.2006 forwarding your application and your letter dated 05.04.2006 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for expansion in production of coal in the existing Hindustan Lalpeth Underground (I & III) Coalmine Project. The total lease area is 748.97 ha, of which 67.96 ha is agricultural land, 334.25 ha is forestland and 346.76 ha is wasteland. It is proposed to work in an additional area of 41.07 ha of Mahakali UG mine. Forestry clearance has not been obtained. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. However, the Junona RF is situated at a distance of about 4m form the mine site. The Erai River flows at a distance of 6.7 km from the lease boundary. It is not proposed to modify the existing drainage of the area. The project does not involve R&R. Of the surface area, 31.60 ha is for sand stock yards, 4.32 ha is for minerals toarge, 2.80 ha is for roads, 3.50 ha is for township, an 659.57 ha is for mining. Mining will be underground by semi-mechanised method. Controlled blasting is involved. Expansion of the rated capacity of the mine is from 0.14 MTPA to 0.18 million tonnes per annum (MTPA) of coal production. Coal production from HLC-1 is 297 TPD and from HLC-III is 130 TPD. Combined mineral transportation from HLC-I and HLC-III is 427 TPD of coal of which 331 TPD is by road by use of 60 vehicles per day and 96 TPD is by rail. Ultimate working depth of the mine is 310m below ground level (bgl). For HLC-1 and 260m bgl for HLC-III. Water table is in the range of 2.8m -11.35 m bgl in the core zone and 2.3-13.2 m bgl in the buffer zone. Mining will intersect water table. Peak water demand is 5964 m3/d of water, of which water requirement of HLC-I is 3120 m3/d and for HLC-III is 2844 m3/d, and is met from mine sump/pit water. Life of the mine at the rated capacity is 20 years. Public Hearing was held on 20.10.2005. NOC has been obtained on 13.03.2006. The project has been approved by Department of Coal on 31.10.1980. The capital cost of the project is Rs. 767 lakhs.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Hindustan Lalpeth Underground Expansion Coal Project of M/s WCL over a lease area of 748.97 ha for production of coal of 0.18 MTPA rated capacity under the provisions of the Environmental Impact Assessment Notification, 2006 subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

(i)

The lease areas of Hindustan Lalpeth UG and of Mahakali UG shall be revised and recast before the mine working of the present project progresses into the lease area of the Mahakali UG Project.

- (ii) All the conditions stipulated by the SPCB in their NOC shall be effectively implemented.
- (iii) No mining shall be undertaken in lease area falling in forestland for which forestry clearance has not been obtained under the provisions of the Forest Conservation Act, 1980.
- (iv) Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.
- (v) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provided adequate retention period to allow proper settling of silt material.
- (vi) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- (vii) Drills should be wet operated only.
- (viii) Controlled blasting should be practiced with use of delay detonators.
- (ix) A progressive afforestation plan shall be prepared and implemented over the mine lease area and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township outside the lease areas, etc, by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (8) Regular monitoring of groundwater level and quality should be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity should 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 should be submitted to the Ministry of Environment & Forests and tot eh Central Pollution Control Board quarterly within one month of monitoring.
- (xi) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (vii) The company shall obtain approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.
- (viii) Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP wastewater.
- (viv) 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.

- (xv) Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional office at Bhopal.
- (xvi) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- (xvii) Consent to Operate shall be obtained before starting mining operations.
- B. General Conditions
- (i) No change in mining technology and scope of working should 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 should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Data on ambient air quality (SPM, RPM, SO2 and NOx) should 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.
- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.
- (vi) Adequate measures should 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 should be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.
- (viii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory should 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 should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

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

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

- The funds earmarked for environmental protection measures should e kept in separate (xii) account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.
- The Regional Office of this Ministry located at Bhopal shall monitor compliance of the (xiii) 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.
- A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any (Sig): suggestion/representation has been received while processing the proposal.
- State Pollution Control Board should display a copy of the clearance letter at the Regional  $(2\pi)$ Office, District Industry Conmeland Collector's Office/Tehsildar's Office for 30 days.

The Project authorities should advertise at least in two local newspapers widely circulated invit 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.

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

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

The above conditions will be enforced inter-alia, under the provisions of the Water 15 (Precention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1956 and the Public Liability Insurance Act, 1991 along with their amendments and Rules.

(Dr.T.Chandini) Additional Director

- Cepy to:
- 1. Secretary, Ministry of Coal, New Delhi ...
- 2. Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg., Madam Cama Road, MUM3 AI - 400032...
- 3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arear Colony, Bhopal - 462016.
- 4. Chairman, Maharsashtra State Felinition Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai -
- Chairman, Central Pollution Central Board, CBD-cum-Office Complex, East Arjun Nagar, New

Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandin Marg, New Delhi.

- 1/7. Sim M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg, Laxminagar, New Delhi,
  - 8. District Collector, Chandrapur, Gevernment of Maharashtra.
  - 9. El Division, Ministry of Environment & Forests, New Delhi, 10. Monitoring File

10. Guard File 11. **Record** File

# MAHARASHTRA POLLUTION CONTROL BOARD

Phone: 24010437/24014701/24020781 : 24024068/24023516 Fax Website: http://mpcb.gov.in. E-Mail: jdair@mpcb.gov.in



KALPATARU POINT, 3rd Floor, Sion-Matunga Scheme Rd. No.8, Opp. Sion Circle, Sion (East), Mumbai-400 022.

#### RED/LSI

Date: 07/04/2017 Consent No: BO/JD(APC)/ UAN No. 1997/R/CC- O 24

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 Authorisation / Renewal of Authorisation under Rule 6 of the Hazardous and Other Wastes (Management and Transboundry Movement) Rules, 2016.

[To be referred as Water Act, Air Act and H&OW (M&TM) Rules respectively].

CONSENT is hereby granted to,

M/s. Western Coal Fields Ltd., Hindustan Lalpeth Colliery Mine 1 & 3 Post, Hindustan Lalpeth Colliery, Tal & Dist. Chandrapur

located in the area declared under the provisions of the Water Act, Air act and Authorization under the provisions of H & OW(M&TM) Rules and amendments thereto subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

- The Consent to Operate is granted for a period up to: 31/03/2020 or up to 1. validity of mine lease period whichever is earlier.
- The Consent is valid for the activity of Mining of Coal over a mining lease 2. area of 748.97 Ha

Sr. No.	Product Name	Maximum Quantity	UOM
1	Coal Mining	0.18	Million Ton/Annum

#### CONDITIONS UNDER WATER ACT: 3.

- The daily quantity of trade effluent from the factory shall not exceed 655 m3/d. (i) (Including Mine Discharge).
- The daily quantity of sewage effluent from the factory shall not exceed 150 m<sup>3</sup>/d. (ii)
- (iii) Trade Effluent Treatment: The applicant shall provide comprehensive treatment system consisting of primary / secondary and/or tertiary treatment as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

stanua	100.			0.0	
1)	pH	Between	5.5 to	9.0	
2)	Suspended Solids	Not to exceed	100	mg/l.	
3)	BOD 3days 27 Deg. C.	Not to exceed	30	mg/l.	
	Oil & Grease	Not to exceed	10	mg/l.	
4)	Total Dissolved Solids	Not to exceed	2100	mg/l.	
5)	Chlorides	Not to exceed	600	mg/l.	
6)		Not to exceed	1000	mg/l.	
7)	Sulphate	Not to exceed	10	mg/l.	
8)	Nitrate Nitrogen	Not to exceed	1	mg/L	(
9)	Phenolic	NOT TO EXCEED			-

Trade Effluent Disposal: The treated effluent shall be used for spraying mine (iv)

pits to the maximum possible extent and excess shall be discharged into local nalla only after achieving above standards. The project authorities shall take proactive initiatives for use of this excess water for agricultural purposes in the vicinity of mine.

- Sewage Effluent Treatment: The applicant shall provide comprehensive (V) treatment system as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards.
  - 100 mg/l. Not to exceed Suspended Solids (1) 100 mg/l.
    - Not to exceed BOD 3 days 27° C.
- (2)Sewage Effluent Disposal: The treated domestic effluent shall be used on land (vi) for gardening / irrigation purpose only.
- Non-Hazardous Solid Wastes: (vii) Treatment Disposal Quantity Type of waste The waste i.e. Over burden shall be disposed for by means of backfilling of Reclamation of the land.

(viii) Other conditions: The industry shall monitor effluent quality regularly.

The applicant shall comply with the provisions of the Water (Prevention & 4. Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and Amended Rules, 2003 there under:

water consumption for the following categories is as under

Sr No	Consumption	Quantity
1	Domestic	210.0 CMD
2	Mine Discharge	655.0 CMD
3	Spraying, Workshop, dust Suppression	120.0 CMD
4	Sand stowing	- CMD
5	Other uses like gardening Etc	0.0 CMD

#### CONDITIONS UNDER AIR ACT: 5.

The applicant shall install a comprehensive control system consisting of (1) control equipments as is warranted with reference to generation of emission and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards:

## (A) Standards for Ambient Air Pollutants:

- (i) Suspended Particulate Matter [SPM] Not to exceed 500 ug/m<sup>3</sup>
- Respirable Particulate Matter [RSPM] Not to exceed 250 ug/m3 (ii) [Size less than 10 micrometer]
- 120 ug/m<sup>3</sup> (iii) Sulphur Dioxide (SO2) Not to exceed 120 ug/m3. Not to exceed (iv) Oxides of Nitrogen (NOx)

## dards for Emissions of Air Pollutants:

and the second se	TOM	Not to exceed	150 mg/Nm <sup>3</sup>
(i)	TPM		
(ii)	SO <sub>2</sub>	Not to exceed	- Kg/Day

## (C) Control Equipment:

(1)

- Coal handling plant will be provided with Dust Collector and Automatic Water Sprinkler.
- Scientific spraying of water on all working area, dump area, stock piles (ii) with the help of appropriate dust suppression system.
- Coal shall be properly covered during transportation. (iii)
- The applicant shall carry out tree plantation along road side, around (iv) dumps or Compulsory a forestation 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 and height is developed between mining area/road and surrounding environment.
- Black topped metal led roads shall be provided and well maintained to (V) prevent dust formation.

- (vi) Overloading of dumpers shall be avoided to prevent spillages.
- (vii) Correct type and quantity of explosive shall be used to avoid excess dust formation and vibration in the surrounding area.
- (viii) The slope of the over burden shall have slope but not more than 28 degree to the horizontal. The overburden shall be properly covered by vegetation for Stabilization.
- (ix) Coal transportation shall be done by installing conveyors wherever possible & mechanically covered closed trucks shall be used for transportation.

(11)	The applicant sha	Il observe the following	ng fuel pattern:-
1.07	Sr.No.	Type of Fuel	Quantity
	1.0	Diesel	600 Liter/month
	1002		

(III) The applicant shall erect the chimney(s) of the following specifications:-

## Sr.No. Chimney attached to

Height in Mtrs.

- (IV) The applicant shall provide minimum three ambient air quality monitoring stations within mining area which should be monitored for SPM, RSPM, SO<sub>2</sub>, 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 continuous monitoring done shall be made available for inspection to the officers of the Board.
- (V) 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
1	Along road	65 (Commercial Area)	20
2	In Colonies	55 (Residential Area)	20
3	Near Opencast Mines	75 (Industrial Area)	10 (*40)
4	Near CHPs	75	30
5	Near Shaft	75	20
6	Near Mine exhaust fan	75	>50 reen belt of sufficient width

(\* The Open Cast Mine needs to be surrounded by a green belt of sufficient width as per the guidelines of Design Institute Ltd. (A Subsidiary of Coal India Ltd.) if the residential complexes are very close).

#### (VI) Other Conditions:

1 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 equipments, the production process connected to it shall be stopped.

 If Coal Washeries are installed, then follow the conditions of the Ministry of Environment & Forests, Government of India's Notification No.Q.15017/13/9 CPW, dated 27th January, 1999 strictly.

# 6. CONDITIONS UNDER H & OW (M &TM) RULES, 2016:

(i) The applicant shall handle hazardous wastes as specified below:

Sr.No.	Item No. as per Sch-I	Type of Waste	Quantity	Disposal
		Nil		

7. General conditions:

- (i) The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30<sup>th</sup> September every year on available open plot area, no. of trees surviving as on 31<sup>st</sup> March of the year and no. of trees planted by September end.
- (ii) The applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by he applicant and operate the same in case of power failure to maintain compliance with the terms and conditions of the consent. In the absence of same, the applicant shall stop, reduce or otherwise, control production to abide by terms & conditions of this consent regarding pollution levels.
- (iii) The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent. The applicant shall not change or alter quantity, quality, the rate of discharge, temperature or the mode of the effluent/ emissions or hazardous wastes or control equipments provided for without previous written permission of the Board.
- (iv) The firm shall submit MPCB, the Environmental Statement Report for the financial year ending 31<sup>st</sup> March in the prescribed Form-V as pre the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992 before 30<sup>th</sup> September every year.
- (v) 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. The applicant shall also submit a comparative statement of designed power and chemical consumptions vis-a vis actual power and chemical consumption alongwith Environmental statement.
- (vi) Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers down- stream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
- (vii) The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous wastes to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- (viii) 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.
- (ix) The applicant shall maintain good house keeping and take adequate measures for control of pollution from all sources so as not to cause nuisance to surrounding area / inhabitants. The project authorities shall work out the feasibility of deploying mechanically closed trucks for transportation and submit action plan within 3 months.
- The project authorities shall submit an action plan for using closed coal conveyor belt system in place of truck transportation, wherever the coal transportation distances is less than 3 Kilometers initially, within 3 months.
- 9. The project authorities shall identify critical road sections where the dust generated from coal transportation is likely to affect human population and/or agriculture and take up works of making those roads pucca and clean, so as to reduce dust emissions in 3 months.

- The project authorities shall install well designed water sprinkling arrangements including fixed and mobile sprayers for dust suppression. The augmentation/ up 10. gradation proposal for dust suppression system shall be submitted in 3 months. The project authorities shall give suitable training to field level mine personnel
- 11. and truck drivers on environmental protection and pollution control. The project authorities shall obtain consent for their railway siding operation.
- 12.
- This consent is valid along with the Environmental Clearance granted to the 13.
- This Board reserves the right to amend or add any conditions in this consent 14. and the same shall be binding on the Applicant.
- Industry shall implement mechanical close type transportation system for 15. coal/metal minerals handling trucks.
- applicant shall comply with the conditions stipulated in Environmental Clearance granted by Ministry of Forest & Environment, 16 Govt. of India vide No. J-11015/182/2006-IA.II(M), dtd. 17/10/2006
- The applicant shall extend existing operational BG of Rs. 5,00,000/- drawn in favour of Regional Officer, MPCB Chandrapur within 15 days valid for 17. the period up to 31/07/2020 towards operation and maintenance of pollution control system so as to achieve the consented standards.
- The applicant shall submit the bank guarantees as per BG Regime of coal mine approved in Boards CAC Meeting dt: 03/11/2015 drawn in favour of 18. RO-MPCB, Chandrapur within 15-days valid for one year period. BG regime enclosed at Annex-I.
- Total Capital investment of the Mine is Rs. 24.12/- Crore. 19.

For and On Behalf of the Maharashtra Pollution Control Board,

(Dr. V. M. Motghare) Joint Director (Air Pollution Control)

To,

M/s. Western Coal Fields Ltd., Hindustan Lalpeth Colliery Mine 1 & 3, Post. Hindustan Lalpeth Colliery, Tal & Dist. Chandrapur

Copy to:

1) Regional Officer, MPCB, Chandrapur. 2) Sub-Regional Officer, MPCB, Chandrapur They are directed to obtain BG's from the industry as per consent conditions and submit the compliance of consent conditions along with the monitoring results within one month period.

Chief Accounts Officer, MPCB, Mumbai.

the of

	Amount (Rs.)	DD. No.	Date	Drawn On
Sr. No. 1	2,44,000/-	20338	06/05/2016	SBI Bank
		10 0011	the (DD No. 578	040 dtd, 1/1/2013, UCO

Previous balance consent fee of Rs. 2.94 Lakhs (DD No. Bank) adjusted in this consent. Now no any consent fee balance with Board. 5) Master file.

4) Cess Branch, MPCB.



