#### WESTERN COALFIELDS LIMITED OFFICE OF THE SUB AREA MANAGER GOURI SUB AREA AM/GSA/Civil/ 778 Date:- 30/11/2023

Ref.No: WCL/BA/SAM/GSA/Civil/ 778

Addl. Principal Chief Conservator of Forests, Ministry of Environment, Forests & Climate Change, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur – 440001 (M.S.)

Subject:- Submission of Six monthly Environment Compliance report in respect of GOURI DEEP OC MINE, Ballarpur Area, WCL. Dear Sir,

Enclosed herewith please find, Six Monthly Environment Compliance in respect of GOURI DEEP OC MINE for period from 01.04.2023 to 30.09.2023. EC Reference: J-11015-179-2014-IA-II(M); dtd: 13/03/2015. Thanking you.

Yours Faithfully,

Mine Manager,

Gourideep OC mine

Copy to:-·

1.Regional Officer, MPCB, Chandrapur 2.AGM, Ballarpur Area, WCL 3.GM(Environment), WCL HQ, Civil Lines, Nagpur 4.GM(Environment), CMPDIL RI –IV, Nagpur 5.ANO(Environment), Ballarpur Area, WCL

#### No. J-11015/179/2014-IA-II (M) Government of India Ministry of Environment, Forests & Climate Change IA-II (Coal Mining) Division

Indira Paryavaran Bhawan, Jorbagh Road, New Delhi-110003

Dated: 13<sup>th</sup> March, 2015

To,

The General Manager (Environment), M/s Western Coalfields Ltd., Coal Estate, 9<sup>th</sup> Floor, Civil Lines, NAGPUR -440001

# Sub. : Expansion of Gouri Deep Expansion Mine Project (from 0.40 MTPA to 0.60 MTPA in an ML area of 356.11 Ha); latitude 19° 46' 33" -19° 47' 56" N and longitude 79° 16' 46.5" -79° 18' 53.6" E of M/s Western Coalfield Limited, located at dist. Chandrapur, Maharashtra - EC under 7(ii) of EIA Notification 2006 – Environmental Clearance - reg.

Sir,

This is with reference to letter no. 43011/09/2014-CPAM dated 30.04.2014 with the application and subsequent letter no. WCL/ENV/HQ/6-1/ dated 05.01.2015; 15.01.2015 and 18.01.2015 for Environmental Clearance for Expansion under 7(ii) of EIA Notification 2006 for the above-mentioned project.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance for Expansion of Gouri Deep Expansion Mine Project (from 0.40 MTPA to 0.60 MTPA in an ML area of 356.11 Ha); latitude  $19^{0}$  46' 33" -19<sup>0</sup> 47' 56" N and longitude  $79^{0}$  16' 46.5" -79<sup>0</sup> 18' 53.6" E of M/s Western Coalfield Limited, located at dist. Chandrapur, Maharashtra under 7(ii) of EIA Notification 2006. The proposal was considered in the 29<sup>th</sup> EAC meeting held on  $15^{th}$  -16<sup>th</sup> January, 2015. The proponent has informed that:

- i. The project was accorded EC vide letter no. J-11015/338/2008-1A.II(M) dated 18.02.2011 for 0.40 MTPA.
- ii. The latitude and longitude of the project are  $19^{\circ}$  46' 33" to  $19^{\circ}$  47'' 56" and  $79^{\circ}$  16' 46.5" to  $79^{\circ}$  18' 53.6" respectively.
- iii. Joint Venture: No Joint Venture.
- iv. Coal Linkage: Linked to M/s Ultra Tech Cements.
- v. The land usage of the project will be as follows:

#### **Pre-Mining:**

S.No	Land particulars	CBA Act 1957 (ha)	Forest Act 1980 (ha)	TotalLand (ha)
1	Agriculture	339.43	Nil	339.43
2	Govt/Other	16.68	Nil	16.68
3	Forest	Nil	Nil	Nil

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 Total	356.11	Nil	356.11

#### Land use during Mining:

S.No	Head	Land
		Requirement (ha)
1.	Excavation Area	92.45
2.	External OB Dump	94.12
3.	Infrastucture	05.00
4.	Project Township	10.00
5.	Boundary Adjustment &	154.54
	Miscellaneous	
	TOTAL	356.11

#### **Post- Mining:**

S.No	Particulars	Land in ha
1	Afforested Area:	127.84
	a) Backfilled Area – 33.72	
	b) External OB Dump – 94.12	
2	Water Body / Void	58.73
3	Vacant land to be released with plantation	154.54
4	Infrastructure	05.00
5	Township	10.00
	TOTAL	356.11

- vi. The total geological reserve is 15.24 MT. The mineable reserve 7.66 MT, extractable reserve is 7.66 MT. The per cent of extraction would be 50.3%.
- vii. The coal grade is 4462 Kcal / kg; G10 .The stripping ratio is 1:6.11. The average Gradient is lin 4 in Q- I & lin 3 in Q-II. There will be One Composite Seam with thickness ranging 14.00 m in Quarry-I & 13.50m in Quarry-II.
- viii. The total estimated water requirement is 6048 m3/day. The level of ground water ranges from 2.00m bgl to 19.55m bgl.
- ix. The Method of mining would be opencast with shovel-dumper combination.
- x. There are 2 external OB dumps with Quantity of 22.87Mbcm in an area of 94.12ha with height of 42 m (A) &60 m (B) above the surface level and 1 internal dump with Quantity of 23.94 Mbcm in an area of 33.72ha.
- xi. The final mine void would be in 58.73 Ha with depth of 130m. and the Total quarry area is 92.45 Ha. Backfilled quarry area of 33.72 Ha shall be reclaimed with plantation. A void of 58.73 ha with depth of 130 m which is proposed to be converted into a water body
- xii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiii. The life of mine is 15 Years.
- xiv. Transportation: Coal transportation in pit by Dumpers, Surface to Siding by Dumpers and loading at siding by Pay loader.
- xv. There is **R & R** involved. There are 297 PAFs.
- xvi. Cost: Total capital cost of the project is Rs. 86.21 Crores. CSR Cost Rs. 2.00 per tonne. R&R Cost 4.78 Crores. Environmental Management Cost (capital cost Rs. 1.855 crores, annual recurring cost Rs. 0.12 crores).
- xvii. Water body: Gouri & Sasti Nullah flows near to the site. Wardha River flows at a distance of 5 km north east of the project site.



- xviii. Approvals: Board's approval obtained on 28.02.2014. Mining plan has been approved on 28.02.2014. Mine Closure Plan approval on 15.02.2014
- xix. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xx. Forestry issues: There is no forest area involved.
- xxi. Total **afforestation** plan shall be implemented covering an area of 94.12ha at the end of mining. Green Belt over an area of 3.00ha. Density of tree plantation 2500 trees/ ha of plants.
- xxii. There are no court cases/violation pending with the project proponent.
- xxiii. Public Hearing: Public Hearing is not applicable as the applied under 7 (ii) of EIA. Notification, 2006.
- 3. The proponent further submitted that
  - a) Revised Post Mining Land use plan

S.No.	Particulars	Land (in ha)
1)	Reclaimed and Afforested area: a) Backfilled area – 33.72	33.72
2)	Backfilled area (to be completed after rehandling of OB- to be reclaimed biologically during closure period)	58.73
3)	Land with plantation developed on plains, avenue, around infrastructure and block plantation	154.54
4)	Land released after rehandling of OB dump ( which will be biologically reclaimed during closure period)	94.12
5)	Infrastructure	5.0
6)	Township	10.00
	Total	356.11

4. EC Compliance report: The compliance report of the, Regional Office, MoEFCC at Bhopal vide letter no. 3-17/2011/(ENV)/376 dated 08.12.2014 was deliberated in the EAC meeting. The Committee has noted the Action Taken for compliance by the Project which, inter alia, are as follows:

- i. The catch drains will continue to be maintained along with adequate plantation so as to arrest any flow of silt and sediments. The balance catch drain of 400 mtr length will be completed before onset of 2015 Monsoon. Retaining wall with sand bags and boulder pitching in wire crafts shall be constructed additionally by May 2015.
- ii. Assistance to villages for meeting water requirement shall be rendered as committed.
- iii. CSR will be continued as per the approved Policy of the Company.

5. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in  $29^{th}$  EAC meeting held on  $15^{th}$  - $16^{th}$  January, 2015 for granting Environmental Clearance. The Ministry of Environment, Forests and Climate Change hereby accords Environmental Clearance for the above-mentioned Expansion of Gouri Deep Expansion Mine Project (from 0.40 MTPA to 0.60 MTPA in an ML area of 356.11 Ha); latitude  $19^0$  46' 33" - $19^0$  47' 56" N and longitude  $79^0$  16' 46.5" - $79^0$  18' 53.6" E of M/s Western Coalfield Limited, located at dist. Chandrapur, Maharashtra under 7(ii) of EIA Notification 2006 under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the terms and conditions mentioned below:

#### A. Specific Conditions:

- i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- ii. The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.
- iii. Coal transportation in pit by Tippers, Surface to Siding by Tippers and loading at siding by Pay loader.
- iv. Toe wall will be constructed with boulder.
- v. Plantation should be made along the boundary of the OBD.
- vi. The catch drains will continue to be maintained along with adequate plantation so as to arrest any flow of silt and sediments. The balance catch drain of 400 mtr length will be completed before onset of the Monsoon. Retaining wall with sand bags and boulder pitching in wire crafts shall be constructed additionally by May 2015.
- vii. Assistance to villagers for meeting water requirement shall be rendered as committed.
- viii. CSR will be continued as per the approved Policy of the Company and Social Audit conducted as per GOI Guidelines/Notification.
- ix. The depth of the internal void shall be 35 m from the ground level and should be adequate for fishery purpose.
- x. All safety measures shall be taken as per CMR, 1957 & related Circulars
- xi. The production shall be within the same Mining Lease area.
- xii. The OB shall be completely re-handled at the end of the mining and will be back filled upto the ground level and covered with about a meter thick top soil and put to use. The land after mining shall be brought back for agriculture purpose.
- xiii. Garland drains be provided.
- xiv. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.
- xv. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xvi. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xvii. Dust mask to be provided to everyone working in the mining area.
- xviii. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xix. People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.
- xx. The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.
- xxi. The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- xxii. There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
- xxiii. OB shall be stacked at two earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.
- xxiv. Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained



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

- xxv. Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- xxvi. Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- xxvii. Drills shall be wet operated.
- xxviii. The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
  - xxix. Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
  - xxx. A Progressive afforestation plan shall be implemented covering an area of 94.12 ha at the end of mining, which includes reclaimed External OB dump area (94.12 ha), Internal OB dump area (33.72 ha), along roads and Green belt (3.00 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.
- xxxi. An estimated total 46.81 Mm<sup>3</sup> of OB will be generated during the entire life of the mine. Out of which 22.87 Mm<sup>3</sup> of OB will be dumped in two external OB Dumps an earmarked area covering 94.12 ha of land with height of 60 m. 23.94 Mm<sup>3</sup> of will be one internal OB dump in covering an area of 33.72 ha with height of 60 m. The maximum height of external OB dump for hard OB will not exceed 90 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.
- xxxii. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
- xxxiii. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.
- xxxiv. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
- xxxv. No groundwater shall be used for mining operations.
- xxxvi. Of the total quarry area of 92.45 ha. the backfilled quarry area of 33.72 ha shall be reclaimed with plantation and a void of 58.73 ha at a **depth of 35** m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- xxxvii. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & climate change and the Central Pollution Control Board quarterly within one month of monitoring.
- xxxviii. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xxxix. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.

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- xl. 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 specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- xli. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
- xlii. For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF&CC and its concerned Regional office
- xliii. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.
- xliv. The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
- xlv. Corporate Environment Responsibility:
  - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
  - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

#### **B.** General Conditions

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.
- ii. No change in the calendar plan of production for quantum of mineral coal shall be made.
- iii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for  $PM_{10}$ ,  $PM_{2.5}$ ,  $SO_2$  and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
- iv. Data on ambient air quality ( $PM_{10}$ ,  $PM_{2.5}$ ,  $SO_2$  and  $NO_x$ ) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.
- v. Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- vi. Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 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 shall be installed before discharge of workshop effluents.

- vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- viii. Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.
- ix. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
- x. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
- xi. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- xii. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
- xiii. The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the Ministry of Environment, Forests & Climate Change at <u>http://envfor.nic.in</u>.
- xiv. A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
- xv. A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.
- xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.
- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. The Environmental statement for each financial year ending 31 March in For –V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.

Expansion Gouri Deep OCP EC

6. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

7. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent

8. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

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

10. The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

11. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

12. 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 and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

13. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

14. This EC supersedes the earlier EC, vide letter no. letter J-11015/338/2008-1A.II(M) dated 18.02.2011 for 0.40 MTPA.

(Dr. Manoranjan Hota) Director

#### Copy to:

- 1. Secretary, Ministry of Coal, New Delhi.
- 2. Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg., Madam Cama Road, MUMBAI 400032.
- 3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal – 462016.
- Member Secretary, Maharashtra State Pollution Control Board, Kalapataru Point, 3rd & 4<sup>th</sup> Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 400002.

- 5. Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
- 6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
- 7. District Collector, Chandrapur, Government of Maharashtra.
- 8. Monitoring File 9. Guard File 10. Record File

11. Notice Board

(Dr. Manoranjan Hota)

Director

#### COMPLIANCE REPORT OF EC OF 0.60 MTPA AT GOURI DEEP OCP, GRANTED PER-MISSION REF NO.J11015/179/2014-IA.II (M) Dated, 13TH MARCH 2015

# A. Specific Conditions

S. NO.	Condition	Statu	Status of Compliance			
i)	The maximum production from mine at any given time shall not exceed the limit as prescribed in EC	Complied and the production doesn't exceed 0.6 MTPA. Production details for last 5 years is as follows:				
		Sr no.YearProduction (MTPA)EC capa (MT		EC capacity (MTPA)		
		1	2019-20	0.60	0.60	
		2	2020-21	0.536	0.60	
		3	2021-22	0.60	0.60	
		4	2022-23	0.56	0.60	
		5	2023-24 (upto Sept 2022)	0	0.6	
ii)	The validity of the EC is for the life of the mine or as specified in EIA notification, 2006, whichever is earlier	Noted.				
iii)	Coal Transportation in pit by Dumpers, surface to siding by Tippers and loading to siding by Pay Loaders	The coal transportation in the pit is carried out by dumpers upto surface. From surface to siding, transportation is done through tippers. Payloaders load coal from stock yard to wagons.				
iv)	Toe wall will be constructed with boulder.	The OB dump will be biologically reclaimed and stabilized with native species, as such there will be no siltation and flow of sediments from this dumps. As such construction of Toe wall may not be required. However, retaining wall may be constructed as per requirement.				
v)	Plantation should be made along the boundary of OBD	27000 no of plants have been planted till date.				
vi)	Catch Drains will contiue to be maintained along with adequate plantation so as to arrest any flow of silt and sediments. The balance catch drain of same size for about 400m length will be completed	Catch drains / garland drains of appropriate sizes have been constructed all around the OB dump to arrest silt and sediments into natural water course. The cross sectional area of catch drain is 2.5 m x 1.7 m. Total length of catch drain is 8.8 km. These catch				

	before onset of 2015 monsoon. Retaining wall with sand bags and boulder pitching in wire crafts shall be constructed additionally by May 2015e balance catch drain of same size for about 400m length has been completed before onset	drains are cleaned before onset of every monsoon.			
vii)	Assistance to villagers for meeting water requirement shall be rendered as committed.	No shortage of water exists in the area. Villagers will be assisted if shortage occurs.			
viii)	CSR will be continued as per the approved policy of the company and	Noted and is being complied. CSR expenditure for last 5 years is as follows:			
	guidelines/notifications	Sr no.	Year	Expenditure (lakhs)	
		1	2019-20	237.35	
		2	2020-21	43.56	
		3	2021-22	2.17	
		4	2022-23	2.368	
		5	2023-24	25.32	
ix)	The depth of the void shall be 35 m from the ground level and should be adequate for fishery purpose.	Noted.			
x)	All safety measures shall be taken as per CMR, 1957 and related circulars.	The permiss all safety me	ion from DGMS easures are taken	has been obtained & accordingly.	
xi)	The production shall be within the same Mining Lease area	The product lease area.	ion is contained	within the same mining	
xii)	The OB shall be completely re- handled at the end of the mining. The rest of the area will be backfilled upto the ground level and covered with about a meter thick top soil and put to use. The land after mining shall be brought back for agricultural purpose.	Noted and will be complied.			
xiii)	Garland drains should be provided	Catch drains / garland drains of appropriate sizes have been constructed all around the OB dump to arrest silt and sediments into natural water course. The cross sectional area of catch drain is 2.5 m x 1.7 m. Total length of catch drain is 8.8 km. These catch			