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# **ENVIRONMENTAL MONITORING REPORT**

# HLP-I & III UG

**CHANDRAPUR AREA** 

### WESTERN COALFIELDS LTD.

JOB NO. 4094423068



**APRIL 2023** 

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
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TEST REPORT NO. RIN/TR/APRIL-23/36 DATE OF ISSUE 30-05-23					30-05-23
NAME OF CUSTOMER GM(ENV.), WCL(HQ), NAGPUR					
TEST REQUIRED         SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2: IS 5182 Part-2:2001(RA 2017)					, ,
SAMPLE DESCRIPTION		AIR SAMPLE	SAMPLING PLAN :		LQR 47
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			13-04-23 TO 15-05-23

SUBSTATION HLC I UG CHUA1							
		PARAMETERS (24 hourly values in $\mu g/m^3$ )					
DATE(dd:mm:yy	) OF SAIVIPLING	SPM	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	
01-04-23	02-04-23	241	147	53	22	16	Clear / Light Breeze
23-04-23	24-04-23	257	161	60	21	14	Cloudy / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

	PIT OFFICE - HLC-I INCLINE CHUA2						
			PARAMETERS (24	4 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	ТО	5	5	2	6	10	CONDITIONS (Sky/ Wind)
01-04-23	02-04-23	247	142	47	20	15	Clear / Light Breeze
23-04-23	24-04-23	251	147	59	17	14	Cloudy / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

HLC-III COLONY CHUA3								
		PARAMETERS (24 hourly values in μg/m <sup>3</sup> )						
DATE(dd:mm:yy	DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	TO	5	5	2	6	10		
01-04-23	02-04-23	133	63	27	13	BDL	Clear / Light Breeze	
27-04-23	28-04-23	169	66	37	11	BDL	Cloudy / Light Breeze	
NAAQS, 2009		-	100	60	80			

RAJIV GANDHI ENGG. COLLEGE CHUA4							
DATE/ddummuu		PARAMETERS (24 hourly values in $\mu g/m^3$ )					
DATE(du:mm.yy	DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	Rainy/Windy
FROM	TO	5	5	2	6	10	
01-04-23	02-04-23	137	61	28	14	BDL	Clear / Light Breeze
27-04-23	28-04-23	150	57	31	12	BDL	Cloudy / Light Breeze
NAAQS, 2009		-	100	60	80	80	



Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-112
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SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)			
SAMPLING METHOD	LSOP 5 PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 13-04-23 TO 15-05-23			

MINE WATER DISCHARGE(HLP-III): CHUW1						
DATE OF SAMPLE	ANALYSIS RESULTS					
COLLECTION	pН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)		
DETECTION LIMIT	2	10	4	2		
01-04-23	7.67	26	24	BDL		
16-04-23	7.6	32	28	BDL		
STANDARDS FOR COAL						
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10		
25/09/2000						

MINE WATER DISCHARGE(HLP-I): CHUW2						
DATE OF SAMPLE	ANALYSIS RESULTS					
COLLECTION	pН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)		
DETECTION LIMIT	2	10	4	2		
01-04-23	7.75	30	40	BDL		
16-04-23	7.72	24	48	BDL		
STANDARDS FOR COAL						
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10		
25/09/2000						



Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR

**Test Report** 



#### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	PLE
Test Required	CPCB PROC	TOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015
SAMPLING METHOD	LSOP 6	

	FAN HOUSE-I:	CHUN1	
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'2023	13-04-23	44.5	43.6
APRIL'2023	26-04-23	43.7	43.5
NOISE POLLUTION	75	70	

	COLONY:	CHUN2	
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
MONTH		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'2023	13-04-23	43.7	43.5
APRIL'2023	26-04-23	43.4	42.2
NOISE POLLUTION	55	45	



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**ENVIRONMENTAL MONITORING REPORT** 

# HLP-I & III UG

CHANDRAPUR AREA

### WESTERN COALFIELDS LTD.

JOB NO. 4094423068



MAY 2023

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

CMPDI RI-IV, NAGPUR
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TEST REPORT NO.		RIN/TR/MAY-23/36 DATE OF ISSUE 30-06-2023					
NAME OF CUSTOMER		M(ENV.), WCL(HQ), NAGPUR					
TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)						
SAMPLE DESCRIPTION		AIR SAMPLE	MPLE SAMPLING PLAN :		LQR 47		
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIE		15-05-23 TO 16-06-23			

	SUBSTATION HLC I UG CHUA1							
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (24					
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	ТО	5	5	2	6	10		
02-05-2023	03-05-2023	251	157	63	21	13	Cloudy / Light Breeze	
16-05-2023	17-05-2023	238	144	58	20	16	Cloudy / Light Breeze	
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	, , , , ,	600	300	-	120	120		

PIT OFFICE - HLC-I INCLINE CHUA2								
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (24					
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	TO	5	5	2	6	10		
02-05-2023	03-05-2023	250	141	47	19	14	Cloudy / Light Breeze	
16-05-2023	17-05-2023	246	140	50	15	12	Cloudy / Light Breeze	
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	, , , , ,	600	300	-	120	120		

	HLC-III COLONY CHUA3						
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (24	4 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	ТО	5	5	2	6	10	
02-05-2023	03-05-2023	172	60	34	10	BDL	Cloudy / Light Breeze
16-05-2023	17-05-2023	135	67	31	12	BDL	Cloudy / Light Breeze
NAAQS	, 2009	-	100	60	80	80	

	RAJIV GANDHI ENGG. COLLEGE CHUA4						
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (24				
DATE(du.min.yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	Rainy/Windy
FROM	TO	5	5	2	6	10	
02-05-2023	03-05-2023	150	59	27	12	BDL	Cloudy / Light Breeze
16-05-2023	17-05-2023	136	60	29	13	BDL	Cloudy / Light Breeze
NAAQS	5, 2009	-	100	60	80	80	



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

SAMPLE DESCRIPTION	Water sam	ater sample				
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)					
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 15-05-23 TO 16-06-23				

MINE WATER DISCHARGE(HLP-III): CHUW1				
DATE OF SAMPLE	ANALYSIS RESULTS			
COLLECTION	рН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03-05-2023	7.72	32	28	BDL
16-05-2023	8.39	30	36	BDL
STANDARDS FOR COAL				
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10
25/09/2000				

MINE WATER DISCHARGE(HLP-I): CHUW2					
DATE OF SAMPLE	ANALYSIS RESULTS				
COLLECTION	рН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)	
DETECTION LIMIT	2	10	4	2	
03-05-2023	7.7	38	44	BDL	
16-05-2023	7.32	26	40	BDL	
STANDARDS FOR COAL					
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10	
25/09/2000					



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC7182
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#### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	OISE SAMPLE			
Test Required	CPCB PROC	PCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015			
SAMPLING METHOD	LSOP 6				

	FAN HOUSE-I:	CHUN1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEV	/EL IN dB(A)
	DATE OF SAMIFLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'2023	13-05-2023	71.5	69.9
MAY'2023	27-05-2023	70.5	68.8
NOISE POLLUTION	75	70	

	COLONY:	CHUN2		
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMELE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
MAY'2023	13-05-2023	44.4	43.3	
MAY'2023	27-05-2023	42.8	41.9	
NOISE POLLUTION	55	45		

Ashwin B Wasnik

Reviewed by

Q.L

Deepanshu Sahu Authoriesed by

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# ENVIRONMENTAL MONITORING REPORT

# HLP-I & III UG

**CHANDRAPUR AREA** 

### WESTERN COALFIELDS LTD.

JOB NO. 4094423068



JUNE 2023

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
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TEST REPORT NO.		DATE OF ISSU	JE	31-07-23			
NAME OF CUSTOMER GM(ENV.), WCL(HQ), NAGPUR							
TEST REOLURED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2: IS 5182 Part-2:2001(RA 2017)						
SAMPLE DESCRIPTION AIR SAMPLE SAMPLING PLAN : LQR 4				LQR 47			
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			17-06-23 TO 15-07-23		

SUBSTATION HLC I UG CHUA1							
		PARAMETERS (24 hourly values in $\mu g/m^3$ )					
DATE(dd:mm:yy) OF SAMPLING		SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	CONDITIONS (Sky/ Willu)
14-06-23	15-06-23	257	151	60	20	14	Cloudy / Light Breeze
20-06-23	21-06-23	240	138	53	18	15	Cloudy / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

PIT OFFICE - HLC-I INCLINE CHUA2							
		PARAMETERS (24 hourly values in $\mu$ g/m <sup>3</sup> )					
DATE(dd:mm:yy) OF SAMPLING		SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	ТО	5	5	2	6	10	
14-06-23	15-06-23	244	137	51	18	13	Cloudy / Light Breeze
20-06-23	21-06-23	248	130	48	15	11	Cloudy / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

	HLC-III COLONY CHUA3							
		PARAMETERS (24 hourly values in μg/m <sup>3</sup> )					ENVIRONMENT CONDITIONS (Sky/Wind)	
DATE(dd:mm:yy	DATE(dd:mm:yy) OF SAMPLING SPM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>2</sub> SO <sub>2</sub>							
FROM	TO	5	5	2	6	10		
14-06-23	15-06-23	170	56	39	10	BDL	Cloudy / Light Breeze	
20-06-23	21-06-23	149	60	33	12	BDL	Cloudy / Light Breeze	
NAAQS	i, 2009	-	100	60	80			

	RAJIV GANDHI ENGG. COLLEGE CHUA4							
DATE/ddummuu		PARAMETERS (24 hourly values in $\mu g/m^3$ )						
DATE(du.mm.y)	) OF SAMPLING	SPM	SPM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>2</sub> SO <sub>2</sub>			Rainy/Windy		
FROM	TO	5	5	2	6	10		
14-06-23	15-06-23	143	52	30	12	BDL	Cloudy / Light Breeze	
20-06-23	21-06-23	131	67	25	11	BDL	Cloudy / Light Breeze	
NAAQ	5, 2009	-	100	60	80	80		



Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample					
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,C &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)					
SAMPLING METHOD	LSOP 5 PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 17-06-23 TO 15-07-23					

MINE WATER DISCHARGE(HLP-III): CHUW1							
DATE OF SAMPLE	ANALYSIS RESULTS						
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg						
DETECTION LIMIT	2	10	4	2			
14-06-23	8.2	28	36	BDL			
20-06-23	8.1	24	40	BDL			
STANDARDS FOR COAL							
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10			
25/09/2000							

MINE WATER DISCHARGE(HLP-I): CHUW2							
DATE OF SAMPLE	ANALYSIS RESULTS						
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/						
DETECTION LIMIT	2	10	4	2			
14-06-23	8.16	34	48	BDL			
20-06-23	8.18	38	52	BDL			
STANDARDS FOR COAL							
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10			
25/09/2000							



Environment Laboratory CMPDI RI-IV, NAGPUR

**Test Report** 



#### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	PLE			
Test Required	CPCB PROC	CPCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015			
SAMPLING METHOD	LSOP 6				

	FAN HOUSE-I:	CHUN1		
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
JUNE'2023	13-06-23	74.6	73.5	
JUNE'2023	19-06-23	66.6	65.8	
NOISE POLLUTION	75	70		

	COLONY:	CHUN2		
	NOISE LEV	LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
JUNE'2023	13-06-23	42.7	41.6	
JUNE'2023	JUNE'2023 19-06-23			
NOISE POLLUTION	55	45		



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**ENVIRONMENTAL MONITORING REPORT** 

# HLP-I & III UG

**CHANDRAPUR AREA** 

# WESTERN COALFIELDS LTD.

JOB NO. 4094423068



**JULY 2023** 

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	TC-7102
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TEST REPORT NO.	RIN/TR/JULY-23/36 DATE OF ISSUE 31-08-2023						
NAME OF CUSTOMER GM(ENV.), WCL(HQ), NAGPUR							
TEST REQUIRED         SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidan document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)							
SAMPLE DESCRIPTION		AIR SAMPLE		SAMPLING PLAN :		LQR 47	
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:				16-07-23 TO 14-08-23	

SUBSTATION HLC I UG CHUA1								
		PARAMETERS (24 hourly values in $\mu g/m^3$ )						
DATE(dd:mm:yy) OF SAMPLING		SPM	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM	TO	5	5	2	6	10		
10.07.2023	11.07.2023	262	154	58	22	15	Cloudy Sky/Light Breeze	
22.07.2023	23.07.2023	234	130	49	16	11	Rainy sky/Light Breeze	
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120		

PIT OFFICE - HLC-I INCLINE CHUA2							
			PARAMETERS (24	1 hourly valu	es in μg/m³)		
DATE(dd:mm:yy) OF SAMPLING		SPM	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM TO		5	5	2	6	10	CONDITIONS (Sky/ Willd)
10.07.2023	11.07.2023	250	144	56	20	14	Cloudy Sky/Light Breeze
22.07.2023	23.07.2023	230	130	46	17	10	Rainy sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

HLC-III COLONY CHUA3							
		PARAMETERS (24					
DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	<b>SO</b> <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)	
FROM TO		5	2	6	10	Conditions (Sky) wind)	
10.07.2023	11.07.2023	70	28	15	BDL	Cloudy Sky/Light Breeze	
22.07.2023	23.07.2023	59	22	11	BDL	Rainy sky/Light Breeze	
NAAQS, 2009		100	60	80	80		

RAJIV GANDHI ENGG. COLLEGE CHUA4							
DATE/ddummuu							
DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	Rainy/Windy	
FROM	ТО	5	2	6	10		
10.07.2023	11.07.2023	65	26	13	BDL	Cloudy Sky/Light Breeze	
20.07.2023 21.07.2023		55	20	9	BDL	Rainy sky/Light Breeze	
NAAQS	, 2009	100	60	80	80		



<b>Environment Laboratory</b>
CMPDI RI-IV, NAGPUR

**Test Report** 



SAMPLE DESCRIPTION	Nater sample						
Test Required	IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025 .7,0 &G: IS 3025-Part 39:1991(RA 2019) & BC	Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C DD: IS 3025 (Part 44): 1993 (RA 2019)					
SAMPLING METHOD	OP 5 PERIOD OF PERFORMANCE OF LAB AG	TIVITIES : 16-07-23 TO 14-08-23					

MINE WATER DISCHARGE(HLP-III): CHUW1							
DATE OF SAMPLE	ANALYSIS RESULTS						
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2			
10.07.2023	8.13	31	32	BDL			
22.07.2023	7.96	24	36	BDL			
STANDARDS FOR COAL							
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10			
25/09/2000							

MINE WATER DISCHARGE(HLP-I): CHUW2				
DATE OF SAMPLE		ANALYSIS F	RESULTS	
COLLECTION	рН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
10.07.2023	8.05	33	40	BDL
22.07.2023	7.86	40	48	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10



CMPDI RI-IV, NAGPUR

## Environment Laboratory CMPDI RI-IV, NAGPUR

**Test Report** 



## **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAN	1PLE	
Test Required	CPCB PRO	PCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015	
SAMPLING METHOD	LSOP 6		

	FAN HOUSE-I:	CHUN1	
	DATE OF SAMPLE COLLECTION	NOISE LEV	/EL IN dB(A)
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	07-07-2023	67.6	66.5
JULY'23	22-07-2023	68.6	67.9
NOISE POLLUTION	75	70	

	COLONY:	CHUN2	
	DATE OF SAMPLE COLLECTION	NOISE LEV	/EL IN dB(A)
MONTH	DATE OF SAMELE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	07-07-2023	44.4	43.2
JULY'23	22-07-2023	42.8	41.5
NOISE POLLUTION	55	45	



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# ENVIRONMENTAL MONITORING REPORT

# HLP-I & III UG

**CHANDRAPUR AREA** 

### WESTERN COALFIELDS LTD.

JOB NO. 4094423068



**AUGUST 2023** 

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
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TEST REPORT NO.		RIN/TR/AUGUST-23/36 DATE OF ISSUE 30-09-2023			
NAME OF CUSTOMER		im(env.), wcl(hq), nagpur			
ITEST REOLURED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)				
SAMPLE DESCRIPTION AIR SAMPLE SAMPLING PLAN :			NG PLAN :	LQR 47	
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES: 15-08-23 TO 15-09			

	SUBSTATION HLC I UG CHUA1						
DATE(ddummuu)		PARAMETERS (24 hourly values in μg/m <sup>3</sup> )					
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	
01.08.2023	02.08.2023	274	176	57	23	15	Cloudy Sky/Light Breeze
16.08.2023	17.08.2023	265	167	53	26	17	Cloudy Sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

	PIT OFFICE - HLC-I INCLINE CHUA2						
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (24	4 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	NO <sub>2</sub>	<b>SO</b> <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	CONDITIONS (Sky/ Willd)
01.08.2023	02.08.2023	254	159	50	23	18	Cloudy Sky/Light Breeze
16.08.2023	17.08.2023	267	167	55	20	13	Cloudy Sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

	HLC-III COLONY CHUA3					
		PARAMETERS (2	4 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	<b>SO</b> <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	2	6	10	
01.08.2023	02.08.2023	68	26	14	BDL	Cloudy Sky/Light Breeze
16.08.2023	17.08.2023	73	23	12	10	Cloudy Sky/Light Breeze
NAAQS	5, 2009	100	60	80	80	

	RAJIV GANDHI ENGG. COLLEGE CHUA4					
DATE (ddummuu		PARAMETERS	(24 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAIVIPLING	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	Rainy/Windy
FROM	TO	5	2	6	10	
01.08.2023	02.08.2023	67	24	11	BDL	Cloudy Sky/Light Breeze
16.08.2023	17.08.2023	70	28	14	BDL	Cloudy Sky/Light Breeze
NAAQS	5, 2009	100	60	80	80	



Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TO THE REPORT OF
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SAMPLE DESCRIPTION	Water sample			
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)			
SAMPLING METHOD	LSOP 5 PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 15-08-23 TO 15-09-23			