		drains are cleaned before onset of every monsoon.			
xiv)	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.	As the mine surface is above HFL, there is no need of embankment. And there is no river/nallah nearby the mine.			
xv)	The CSR cost should be Rs 5/tonnes of coal produced which should be	Sr no.	Year	Expenditure (lakhs)	
	adjusted as per the annual inflation.	1	2018-19	7.8166	
		2	2019-20	237.35	
		3	2020-21	47.05	
		4	2021-22	2.17	
		5	2022-23	2.368	
		6	2023-24	25.32	
xvi)	Everybody in the core area should be provided with mask for protection against fugitive dust emissions	Dust masks are provided to the workers operating in mine.			
xvii)	Dust mask to be provided to everyone working in the mine area	Dust masks are provided to the workers operating in mine.			
xviii)	The supervisory staff should be periodically responsible for ensuring compulsory regarding wearin of dust mask in the core area.	It is being followed			
xix)	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	Every worker in the mine is examined in 5 years- up to the age of 45; the workers who are above 50 years are subjected to periodic medical examination at two and a half years interval.			
xx)	The mining area should be surrounded by green belt having thick canopy of the tree cover.	Noted and will be Complied.			
xxi)	The embankment constructed along the boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.	As the mine surface is above HFL, there is no need of embankment. And there is no river/nallah nearby the mine.			

xxii)	There shall be no no overflow of OB into the river and into the agricultral fields and massive plantation of native species shall be taken up in the area between the river and the project.	There is no chance of flow of OB into the river or agricultural fields.
xxiii)	Ob shall be stacked at one external OB dumpsite(s) only. The ultimate slope of the dump shall not excedd 28 degree. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self sustaining. Compliance status shall be submitted to the MoEFCC and its concerned RO on yearly basis.	Excavated OB is now being dumped entirely on surface as external OB Dump at earmarked site The mine is in 5th year of operation only and the external OB dump is in active stage. The total OB removed upto sept 2023 is 22.1 Mm <sup>3</sup> The biological reclamation of external OB dump is yet to start as the same is in active stage. Once the maximum height is attained, the reclamation process will start firstly with technical reclamation like grading, making proper slope. Thereafter, biological reclamation will be taken up.
xxiv)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest the silt and sediment alows from soil, OB and at one external OB dumpsite only. The water so collected shall be utilised for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	Catch drains / garland drains of appropriate sizes have been constructed all around the OB dump to arrest silt and sediments into natural water course. The cross sectional area of catch drain/length is 2.5 m x 1.7 m of length 8.8 km. These catch drains are cleaned before onset of every monsoon. A sump is constructed at the quarry floor with a capacity 0f 29.95 MG that collects all the silt and sediments from OB benches through "X" drainages. The sump capacity is adequate, considering sudden rain fall and it is sufficient to allow settlemnet of suspended particles. The water pumped out of the mine sump is used for water spraying in the mine premises, roads and also for Green belt development.
xxv)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	The OB dump will be biologically reclaimed and stabilized with native species, as such there will be no siltation and flow of sediments from this dumps. As such construction of Toe wall may not be required. However, retaining wall may be constructed as per requirement.
0xxvi)	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency	Noted and will be complied. Siding has been set up at Gourideep OC to reduce the road transportation load. Side cladding has been provided to arrest dust

	bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	at siding along with 2 nos. trolley mounted mist foggers. Also, 16 nos. rainguns have been installed at Gourideep siding.
xxvii)	Drills shall be wet operated.	Noted and will be complied.
xxviii)	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3 tier green belt comprising of a mix of native species shall be developed all along the major roads.	Noted and will be complied. The coal transportation road is 3.8 km. The entire road is black topped. 59500 nos plantation has been done till date in and arond the project. The density of the plantation will be maintained at 2500 plants/ha.
xxix)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigtaive measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Using cord relays to reduce ground vibration and fly rocks.
xxx)	A progressive afforestation plan shall be implemented covering an area of 94.12 ha at the end of mining, which includes reclaimed External OB dump area (94.12 ha), internal OB dump area (33.72 ha), along roads and green belt (3.00 ha) in township located outside the lease by planting native species in consultation with local DFO. The density of the trees shall be around 2500 plants/ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3 tier avenue plantation along the main approach roads to mine.	Noted and will be complied.: 59500 nos plantation has been done till date. The coal transportation road is 3.8 km. The entire road is black topped.
xxxi)	An estimated total of 46.81 Mm3of OB generated during the entire life of the mine. Out of which 22.87 Mm <sup>3</sup> of OB will be dumped into two external OB Dumps an ear marked area covering 94.12 ha of land with height of 60 m. The maximum height of External OB dump for hard OB will not exceed 90 m. Maximum slope of	Excavated OB is now being dumped entirely on surface as external OB Dump at earmarked site The mine is in 6th year of operation only and the external OB dump is in active stage. The total OB removed till date is 22.1 Mm <sup>3</sup>

	the mine shall not exceed 28 degrees.	
xxxii)	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	The restoration & reclamation plan for degraded area will be in line with the approved EMP.
xxxiii)	Compensatory ecological & restoration of waste land, other degraded land and OB dumps in lieu of breasking open the land be carried out.	The restoration & reclamation plan for degraded area will be in line with the approved EMP.
xxxiv)	The mining should be phased out in sustainable manner. No extra OB dumps are permitted.	The mining will be carried out as per plan . No extra OB dumps will be made.
xxxv)	No groundwater shall be used for mining operations.Application for approval of CGWA for ground water abstraction made on 09/01/2017. Application no: 21- 4/686/MH/MIN/2017	NOC for ground water abstraction has been obtained vide CGWA/NOC/MIN/ORIG/2021/12564 valid from 13/08/2021 to 12/08/2023. Application for renewal of CGWA NOC has been made and EAC meeting awaited. Requisite fees for abstraction against quantum to be extracted for renewal period has been made to CGWA.
xxxvi)	Of the total quarry area of 92.45 ha the backfilled quarry area of 33.72 ha shall be reclaimed with plantation and a void of 58.73 ha at a a depth of 35 m which is proposed to be converted into a wter body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consulation with the local DFO. Density shall be 2500 plants per	The restoration & reclamation plan for degraded area will be in line with the approved EMP.
xxxvii )	Regular monitoring of GW level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers Monitoring shall be done 4 times a year. Data is submitted to MOEF and CPCB quarterly with in one month of monitoring.	The groundwater level monitoring is being carried out by CMPDIL, 4 times a year in pre-monsoon (May), Monsoon (August), Post-monsoon (November) and Winter (January) seasons and for quality once in a year. Reports attached.
xxxvii i)	The company shall put up artificial GW recharge measures for augmentation of Gw resource in	The nearby villages have no shortage of water, however regular supply of water is ensured in case of scarcity. The groundwater level monitoring has

	case monitoring indicates a decline in water table.	not indicated any decline in water level till date.			
xxxix)	STP shall be installed in existing colony. ETP shall also be provided for workshop and CHP wastewater.	The existing requirement of residential accommodation is made at Sasti township,which is outside the mine lease of gauri deep project. STP at Sasti township is of capacity 1 MLD. One ETP is provided with a capacity of 75 cum /day for work shop			
xI)	Besides carrying out PME of workers, 10% of the workers identified from workforce engaged in active mining opertaions shall be subjected to health check up for occupational diseases and hearing impairment.	Periodical health check-up of mine workers are carried out once in 5 years with the purpose of detecting occupational diseases & hearing impairment. Every worker in the mine is examined in 5 years- up to the age of 45; the workers who are above 50 years are subjected to periodic medical examination at two and a half years interval.			
xIi)	Land oustees shall be compensated as per the norms laid out R & R policy of CIL or National R&R policy whichever is higher	Entire land has been acquired and R & R has been already settled. No house oustees involved. Total Land acquired = 334.13 ha Employment provided=227nos. Total land compensation paid = Rs 27128805.00 Balance with tribunal = Rs 4939555.00			
xIii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery( on a scale of 1: 5000) of core zone and buffer zone, from start of project until end shall be prepared once in 3 years and report should be submitted to MoEFCC and its concerned Regional authority.	Noted and is being complied.			
xIiii)	A detailed final mine closure plan along with details of Corpus fund shall be submitted to MoEFCC within 6 months of Environmental clearance	Mine closure plan has been prepared and duly approved by WCL Board. Progressive balance in escrow account as on 31/03/2023 is Rs: 20,80,17,073.00 Escrow account No0897107600001072			
xIiv)	The project authorities shall in consultation with the panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.	The CSR activities are undertaken after due consulation with the local villagers. The details of CSR expenditure for last 5 years is as follows:		after due . The details of as follows:	
		Sr no.	Year	Expenditure (lakhs)	
		1	2018-19	7.8166	

		2	2019-20	237.35			
		3	2020-21	47.05			
		4	2021-22	2.17			
		5	2022-23	2.368			
		6	2023-24 (upto	25.32			
			sept 2023)				
xIv)	Corporate Environment responsibility:						
	a) The company shall have a well laid down Environment policy approved by the Board of Directors	Complied. Attach	ied				
	b) The Environment polcy shall prescribe for standard operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or Ecrest	It is being followed					
	norms/conditions.		1 11 • 1 1 1				
	c) The hierarchial system or administrative order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	At HQ, WCL- The cell is headed by GM (Env) reporting to Director (Technical). The team					
		comprises of multi-disciplinary trained executive.					
		At Area level – General Manager heads the Environment Department & assisted by GM (oprn) & ANO with 1 Assistant Managers of Environment discipline					
	d) to have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stake holders at	At Unit Level- Environment Management Cell is headed by Sub-Area Manager and is assisted by Project Nodal Officer (Env) at unit level.					
	large.	It is being follow	ed.				