MINE WATER DISCHARGE(HLP-III): CHUW1						
DATE OF SAMPLE		ANALYSIS F	RESULTS			
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/l)					
DETECTION LIMIT	2	10	4	2		
01.08.2023	7.92	25	36	BDL		
16.08.2023	7.8	21	28	BDL		
STANDARDS FOR COAL						
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10		
25/09/2000						

MINE WATER DISCHARGE(HLP-I): CHUW2						
DATE OF SAMPLE		ANALYSIS F	RESULTS			
COLLECTION	pH         TSS (in mg/l)         COD(in mg/l)         O & G(in mg/l)					
DETECTION LIMIT	2	10	4	2		
01.08.2023	7.59	24	32	BDL		
16.08.2023	7.86	28	40	BDL		
STANDARDS FOR COAL						
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10		
25/09/2000						



CMPDI RI-IV, NAGPUR

Environment Laboratory CMPDI RI-IV, NAGPUR

**Test Report** 



#### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	PLE	
Test Required	CPCB PROCTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015		
SAMPLING METHOD	LSOP 6		

	FAN HOUSE-I:	CHUN1	
	DATE OF SAMPLE COLLECTION	NOISE LEV	/EL IN dB(A)
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	08-08-2023	67.9	66.5
AUG'23	26-08-2023	65.8	64.5
NOISE POLLUTION	75	70	

	COLONY:	CHUN2	
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
MONTH	DATE OF SAMELE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	08-08-2023	43.5	42.6
AUG'23	26-08-2023	42.9	41.6
NOISE POLLUTION	55	45	



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# ENVIRONMENTAL MONITORING REPORT

# HLP-I & III UG

**CHANDRAPUR AREA** 

### WESTERN COALFIELDS LTD.

JOB NO. 4094423068



SEPTEMBER 2023

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
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TEST REPORT NO.	RIN/TR/SEPT-23/37 DATE OF ISSUE 27-1				27-10-23		
NAME OF CUSTOMER		GM(ENV.), WCL(HQ), NAGPUR					
TEST REOLURED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)						
SAMPLE DESCRIPTION	AIR SAMPLE SAMPLI			NG PLAN :	LQR 47		
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIE	S:		15-09-23 TO 15-10-23		

SUBSTATION HLC I UG CHUA1							
DATE(dd:mm:yy) OF SAMPLING			PARAMETERS (2	4 hourly valu	es in μg/m³)		
DATE(dd:mm:yy	) OF SAMPLING	SPM	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	<b>SO</b> <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	
01.09.2023	02.09.2023	282	181	59	27	18	Cloudy Sky/Light Breeze
17.09.2023	18.09.2023	269	170	53	24	15	Clear Sky/Light Breeze
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	, , , , , ,	600	300	-	120	120	

PIT OFFICE - HLC-I INCLINE CHUA2							
DATE/ddummuu		PARAMETERS (24 hourly values in µg/m <sup>3</sup> )					
DATE(du.mm.yy	DATE(dd:mm:yy) OF SAMPLING SPM PM <sub>10</sub> PM <sub>2.5</sub> NO <sub>2</sub> SO <sub>2</sub>			ENVIRONMENT CONDITIONS (Sky/Wind)			
FROM	TO	5	5	2	6	10	
01.09.2023	02.09.2023	280	179	57	24	19	Cloudy Sky/Light Breeze
17.09.2023	18.09.2023	275	172	52	21	13	Clear Sky/Light Breeze
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	, , , , ,	600	300	-	120	120	

HLC-III COLONY CHUA3						
		PARAMETERS (2				
DATE(dd:mm:yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	то	5	2	6	10	
01.09.2023	02.09.2023	75	24	16	10	Cloudy Sky/Light Breeze
17.09.2023	18.09.2023	70	27	12	BDL	Clear Sky/Light Breeze
NAAQS	5, 2009	100	60	80	80	

		RAJIV GANDHI ENGG. COLL	EGE CHUA4			
DATE(dd:mm:yy) OF SAMPLING						
DATE(dd.mm.yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>2</sub>	SO <sub>2</sub>	Rainy/Windy
FROM	TO	5	2	6	10	
01.09.2023	02.09.2023	76	25	11	BDL	Cloudy Sky/Light Breeze
17.09.2023	18.09.2023	72	21	14	10	Clear Sky/Light Breeze
NAAQS	5, 2009	100	60	80	80	



Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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SAMPLE DESCRIPTION	Water sample
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)
SAMPLING METHOD	LSOP 5 PERIOD OF PERFORMANCE OF LAB ACTIVITIES : 15-09-23 TO 15-10-23

MINE WATER DISCHARGE(HLP-III): CHUW1							
DATE OF SAMPLE	ANALYSIS RESULTS						
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2			
02.09.2023	7.79	20	32	BDL			
18.09.2023	7.54	16	24	BDL			
STANDARDS FOR COAL							
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10			
25/09/2000							

MINE WATER DISCHARGE(HLP-I): CHUW2							
DATE OF SAMPLE	ANALYSIS RESULTS						
COLLECTION	pH         TSS (in mg/l)         COD(in mg/l)         O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2			
02.09.2023	7.57	22	24	BDL			
18.09.2023	7.27	26	32	BDL			
STANDARDS FOR COAL							
MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10			
25/09/2000							



Environment Laboratory CMPDI RI-IV, NAGPUR

**Test Report** 



#### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	PLE
Test Required	CPCB PROC	TOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015
SAMPLING METHOD	LSOP 6	

	CHUN1			
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
SEPT'23	09-09-23	67.6	66.5	
SEPT'23	25-09-23	67.5	66.6	
NOISE POLLUTION	75	70		

	COLONY:	CHUN2		
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)		
MONTH		DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
SEPT'23	09-09-23	42.5	41.9	
SEPT'23	T'23 25-09-23		42.5	
NOISE POLLUTION	(REGULATION AND CONTROL) RULES	55	45	



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महाराष्ट्र प्रदूषण नियंत्रण मंडळ

<b>FORM V</b> Environmental Audit Report for the financial Year er	nding the 31st March 2020	
Unique Application Number MPCB-ENVIRONMENT_STATEMENT-0000023618		<b>bmitted Date</b> -05-2020
Company Information		
<b>Company Name</b> M/s Western Coalfields Limited, Hindustan Lalpeth Colliery 3	Application UAN number y 1 & MPCB-CONSENT-0000001997	
<b>Address</b> POST- HINDUSTAN LALPETH COLLIERY		
<b>Plot no</b> NA	<b>Taluka</b> Chandrapur	<b>Village</b> WCL-Chandrapur Area
<b>Capital Investment (In lakhs)</b> 2662.92	<b>Scale</b> L.S.I.	<b>City</b> Chandrapur
<b>Pincode</b> 442507	<b>Person Name</b> Shri. R. K. Dhabaria	<b>Designation</b> Sr. Manager
<b>Telephone Number</b> 8275967562	Fax Number -	<b>Email</b> managerhlc1@gmail.com
<b>Region</b> SRO-Chandrapur	<b>Industry Category</b> Red	Industry Type R35 Mining and ore beneficiation
Last Environmental statement submitted online yes	<b>Consent Number</b> BO/JD(APC)/UAN No. 1997/R/CC-0241	<b>Consent Issue Date</b> 07.12.2017
<b>Consent Valid Upto</b> 31.03.2020		
Product Information Product Name Con	sent Quantity Actual Qu	antity UOM

COAL	0.18	0	MT/A
<b>By-product Information</b> <b>By Product Name</b> NA	Consent Quantity -	Actual Quantity -	<b>UOM</b> CMD

1) Water Consumption in m3/day		
Water Consumption for	Consent Quantity in m3/day	Actual Quantity in m3/day
Process	120	100
Cooling	-	-
Domestic	210	120
All others	-	-
Total	330	220

<b>Particulars</b> Daily Trade Effluent		<b>Cons</b> 655	sent Quantit	<b>ty Ac</b> 60	t <b>ual Quantit</b> 0	-	<b>Jom</b> CMD
2) Product Wise Prod process water per ui	cess Water Consumption nit of product)	on (cubic meter of					
Name of Products (P				the Previous		e current	иом
Coal (Cubic Meter/Tonr	1e)		<b>financia</b> 0	l Year	<b>Financial</b> 0	year	CMD
3) Raw Material Con unit of product)	sumption (Consumption	n of raw material per					
Name of Raw Materi	als		During the		During the		иом
Explosives (KG/Tonne)			<b>financial Y</b> 0	ear	<b>Financial y</b> 0	ear	
4) Fuel Consumption	1						
Fuel Name		Consent quantity		Actual Qu	antity	UOI	
Diesel		7.2		0		KL/A	
	l to environment/unit o	f output (Parameter as	specified in	n the consent	issued)		
[A] Water							
Pollutants Detail		Concentration of Pollu discharged(Mg/Lit) Ex PH,Temp,Colour		Percentage from prescri standards w	bed		
	Quantity	Concentration		%variation		Standard	Reason
WATER REPORT ATTACHED IN STEP I	-	-		-		-	-
<mark>[B] Air (Stack)</mark> Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pol discharged(Mg/NM3)		Percentage from prescri standards w	bed		
	Quantity	Concentration		%variation		Standard	Reason
NO AIR STACK MONITORING	-	-		-		-	-
HAZARDOUS WASTE	5						
1) From Process							иом
Hazardous Waste Ty	pe Total During Previo NA	ous Financial year	<b>Total</b> NA	During Currei	nt Financial y	year (	KL/A
Hazardous Waste Ty 2) From Pollution Co Hazardous Waste Ty	NA Introl Facilities	ous Financial year revious Financial year	NA	During Currei			
2) From Pollution Co Hazardous Waste Ty SOLID WASTES	NA ontrol Facilities ope Total During Pi		NA Tota				KL/A
2) From Pollution Co Hazardous Waste Ty SOLID WASTES 1) From Process	NA Introl Facilities Total During Pa NA	revious Financial year	NA Tota NA	During Curre	ent Financial	year	KL/A <b>UOM</b> Ton/Y
2) From Pollution Co Hazardous Waste Ty SOLID WASTES 1) From Process	NA ontrol Facilities ope Total During Pi	revious Financial year	NA Tota NA		ent Financial	year	KL/A
2) From Pollution Co Hazardous Waste Ty SOLID WASTES 1) From Process Non Hazardous Wast	NA potrol Facilities rpe Total During Pl NA te Type Total During P NA potrol Facilities	revious Financial year	NA Tota NA Tot	During Curre	ent Financial rent Financia	year al year	KL/A UOM Ton/Y UOM

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

<b>Qty of Hazardous Waste</b> NA	<b>UOM</b> KL/A	Concentration of Hazardous Waste -
Qty of Solid Waste	UOM	Concentration of Solid Waste
NA	CMD	-
	NA Qty of Solid Waste	NA KL/A Qty of Solid Waste UOM

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	0	0	0	922731	0 (Mine has been closed permanently since 12.10.2017 )	-

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<br/>ProtectionEnvironmental Protection Measures<br/>Capital Investment (Lacks)CAPITAL EXPENDITUREAIR POLLUTION CONTROL, WATER<br/>POLLUTION CONTROL, PLANTATION0 (Mine has stopped working since<br/>12.10.2017 & is preparing for<br/>permanent closure)

[B] Investment Proposed for next Year Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
CAPITAL INVESTMENT	WATER POLLUTION CONTROL (Construction of STP for colony)	0

Any other particulars in respect of environmental protection and abatement of pollution.

Particulars Documents as asked

Name & Designation SHRI R. K. DHABARIA, SR. MANAGER

# **REPORT ON**

# **MONITORING OF GROUND WATER LEVEL**

## OF

# HINDUSTAN LALPETH UG I & II MINE, CHANDRAPUR AREA

(M.S) WESTERN COALFIELDS LTD.



PERIOD- DEC 2022 (POST-MONSOON), JAN-FEB -2023 (WINTER) & MAY-2023 (PRE-MONSOON)



# M/s Anacon Laboratories Pvt. Ltd., Nagpur

MoEF&CC (GOI) and NABL Recognized Laboratory ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Lab. & Consultancy: FP-34, 35, Food Park, MIDC, Butibori, Nagpur – 441122 Mob: +91-9372960077 Email: ngp@anacon.in Website: <u>www.anaconlaboratories.com</u> Report No. ANqr /PD/20A/2023/199

# 2022-23 & 2023-24

# **<u>Certificate</u>**

The Ground water Level monitoring has been carried out with due diligence and the Monitoring of Ground Water Level of all observation wells Report have been prepared as per the scope of work order no. वेकोलि/मुख्यालय/पर्यावरण/14-L/77 on date: 08.12.2022.

The report encompasses the Monitoring of Ground water level reports of observation wells pertaining to the HINDUSTAN LALPETH UG I & II MINE, of the Chandrapur District, Maharashtra.

Anacon Laboratories Pvt. Ltd. gratefully acknowledges the full cooperation rendered by concerned WCL Officials for timely completion of the project.

**Ajinkya Nakod** (Geologist)

**Gyanchand Bohra** NABET Accredited EIA Expert for Hydrogeology & Geology

Nagpur. August-2023

NAGP (Dr. D. G. Garway)

Head of Organization Anacon Laboratories Pvt. Ltd., Nagpur

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### **INTRODUCTION**

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 Chhindawara 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/77 on date: 08.12.2022.

This Ground Water Level Monitoring report is prepared for HINDUSTAN LALPETH UG I & II MINE, mines of Chandrapur area of WCL for 3 seasons i.e. DEC 2022(POST-MONSOON), JAN-FEB 2023 (WINTER) & MAY-2023 (PRE-MONSOON). These mine IS located in Chandrapur District of Maharashtra.

### **GENERAL HYDROGEOLOGICAL CONDITION**

The major water bearing formations in the district are Alluvium, Lower Gondwana Sandstones, Deccan Trap Basalt, Vindhyan Limestone and Archean metamorphic. Amongst these, the lower Gondwana Sandstones, particularly Kamthi Sandstone forms the most potential aquifer.

### A. <u>HARD ROCK FORMATIONS</u>

### **ARCHEAN METAMORPHICS**

Archeans, which comprise granite and granitic gneiss, occur in most of the eastern part of the district extending north-south from Nagbhid to Gondpipri. 6 These rocks are generally devoid of primary porosity, but weathering, jointing, fracturing, shearing etc., create secondary porosity, within which the ground water generally occurs in phreatic conditions. The depth of weathering ranges from 4 to 12 m bgl and dugwells are generally tapping this zone with yields of up to 30 m3 /day. Contrary to the general perception, the possibility of deep seated fracture zone exists in the area because of tectonic disturbances manifested in the form of dykes observed in the area. Therefore borewells in the depth range of 40-70 m bgl are also successful in this formation at suitable places with yield of 1000 to 35000 lph. High yielding dugwells are generally located in fractured granites.

### VINDHYAN LIMESTONE

In Vindhyans, Limestones are water bearing formation while Sandstone due to their hard and compact nature, has poor ground water potential. The Vindhyan sedimentares mainly occur in north central part of the district around Tadoba and Nagbhid in parts of Chimur, Sindewahi, Bhadravati and Nagbhid talukas and in south eastern part of the district in parts of Chandur and Rajura talukas. Limestones as such are massive but wherever they are cavernous and fractured they are capable of holding water and the ground water generally occurs under phreatic condition in these formations and the discharge in general is poor (up to 15 m3 /day). The borewells drilled by State Govt. agencies in the depth range of 30 to 40 m bgl are successful only at few places where discharge of 10000 lph or above has been observed.

### **DECCAN TRAP BASALT**

Deccan Trap Basalt is observed in small area in the north eastern and south eastern peripheral parts of the district and does not form a promising aquifer in the district. Weathered, jointed and fractured Massive and Vesicular Basalt forms the aquifer in the area. Ground water occurs in phreatic conditions within the depth of 10-15 m, however, borewells drilled have shown presence of fracture zones and thus forming deeper confined and semi-confined aquifers at places. The dugwells yield varies from 15-30 m3 /day when favourably located, whereas borewells yield 1 to 3 lps.

### B. <u>SOFT ROCK FORMATIONS</u>

### **GONDWANA SANDSTONE**

Gondwana formation comprising of Kamthi and Barakar Sandstone and Maleri and Talchir Shale occupy north-south extending elongated stretch in cental and southern parts of the district in parts of Warora, Bhadravati, Chandrapur, Ballarpur, Rajura and Gondpipri 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 phreatic as well as confined conditions in Kamthi Sandstone up to the depth of 80 to 120 m bgl with thickness varying from 34 to 102 m. Barakar Sandstone occurs below Kamthi formation and three granular zones are observed with cumulative thickness of about 72 m within a 300 m thick sandstone-shale sequence. Comparatively Kamthi Sandstone has more ground water potential with yields of up to 20 lps. The other Gondwana formations i.e., Maleri Series (upper Gondwana) and Talchirs (lower Gondwana) have very poor ground water potential and ground water occurs in phreatic condition.

### ALLUVIUM

Alluvium of fluvial origin occurs in narrow patches along the banks of Wardha and Wainganga Rivers and consists of clay, silt with lenticular bodies of sand and gravel. Ground water generally occurs under phreatic conditions down to the depth of 10-15 m. The area in the north eastern part of the district near Brahmapuri along the western bank of Wainganga River and having a spread of about 100 sq. km. forms the most potential alluvial area. The Allluvium in this part is occurs down to 30-35 m and the basement is reported to be formed by Granitic Gneisses. The dugwells yield up to 50 m3 /day when favourably located, whereas shallow tubewells yield varies from 5 to 15 lps.

# HINDUSTAN LALPETH UG I & II MINE, CHANDRAPUR AREA WESTERN COALFIELDS LTD.

PERIOD- DEC 2022(POST-MONSOON), JAN-FEB 2023 (WINTER) & MAY-2023 (PRE-MONSOON)

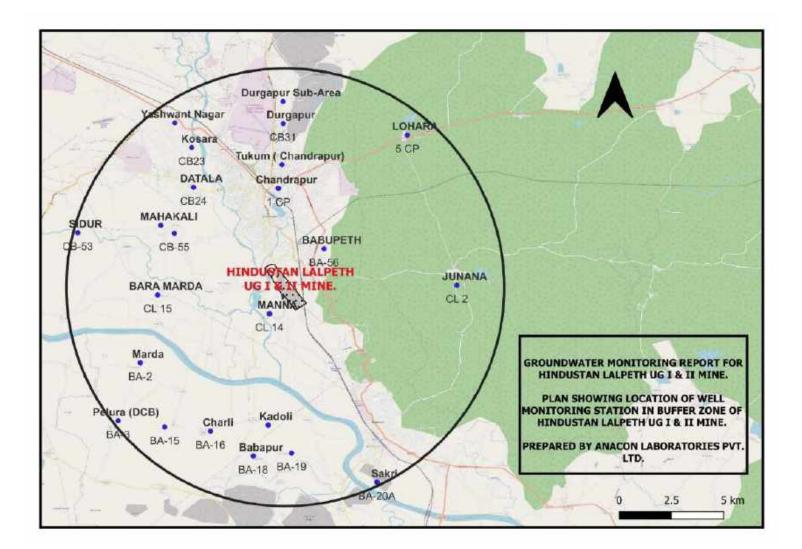


FIGURE-V: GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF HINDUSTAN LALPETH UG I & II)

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia	Well depth	Height of measuring	Depth (m bgl	to wate )	er level		
							(m)	(m bmp)	point (m agl)	Dec- 22	JAN- FEB- 23	May- 23	Utility / Owner	Formation Tapped
1	CB22	Yashwant Nagar	Centre of village , near Zila Parishad school & Hanuman Mandir	19°59'36.44 "	79°15'18. 15"	217	7.87	3.97	0.82	3.65	4.25	6.35	agriculture	limestone
2	CB23	Kosara	West of village , adjacent to road	19°58'55.9"	79°15'46. 1"	238	12.25	3.91	0.94	4.45	5.35	11.42	agriculture	basalt
3	CB24	DATALA	SE of village , in Shanti Kunj Nagar	19°57'50.51 "	79°15'48. 89"	187	14.28	4.3	0.62	5.85	7.45	12.14	agriculture	laterite
4	CB31	Durgapur	East of Tadoba road , inside St. Mary's Convent compound	19°59'35.39 "	79°18'16. 18"	198	11.47	3.27	0.45	3.85	4.85	10.15	agriculture	basalt
5	CB32	Durgapur Sub-Area	Trade Union office compound (INTUC), MQ type quarters	20°0'11.63"	79°18'15. 98"	243	8.93	2.34	0.72	7.35	7.9	7.28	agriculture	limestone
6	CB33	Tukum ( Chandrapur)	Adjacent (East) to Tadoba road in garden, near Petrol pump.	19°58'27.68 "	79°18'14. 23"	212	9.85	3.3	0.77	7.25	8.25	9.10	agriculture	basalt
7	CB-53	SIDUR	SOUTH-EAST 100M FROM GP OFFICE.	19°56'35.89 "	79°12'38. 58"	198	8.7	4.2	0.4	3.3	4.6	7.52	domestic	basalt

Table: I Ground Water Level Monitoring Data from Dugwells In Buffer Zone of Hindustan Lalpeth UG I & II Mine, Chandrapur Area, WCL

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia	Well depth	Height of measuring	-	to wate )	er level		
							(m)	(m bmp)	point (m agl)	Dec- 22	JAN- FEB- 23	May- 23	Utility / Owner	Formation Tapped
8	CB-55	DEWADA	EAST 100M FROM NIMKAR DAILY NEEDS ADJACENT TO THE ROAD.	19°56'34.87 "	79°15'17. 28"	215	11.5	4.8	0.2	3.5	4.6	9.49	domestic	basalt
9	1 CP	Chandrapur	Infront of Telephone exchange LIC office	19°57'48.74 "	79°18'8.4 5"	223	8.41	2.73	0.61	3.65	6.95	7.25	agriculture	laterite
10	5 CP	LOHARA	Adjacent to Lohara Mul road Near Naka Bungalow	19°59'16.4"	79°21'40. 41"	215	8.2	2.29	0.61	5.45	7.7	7.95	agriculture	basalt
11	CL 14	MANNA	Inside village by side of house Bapuji Motghare	19°54'22.62 "	79°17'53. 69"	230	11.17	3.51	0.45	1.85	7.35	10.15	agriculture	laterite
12	CL 15	BARA MARDA	At the junction of Marda Pipri road	19°54'53.58 "	79°14'49. 98"	231	9.7	3.67	0.32	3.65	6.35	8.19	agriculture	laterite
13	CL 2	JUNANA	Forest colony	19°55'9.4"	79°23'1.9 9"	185	14.4	1.26	0.7	8.15	9.25	11.42	agriculture	limestone
14	PZ - 1	MAHAKALI	Filter plant	19°56'48"	79°14'55"	198	8.45	2.91	0.71	4.15	6.95	6.95	agriculture	laterite
15	BA-2	Marda	NW of village, outside	19°53'1.9"	79°14'21. 4''	181	8.46	2.68	0.88	3.45	4.15	5.9	Domestic	limestone
16	BA-3	Pelura (DCB)	Eastern side of the village near Mr. Krishna Amne home	19°51'26.4"	79°13'45. 1''	189	9.81	3.21	0.97	3.65	3.85	6.7	Domestic	basalt

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia	Well depth	Height of measuring	•	to wate I)	er level		
							(m)	(m bmp)	point (m agl)	Dec- 22	JAN- FEB- 23	May- 23	Utility / Owner	Formation Tapped
17	BA- 15	Nirli (DCB)	East side of village , about 20m west of the road to Didsi	19°51'16.4"	79°15'1.4' '	229	15.45	2.84	0.41	4.15	4.35	9.7	agriculture	laterite
18	BA- 16	Charli	Near Bajarang Bali Mandir, Southern edge of the village	19°51'9.5"	79°16'16. 7''	234	14.83	4.28	0.77	3.45	3.5	10.8	agriculture	basalt
19	BA- 17	Kadoli	East of village, outside near Mata mandir, 150 m S of Kadoli-Kolgaon Road	19°51'19.4"	79°17'51. 7''	186	6.44	3.94	0.81	3.25	3.5	4	agriculture	laterite
20	BA- 18	Babapur	N of the village near the temple	19°50'28.6"	79°17'27. 1''	187	7.33	2.88	0.89	3	4.65	5.75	agriculture	limestone
21	BA- 19	Manoli	E of the village near to Gram Panchayat office	19°50'33.6"	79°18'30. 1''	191	9.26	2.31	0.71	4.35	5.15	6	agriculture	basalt
22	BA- 20A	Sakri	West of the village near to school	19°49'45.5"	79°20'50. 3''	236	12.27	2.79	1.13	3.5	4.85	7.9	Domestic	limestone
23	BA- 56	BABUPETH	NEAR KARANBE HOUSE ADJACENT TO KACCHA ROAD.	19°56'9.25"	79°19'23. 56''	222	9.1	4	0.6	3.5	4.8	7.3	Domestic	basalt

# **ANALYSIS REPORT**

# Anacon Laboratories





Test Report

ULN	t No TC545823000001925F Report No.: ALPL/18072023/0	8-46	Dated 18.	07.2023		Page 1 of 1	A
Test	Report No.: ALPL/180/2023/04	5+ 40 Sa	mple Inward No.	ALP1/24062023/	W-1/54-46	Analysis Start	24/06/2023
Issue	d To :	Analysis End	14.07.2023				
M/s V	Western Coalfields Limited (W	AL 44	ward Date	24.06.2023			
Futala	a Road, Coal Estate, Civil Lines,	Nagpur,	ference				
WCL.	HQ (M.S), 440001	ru	terence			Sample Category	
			Sample Particul	ars/Details		Purpose of analysis	Quantity Received
	Sample Name Ground Water	Groun	d Water (Sample ID:	(Chandrapu	r Atea)	Drinking	1 L.tr
-	Sample Collected B		Sampling Date	19.05.2023		Sampling I	
	Mr. Akash Kirnake		Sampling Time	Not Mentioned		Chandr	aptar
Tests	Required: Chemical Testing.						
Tests	Requirementation		TES	T RESULTS		-10 10200 - 2012	-
_					Requirement	as per IS 10500 : 2012 Vater Specifications)	State State When
0.054	and the second second second second	Measurement	Test M	thod	(Drinking v	Amendment No. 4	Test Result
S.N.	Test Parameter	Unit	5-630/125	AT 3 1 20 40	Accentable Limi	t Permissible Limit	#
		10000			Acceptable Land		
1	Chemical Testing 1. Water		15 3025 (Part	221 - 1986	200	600	83.21
1	Alkalinity	mg/l	IS 3025 (Par		5	15	1
2	Colour	Hazen	IS 3025 (Par		250	1000	35.73
3	Chloride (as Cl)	mg/l	IS 3025 (Par		75	200	25.92
4	Calcium (as Ca)	mg/l	IS 3025 (Par		0.2	1	BDL(DL-0.1
5	Residual Chlorine	mg/l	IS 3025 (Par	(60) 2008	1.0	1.5	0.12
6	Fluoride (as F)	mg/l	15 3025 (Par	15 3025 (Part 46) 1994 30		100	8.76
7	Magnesium (as Mg)	mg/i	APHA method 23	rd edition: 2017	45	No relaxation	BDL(DL-2)
8	Nitrate (as NO <sub>1</sub> )	1027	15 3025 (Pa	rt 5) : 2018	Agreeable	Agreeable	Agreeable
9	Odour	-	1S 3025 (Par	t11):2022	6.5 to 8.5	No relaxation	8.09
10	pH	mg/l	IS 3025 (Par	1 24) : 2022	200	400	3.86
11	Sulphate (as SO <sub>4</sub> ) Total dissolved solids	mg/l	IS 3025 (Par	1 16) : 2023	500	2000	244
12	Turbidity	NTU	IS 3025 (Par	110) 1984	1	5	100.5
13	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Pa	121):2009	200	600	100.5
14	Chemical Testing						
11	2. Residues In Water		and the second second		0.01	No relaxation	BDL (DL - 0.0
15	Arsenic (as As)	mg/l	IS 3025 (Pa		0.01	0.2	BDL(DL+0.
16	Aluminium (as Al)	mg/l	IS 3025 (Pa		0.03	2.4	BDL (DL - 0.
17	Boron (as B)	mg/l		irt 2): 2019	0.05	1.5	BDL (DL - 0.)
18	Copper (as Cu)	mg/l		IS 3025 (Part 2) : 2019		No relaxation	BDL (DL - 0.
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019		0.003	No relaxation	0.01
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019 IS 3025 (Part 2) : 2019		0.01	No relaxation	BDL (DL + 0.
21	Lead (as Pb)	mg/l	15 3022 (P	ut 2) : 2019	0.1	0.3	BDL (DL - 0 BDL (DL - 0
22	Manganese (as Mn)	mg/l	15 3025 (P	IS 3025 (Part 2) : 2019 IS 3025 (Part 2) : 2019		0.02 No relaxation	
23	Nickel (as Ni)	mg/l	15 3023 (P	art 56) ; 2003	0.01	No relaxation	BDL (DL-0.0
24	Selenium (as Se)	mg/l	15 3025 (P	art 2): 2019	0.05	No relaxation	BDL (DL - 0.
25	Total Chromium (as Cr)	mg/l/	IS 3025 (P	urs = 1 + 20117	5	15	BDL (DL - 0.1

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 Lubs. • Liability of Anacon Labs is limited to involved amount only • Non-perishable and • Les report shart du ce represences except in tait whiten opprovar of shareon taits. • Linoutry of Anacon taits is infinited to involved amount only. • Non-perturbative 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'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be

REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

M Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager ----END OF REPORT-----

Authorized Signatory Ch may Garway Deputy Quality Manager

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## Test Report

Test Report No.: ALPL/22072023/0	5-1	Dated 22	2.07.2023	Page 1 of 1	TC 545	
Issued To :		Sample Inward No.	ALPL/29062023/W-2/64-1	Analysis Start	29.06.2023	
M/s Western Coalfields Limited (W		Inward Date	29.06.2023	Analysis End	20.07.2023	
Futala Road, Coal Estate, Civil Lines, WCL HQ (M.S), 440001	Nagpur,	Reference		Sample Category	Water	
Sample Name Ground Water	c	Sample Parties Fround Water (Sample II)	lars/Details 9: BA-2), (Ballarpur Area)	Purpose of analysis Drinking	Quantity Received	
Sample Collected B Mr. Akash Kimake	e	Sampling Date Sampling Time	23.05.2023 Not Mentioned	Sampling I Mard		

_			TEST RESULTS			
5.N.	Test Parameter	Measurement Unit	Test Method	Requirement as (Drinking Wa Including Ar	Test Result	
I	Chemical Testing 1. Water			Acceptable Limit	Permissible Limit #	
	Alkalinity	I mind I	THE BASE IN LOSS HARE	1		
2	Colour	mg/l	IS 3025 (Part 23) : 1986	200	600	149.27
3		Hazen	IS 3025 (Part 4): 2021	5	15	1
	Chloride (as CI)	mg/l	18 3025 (Part 32) 1988	250	1000	25.07
4	Calcium (as Ca)	mg/l	TS 3025 (Part 40) : 1991	75	= 200	22.78
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.11
7	Magnesium (as Mg)	mg/l	TS 3025 (Part 46) : 1994	30	100	9.53
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		1S 3025 (Part 5): 2018	Agreeable	Agreeable	Agreeable
10	pH		IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.83
11	Sulphate (as SO <sub>4</sub> )	mg/i	IS 3025 (Part 24) : 2022	200	400	10.75
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	280.94
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.1
14	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	96.12
Π	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	15 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
17	Boren	mg/l	1S 3025 (Part 2) 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) 2019	0.05	15	BDL (DL = 0.03)
19	Cadmium (as Cd)	mu/l	18 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.04
21	Lead (as Pb)	mg/l	IS 3625 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.03)
24	Sclenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	10.0	No relaxation	BDL (DL+0.001)
25	Total Chromium (as Cr)	mg/l	15 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)

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 involved amount only • Non-perishable and Prestription and not of reproduced except in thir window professment approval of reacting tasks of the tasks in the original convolved and 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/T' is equivalent to 'ppm'. • BDL- Below detection limit. •, DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with 18:10500:2012 for tests conducted, indicating that it is

fit for drinking purpose with respect to tested parameters. Verified By

Mangesh Fande Technical Manager

Snehal Raut

Deputy Technical Manager

--- END OF REPORT-----

Authorized Signatory

yan Chinmay Garway Deputy Quality Manager



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Page I of I



Test Report

ULR No TC545823000001994F		
Test Report No.: ALPL/22072023/05-2	Dated 22	2,07.2023
Issued To :	Sample Inward No.	ALPL/2

End 20.07.2023	Analysis Start Analysis End Sample Category	ALPL/29062023/W-2/64-2 29.06-2023	Sample Inward No. Inward Date Reference	sued To : /s Western Coalfields Limited (WCL) tala Road, Coal Estate, Civil Lines, Nagpur, WCL 2 (M.S), 440001		
the second	Purpose of analysis	ulars/Details	Sample Partice	Sample Name		
	Drinking	ID:BA-3); (Ballarpur Area)	Ground Water (Sample I	Ground Water		
Sampling Location		23.05.2023	Sampling Date	Sample Collected By		
Pelura (DCB)		Not Mentioned	Sampling Time	Mr. Akash Kirnake		
_		Not Mentioned				

			TEST RESULTS			
S.N.	Test Parameter	Measurement	Test Method	Requirement as (Drinking Wat Including Ar	Test Result	
		TO COMPANY.		Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	146.74
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	I.
3	Chloride (as CI)	mg/l	IS 3025 (Part 32) :1988	250	1000	26.03
.4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	23,49
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0,1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.17
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) ; 1994	30	100	9.96
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		IS 3025 (Part 5): 2018	Agreeable	Agreeable	Agreeable
10	pH		IS 3025 (Part 11) ; 2022	6.5 to 8.5	No relaxation	7.96
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	9.68
12	Total dissolved solids	mg/l	IS 3025 (Part 16): 1984	500	2000	282
13	Turbidity	NTU	1S 3025 (Part 10) : 1984	1	5	0.3
14	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21): 2009	200	600	99.68
п	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	1S 3025 (Part 2): 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	IS 3025 (Part 2): 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2): 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) ; 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) ; 2019	1.0	No relaxation	0.02
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) ; 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	10.0	No relaxation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDI. (DI., - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL -0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with IS:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By Mangesh Fande Technical Manager