#### **B. General Conditions**

S. NO.	Condition	Status of Compliance
i)	No change in Mining technology and scope of working shall be made without prior approval of the MOEF &	No change in Mining technology envisaged.

	CC						
ii)	No change in calendar plan of production for quantum of mineral coal shall be made	Noted					
iii)	Four ambient air quality	Four ambient air quality monitoring stations are -					
	established in the core zone as	(i)Manager Office					
	wel as in the buffer zone for PM 10, PM 2.5, SO2 and NOX.	(ii)Mutra village					
		(iii)Goyegaon					
		(iv) Antragaon village					
		and it is in consultation with MPCB, Chandrapur. It is being monitored by CMPDIL regularly. Monitoring reports for the period 01.04.2023 to 30.09.2023 enclosed.					
iv)	Data on ambient air quality	It is being monitored by CMPDIL regularly.					
	monitoring and heavy metals such as Hg, As, Ni, Cd, Cr tc shall be regularly submitted to Ministry including its concerned Regional office and to SPCB and CPCB once in 6 months.	Monitoring reports for the period 01.04.2023 to 30.09.2023.					
v)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged with blasting and drilling operations, operation of HEMM etc shall be provided with ear plugs/muffs	Adequate measures are taken for control of Noise pollution. Workers engaged in blasting and drilling operations, operation of HEMM, etc are provided with ear plugs/muffs					
vi)	Industrial wastewater (workshop and WW from mine) shall be properly collected, treted so as to conform the prescribed standards	For proper treatment of Industrial wastewater-One ETP of capacity 75 cum./day has been provided in the workshop and 1 nos of Sedimentation tank have been constructed near the mine for treatment of mine pumped out water. The quality of discharge is being monitored so as to ensure compliance of prescribed norms before discharging. Oil and grease traps installed at the WETP.					
vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	Coal transportation vehicles are covered with tarpaulins and are optimally loaded. Vehicular emissions are kept under control PUC certificate for all light & passenger vehicles are taken.					

		Siding has been set up at Gourideep OC to reduce the road transportation load. Side cladding has been provided to arrest dust at siding along with 2 nos. trolley mounted mist foggers. Also, 16 nos. rainguns have been installed at Gourideep siding.								
viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the SPCB abd data analysed through a lab recognised under EPA rules, 1986.	Monitoring of environmental quality parameters is done by CMPDIL, Nagpur. There is a full fledged NABL accredited Env. Laboratory of CMPDIL. The Monitoring is done through this laboratory at fortnightly interval. Mine has procured a portable testing kit for field monitoring of pH , TDS etc. Monitoring reports for the period 01.04.2022 to 30.09.2022.								
ix)	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Protective respiratory devices are provided to workmen exposed to dust area. Workers are also regularly given training on safety and health aspec VTC (this is the statuatory requirement under mine safety act). Periodical medical examination of every worker is being done every five years in our area hospital to detect any disease so that the appropriat action can be taken up at project level.Details of IME and PME done at Ballarpur Are given below:PME (in nos.)YearIME (in nos.)AcheivedTarget I Acheived202195312201425202285712201216Details of VTC trainings carried out at Ballarpur A lis given below:								
		Ve	ar	V	TC Tr	aining				
		2021.22		Target	A	cheived				
		2022-23		680	4	40				
		2022-23		000	4	עד				
x)	Occupational health surveillance programme of the workers shall be taken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records	It was submitted that every worker in mine was examined once oin 5 years upto the age of 45 years the workers who are above 50 years are subjected to periodical medical examination at two and a half year as per law. Details of IME and PME done at Ballarpur Area given below:								
	maintained thereof.	Year	IME (i	n nos.)	PME	(in nos.)				
			Acheive	d	Targe	Acheived				
		2021	953		1220	1425				

		2022 857 1220 1216
		As per the records available, no notifiable (as specified in the Mine's Rules, 1985 disease has been identified till date.
xi)	A seperate environmental management cell with suitable qualified personnel shall be setup under the control of Senior Executive, who will report directly to the Head of the company.	At HQ, WCL- The cell is headed by GM (Env) reporting to Director (Technical). The team comprises of multi-disciplinary trained executive. At Area level – General Manager heads the Environment Department & assisted by GM (oprn) & ANO with a 1 Assistant Managers of Environment discipline. At Unit Level- Environment Management Cell is headed by Sub- Area Manager and is assisted by Project Nodal Officer (Env) at unit level.
xii)	The funds earmarked for environmental protection measures shall be kept in seperate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its concerned RO	The funds earmarked for environment protection measures are kept in seperate account and it is not used for any other purpose. Expenditures statement are shown in every six monthly compliance reports sent to MoEF&CC
xiii)	The project authorities shall advertise at least in 2 local newspapers widely circulated around the project, one of which shall be in the vernacular language of locality concerned within 7 days of the clearance letter informing that the project has been accorded environmental clearance and a copy of EC is available at SPCB and may also be seen at website of MoEFCC.	Complied. LOKMAT (Marathi) on 21-03-2015 HITAVADA (English) on 21-03-2015
xiv)	A copy of EC letter shall be marked to concern Panchayat/zila parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion./representation has been recieved while processing the proposal.	The environment clearance copy has been sent to panchayat but no suggestion has been received.
xv)	A copy pf EC letter shall also be displayed on website of the	Complied

	concerned SPCB. The EC letter shall also be displayed at Regional Office, district industry sector and Collector's Office/Tehsildar's Office for 30 days.	
xvi)	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	The clearance letter has been uploaded on website of Western Coalfields Limited. The compliance report is being uploaded. Website link to access EC is <u>http://westerncoal.nic.in/?q=node/271</u>
xvii)	The project proponent shall be submit six monthly compliance reports on status of Complaince of the stipulated EC conditions (both in hard copy and email) to the respective Regional Office of Ministry, respective Zonal offices of CPCB and SPCB.	Noted and will consistently comply.
xviii)	The regional office of this ministry located in the region shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the office(s) of the Regional Office by furnishing the requisite data/information/ monitoring reports	Noted
xix)	The environment statement for st each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned	The Form V of the project for the year 2021-22 has been submitted to MPCB before 30.09.2023 via EC MPCB portal.

	SPCB as prescribed under the EP Rules, 1986, as asmended subsequently, shall also be uploaded on the company's website along with status of compliance of EC conditions and shall be sent to the respective Regional offices of the MoEF&CC by e-mail.						
6	The proponent shall abide by the commitments and recommendations made in EIA/EMP report so also during their presentation to EAC.	Noted and will be complied					
7	The commitment made by the proponent to the issue raised during the Public Hearing shall be implemented by the proponent.	This project has been covered u/s 7 (ii) with exemption from Public Hearing					
8	The proponent is required to obtain all necessary clearances that may be required before the start of project.	Noted and will be followed.					
9	The Ministry or any other competent authority may stipulate any further condition for environmental protection	Noted.					
10	The proponent shall setup an Environment Audit Cell with responsibility and accountability to ensure implementation of all EC conditions.	<ul> <li>A team for Internal Monitoring of compliances of Environment clearance conditions have been set up which comprises of: <ol> <li>Area Nodal Officer [Env], Ballarpur Area.</li> <li>S.O. Civil, Ballarpur Area</li> <li>Area Finance Manager, Ballarpur Area.</li> <li>S.O. Mining, Ballarpur Area.</li> </ol> </li> <li>5. Area Survey Officer, Ballarpur Area.</li> </ul>					

11	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and may attract action under the provisions of EPA, 1986.	Noted.
12	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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and coccupational and other diseases due to the mining operations	Noted and will be followed.
13	Any appeal against this EC shall lie with the NGT, if preferred, with in a period of 30 days as prescribed under section 16 of NGT Act, 2010	Noted.
14	This EC supersedes the earlier EC, vide letter no. Letter J- 11015/338/2008-1A.II(M) dated 18.022011 for 0.40MTPA	Noted.