Snchal Raut Deputy Technical Manager

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

Authorized Signatory Jan Chinmay Garway Deputy Quality Manager



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Test Report

Test Report No.: ALPL/22072023/05-11 Issued To :	Sample Inward No.	ALPL/29062023/W-2/64-12	Analysis Start	29.06.2023
M/s Western Coalfields Limited (WCL)	Inward Date	29.06.2023	Analysis End	20.07 2023
Putala Road, Coal Estate, Civil Lines, Nag	ur, Reference		1.0.2201024.00035.000.0	
WCL HQ (MLS), 440001			Sample Category	Water
Sample Name Ground Water	Sample Partice Ground Water (Sam	alars/Details ple ID: BA- 15); (Ballarpur Area)	Purpose of Analysis Drinking	Quantity Received 1 Ltr
Sample Collected By Mr. Akash Kirnake	Sampling Date Sampling Time	25.05 2023 Not Mentioned	Sampling I Nirli (E	

		- 1121	TEST RESULTS			
S.N.	Test Parameter	Test Parameter Measurement Unit	Test Method	(Drinking Wat	per 18 10500 : 2012 er Specifications) nendment No. 4	Test Result
_				Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	138.65
2	Coloar	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	2.50	1000	22.17
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) ; 1991	75	200	27.05
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	1S 3025 (Part 60) : 2008	1.0	1.5	0.12
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	8.66
8	Nitrate (as NO <sub>3</sub> )	mg/l	APEIA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		IS 3025 (Part 5) ; 2018	Agreeable	Agreeable	Agreeable
10	pH		IS 3025 (Part 11) : 2022	6.5 10 8.5	No relaxation	8.17
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	7.44
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	224
13	Turbidity	NTU	1S 3025 (Part 10) : 1984	1	5	0.3
14	Total hardness (as CaCO <sub>2</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	103.24
п	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL = 0.01)
16	Aluminium (as AI)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	1S 3025 (Part 2) : 2019	0,5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	18 3025 (Part 2): 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	1S 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	18 3025 (Part 2) : 2019	1.0	No relaxation	0.01
21	Lead (as Pb)	mg/l	18 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2): 2019	0.1	03	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relexation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	15 3025 (Part 2) : 2019	5	15	BDL (DL + 0.1)

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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 driaking water. 'mg/l' is equivalent to 'ppm'. BDL- Below detection limit. DL- DL Indicates detection limit of instrument /method and shall be
considered as 'absent'.

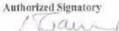
REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with 1S:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By Mangash Fande

Technical Manager

au Snehal Raut Deputy Technical Manager

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



Chinmay Garway Deputy Quality Manager



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Test Report

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	ALPE/29062023/W-2/64-13 29 06 2023 -	Analysis Start Analysis End Sample/Category	29 06 2023 20 07 2023 water
Sample Name	Sample Partice	alars/Details	Purpose of analysis	Quantity Received
Ground Water	Ground Water (Sam	ple ID: BA-16), (Ballarpur Area)	Drinking	
Sample Collected By	Sampling Date	25.05.2023	Sampling I	
Mr. Akash Kirnake	Sampling Time	Not Mentioned	Cha	

			TEST RESULTS		TC 10800 0075	
S.N.	Test Parameter	Test Parameter Measurement Unit	Test Method	Requirement as (Drinking Wa Including As	Test Result	
				Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	159.39
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	35.67
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	27.05
5	Residual Chlorine	mg/l	1S 3025 (Part 26) : 2021	0.2	1	BDL(DL=0.1)
Ď	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1,5	0.10
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	8.23
8	Nitrate (as NO <sub>4</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	HDL(DL-2)
9	Odour		IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH		IS 3025 (Part 11): 2022	6.5 to 8.5	No relaxation	7.45
11	Sulphate (as SO <sub>4</sub> )	mg/l	1S 3025 (Part 24): 2022	200	400	10.85
12	Total dissolved solids	mg/l	1S 3025 (Part 16) : 1984	500	2000	253
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
14	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21): 2009	200	600	101.46
п	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/I	1S 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2): 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	1S 3025 (Part 2): 2019	0.003	No relircation	BDL (DL + 0.001
20	Iron (as Fe)	mg/l	IS 3025 (Part 2): 2019	1.0	No relaxation	0.01
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with 15:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters. Verified By

120 Mangest Funde Technical Manager

all Snehal Raut Deputy Technical Manager

recamban manager

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

Authorized Signatory yau f

Chinmay Garway
 Deputy Quality Manager



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Test Report

ULR No TC545823000001994F Test Report No.: ALPL/22072023/05 Issued To :	- 14	Dated 22 Sample Inward No.	07.2023 ALPL/29062023/W-2/64-14	Page   of   Analysis Start	29.06.2023
M/s Western Coalfields Limited (WC Futala Road, Coal Estate, Civil Lines, N WCL, HO (M.S), 440001	CL) lagpur,	Inward Date Reference	29.06.2023	Analysis End Sampl Category	20.07.2023 Water
Sample Name Ground Water	G	Sample Particu round Water (Sample ID:	lars/Details BA-17): (Ballarpur Area)	Purpose of analysis Drinking	Quantity Received
Sample Collected By Mr. Akash Kirnake		Sampling Date Sampling Time	25.05.2023 Not Mentioned	Sampling I Kade	
Tests Required: Chemial Testing			the share and a state of		

			TEST RESULTS			
s.n.	Test Parameter	Test Parameter Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water	- M				
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	124.55
2	Colour	Hazen	IS 3025 (Part 4): 2021	5	15	
3	Chloride (as CI)	mg/l	IS 3025 (Part 32) :1988	250	1000	28.92
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	27.76
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.23
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	8.66
8	Nitrate (as NO1)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	nH	-	1S 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.05
11	Sulphate (as SO <sub>1</sub> )	mg/l	15 3025 (Part 24) : 2022	200	400	9.35
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	314
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.2
14	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	500	105.02
п	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	18 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	IS 3025 (Part 2): 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDI. (DL - 0.001
20	Iron (as Fe)	mg/l	1S 3025 (Part 2) : 2019	1.0	No relaxation	0.02
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2), 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Sc)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)

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Provide the disposed off after 30 days and 15 days respectively from the date of test Report, unless appendix date and shall be considered as 'absent'.

REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with 1S:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

1200 Mangesh Fande Technical Manager

Snebal Raut Deputy Technical Manager

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

Authorized Signatory Udu

Chinmay Garway Deputy Quality Manager



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## Test Report

#### ULR No.- TC545823000001994F

Test Report No.: ALPL/22072023/05-	15 Dated 1	22.07 2023	Page 1 of 1	TC 5458
Issued To : M/s Western Coalfields Limited (WCI Futala Road, Coal Estate, Civil Lines, Na WCL HQ (M.S), 440001		ALPL/29062023/W-2/64-15 29.06.2023	Analysis Start Analysis End Sample Categor	29.06.2023 20.07.2023 Water
Sample Name Ground Water	Sample Partic Ground Water (Sample II	ulars/Details D: BA-18); (Ballarpur Area)	Purpose of analysis Drinking	Quantity Received
Sample Collected By Mr. Akash Kirnake	Sampling Date Sampling Time	26 05 2023	Sampling Location Babapur	
Mr. Akash Kimake Tests Required: Chemial Testing	Sampling Time	Not Mentioned	Baba	DIN.

			TEST RESULTS	1/1		
S.N.	Test Parameter Measurem Unit		Test Method	Requirement as (Drinking Wa Including Ar	Test Result	
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	115.15
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	1S 3025 (Part 32) 1988	2.50	1000	26.99
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	23,49
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.17
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	9.96
8	Nitrate (as NO <sub>3</sub> )	mg/t	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		IS 3025 (Part 5) ; 2018	Agreeable	Agreeable	Agreeable
10	pH	÷	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.97
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	8.91
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	272
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.2
14	Total hardness (as CaCO <sub>x</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	99.68
п	Chemical Testing 2. Residues In Water					10000
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	IS 3025 (Part 2): 2019	0.5	2.4	BDL (DL - 0,1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2): 2019	0.05	1.5	BDL (DL = 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fc)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.01
21	Lead (as Pb)	mg/l	IS 3025 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.01	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) 2003	0.01	No relaxation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL + 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL = 0.1)

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#Please see watermark
#Please see waterm alternate source for drinking water • 'mg/l' is equivalent to 'ppm' • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with IS:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters. Verified By

Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager

---END OF REPORT-----

Authorized Signatory Jaans

Chinmay Garway Deputy Quality Manager



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## Test Report

Test Report No.: ALPL/22072023/05-16	Dated 2	2.07.2023	Page 1 of 1	TC 545
issued To :	Sample Inward No.	ALPL/29062023/W-2/64-16	Analysis Start	20 0h 2023
M/s Western Coalfields Limited (WCL)	Inward Date	29.06.2023	Analysis End	20.07.2023
Futala Road, Coal Estate, Civil Lines, Nagpu	. Reference	-		
WCL HQ (M.S), 440601			Sample Category	Water
Sample Name Ground Water	Sample Partic Ground Water (Sample	ulars/Details : ID: BA-19); (Ballarpur Area)	Purpose optimalysis Drinking	Quantity Received
Sample Collected By Mr. Akash Kirnake	Sampling Date Sampling Time	26.05.2023 Not Mentioned	Sampling Location Manoli	

-			TEST RESULTS				
s.N.	Test Parameter	Test Parameter Measurement Unit		(Drinking Wat Including At	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		
				Acceptable Limit	Permissible Limit #		
I	Chemical Testing 1. Water						
1	Alkalinity	nig/l	IS 3025 (Part 23) 1986	200	600	77.55	
2	Colour	Hazen	18 3025 (Part 4) : 2021	5	15	1	
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	20.24	
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	24.26	
5	Residual Chlorine	mg/l	18 3025 (Part 26) 2021	0.2	1	BDL(DL-0.1)	
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) . 2008	1.0	1.5	0.24	
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46): 1994	30	100	9.10	
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)	
9	Odour		IS 3025 (Part 5) ; 2018	Agreeable	Agreeable	Agreeable	
10	pH		IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.57	
11	Sulphate (as SO <sub>2</sub> )	mg/l	18 3025 (Part 24) : 2022	200	400	7.57	
12	Total dissolved solids	mg/i	1S 3025 (Part 16) : 1984	500	2000	321	
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.1	
14	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	500	97.9	
п	Chemical Testing 2. Residues In Water						
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)	
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)	
17	Boron	mg/l	18 3025 (Part 2): 2019	0.5	2.4	BDL (DL = 0.1)	
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) ; 2019	0.05	1.5	BDL (DL - 0.03)	
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001	
20	Iron (as Fe)	mg/l	18 3025 (Part 2) 2019	1.6	No relaxation	0.04	
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)	
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	03	BDL (DL - 0.05)	
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)	
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No reluxation	BDL (DL-0.001)	
25	Total Chromium (as Cr)	mg/l	15 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)	
26	Zinc (as Zn)	mg/l	18 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)	

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REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with 15:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

MangeshFunde Technical Manager

Snehal Raut Deputy Technical Manager

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

Authorized Signatory fleer

Chinmay Garway Deputy Quality Manager



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### Test Report

Test Report No.: ALPL/22072023/05- 17	Dated 22	2.07.2023	Page 1 of 1	TC 545
Issued To: M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HO (M.S), 440001	Sample Inward No. Inward Date Reference	ALPI/29062023/W-2/64-17 29.06/2023	Analysis Start Analysis End Sample/Categor	29.06.2023 20.07.2023 y Water
Sample Name Ground Water	Sample Partice Ground Water (Sample )	ilars/Details [D: BA-20A); (Ballarpur Arca)	Purpose of analysis Drinking	Quantity Received 1 Ltr
Sample Collected By Mr. Akash Kirnake	Sampling Date Sampling Time	26.05.2023 Not Mentioned	Sampling Sak	
Tests Required: Chemial Testing				

1 sat	s requireu; enclinar resultg		TEST RESULTS				
S.N.	Test Parameter	Test Parameter Measurement Unit	Test Method	(Drinking Wa Including At	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		
				Acceptable Limit	Permissible Limit #		
1	Chemical Testing 1. Water						
1	Alkalinity	mg/l	1S 3025 (Part 23) : 1986	200	600	124,55	
2	Colour	Hazen	IS 3025 (Part 4): 2021	5	15	1	
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	35.67	
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	29,19	
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL+0.1)	
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.19	
7	Magnesium (as Mg)	mg/l	JS 3025 (Part 46) : 1994	30	100	8.66	
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)	
9	Odour		IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable	
10	рH		IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.47	
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	7,97	
12	Total dissolved solida	mg/l	IS 3025 (Part 16): 1984	500	2,000	292	
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.1	
14	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	108.58	
п	Chemical Testing 2. Residues In Water					1	
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)	
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)	
17	Boron	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL = 0.1)	
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)	
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001	
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.02	
21	Lead (as Pb)	mg/l	IS 3025 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001	
22	Manganese (as Mn)	mg/l	1S 3025 (Part 2): 2019	0,1	0,3	BDL (DL - 0.05)	
23	Nickel (as Ni)	mg/l	1S 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL - 0.01)	
24	Selenium (as Se)	mg/l	1S 3025 (Part 56) : 2003	0.61	No relaxation	BDL (DL-0.001	
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)	
26	Zinc (as Zn)	mg/l	1S 3025 (Part 2) ; 2019	5	15	BDL (DL - 0.1)	

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REMARKS: As requested by the client, sample was tested for above parameters only w

Verified By per Mangesh Pande Technical Manager

au Snehal Raut Deputy Technical Manager

END OF REPORT

Authorized Signatory

Jamp Chinmay Garway

Peputy Quality Manager



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Test Report

R No TC545823000001994F at Report No.: ALPL/22072023/05- 42	Dated 22	2.07.2023	Page 1 of 1	TC 548
ed To : Western Coalfields Limited (WCL) la Road, Coal Estate, Civil Lines, Nagpur, L HQ (M.S), 440001	Sample Inward No. Inward Date Reference	ALPL/29062023/W-2/64-42 29.06.2023	Analysis Start Analysis End Sample Categor	29 06 2023 20 07 2023 y Water
Sample Name Ground Water	Sample Parties Ground Water (Sample II	ilars/Details ): BA-56): (Ballarpur Area)	Purpose of analysis Drinking	Quantity Received
Sample Collected By Mr. Akash Kirnake	Sampling Date Sampling Time	29.05.2023 Not Mentioned	Sampling Babu	
	Sampling Time			

S.N.	Test Parameter	Measurement Unit	Test Method	(Drinking Wa	per IS 10500 : 2012 er Specifications) nendment No. 4	Test Result
		100000		Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	126.9
2	Colour	Hazen	15 3025 (Part 4) : 2021	5	15	1
3	Chloride (as CI)	mg/l	IS 3025 (Part 32) :1988	250	1000	42.42
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	25:63
5	Residual Chlorine	mg/l	1S 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	1S 3025 (Part 60) : 2008	1.0	1.5	0.11
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) ; 1994	30	100	7.80
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	2.38
9	Odour	-	18 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH		IS 3025 (Part 11) : 2022	6.5 10 8.5	No relaxation	7.44
11	Sulphate (as SO <sub>4</sub> )	mg/l	1S 3025 (Part 24) : 2022	200	400	10.38
12	Total dissolved solids	mg/l	1S 3025 (Part 16) : 1984	500	2000	209
13	Turbidity	NTU	1S 3025 (Part 10) : 1984	1	5	0.2
14	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	500	96.12
п	Chemical Testing 2. Residues In Water		11.530.001 3557 07.19 30 19 01 19			
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2); 2019	0.03	0.2	BDL(DL-0.01)
17	Boron	mg/l	IS 3025 (Part 2); 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	1S 3025 (Part 2) : 2019	0.05	15	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	1S 3025 (Part 2): 2019	1.0	No relaxation	BDL(DL-0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	1S 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	18 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The Submitted Sample complies with IS:10500:2012 for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager

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

Authorized Signatory Jaur

Chinmay Garway
 Deputy Quality Masager



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### Test Report

#### ULR No.- TC545823000001925F Test Report N

Issued To :	Sample Inward No.	8.07.2023 ALPL/24062023/W-1/54-17	Page 1 of 1	
M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001	Inward Date	24.06.2023	Analysis Start Analysis End	24.06.2023 14.07.2023
	Reference	*		14,07,2023
Sample Name Ground Water	Sample Particu Ground Water (Sample ID	lars/Details : CB22); (Chandrapur Area)	Sample Category Purpose of analysis	
Sample Collected By Mr. Akash Kirnake ests Required: Chemical Testing.	Sampling Date Sampling Time	15.05.2023 Not Mentioned	Drinking Sampling L	Quantity Receive