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

#### (भूजल निकासी हेतु अनापत्ति प्रमाण पत्र) NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Gauri Deep Oc Expn. Mine					
Project Address:	Near Village Gauri, Wardha Valley Colafield, Ballarpur Area Of Wcl					
Village:	Gowari	Block:	Rajura			
District:	Chandrapur	State:	Maharashtra			
Pin Code:						
Communication Address:	General Manager (env), Wcl (hq), Coal Estate, Civil Line, Nagpur, Nagpur, Maharashtra - 440001					
Address of CGWB Regional Office :	Central Ground Water Board Central Region, N.s. Building, Civil Lines, Nagpur, Maharashtra - 440001					
		1.1				

1. NOC No.:			CGW	A/NOC	C/MIN/O	RIG/20	)21/12	2564			$\langle \rangle$	1				
2.	Application	n No.:	21-4/740/MH/MIN/2017						1	3.	Cate (GW	egory: /RE 2017)	Sa	Safe		
4.	Project Sta	atus:	Existi	ng Pro	ject				1	5.	NOC	NOC Type: New				
6.	Valid from	n:	13/08	8/2021				. 5	1	7.	Vali	d up to:	12	/08/202	3	
8.	Ground Wa	ater Absti	action	Permi	tted:			1	1							
	Fresh	Water			Saline	Water				De	wate	ring		-	Total	
	m³/day	m³/ye	ar	m³/	/day	m³	/year	<u></u>	m³/	day		m³/year	m	³/day	m³	/year
	0.00	0.00	)	20			2		149	9.00		547135.00				
9.	Details of o	ground wa	ater ab	stractio	on /Dew	atering	g stru	ctures	3							
			Tota	al Exis	ting No	.:2						Total Proposed No.:0				
				DW	DCB	BW	TW	Μ	P I	MPu	D١	V DCB	BW	TW	MP	MPu
	Dewatering	Structure	<b>e</b> *	0	0	0	0	2	2	0	0	0	0	0	0	0
*DW	/- Dug Well; D	CB-Dug-cur	n-Bore V	Vell; BW	/-Bore We	ll; TW-T	ube W	ell; MP	-Mine F	Pit;MP	u-Mine	Pumps				
10.	Ground Wa	ater Absti	action	/Resto	ration C	harges	s paid	(Rs.)	:				2735	675.00		
11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.					No. of Piezomete		eters	Monitoring Mechanism								
CM									Manual	DWLR*	DWLF	R With T	elemetry			
	**DWLR - Diç	gital Water L	evel Re	ecorder					2	2 0 1 1						

#### (Compliance Conditions given overleaf)

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

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011 Phone: (011) 23383561 Fax: 23382051, 23386743 Website: cgwa-noc.gov.in

> पानी बचाये – जीवन बचाये SAVE WATER - SAVE LIFE

#### Validity of this NOC shall be subject to compliance of the following conditions:

Mandatory conditions:

1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.

2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.

3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.

4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.

5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.

6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab

7) The firm shall report compliance of the NOC conditions online in the website (www.cqwa-noc.gov.in) within one year from the date of issue of this NOC.

8) Industries abstracting ground water in excess of 100 m 3 /d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.

9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.

10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

#### General conditions:

11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).

12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).

13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.

14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.

15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.

16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.

17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.

18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.

19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.

20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.

21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.

22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.

23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.

24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.

25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCE list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.

26) In case of new infrastructure projects having ground water abstraction of more than 20 m3/day, the firm/entity shall ensure implementation of dual water supply system in the projects.

27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.

28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.

29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)



# **COAL INDIA LIMITED**



# **CORPORATE ENVIRONMENT POLICY**

2018

#### **Environmental Policy Statement:**

Coal India Limited(CIL) is committed to promote sustainable development by protecting the environment through integrated project planning & design, prevention / mitigation of pollution, conservation of natural resources, restoration of ecology & biodiversity, recycling/ proper disposal of wastes, addressing climate change and inclusive growth. It also aims to bringing awareness amongst its stakeholders for continual improvement in environmental performances following best practices.

#### **OBJECTIVES:**

#### **Coal India Limited shall endeavor to:**

- 1. Plan & design projects with due consideration to environmental concerns for Sustainable Development.
- 2. Conduct mining and associated operation in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects.
- 3. Prevent pollution of surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.
- 4. Implement Environment Management Plans in all our mines /projects effectively to mitigate pollution, conservation of natural resources and restoration of ecology & biodiversity.
- 5. Ensure compliance of all applicable Environmental Clearance& Forestry Clearance conditions and other statutory conditions issued by regulatory agencies.
- 6. Recycling of wastes on the principle of REDUCE, REUSE and RECYCLE.
- 7. Put special thrusts on efficient energy utilization / renewable energy as a measure to reduce carbon foot-print.
- 8. Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective action.
- 9. Taking measures to render productive post mining land use.
- 10. Implementation of activities applicable to CIL arising out of International Conventions.
- 11. Create environmental awareness among the employees and the local communities through pro-active communication and training.

## STRATEGIES FOR IMPLEMENTATION OF ENVIRONMENTAL POLICY:

#### **Back Ground:**

Coal India Limited subscribes to the view of Sustainable Development. Unless the environment can sustain all the developmental activities, any pursuit of development in isolation can cause irreparable damage to the ecosystem and associated environmental attributes. Keeping this view in mind, Coal India Limited attaches top priority towards sustainable development and approved its 'Corporate Environmental Policy' in December 1995, which was subsequently revised in 2012. However the present policy is the amendment of the 2012 Policy and is complimentary to the National Environmental Policy, 2006.

This modification in the present policy is the outcome of the experience gained since 2012 keeping in view the modifications / amendments made time to time in environmental policies and additional stipulation notified by MoEF&CC (Ministry of Environment, Forest& Climate Change) and other organisations concerning mine closure, reclamation of degraded land, environmental clearance etc. and also with the objective of revisiting the corporate policy.

This Policy has a vision of Green Mining and mission of 100% compliance of environmental statutes applicable to coal mining industry.

**Strategies:** Coal India adopts the strategies appended below for effective implementation:

# **1. MINE/ PROJECT PLANNING & DESIGN FOR SUSTAINABLE DEVELOPMENT:**

- a) Coal being a non-renewal energy source, extraction shall be planned prudently to meet national requirement in a planned way. The projects shall be designed on the principle of Sustainable Development with due consideration to environment, mine closure ,safety and aspirations of the stakeholders at the planning& design stage itself with due regard to mine closer plan.
- b) While preparing the Mining plan/project reports, the effort shall be to incorporate latest mining technologies and equipment's with optimal capacity, which are more environment friendly.

c) All Mining Plan/ project reports will be provided with detailed provisions for ensuring environmental compliances.

# 2. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) & ENVIRONMENT MANAGEMENT PLAN (EMP)

- a. All mine planning and design shall be environmentally acceptable and operation shall be carried out in such a way as to facilitate the compliance of stipulated environmental standards.
- b. EIA& EMP for all projects shall be formulated as per the approved ToR (Terms of Reference) and pubic consultations for obtaining Environmental Clearance (EC) from MoEF&CC. Similarly, in the existing projects needing enhancement of production capacities with or without increase in land, change of technology, renewal of lease and change in land use etc. fresh EC is required to be sought as per norms. The projects shall be operated after obtaining Consent to Establish (CTE)/Consent to Operate (CTO) from State Pollution Control Boards (SPCB).
- c. Detailed Mine Closure Plans shall be prepared for all existing and new mines as per the MoC (Ministry of Coal) guidelines.

## **3. COMPLIANCE OF THE STATUTORY REQUIREMENTS:**

The implementation of EMP and fulfillment of all other statutory requirements like conditions of EC, FC and consents to establish & operate, including timely submission of returns to statutory bodies and various agencies, are to be ensured at all levels.

#### 4. MEASURES TO MITIGATE POLLUTION:

#### a) Air Pollution:

- i) Generation of dust is to be controlled at the source to the possible extent with necessary control measures during drilling, blasting, loading, unloading, CHP transfer points etc.
- ii) Deployment of eco-friendly mining technologies.
- iii) Dust generation is to be minimized along coal / waste transportation routes.
- iv) Mechanized transportation of coal to be encouraged.
- v) Green belt is to be created around the source of dust.

# **b) Water pollution:**

- i) The mine water and other effluent shall be treated to ensure the discharge norms as per statute. The treated effluent shall be utilized to the extent possible with a view to achieve maximum water conservation.
- ii) Oil & grease from the effluent shall be removed by Oil & Grease Traps for proper disposal.

## c) Noise / ground vibration:

- i) All measures to minimize noise pollution will be taken including maintenance of HEMM, equipment and provision of PPE where required.
- ii) Suitable controlled blasting techniques shall be followed to reduce ground vibration as well as noise pollution.

# d)Land reclamation:

- i) Progressive and concurrent reclamation of mined out areas will be carried out as per approved EIA/EMP and Mine Closure Plan (MCP).
- ii) Slopes of external dumps are the important area to be suitably graded / terraced for effective reclamation and plantation.
- iii) Preservation of top soil is required for future use. Old as well as existing nonactive dumps are to be technically and biologically reclaimed.
- iv) Monitoring of reclamation work of all opencast mines will be done through Satellite Surveillance. The outcome shall be put in the websites.

## e) Mine closure plans:

Mine Closure Plan (MCP) shall be prepared for each mine. MCP are being delineated in two phases viz. progressive and final mine closure. Appropriate funds are set aside and deposited under a special Escrow fund every year as per MoC guidelines, to be utilized for proper and final mine closure.

For mines closed prior to issuance of MoC guidelines (i.e. 27<sup>th</sup> August, 2009) suitable action to be taken as per provisions of Mines Act 1952.

# f) Mine fire

CIL shall endeavour to reduce occurrence of mine fire and subsidence due to mining activity. Monthly report shall be submitted to top management of the subsidiary and CIL and Quarterly to company board. Action Plan for mine fire control shall be implemented. Monitoring will be done through Satellite Surveillance/other suitable technology.

# g) Monitoring:

- I. All receptors in and around the mining projects shall be monitored regularly to assess the efficacy of the pollution control / mitigation measures within stipulated standards.
- II. Effect of mining on the hydrology of the area will be monitored through measurement of water level and its quality of nearby wells and bore holes provided for this purpose. Conservation of water through rainwater harvesting shall be taken up.
- III. Area and Unit environmental cells shall have regular interaction with the people in and around the coal mines and other allied units on matters related to environment to take necessary and timely corrective actions.
- V. Environmental initiatives and monitoring through self and third party environment audit shall be conducted for generating useful data for taking corrective actions and mitigation measures as per guidelines.

#### h) Other measures:

- I. Special emphasis shall be given to undertake R&D related to various facets of coal mine environmental management in collaboration with Central Mine Planning and Design Institute (CMPDI) and other competent institutions.
- II. Besides ensuring statutory compliance, the CIL desires to set high standards and continual improvement.
- III. A number of mines and establishments of CIL are ISO 14001 certified and balance mines & establishments shall be ISO 14001 certified in phased manner.
- IV. CSR and R&R policies of CIL are to be incorporated for better planning and implementation of the socio-economic issues of coal mining areas.
- V. The coal mining environmental issues are complex and require multidisciplinary approach to address the same. CIL will endeavor to enter into MoUs with expert agencies of repute to assist in environment issues and also help in capacity building of CIL executives.
- VI. CIL conduct periodical medical examination (PME) of its work force on routine basis in compliance of the requirement mining rules and regulation, additional test will be done as and when require.

## 5. PRESERVATION OF BIO-DIVERSITY:

a) This will start from mine planning including technically and biologically reclamation of mined out areas in collaboration with State Forest Departments, Wild Life Divisions, NGOs etc. working in the fields of biodiversity conservation. b) The selection of species for plantation shall be done in consultation with the local community to include the local species and their preferences, if any.

## 6. COAL BENEFICIATION / COALWASHERIES:

- a) For beneficiation of Runoff Mines (ROM) coal, washeries are being set up in a phased manner as per requirement and statutes.
- b) Slurry Management System (SMS) in all washeries shall be organized to ensure collection of fines, gainful utilization of rejects viz. power generation in Fluidized Bed Combustion (FBC) plants, selling to brick manufacturers or adopting other environmental friendly disposal options as feasiable.
- c) The reject dumps and tailings shall be suitably handled to avoid any contamination.
- d) The effluent from washeries including tailings pond shall be suitably treated and reused to minimize water consumption with zero discharge concept.

## 7. CONSERVATION AND CLEAN TECHNOLOGY:

- a) R&D projects shall be taken up to promote clean coal technology and improve the existing technologies.
- b) Energy saved is energy produced. Voluntary energy audit to be done for corrective action to reduce carbon footprint.
- c) Clean Development Mechanisms will be explored for reducing emission of Green House Gases by exploration, identification, preparation of projects reports for extraction of methane from Coal Bed, Coal Mine, Abandoned Mine, Ventilation Air, UG Coal Gasification, generation and utilization of renewable energy etc.

## 8. AWARENESS PROGRAMME:

- a) Publicity to generate awareness through exchange & communication of information, newsletters and periodicals on environment, seminars, work-shops, celebration of World Environment Day etc. at CIL / Subsidiary HQs, Areas & units to be undertaken. Regular training programs to be organized at various levels to inculcate awareness among employees.
- b) Courses on environmental and forestry laws and Environmental Protection Measures and the Corporate Policy to be organized for project executives for improving knowledge.
- c) CIL to give annual awards for achieving excellence in environment related

issues and activities. These awards will be in recognition for implementation of EMP, land reclamation and compliance of statutes, proper maintenance of air & water quality and noise level.

#### 9. WASTE MANAGEMENT:

CIL will undertake appropriate action for safe handling, storage and disposal of solid waste and hazardous waste generated from its industrial set up and colonies as per relevant rules. The biomedical waste generated from hospitals and dispensaries will be collected and disposed in appropriate facilities created as per statutes. E-waste management and handling of various types of e-waste generated in its operations will be done as per rule.

#### **10. CORPORATE ENVIRONMENT RESPONSIBILITY:**

Corporate Environment Responsibility (CER) is mandatory for issuing environmental clearance for all the Greenfield and Brownfield projects as per directives of MoEFCC with effect from 1st May, 2018 (O.M.No.22-65/2017-IAIII dt. 19.06.2018). Budgetary provisions should be kept for implementation of provisions of CER for all the projects which will be submitted to MoEFCC for grant of environmental clearance.

## **11. INCORPORATION OF VIEWS OF STAKEHOLDERS:**

CIL will critically examine and incorporate the viewpoints of various stakeholders like PAPs/PAFs, Parliamentary Committees, Standing Sub-Committees, NGOs etc. CIL being a listed entity with stock exchange, it will also take into consideration the observations/viewpoints of international investors.

## **12.IMPLEMENTATION OF POLICY:**

- i) Manpower: CIL shall have environmental divisions at decision making & operational levels in its structure. The environment department shall be set up and strengthened at:
  - i) CIL Corporate HQ at Kolkata
  - ii) Subsidiary HQs
  - iii) Areas / Units / Collieries / Workshops /Washeries
  - iv) CMPDI (HQ) & CMPDI Regional Institutes
- **ii) Roles and Responsibilities:** The environmental department, set up at company HQs, Areas and Unit levels with appropriate manpower and resources, shall be responsible for implementation of policy, obtaining EC, FC, consent to establish

& operate, statutes requirements and undertaking mitigation measures besides preparation of action plan every year and also to intimate the status of implementation to the management regularly.

**iii)** Annual Environment Budget (Revenue & Capital): The Annual Environment Budget (revenue & capital) shall be prepared based on the action plan including monitoring of various bench marks and the budget utilization. The year wise funds earmarked for environmental protection measures shall be kept in separate accounts with Environmental cost code.

#### **13. FLEXIBILITY TO THE SUBSIDIARY COMPANIES:**

CEP 2018 will be applicable for all subsidiaries of CIL. The subsidiary company Boards have been authorized to approve necessary modifications in CEP 2018 with reference to unique conditions prevailing at the concerned subsidiary.