		1	TEST RESULTS			
S.N	rest rarameter	Unit Test Method (Drinking Water Specifications)				
1	Chemical Testing 1. Water			Accentable Limit	mendment No. 4	Test Result
1	Alkalinity	mg/l		- receptable Light	Permissible Limit #	
2	Colour	Hazen	IS 3025 (Part 23) : 1986	200		
3	Chloride (as Cl)		IS 3025 (Part 4) : 2021	5	600	81,64
4	Calcium (as Ca)	mg/l	IS 3025 (Part 32) :1988		15	1
5	Residual Chlorine	mg/l	IS 3025 (Part 40) : 1991	250	1000	43.39
6	Fluoride (as F)	mg/l	IS 3025 (Part 26) : 2021	75	200	30.72
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 60) : 2008	0.2	1	BDL(DL-0.1)
8	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025 (Part 46) : 1994	1.0	1.5	
9	Odour	mg/l	APHA method 23rd edition: 2017	30	100	0.15
10	pH		IS 3025 (Part 5) : 2018	45	No relaxation	2.33
11	Sulphate (as SO <sub>4</sub> )	· · · ·	IS 3025 (Part 11) : 2022	Agreeable	Agreeable	BDL(DL-2)
12	Total dissolved solids	mg/l	IS 3025 (Part 24) : 2022	6.5 to 8.5	No relaxation	Agreeable
13	Turbidity	mg/l	IS 3025 (Part 16) : 2023	200	400	7.92
14		NTU	IS 3025 (Part 16) : 2023	500	2000	7,32
	Total hardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 10) : 1984	1	5	220
п	Chemical Testing		IS 3025 (Part 21) : 2009	200		0.2
15	2. Residues In Water				600	86.4
16	Arsenic (as As)	mg/l	16 2025 18			
7	Aluminium (as Al)	mg/l	IS 3025 (Part 37) : 2022	0.01	11	
8	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.03	No relaxation	BDL (DL - 0.01)
-	Copper (as Cu)	mg/l	1S 3025 (Part 2) : 2019	0.5	0.2	BDL(DL-0.01)
-	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.05	2.4	BDL (DL - 0.1)
	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.003	1.5	BDL (DL - 0.03)
1	Lead (as Pb)	mg/l	18 3025 (Part 2) : 2019	1.0	No relaxation	BDL (DL - 0.001)
2	Manganese (as Mn)	mg/l	IS 3025 (Part 2): 2019	0.01	ino relaxation	BDL(DL-0.01)
5	Nickel (as Ni)	mg/l	IS 3025 (Part 2): 2019	0.1	No relaxation	BDL (DL - 0.001)
1	Selenium (as Se)	and the second se	IS 3025 (Part 2): 2019		0.3	BDL (DL - 0.05)
5	Total Chromium (as Cr)	mg/l	IS 3025 (Part 56) · 2003	0.02	isto relaxation	BDL (DL - 0.05)
	cine (as Zn)	mg/l	IS 3025 (Part 2) + 2010	0.01	No relaxation	BDL (DL - 0.001) BDL (DL- 0.001)
OTE	:      Please see watermark "Original Te report shall not be seen and the second secon	mg/l	IS 3025 (Part 2) : 2019	0.05	AT	BDL (DL - 0.001) BDL (DL - 0.03)
<ul> <li>Test</li> </ul>	report shall not be seen a stigning It	a keport to confirm th	te authorizing cat	5	16	DL (DL - 0.03)

 10
 Zine (as Zn)
 mg/l
 IS 3025 (Part 2): 2019
 5
 15
 BDL (DL - 0.1)

 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.
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 alternate source for drinking water. • 'mg/l' is equivalent to 'ppm'. • BDL- Below detection limit. • DL- DL Indicates detection limit of instrument /method and shall be

 and material control for draming stands, a mer to experiment of a submitted sample complies with 15:10500:2012, for tests conducted, indicating that it is REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 15:10500:2012, for tests conducted, indicating that it is

Mangesh Fande Technical Manager

au Snehal Raut Deputy Technical Manager ---- END OF REPORT---

Authorized Signatory Chinnay Garway Deputy Quality Manager

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### Test Report

## ULR No.- TC545823000001925F

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Issued To : M/s Western CoolGate and	Sample Inward No	d 18.07.2023 ALPL/24062023/W-1/54-18	Page 1 of 1	
M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M S) 440001	Inward Date	24.06.2023	Analysis Start	24.06.2023
WCL HQ (M.S), 440001	Reference	24.00.2023	Analysis End	14.07.2023
Sample Name Ground Water Sample Collected By Mr. Akash Kimake Tests Required: Chemical Testing.	Sample Parti Ground Water (Samp Sampling Date Sampling Time	culars/Details le ID: CB23); (Chandrapur Area) 16.05.2023 Not Mentioned	Sample Categor Purpose of analysis Drinking Sampling I	Quantity Receive

TEST RESULTS						
lest Parameter	Measurement Unit	Test Method				
Allesting I. Water				Amendment No. 4	Test Result	
arkalinity	mail		1 Acceptable Lim	it Permissible Limit #		
	the second se	IS 3025 (Part 23) : 1986				
Chloride (as CI)		15 3025 (Part 4) · 2021		600		
Calcium (as Ca)		IS 3025 (Part 32) -1088	5		86.35	
Residual Chlorine	and the second se	IS 3025 (Part 40) - 1001	250		1	
Fluoride (as F)	mg/l	IS 3025 (Part 20) 2001	75		39.56	
Magnesium (as Ma)	mg/l	IS 3025 (Part 26) : 2021	0.2	200	29.76	
Nitrate (as NO.)	mg/l	IS 3025 (Part 60) : 2008		1	BDL(DL-0.1)	
Odour	mg/l	APHA math (Part 46) : 1994			0.14	
	-	16 2020 23rd edition: 2017			10.51	
		15 5025 (Part 5) : 2018		No relaxation	BDL(DL-2)	
Total (as SO <sub>4</sub> )	mg/l	15 3025 (Part 11) : 2022		Agreeable	BUL(DL-2)	
Total dissolved solids		IS 3025 (Part 24) - 2022		No relaxation	Agreeable	
turbidity	and the second se	1S 3025 (Part 16) : 2022			7.18	
Total hardness (as CaCO <sub>1</sub> )		IS 3025 (Part 10) - 1984	500		8.03	
Chemical Testing	mg/i	IS 3025 (Part 21) : 2000	1		253	
2. Residues In Water		(* 411 21/ . 2009	200		0.2	
Arsenic (as As)				000	117.6	
Aluminium (as AI)	mg/l	IS 3025 (Bort 27) 2020			The second second	
Boron (as B)	mg/l	15 3025 (Part 37) : 2022	0.01			
Opper (as Co)	mg/l	IS 3025 (Part 2) : 2019			BDL (DL - 0.01)	
admium (as Cu)	mg/l	15 3025 (Part 2): 2019			BDL(DL-0.01)	
inn (as Ca)	mg/l	15 5025 (Part 2) : 2019			BDL (DL - 0.1)	
end (as Pb)		15 3025 (Part 2) : 2019			BDL (DL - 0.03)	
(as PD)	and the second se	1S 3025 (Part 2) · 2010		No relaxation	BDL (DL - 0.03)	
anganese (as Mn)	and the second se	18 3025 (Part 2) · 2010		No relaxation	BDL (DL - 0.001)	
ickel (as Ni)		15 3025 (Part 2) - 2010	and the second se	No relaxation	0.01	
lenium (as Se)		18 3025 (Part 2) · 2010		0.0	BDL (DL - 0.001)	
tal Chromium (as Cr)	- Transmission	IS 3025 (Part 56) - 2002	0.02	Month	BDL (DL - 0.05)	
IC Inc Zn)	mg/l		0.01	Negral	BDL (DL - 0.01)	
Discourse	mal	IS 3025 (Part 2) : 2019	0.05	relaxation	BDL (DL-0.001)	
	Chemical Testing 1. Water         Alkalinity         Colour         Chloride (as Cl)         Calcium (as Ca)         Residual Chlorine         Fluoride (as F)         Magnesium (as Mg)         Nitrate (as NO <sub>3</sub> )         Odour         pH         Sulphate (as SO <sub>4</sub> )         Total dissolved solids         Turbidity         Total dissolved solids         Arscnic (as As)         Muminium (as Al)         Boron (as B)         Opper (as Cu)         admium (as Cd)         on (as Fe)         ead (as Nb)         lenium (as Se)         tal Chromium (as Cr)         tal Chromium (as Cr)	Test Parameter     Measurement Unit       Chemical Testing I. Water       Alkalinity     mg/l       Colour     Hazen       Chloride (as Cl)     mg/l       Calcium (as Ca)     mg/l       Residual Chlorine     mg/l       Fluoride (as F)     mg/l       Magnesium (as Mg)     mg/l       Nitrate (as NO <sub>3</sub> )     mg/l       Odour     -       pH     -       Sulphate (as SO <sub>4</sub> )     mg/l       Total dissolved solids     mg/l       Turbidity     NTU       Total dissolved solids     mg/l       Q2. Residues In Water     Magnesian (as Al)       Arsenic (as As)     mg/l       Muminium (as Al)     mg/l       Boron (as B)     mg/l       on (as Fe)     mg/l       ead (as Pb)     mg/l       fanganese (as Mn)     mg/l       ianganese (as Mn)     mg/l       ianganese (as Mn)     mg/l       ianganese (as Mn)     mg/l       ianganese (as Ni)     mg/l	Test Parameter         Measurement Unit         Test Method           Chemical Testing 1. Water         Alkalinity         mg/l         IS 3025 (Part 23) : 1986           Colour         Hazen         IS 3025 (Part 23) : 1986           Choride (as CI)         mg/l         IS 3025 (Part 40) : 2021           Calcium (as Ca)         mg/l         IS 3025 (Part 40) : 1991           Residual Chlorine         mg/l         IS 3025 (Part 40) : 1991           Fluoride (as F)         mg/l         IS 3025 (Part 40) : 1991           Magnesium (as Mg)         mg/l         IS 3025 (Part 40) : 1091           Magnesium (as Mg)         mg/l         IS 3025 (Part 40) : 1094           Odour         mg/l         IS 3025 (Part 40) : 2008           Nitrate (as NO <sub>1</sub> )         mg/l         IS 3025 (Part 40) : 2017           pH         -         IS 3025 (Part 5) : 2018           Sulphate (as SO <sub>4</sub> )         -         IS 3025 (Part 11) : 2022           Total disolved solids         mg/l         IS 3025 (Part 10) : 2023           Total disolved solids         mg/l         IS 3025 (Part 10) : 1984           Chemical Testing         -         IS 3025 (Part 21) : 2019           2. Residues In Water         -         IS 3025 (Part 2) : 2019           Adminium (as Al)	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	

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Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager

--END OF REPORT-----

Authorized Signatory Chipmay Garway Deputy Quality Manager

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+ 91 8045685558 
Email : info@anacon.in







Test Report

#### ULR No.- TC545823000001925F

Mr. Akash Kirnake Tests Required: Chemical Testing	Sampling Time		Sampling I Data	
Sample Collected By	Sompling Data	17.05.2023	Drinking	I Ltr
Ground Water	Ground Water (Sample	: ID: CB24); (Chandrapur Area)	Purpose of analysis	Quantity Received
Sample Name	Sample Parti	Sample Particulars/Details		y Water
WCL HQ (M.S), 440001	Reference	*		
M/s Western Coalfields Limited (W Futala Road, Coal Estate, Civil Lines,	CL) Inward Date Nagpur	24/06/2023	Analysis End	14.07.2023
Issued To :	Sample Inward No	ALPL/24062023/W-1/54-22	Analysis Start	24 06 2623
Test Report No.: ALPL/18072023/0	Daice	1 18.07.2023	Page 1 of 1	

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	(Drinking Wat Including Ar	per IS 10500 : 2012 er Specifications) nendment No. 4	Test Result
1	Chemical Testing 1. Water			Acceptable Limit	Permissible Limit #	
1	Alkalinity	mg/l	10 2020 00		and the second second	
2	Colour	Hazen	IS 3025 (Part 23) : 1986	200	600	80.07
3	Chloride (as CI)	mg/l	IS 3025 (Part 4) 2021	5	15	1
4	Calcium (as Ca)	mg/l	1S 3025 (Part 32) :1988	250	1000	34.45
5	Residual Chlorine	mg/l	IS 3025 (Part 40): 1991	75	200	21.12
6	Fluoride (as F)	mg/l	IS 3025 (Part 26) : 2021	0,2	I	BDL(DL-0.1)
7	Magnesium (as Mg)		IS 3025 (Part 60) : 2008	1.0	1.5	0.12
8	Nitrate (as NO <sub>3</sub> )	mg/I	IS 3025 (Part 46): 1994	30	100	11.68
9	Odour	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
10	pH	-	1S 3025 (Part 5) : 2018	Agreeable	Agreeable	
11	Sulphate (as SO <sub>4</sub> )	•	IS 3025 (Part 11) 2022	6.5 to 8.5	No relaxation	Agreeable 7.92
12	Total dissolved solids	mg/I	IS 3025 (Part 24): 2022	200	400	
13	Turbidity	mg/l	IS 3025 (Part 16) 2023	500	2000	6.98
14		NTU	IS 3025 (Part 10): 1984	1	5	223
14	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) 2009	200	600	0.2
п	Chemical Testing 2. Residues In Water		and the second		000	100.08
15	Arsenic (as As)	mg/l	18 2026 (Dec. 27) 2022			
16	Aluminium (as Al)	mg/l	IS 3025 (Part 37) 2022	0.01	No relaxation	BDL (DL - 0.01)
7	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
8	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
9	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.05	1.5	BDL (DL - 0.03)
0	Iron (as Fe)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001
1	Lead (as Pb)	mg/l	IS 3025 (Part 2): 2019	1.0	No relaxation	0.01
2	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001
3	Nickel (as Ni)	mg/l	IS 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
4	Selenium (as Se)	and the second s	15 3025 (Part 2) 2019	0.02	No relaxation	BDL (DL + 0.01)
	Total Chromium (as Cr)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001)
_	Zine (as Zn)	mg/I	IS 3025 (Part 2): 2019	0.05	No relaxation	
NOT	E* • Please can united at the	mg/l	IS 3025 (Part 2) : 2019 the authenticity of this report • Results sha	5	15	BDL (DL - 0.03) BDL (DL - 0.1)

nenticity of this report. • Results shall be referred in 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 
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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 1S:10500:2012, for tests conducted, indicating that it is Verified By

Fer NK Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager ----END OF REPORT------

Authorized Signatory Ching hay Garway Deputy Quality Manager

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Test Report

#### ULR No.- TC545823000001925F

	Sample Inward No.		and the second	21.01.2022
CL) Jagnur,	Inward Date	24.06.2023	Analysis End	24.06.2023 14.07.2023
	Reference	*		
	Sample Particulars (Det. 1)		Sample Catego	y Water
Grou	nd Water (Sample ID: CI	3311 (Chandranur Aran)		Quantity Received
	Sampling Date 17.05.2023		Drinking	1 Ltr
	Samping Date	17.05 2027	Sampling	
	CL) Nagpur, Grou	CL.) Sample Inward No. Nagpur, Reference Ground Water (Sample Dr Cl	CL) Nagpur, Sample Inward No. ALPL/24062023/W-1/54-25 Inward Date 24.06/2023 Reference - Sample Particulars/Details Ground Water (Sample ID: CB31); (Chandrapur Area)	CL) Nagpur, Nagpur, Reference Sample Particulars/Details Ground Water (Sample ID: CB31); (Chandrapur Area)