# **REVIEW OF ENVIRONMENTAL POLICY:**

In view of the present fast changing social, economic and environmental scenario, this Policy shall be reviewed every 5 years to incorporate the changes in the legal, technical, environmental, economic and social inputs prevailing at that time. Whenever, there is change in National Environmental Policy or other National / State relevant policies, Acts etc, this Corporate Environmental Policy would be reviewed and suitably revised.

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**ENVIRONMENTAL MONITORING REPORT** 

#### **GOURI DEEP OC**

**BALLARPUR 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

Env CN	vironment Laboratory MPDI RI-IV, NAGPUR	Test Report		and the second sec	Australia automatica automatic Automatica automatica automatic Automatica automatica
TEST REP	PORT NO.	RIN/TR/AUG-23/43	DATE OF ISSUE		30-09-2023

NAME OF CUSTOMER		GM(ENV.), WCL(HQ), NAGPUR				
TEST REQUIRED	SPM: IS 5182 Part-4:19 volume-II (part-II)-2.12	99(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance docume :2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)				Assurance guidance document
SAMPLE DESCRIPTION		AIR SAMPLE		SAMPLING PLAN :		LQR 47
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			15-08-23 TO 15-09-23	

MANAGER OFFICE BGDO1								
DATE/ddummuu/			PARAMETERS	(24 hourly va	llues 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>x</sub>	So <sub>x</sub>	(Sky/Wind)	
FROM	TO	5	5	2	6	10	(Sky/Wild)	
02-08-2023	03-08-2023	247	142	42	15	BDL	Cloudy Sky/ Light Breeze	
17-08-2023	18-08-2023	269	165	50	16	10	Cloudy Sky/ Light Breeze	
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120		

		MUTRA VILLAGE	BGDO2			
DATE		PARAMETERS				
DATE(dd:mm:yy) OF SAMPLING		PM <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	2	6	10	
02-08-2023	03-08-2023	49	24	8	BDL	Cloudy Sky/ Light Breeze
17-08-2023	18-08-2023	56	28	10	BDL	Cloudy Sky/ Light Breeze
NAAQS	5, 2009	100	60	80	80	

	GOYEGAON VILLAGE BGDO3							
		PARAMETERS						
DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)		
FROM	TO	5	2	6	10	(5)()/ (1)()		
02-08-2023	03-08-2023	59	29	9	BDL	Cloudy Sky/ Light Breeze		
17-08-2023	18-08-2023	60	26	8	BDL	Cloudy Sky/ Light Breeze		
NAAQS, 2009		100	60	80	80			

		ANTARGAON VILLAGI	BGDO4			
		PARAMETERS				
DATE(dd:mm:yy) OF SAMPLING		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	2	6	10	
02-08-2023	03-08-2023	60	25	10	BDL	Cloudy Sky/ Light Breeze
17-08-2023	18-08-2023	52	24	7	BDL	Cloudy Sky/ Light Breeze
NAAQS, 2009		100	60	80	80	

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Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR		Test Report	TC-715		
SAMPLE DESCRIPTION	Water sam	ple			
Test Required	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C				
rest Required	: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: BGDW1						
DATE OF SAMPLE		ANALYSI	S RESULTS			
COLLECTION	рН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)		
DETECTION LIMIT	2	10	4	2		
02-08-2023	7.85	28	32	BDL		
17-08-2023	7.95	24	48	BDL		
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10		

ETP(WORKSHOP) DISCHARGE: BGDW2						
DATE OF SAMPLE		ANALYSI	S RESULTS			
COLLECTION	pН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)		
DETECTION LIMIT	2	10	4	2		
02-08-2023	7.70	32	56	BDL		
17-08-2023	7.65	32	76	BDL		
STANDARDS FOR COAL						
MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10		

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Analysed by

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

**Test Report** 



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

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

	MANAGER OFFICE:	BGON1	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	05-08-2023	54.5	53.9
AUG'23	21-08-2023	55.6	54.7
NOISE POLLUTI CON	75	70	

	СНР	BGON2	
	DATE OF SAMPLE	NOISE LEVEL IN dB(	
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	05-08-2023	57.9	56.5
AUG'23	21-08-2023	56.5	55.6
NOISE POLLUTI	NOISE POLLUTION (REGULATION AND CONTROL) RULES		

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Ashwin B Wasnik Reviewed by

Deepanshu Sahu Authoriesed by

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2. Laboratory activities are performed at the Laboratory permanent facility that is ground floor, Environment Lab, CMPDI RI-IV, Nagpur.

- 3. This report refers to the values related to the items tested.

**DRINKING WATER MONITORING REPORT** 

#### **BALLARPUR AREA**

#### WESTERN COALFIELDS LTD.

JOB NO.4094423068



#### **QE-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

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**Environment Laboratory** CMPDI RI-IV, NAGPUR

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TEST REPORT NO. RIN/TR/SEPT-23/DW16 DATE OF ISSUE 27-10-2023 GM(ENV.), WCL(HQ), NAGPUR NAME OF CUSTOMER SAMPLE DESCRIPTION WATER SAMPLE NAME OF AREA BALLARPUR SAMPLING METHOD: LSOP 5 NAME OF PROJECT GOURI I & II OC SAMPLING PLAN: LQR 47

NO. OF PAGES 2

NAME OF LOCATION: FILTER PLANT				SA	MPLING DATE:	12-07-2023
					IS 10	500:2012
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	REQUIREMENT (ACCEPTABLE LIMIT)	PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	2	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Agreeable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	1	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.25	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	236	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>°</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	42	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	BDL	0.2	1
9	Fluoride (as F <sup>°</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.66	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	454	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	43	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	31	30	100
13	Copper (as Cu) -mg/I	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	BDL	0.1	0.3
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	83	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	12	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	168	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	0.005	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	0.005	BDL	0.1	0.2

#### BDL: BELOW DETECTION LIMIT

Re

DEEPANSHU SAHU AUTHORIZED SIGNATORY

Luns SCIENTIFIC ASSISTANT

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#### Environment Laboratory CMPDI RI-IV, NAGPUR

Drinking water quality monitoring data

222

 TEST REPORT NO.
 RIN/TR/SEPT-23/DW17
 DATE OF ISSUE
 27-10-2023

 NAME OF CUSTOMER
 GM(ENV.), WCL(HQ), NAGPUR
 SAMPLE DESCRIPTION
 WATER SAMPLE

 NAME OF AREA
 BALLARPUR
 SAMPLING METHOD: ISOP 5
 SAMPLING PLAN: LQR 47

NO. OF PAGES 2

NAME C	OF LOCATION: FILTER PLANT			SAMPLING DATE: 12-07-2023		
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	IS 10	500:2012
					(ACCEPTABLE	IN THE ABSENCE OF
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	1	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Agreeable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	1	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.85	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	56	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>°</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	24	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	BDL	0.2	1
9	Fluoride (as F <sup>-</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.92	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	190	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	27.2	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	6.4	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	BDL	0.1	0.3
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	18	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	4	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	< 0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	< 0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	220	24	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	BDL	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	BDL	BDL	0.1	0.2

#### BDL: BELOW DETECTION LIMIT

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TEST REPORT NO.	RIN/TR/SEPT-23/	DW18		DATE OF ISSUE	27-10-2023
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW DHOPTALA	0C		SAMPLING PLAN: LQR 47	
NO. OF PAGES	2		-		-

NAME C	OF LOCATION: MANAGER OFFIC	MANAGER OFFICE		SAI	MPLING DATE:	13-07-2023
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	IS 10 REQUIREMENT	500:2012 PERMISSIBLE LIMIT
					(ACCEPTABLE	IN THE ABSENCE OF
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	1	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Unobjection able	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	2	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.95	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	560	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>°</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	412	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.02	0.2	1
9	Fluoride (as F <sup>°</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.36	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	1520	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	140	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	52	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	0.027	0.1	0.3
15	Sulphate (as SO4 <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	157	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	4	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	0.021	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	392	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	0.005	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	0.005	BDL	0.1	0.2

BDL: BELOW DETECTION LIMIT

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NAME C	OF LOCATION: FILTER PLANT			SAMPLING DATE:		14-07-2023
					IS 10	500:2012
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	REQUIREMENT (ACCEPTABLE LIMIT)	PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	2	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Agreeable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	2	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.60	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	256	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>-</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	78	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	BDL	0.2	1
9	Fluoride (as F <sup>-</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.88	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	660	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	68.2	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	30	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	BDL	0.1	0.3
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	74	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	12	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	0.014	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B- C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	236	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	0.005	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B	0.005	BDL	0.1	0.2

BDL: BELOW DETECTION LIMIT

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#### **DRINKING WATER MONITORING REPORT**