-	1		TEST RESULTS			
S.N.	Test Parameter	Measurement Unit	Test Method	(Drinking Wa Including Ar	per IS 10500 : 2012 (er Specifications) mendment No. 4	Test Result
1	Chemical Testing 1. Water			Acceptable Limit	Permissible Limit #	1
1	Alkalinity	mg/l	15 2025 (D			
2	Colour	Hazen	IS 3025 (Part 23) 1986	200	600	86.35
3	Chloride (as Cl)	mg/l	IS 3025 (Part 4) : 2021	5	15	100.5
4	Calcium (as Ca)	mg/l	IS 3025 (Part 32) :1988	250	1000	40.83
5	Residual Chlorine	- March	IS 3025 (Part 40) : 1991	75	200	32.64
6	Fluoride (as F)	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 60) : 2008	1.0	15	0.15
8	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025 (Part 46) 1994	30	100	9.93
9	Odour	mg/l	APHA method 23rd edition: 2017	45	No relaxation	
0	pH		IS 3025 (Part 5) : 2018	Agrecable	Agrecable	BDL(DL-2)
1	Sulphate (as SO <sub>1</sub> )	•	1S 3025 (Part 11) : 2022	651085	No relaxation	Agreeable
2	Total dissolved solids	mg/l	1S 3025 (Part 24) : 2022	200	400	8.05
13	Turbidity	mg/l	IS 3025 (Part 16) : 2023	500	2000	7.17
14	Total hardness (as CaCO <sub>1</sub> )	NTU	IS 3025 (Part 10) : 1984	1	5.	255
-	Chaminal T	mg/l	IS 3025 (Part 21) 2009	200	600	0.2
п	Chemical Testing 2. Residues In Water				800	122.4
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.51		
6	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.01
7	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01
8	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
9	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) 2019 IS 3025 (Part 2) 2019	0.05	1.5	BDL (DL - 0.03
0	Iron (as Fe)	mg/l	IS 3025 (Part 2) 2019	0.003	No relaxation	BDL (DL - 0.00
1	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019 IS 3025 (Part 2) : 2019	1.0	No relaxation	BDL(DL-0.01
2	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.00)
	Nickel (as Ni)	ing/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
+	Selenium (as Se)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
	Total Chromium (as Cr)	mg/l	18 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL- 0.001
5	Zinc (as Zn)	mall	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)
NOTI	E: • Please see watermark "Original	Tatt Descetter	IS 3025 (Part 2) : 2019 the authenticity of this report • Results the	5	15	BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 1S:10500:2012, for tests conducted, indicating that it is Verified By

For Not Mangesh Fande Technical Manager

Raut Deputy Technical Manager -----END OF REPORT-----

Authorized Signator Chir ay Garway Deputy Quality Manager

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Test Report

Mr. Akash Kimake Tests Required: Chemical Testing	Sampling Date Sampling Time	17.05.2023 Not Mentioned	Sampling Durgapur S	Location
Ground Water Sample Collected By	Ground Water (Sample IE	CB32); (Chandrapur Area)	Purpose of analysis Drinking	Quantity Received
Sample Name	Sample Partic	Sample Particulars/Details		y Water
WCL HQ (M.S), 440001	Reference			
M/s Western Coalfields Limited (W Futala Road, Coal Estate, Civil Lines,	CL) Inward Date	24.06.2023	Analysis End	14.07 2023
Issued To :	- Second in the second second	ALPL/24062023/W-1/54-26	Analysis Start	24 66 2023
ULR No TC545823000001925F Test Report No.: ALPL/18072023/0	8- 26 Dated Sample Inward No.	18.07.2023 ALPL/24062023/AV-1/54-26	Page 1 of 1	

-			TEST RESULTS			
S.N.	Test Parameter	Measurement Unit	Test Method	(Drinking Wa Including Ar	per IS 10500 : 2012 ter Specifications) mendment No. 4	Test Result
I	Chemical Testing 1. Water			Acceptable Limit	Permissible Limit #	1
1	Alkalinity	mg/l	15 2025 (0			
2	Colour	Hazen	IS 3025 (Part 23) : 1986	200	600	84.78
3	Chloride (as CI)	mg/l	IS 3025 (Part 4) : 2021	5	15	1
4	Calcium (as Ca)	mg/l	IS 3025 (Part 32) :1988	250	1000	39.56
5	Residual Chlorine	mg/i	IS 3025 (Part 40) : 1991	75	200	29.76
6	Fluoride (as F)		IS 3025 (Part 26) 2021	0.2	1	BDL(DL+0.1)
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 60) : 2008	1.0	1,5	0.14
8	Nitrate (as NO <sub>4</sub> )	mg/l	IS 3025 (Part 46) 1994	30	100	12.27
9	Odour	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
10	pH	•	IS 3025 (Part 5) = 2018	Agreeable	Agreeable	Agrecable
11	Sulphate (as SO <sub>4</sub> )		IS 3025 (Part 11): 2022	6.5 to 8.5	No relaxation	7.82
12		mg/l	IS 3025 (Part 24) : 2022	200	400	7.50
13	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	254
14	Turbidity	NTU	IS 3025 (Part 10) 1984	1	5	and the second se
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) 2009	200	600	0.3
п	Chemical Testing 2. Residues In Water				000	124.8
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.00		
16	Aluminium (as Al)	mg/l	1S 3025 (Part 2) 2019	10.0	No relaxation	BDL (DL - 0.01)
17	Boron (as B)	mg/l	1S 3025 (Part 2): 2019	0.03	0.2	BDL(DL-0.01)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) 2019	0.5	2.4	BDL (DL - 0,1)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.05	1.5	BDL (DL - 0.03)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.02
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001
23	Nickel (as Ni)	mg/l	1S 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
24	Selenium (as Se)	mg/l		0.02	No relaxation	BDL (DL -0.01)
15	Total Chromium (as Cr)	mg/l	18 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)
NOT	E: • Please see watermurk "Owners!	Tast Decentile	IS 3025 (Part 2): 2019 the authenticity of this report • Results cha	5	15	BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with IS:10500:2012, for tests conducted, indicating that it is Verified By

At 19 Mangesh Fande Technical Manager

Tou Snehal Raut Deputy Technical Manager -----END OF REPORT-----

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### Test Report

and the second se					
Sample Inward No.	ALPL/24062023/W-1/54-28	Analysis Start	24.06.2023		
Inward Date	24.06.2023	Analysis End	14.07.2023		
Reference		- Sample Categor			
Sample Partice	Sample Particulars/Details		Quantity Received		
Ground Water (Sample II.	12.05 2023	Sampling Location			
	Sampling Time Not Mentioned		Tukum (Chandrapur)		
	Inward Date Reference Sample Partic Ground Water (Sample II Sampling Date	Inward Date 24.06.2023 Reference - Sample Particulars/Details Ground Water (Sample ID: CB33), (Chandrapur Area) Sampling Date 17.05.2023	Sample Particulars/Details     Analysis End       Ground Water (Sample ID: CB33); (Chandrapur Area)     Purpose of analysis Drinking       Sampling Date     17.05.2023		

Test Basamatar		Test Parameter Measurement Test Method		(Drinking Wat Including An	per IS 10500 : 2012 er Specifications) nendment No. 4	Test Result
S.N.	lest Parameter	Unit		Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water	1	53 100/	200	600	87.92
1	Alkalinity	mg/l	1S 3025 (Part 23) : 1986	5	15	1
2	Colour	Hazen	IS 3025 (Part 4) : 2021	250	1000	31.90
3	Chloride (as Cl)	mg/l	1S 3025 (Part 32) (1988	75	200	25.92
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	0.2	1	BDL(DL-0.1)
4	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	and the second se	15	0.14
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	100	12.85
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) 1994	30	No relaxation	BDL(DL-2)
-	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	Agreeable	Agreeable
8	Odour		IS 3025 (Part 5) , 2018	Agreeable	No relaxation	7.04
9	The second se	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	400	10.67
10	pH Scheberg (mc SCh.)	mg/l	IS 3025 (Part 24) : 2022	200	1 Vieto	247
11	Sulphate (as SO <sub>4</sub> ) Total dissolved solids	mg/l	18 3025 (Part 16) : 2023	500	2000	0.2
12		NTU	IS 3025 (Part 10): 1984	1	5	117.6
13	Turbidity	mg/l	1S 3025 (Part 21): 2009	200	600	117.0
14	Total hardness (as CaCO <sub>3</sub> ) Chemical Testing	105.1				
П	2. Residues In Water	- 16		0.01	No relaxation	BDL (DL - 0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) 2022		0.2	BDL(DL-0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) 2019	0.03	2.4	BDL (DL - 0.1)
17	Boron (as B)	mg/l	IS 3025 (Part 2): 2019	0.5	1.5	BDL (DL - 0.03)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.001)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL(D1-0.01)
20	Iron (as Fe)	mg/l	1S 3025 (Part 2): 2019	1.0	No relaxation	BDL (DL - 0.001)
-	Lead (as Pb)	mg/I	IS 3025 (Part 2): 2019	0.01	0.3	BDL (DL - 0.05)
21	Manganese (as Mn)	mg/l	IS 3025 (Part 2): 2019	0.1		BDL (DL - 0.01)
22	Nickel (as Ni)	mg/l	15 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL-0.001)
23	Selenium (as Se)	mgA	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.03)
24	EX OF CITE THE CASE	mg/l	IS 3025 (Part 2) 2019	0.05	No relaxation	BDL (DL - 0.0)
25	Total Chromium (as Cr) Zinc (as Zn)		IS 3025 (Part 2): 2019 firm the authenticity of this report. • Result	5	15	

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with IS: 10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters. Authorized Signatory

Verified By

Feri Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager -----END OF REPORT----

may Girway Deputy Quality Manager

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Test Report

33		8.07.2023	Page 1 of 1	24.06.2023
Sar	nplc Inward No.	ALPL/24062023/W-1/54-33	Analysis Start	
a second s	ard Date	24.06.2023	Analysis End	14,07,2023
gpur, Ref	Reference -		Sample Catego	
Groups	Sample Partici	ulars/Details (CB-53): (Chandrapur Area)	Purpose of analysis Drinking	Quantity Received 1 Ltr
Ground Water Ground Sample Collected By Mr. Akash Kirnake		18.05.2023		Location dur
1	L) Inv gpur, Rel	L) Sample Inward No. Inward Date Reference Ground Water (Sample ID Sampling Date	L) Sample Inward No. ALPL/24062023/W-1/54-33 L) Inward Date 24.06.2023 Reference - Sample Particulars/Details Ground Water (Sample ID: CB- 53), (Chandrapur Area) Sampling Date 18.05.2023	L) Sample Inward No. ALPL/24062023/W-1/54-33 Analysis Start Inward Date 24.06 2023 Reference - Sample Categor Sample Particulars/Details Ground Water (Sample ID: CB- 53), (Chandrapur Area) Purpose of analysis Drinking Sampling Date 18.05 2023 Sampling

S.N.	Test Parameter	Measurement	Test Method	(Drinking Wat Including An	per IS 10500 : 2012 er Specifications) nendment No. 4	Test Result
2.14.		Unit	and the second second	Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1, Water			200	600	81.64
1	Alkalimity	mg/l	1S 3025 (Part 23) 1986	200	15	1
2	Coleur	Hazen	IS 3025 (Part 4) : 2021	5	1000	37.00
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) 1988	250	200	24
4	Calcium (as Ca)	mg/l	1S 3025 (Part 40) : 1991	75	200	BDL(DL-0.1)
5	Residual Chlorine	mg/l	1S 3025 (Part 26) : 2021	0.2	10	0.12
6	Fluoride (as F)	mg/l	1S 3025 (Part 60) : 2008	1.0	1.5	7.01
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46): 1994	30	100	BDL(DL-2)
8	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	Agreeable
9	Odour		IS 3025 (Part 5): 2018	Agreeable	Agreeable	8.19
-	pH		IS 3025 (Part 11): 2022	6.5 to 8.5	No relaxation	
10		mg/l	IS 3025 (Part 24) : 2022	200	400	6.55
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 16) : 2023	500	2000	216
12	Total dissolved solids	NTU	1S 3025 (Part 10) : 1984	1	5	0.3
13	Turbidity	mg/l	1S 3025 (Part 21) : 2009	200	600	88.8
14	Total hardness (as CaCO <sub>1</sub> )	ingo	10.2000 10.000			
п	Chemical Testing 2. Residues In Water				1	BDL (DL - 0.01)
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL(DL-0.01)
16	Aluminium (as Al)	mg/I	IS 3025 (Part 2): 2019	0.03	0.2	BDL (DL - 0.1)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.03)
18	Copper (as Cu)	mg/l	1S 3025 (Part 2): 2019	0.05	1.5	and the second se
19	Cadmium (as Cd)	mg/l	1S 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001)
		mg/l	1S 3025 (Part 2): 2019	1.0	No relaxation	0.01
20	Iron (as Fe) Lead (as Pb)	mg/l	1S 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
21		mg/l	1S 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (D1, - 0.01)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
24	Selenium (as Sc)	mg/l	IS 3025 (Part 2): 2019	0.05	No relaxation	BDL (DL - 0.03)
25	Total Chromium (as Cr) Zinc (as Zn)		IS 3025 (Part 2) : 2019 from the authenticity of this report • Results	5	15	BDL (DL - 0.1)

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Verified By

Technical Manager

Mangesh Fande

Snehal Raut Deputy Technical Manager ----- END OF REPORT------

Thinkinay Garway Deputy Quality Manager

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Test Report

Dated I				
Sample Inward No.	ALPL/24062023/W-1/54-35	Analysis Start	24,06,2023	
	24.06.2023	Analysis End	14.07.2023	
Reference	Reference -		ry Water	
Sample Partic Ground Water (Sample ID	ulars/Details (CB- 55); (Chandrapur Area)	Purpose of analysis Drinking	Quantity Received	
Sampling Date Sampling Time	18.05.2023 Not Mentioned	Sampling Dew		
	AND REPORTED THE			
	Aur, Reference Ground Water (Sample Partic Sampling Date Sampling Time	Aur, Reference Sample Particulars/Details Ground Water (Sample ID: CB- 55); (Chandrapur Area) Sampling Date 18:05:2023	Analysis End Analysis End Sample Categor Sample Particulars/Details Ground Water (Sample ID: CB- 55); (Chandrapur Area) Sampling Date 18:05:2023 Sampling Time Not Mentioned Dew	

S.N.	Test Parameter	Measurement	Test Method	(Drinking Wat	per IS 10500 : 2012 ter Specifications) nendment No. 4	Test Result
				Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water			-		and 10-4
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	80.07
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	
3	Chloride (as Cl)	mg/l	1S 3025 (Part 32) :1988	250	1000	39.56
4	Calcium (as Ca)	mg/l	1S 3025 (Part 40) : 1991	75	200	20.16
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL-0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) 2008	1.0	15	0.13
7	Magnesium (as Mg)	mg/l	1S 3025 (Part 46): 1994	30	100	6.42
8	Nitrate (as NO <sub>4</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
9	Odour		15 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH		18 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.05
11	Sulphate (as SO <sub>4</sub> )	mg/l	1S 3025 (Part 24) : 2022	200	400	5.68
12	Total dissolved solids	mg/l	1S 3025 (Part 16) : 2023	500	2000	203
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
14	Total bardness (as CaCO <sub>1</sub> )	mg/l	IS 3025 (Part 21) 2009	200	600	76.8
п	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2): 2019	0.5	2.4	BDL (DL • 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) 2019	0.05	1.5	BDL (DL + 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	BDL(DL-0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	1S 3025 (Part 2) 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	1S 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL = 0.01)
24	Sclenium (as Sc)	mg/l	1S 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL • 0.001)
25	Total Chromium (as Cr)	mg/l	1S 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	me/l	18 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

For Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager -END OF REPORT----

Authorized Signatory

Chomay Garway Deputy Quality Manager

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Test Report

ULR No TC545823000001925F Test Report No.: ALPL/18072023/	08-53	Dated 18	3.07.2023		Page 1 of 1	
Test Report From the Difference		Sample Inward No.	ALPL/24062023/W-1/54-53		Analysis Start	24.06.2023
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Inward Date	24.06.2023	Analysis End Sample Categor		14.07.2023
		Reference				r Water
Sample Name Ground Water	Gro	Sample Parties	alars/Details '1. 2). (Chandrapur Area)	Pur	pose of analysis Drinking	Quantity Received
Sample Collected By Mr. Akash Kimake		Sampling Date Sampling Time	20.05.2023 Not Mentioned		Sampling Jun	
Tests Required: Chemical Testing						

TEST RESULTS Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Measurement Test Result Test Method S.N. Test Parameter Including Amendment No. 4 Unit Acceptable Limit | Permissible Limit # Chemical Testing 1. Water 1 97.34 600 IS 3025 (Part 23) : 1986 200 mg/l Alkalinity 15 IS 3025 (Part 4) 2021 2 Colour Hazen 40.83 250 1000 1S 3025 (Part 32) :1988 mg/l Chloride (as CI) 2 24 75 200 IS 3025 (Part 40) : 1991 Calcium (as Ca) mg/l 4 BDL(DL-0.1) IS 3025 (Part 26) : 2021 0.2 mg/l **Residual Chlorine** 0.18 IS 3025 (Part 60) : 2008 1.0 15 mg/l Fluoride (as F) 6 30 100 8.18 IS 3025 (Part 46) : 1994 Magnesium (as Mg) mg/l 7 BDL(DL-2) APHA method 23rd edition: 2017 45 No relaxation Nitrate (as NO<sub>3</sub>) mg/l 8 Agreeable Agreeable IS 3025 (Part 5): 2018 Agreeable Odour Ü . 7 98 IS 3025 (Part 11) : 2022 6.5 10 8 5 No relaxation pH 10 400 5.28 1S 3025 (Part 24) : 2022 200 Sulphate (as SO<sub>1</sub>) mg/l 11 500 2000 239 1S 3025 (Part 16): 2023 Total dissolved solids mg/l 12 0.2 IS 3025 (Part 10) : 1984 1 NTU 13 Turbidity 93.6 600 200 IS 3025 (Part 21) : 2009 Total hardness (as CaCO<sub>1</sub>) mg/l 14 **Chemical Testing** п 2. Residues In Water BDL (DL - 0.01) 0.01 No relaxation IS 3025 (Part 37) : 2022 mg/l 15 Arsenic (as As) BDL(DL-0.01) 0.2 1S 3025 (Part 2): 2019 0.03 Aluminium (as Al) mg/I 16 BDL (DL - 0.1) 0.5 2.4 IS 3025 (Part 2) 2019 Boron (as B) mg/l 17 BDL (DL - 0.03) IS 3025 (Part 2) 2019 0.05 1.5 mg/l 18 Copper (as Cu) BDL (DL - 0.001) No relaxation IS 3025 (Part 2): 2019 0.003 mg/l 19 Cadmium (as Cd) 0.01 No relaxation IS 3025 (Part 2): 2019 1.0 20 Iron (as Fe) mg/l BDL (DL - 0.001) No relaxation 1S 3025 (Part 2) : 2019 0.01 mg/l Lead (as Pb) 21 03 BDL (DL - 0.05) 0.1 1S 3025 (Part 2): 2019 mg/l 22 Manganese (as Mn) BDL (DL - 0.01) 15 3025 (Part 2): 2019 0.02 No relaxation 23 mg/I Nickel (as Ni) BDL (DL-0.001) 0.01 No relaxation mg/l IS 3025 (Part 56) 2003 24 Selenium (as Se) BDL (DL - 0.03) 1S 3025 (Part 2): 2019 No relaxation 0.05 25 Total Chromium (as Cr) mg/l BDL (DL - 0.1) 15 1S 3025 (Part 2): 2019 5 Zinc (as Zn) mg/l 26

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 1S:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters Authorized Signatory

Verified By ron Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager ----END OF REPORT-----

may (Grway Deputy Quality Manager

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Test Report

ULR No TC545823000001925F	8- 50	Dated 18	8.07.2023	Page 1	200 H 201
Test Report No.: ALPL/18072023/0	0- 20	Sample Inward No.	ALPL/24062023/W-1/54-50	Analysis S	
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Inward Date	24.06.2023	Analysis	End 14 07 2023
		Reference	- Sample Category		ategory Water
Sample Name	-	Sample Partic	alars/Details CL 14): (Chandrapur Area)	Purpose of anal Drinking	
Ground Water Ground Sample Collected By Mr. Akash Kirnake		Sampling Date	20.05.2023	Sampling Location	
		Sampling Time			Manna

TECT DESULTS

Tests Required: Chemical Testing.

	ind in the second se		TEST RESULTS			
S.N.	Test Parameter	Measurement	Test Method	Requirement as (Drinking Wat Including Ar	Test Result	
G.1 %.	rea i analitica	Unit		Acceptable Limit	Permissible Limit #	
1	Chemical Testing 1. Water			200	600	80.07
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	15	I
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	1000	35.73
3	Chloride (as Cl)	mg/l	1S 3025 (Part 32) 1988	250	200	23.04
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	BDL(DL-0.1)
5	Residual Chlorine	mg/l	IS 3025 (Part 26) 2021	0.2	15	0.14
	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0		10.51
6	Magnesium (as Mg)	mg/l	1S 3025 (Part 46) 1994	30	100	BDL(DL-2)
-	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	Agreeable
8			1S 3025 (Part 5): 2018	Agreeable	Agreeable	8.27
9	Odour		IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	100,000,71
10	pH	mg/l	IS 3025 (Part 24) 2022	200	400	5.49
11	Sulphate (as SO <sub>4</sub> )	the second se	18 3025 (Part 16) 2023	500	2000	224
12	Total dissolved solids	mg/l NTU	IS 3025 (Part 10) 1984	1	5	0.3
13	Turbidity		15 3025 (Part 21) 2009	200	600	100.8
14	Total hardness (as CaCOa)	mg/l	10 0022 (1.03 2) /			
п	Chemical Testing					
17.90	2. Residues In Water	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
15	Arsenic (as As)	mg/l	1S 3025 (Part 2): 2019	0.03	0.2	BDL(DL- 0.01)
16	Aluminium (as Al)	and the second se	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
17	Boron (as B)	mg/l	IS 3025 (Part 2) 2019	0.05	1.5	BDL (DL - 0.05)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) 2019	0,003	No relaxation	BD1. (DL - 0.001
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2): 2019	1.0	No relaxation	0.01
20	Iron (as Fe)	mg/l	1S 3025 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001
21	Lead (as Pb)	mg/l	IS 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
23	Nickel (as Ni)	mg/l	18 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL-0.001
24	Selenium (as Sc)	mg/l		0.05	No relaxation	BDL (DL - 0.03)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019		d complets) and applicable to	tested narameters only

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 'mg/l' is equivalent to 'ppm'.
 BDLe Below detection limit.
 DL. Indicates detection limit of instrument /method and shall be considered as 'absent'.

REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 1S:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

Mangesh Fande Technical Manager

Snehal Raut

Deputy Technical Manager -----END OF REPORT-----

Authorized Signatory

Garway Quality Manager Denuty

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Test Report

#### ULR No.- TC545823000001925F

ANACON

Test Report No.: ALPL/18072023/08- 52	Dated 1	8.07.2023	Page 1 of 1	
	Sample Inward No.	ALPL/24062023/W-1/54-52	Analysis Start	24.06.2023
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur,	Inward Date	24.06.2023	Analysis End	14,07,2023
WCL HQ (M.S), 440001	Reference	2 <b>9</b>	12 4 22 4	
			Sample Categor	y Water
Sample Name	Sample Partic		Purpose of analysis	Quantity Received
Ground Water	Ground Water (Sample II	D: CL 15); (Chandrapur Area)	Drinking	1 Ltr
Sample Collected By Mr. Akash Kimake	Sampling Date Sampling Time	20.05.2023 Not Mentioned	Sampling Bara M	ALC REAL PROPERTY AND ADDRESS OF ADDRES
Tests Required: Chemical Testing.	and a strategy with a second		de la contra c	

TEST RESULTS Requirement as per IS 10500 : 2012 Measurement (Drinking Water Specifications) S.N. Test Method Test Result Test Parameter Including Amendment No. 4 Unit Acceptable Limit | Permissible Limit # I **Chemical Testing 1. Water** IS 3025 (Part 23) : 1986 200 600 83.21 Alkalimity mg/l . Colour Hazen IS 3025 (Part 4): 2021 5 15 IS 3025 (Part 32) :1988 250 33.18 3 1000 Chloride (as Cl) mg/lIS 3025 (Part 40) : 1991 75 200 25.92 4 Calcium (as Ca) mg/l IS 3025 (Part 26) : 2021 BDL(DL-0.1) 0.2 5 **Residual Chlorine** mg/l 1 6 Fluoride (as F) mg/l IS 3025 (Part 60) : 2008 1.6 1.5 013 7 Magnesium (as Mg) IS 3025 (Part 46): 1994 30 100 10.51 mg/l Nitrate (as NO<sub>0</sub>) 8 APHA method 23rd edition: 2017 45 No relaxation BDL(DL-2) mg/l IS 3025 (Part 5) : 2018 Agreeable 9 Odour Agreeable Agreeable . 10 pH IS 3025 (Part 11) : 2022 6.5 to 8.5 No relaxation 8.19 IS 3025 (Part 24) : 2022 200 5.07 11 Sulphate (as SO4) 400 mg/lIS 3025 (Part 16) : 2023 500 2000 231 12 Total dissolved solids mg/l IS 3025 (Part 10) : 1984 13 Turbidity NTU 1 5 0.2 Total hardness (as CaCO<sub>3</sub>) IS 3025 (Part 21) : 2009 200 600 108 14 mg/l Chemical Testing 11 2. Residues In Water 15 Atsenic (as As) IS 3025 (Part 37) : 2022 0.01 No relaxation BDL (DL - 0.01) mg/lIS 3025 (Part 2) : 2019 0.2 BDL(DL-0.01) 16 Aluminium (as Al) mg/l 0.03 mg/l IS 3025 (Part 2): 2019 17 Boron (as B) 0.5 2.4 BDL (DL - 0.1) 18 Copper (as Cu) mg/l IS 3025 (Part 2) : 2019 0.05 1.5 BDL (DL - 0.03) IS 3025 (Part 2) No relaxation 19 Cadmium (as Cd) 2019 0.003BDL (DL - 0.001) mg/l IS 3025 (Part 2) : 2019 20 1.0 No relaxation 0.01 Iron (as Fe) mg/I 21 IS 3025 (Part 2) : 2019 BDL (DL - 0.001) Lead (as Pb) mg/l 0.01 No relaxation IS 3025 (Part 2) : 2019 BDL (DL - 0.05) 22 Manganese (as Mn) mg/l 0.1 0.3 23 Nickel (as Ni) mg/l IS 3025 (Part 2): 2019 0.02 No relaxation BDL (DL - 0.01) IS 3025 (Part 56) : 2003 24 No relaxation BDL (DL-0.001) Selenium (as Se) mg/l 0.01 25 IS 3025 (Part 2) : 2019 Total Chromium (as Cr) mg/l 0.05 No relaxation BDL (DL - 0.03) IS 3025 (Part 2) : 2019 26 Zinc (as Zn) mg/l 5 15 BDL (DL - 0.1)

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters. Verified By Authorized Signatory

100 Mangesh Fande Technical Manager

11U Snehal Raut Deputy Technical Manager

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

Authorized Signatory Chinmay Galway Deputy Quality Manager

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Anacon Laboratories Pvt. Ltd. Nagpur Lab

♥ FP-34, 35, Food Park, Five Star Industrial Estate, MIDC Butibori, Nagpur, Maharashtra, India - 441 122







Test Report

Sample Name Ground Water Sample Collected B		round Water (Sample ID: Sampling Date	5 CP); (Chandrapur Area) 20.05.2023 Not Mentioned	Drinking Sampling I Loha	
		Sample Partie	nlars/Details	Purpose of analysis	Quantity Received
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Reference	2	Sample Category	Water
		Inward Date	24.06.2023	Analysis End	14.07.2023
Trai repart dan da		Sample Inward No.	ALPL/24062023/W-1/54-47		
ULR No TC545823000001925F Test Report No.: ALPL/18072023/08	3-47	Dated 18	3.07.2023	Page 1 of 1 Analysis Start	24.06.2023

Tests Required: Chemical Testing

S.N.	Test Parameter	Measurement	TEST RESULTS Test Method	(Drinking Wat Including Ar	per 1S 10500 : 2012 (er Specifications) nendment No. 4	Test Result
D.13.	(est l'avaniete)	Unit		Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water				(10)	82.29
1	Alkalinity	me/l	15 3025 (Part 23) : 1986	200	600	82.29
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	34.45
_	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	27.84
3	Calcium (as Ca)	mg/l	IS 3025 (Part 40) 1991	75	200	BDL(DL-0.1)
4	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	0.10
5	- 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mg/l	IS 3025 (Part 60) 2008	1.0	1.5	
6	Fluoride (as F)	mg/l	1S 3025 (Part 46) 1994	30	100	2.92
7	Magnesium (as Mg)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL-2)
8	Nitrate (as NO <sub>3</sub> )	ing/A	1S 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
9	Odour	-	IS 3025 (Part 11) 2022	6.5 to 8.5	No relaxation	6.85
10	pH	mg/l	IS 3025 (Part 24) 2022	200	400	5.56
11	Sulphate (as SO <sub>1</sub> )	mg/l	IS 3025 (Part 16): 2023	500	2000	199
12	Total dissolved solids	NTU	IS 3025 (Part 10) : 1984	1	5	0.2
13	Turbidity		IS 3025 (Part 21): 2009	200	600	81.6
14	Total hardness (as CaCO <sub>3</sub> )	mg/l	15 5025 (1 01 21) - 2005			
11	Chemical Testing	0				
100	2. Residues In Water		15 3025 (Part 37) ; 2022	0.01	No relaxation	BDL (DL - 0.01)
15	Arsenic (as As)	mg/l	1S 3025 (Part 2) : 2019	0.03	0.2	BDL(DL-0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.5	2,4	BDL (DL - 0.1)
17	Boron (as B)	mg/l	IS 3025 (Part 2) 2019	0.05	1.5	BDL (DL - 0.03)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) 2019	0.003	No relaxation	BDL (DL - 0.001
19	Cadmium (as Cd)	mg/I	IS 3025 (Part 2) 2019	1.0	No relaxation	0.01
20	Iron (as Fe)	mg/l	IS 3025 (Part 2): 2019	0.01	No relaxation	BDL (DL - 0.001
21	Lead (as Pb)	mg/l	15 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05)
22	Manganese (as Mn)	mg/l	1S 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL + 0.01)
23	Nickel (as Ni)	mg/l	18 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL- 0.001)
24	Selemum (as Se)	mg/l		0.05	No relaxation	BDL (DL - 0.03)
25	Total Chromium (as Cr)	mg/l	1S 3025 (Part 2): 2019	5	15	BDL (DL - 0.1)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2): 2019		t complete) and applicable to	tested parameters only.

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 15:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameter Authorized Signatory

Verified By

Cen Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager ----END OF REPORT----

Chingmay Cherway Deputy Quality Manager

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Test Report

Sample Collected By Mr. Akash Kirnake		Sampling Date Sampling Time	20.05.2023 Not Mentioned	Mahahali	
Ground Water			20.05 2023	Sampling Location	
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001 Sample Name		Sample Particulars/Details Ground Water (Sample ID: PZ- 1), (Chandrapur Area)		Purpose of analysis Drinking	Quantity Received
		Reference		Sample Category	Water
		Inward Date	24.05 2023	Analysis End	14,07,2025
Test Report Aut. ALT D Tub to Day of the		Sample Inward No.	ALPL/24062023/W-1/54-54	Analysis Start	14.07.2023
ULR No TC545823000001925F Test Report No.: ALPL/18072023/08- 54		Dated 18 07 2023		Page 1 of 1	24 06 2023

S.N.	Test Parameter	Measurement Unit	TEST RESULTS	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result			
				Acceptable Limit	Permissible Limit #				
I	Chemical Testing 1. Water				600	78.5			
1	Alkalinity	mg/l	IS 3025 (Part 23): 1986	200	15	1			
2	Colour	Hazen	1S 3025 (Part 4) 2021	5	1000	28.07			
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	and the second descent of the second descent descent descent descent descent descent descent descent descent de	21.2			
122	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	BDL(DL-0.1)			
4	Residual Chlorine	mg/l	1S 3025 (Part 26) : 2021	0.2		0.17			
5	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	8.76			
6		mg/l	IS 3025 (Part 46) : 1994	30	100	BDL(DL-2)			
7	Magnesium (as Mg)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	and the second s			
8	Nitrate (as NO <sub>3</sub> )	mgr	1S 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable			
9	Odour		1S 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.12			
10	pH	mg/l	IS 3025 (Part 24) : 2022	200	400	5.32			
11	Sulphate (as SO <sub>4</sub> )	the second se	1S 3025 (Part 16) 2023	500	2000	202			
12	Total dissolved solids	mg/l NTU	1S 3025 (Part 10) 1984	1	5	0.3			
13	Turbidity		IS 3025 (Part 21) 2009	200	600	88.8			
14	Total hardness (as CaCO <sub>3</sub> )	mg/l	13 3023 (1411 21) 2007		and the second				
п	Chemical Testing 2 Residues In Water BDI (DL - 0.01) BDI (DL - 0.01)								
1 and	2. Residues In Water	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL(DL-0.01)			
15	Arsenic (as As)	mg/l	18 3025 (Part 2) : 2019	0.03	0.2				
16	Aluminium (as Al)	mg/l	1S 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)			
17	Boron (as B)	ing/i	1S 3025 (Part 2) : 2019	0.05	1,5	BDL (DL - 0.03)			
18	Copper (as Cu)	mg/l	IS 3025 (Part 2): 2019	0,003	No relaxation	BDL (DL - 0.00			
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) 2019	1.0	No relaxation	BDL(DL-0.01)			
20	Iron (as Fc)	and the second se	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.00			
21	Lead (as Pb)	mg/l	15 3025 (Part 2): 2019	0.1	0.3	BDL (DL - 0.05			
22	Manganese (as Mn)	mg/l	18 3025 (Part 2): 2019	0.02	No relaxation	BDL (DL - 0.01			
23	Nickel (as Ni)	mg/l	15 3025 (Part 56) ; 2003	0.01	No relaxation	BDL (DL+ 0.001			
24	Selenium (as Se)	mg/l	1S 3025 (Part 2) : 2019	0.05	No relaxation	BDL (D1 0.03)			
25	Total Chromium (as Cr)	mg/l	100 200 5 (Deve 2) - 2010	5	15	BDL (DL - 0.1)			
26	Zinc (as Zn)	mg/l	IS 3025 (Part 21, 2019	- I - II ha safarrad to teste	d sample(s) and applicable to t	tested parameters only.			

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REMARKS: As requested by the client, sample was tested for above parameters only. The submitted Sample complies with 18:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

de llo CON Mangesh Fande Technical Manager

Snehal Raut Deputy Technical Manager ----END OF REPORT------

Authorized Signatory Mimay Garway Deputy Quality Manager

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