## **BALLARPUR AREA**

#### WESTERN COALFIELDS LTD.

JOB NO.4094423068



#### **QE-JUNE 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

# TC-7102

# Test Report Drinking water quality monitoring data

TEST REPORT NO.	RIN/TR/JUNE-23/DW16			DATE OF ISSUE	31-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(H	IQ), NAGPUR		SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	GOURI I & II OC			SAMPLING PLAN: LQR 47	
NO. OF PAGES	2				-

NAME C	NAME OF LOCATION: FILTER PLANT		SAI	MPLING DATE: 06-05-23		
					IS 10	500:2012
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	REQUIREMENT (ACCEPTABLE LIMIT)	PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	3	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Unobjectio nable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	4	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.58	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	240	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>-</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	54	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.03	0.2	1
9	Fluoride (as F <sup>-</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.439	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	440	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	61	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	22	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	BDL	0.1	0.3
15	Sulphate (as SO4 <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	74	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	22.28	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation

18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	192	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	0.005	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	0.005	BDL	0.1	0.2

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# Test Report Drinking water quality monitoring data

TEST REPORT NO.	RIN/TR/JUNE-23/	′DW17	DATE OF ISSUE	31-07-23	
NAME OF CUSTOMER	GM(ENV.), WCL(H	IQ), NAGPUR		SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	SASTI OC	SASTI OC		SAMPLING PLAN: LQR 47	
NO. OF PAGES	2				-

NAME OF LOCATION: FILTER PLANT		SA	MPLING DATE:	08-05-23		
SL. NO.	PARAMETER	TEST METHOD	DETECTION	ANALYSIS RESULT	IS 10	500:2012
					REQUIREMENT (ACCEPTABLE	PERMISSIBLE LIMIT IN THE ABSENCE OF
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	3	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Unobjectio nable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	4	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.55	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	680	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>-</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	94	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.03	0.2	1
9	Fluoride (as F <sup>-</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.521	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	990	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	180	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	57	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	0.032	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	0.028	0.1	0.3
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	208	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	5.53	45	No relaxation

17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation
20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	0.021	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	< 0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	< 0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	220	212	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	BDL	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	BDL	BDL	0.1	0.2

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TEST REPORT NO.	RIN/TR/JUNE-23/	′DW18		DATE OF ISSUE	31-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW DHOPTALA OC			SAMPLING PLAN: LQR 47	
NO. OF PAGES	2				-

NAME OF LOCATION: MANAGER OFFICE			SAMPLING DATE: 12-0		12-05-23	
SL. NO.	PARAMETER	TEST METHOD	DETECTION	ANALYSIS RESULT	IS 10500:2012	
					REQUIREMENT (ACCEPTABLE	PERMISSIBLE LIMIT IN THE ABSENCE OF
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	2	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Unobjectio nable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	3	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.34	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	680	200	600
6	Iron (as Fe) -mg/I	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>-</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	78	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.02	0.2	1
9	Fluoride (as F <sup>-</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.421	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	1000	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	188	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	52	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	0.039	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	0.031	0.1	0.3
15	Sulphate (as SO4 <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	197	200	400
16	Nitrates (as NO3) - mg/l	3) - mg/l APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017		6.96	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation

19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C	0.005	BDL	0.01	No relaxation
		AAS-VGA Method:2017				
20	Arsenic (As)-mg/l	AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) mg/l	IS 3025 Part-49 AAS Flame	0.01	0.027	5	15
21		Method:2014	0.01	0.027	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS	0.03	BDL	0.05	No relaxation
		Flame Method:2014	0.00			ite relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B-C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	204	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B	0.005	0.008	0.02	No relayation
25		AAS FLAME Method:2017	0.000	0.000	0.02	NO TEIAXALION
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B	0.005	BDI	0.1	0.2
26	Aluminum (Al)-mg/i	AAS-GTA Method:2017	0.005	BDL		0.2

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#### Test Report



#### Drinking water quality monitoring data

TEST REPORT NO.	RIN/TR/JUNE-23/	3/DW19		DATE OF ISSUE	31-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(H	IQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE	
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	BALLARPUR UG			SAMPLING PLAN: LQR 47	
NO. OF PAGES	2				-

NAME OF LOCATION: FILTER PLANT			SAMPLING DATE: 12-05-23			
	•			IS 10500:2		500:2012
SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT	REQUIREMENT (ACCEPTABLE LIMIT)	PERMISSIBLE LIMIT IN THE ABSENCE OF ALTERNATE SOURCE
1	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	2	5	15
2	Odour	IS 3025 Part-5:2014	Qualitative	Unobjectio nable	Agreeable	Agreeable
3	Turbidity (NTU)	IS 3025 Part-10 Neplometric Method: 2012	1	3	1	5
4	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.85	6.5 to 8.5	No relaxation
5	Total Hardness (as CaCO <sub>3</sub> ) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	280	200	600
6	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	0.3	No relaxation
7	Chlorides (as Cl <sup>-</sup> )- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	76	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.02	0.2	1
9	Fluoride (as F <sup>°</sup> )- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.392	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	510	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	79	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	21	30	100
13	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	0.05	1.5
14	Manganese as (Mn)- mg/l	IS 3025 Part-59, AAS Flame Method: 2006	0.02	BDL	0.1	0.3
15	Sulphate (as SO <sub>4</sub> <sup>-2</sup> ) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	65	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	6.10	45	No relaxation
17	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	0.003	No relaxation
18	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	0.01	No relaxation
19	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.01	No relaxation

20	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	0.05	No relaxation
21	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL	5	15
22	Total Chromium -mg/l	IS 3025 Part-52 Clause 6, AAS Flame Method:2014	0.03	BDL	0.05	No relaxation
23	Boron as (B) -mg/l	APHA, 23rd Edition 4500 B- C Carmine Method:2017	0.002	BDL	0.5	1
24	Alkalinity -mg/l	IS 3025 Part-23:2014	4	220	200	600
25	Nickel-mg/l	APHA, 23rd Edition 3113 B AAS FLAME Method:2017	0.005	BDL	0.02	No relaxation
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B AAS-GTA Method:2017	0.005	BDL	0.1	0.2

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

### **BALLARPUR AREA**

WESTERN COALFIELDS LTD.



**APRIL 2023 TO JUNE 2023** 

**Environment Laboratory** 

### **CMPDI**

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

AN ISO 9001:2015 COMPANY

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1	HEAVY METAL ANALYSIS REPORT	1 TO 22

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE /HM46		DATE OF ISSUE	31-08-2023				
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S		GM(ENV.),WCL(HQ), NAGPUR		GM(ENV.),WCL(HQ), NAGPUR		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & C	tals (As, Pb, Ni, Cr & Cd ) in air samples (ASTM D 4185)						
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4					
NAME OF PROJECT	GOURI DEEP		SAMPLING PLAN : LQR 47					
No. of Pages	1	-		-				

SI No.	Name of location	Location Code	Date of sampling
1	MANAGER OFFICE	BGDOA-1	02-04-2023
2	MUTRA VILLAGE	BGDOA-2	02-04-2023
3	GOYEGAON VILLAGE	BGDOA-3	02-04-2023
4	ANTARGAON	BGDOA-4	02-04-2023

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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE /HM47		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	PAUNI OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			-

SI No.	Name of location	Location Code	Date of sampling
1	MANGER OFFICE -PAUNI O/C	BPOA-1	05-04-2023
2	WORKSHOP PAUNI O/C	BPOA-2	05-04-2023
3	PAUNI VILLAGE	BPOA-3	05-04-2023

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

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TEST REPORT NO.	RIN/TR/JUNE /HM48		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd ) in air samples (ASTM D		4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	PAUNI II OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			-

SI No.	Name of location	Location Code	Date of sampling
1	MINE OFFICE	BP2OA-1	06-04-2023
2	SUBSTATION	BP2OA-2	06-04-2023
3	SAKHRI VILLAGE	BP2OA-3	06-04-2023

SL No	Parameter	Method of	Detection		Obse	erved Value	National Ambient Air Quality
51. 100.	rarameter	analysis	limit	BP2OA-1	BP2OA-2	BP2OA-3	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	BDL	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	0.0049	BDL	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	BDL	**

**BDL: BELOW DETECTION LIMIT** 

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TEST REPORT NO.	RIN/TR/JUNE /HM49		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd ) in air samples (ASTM D		4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	GAURI I OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			-

SI No.	Name of location	Location Code	Date of sampling
1	MANAGER OFFICE -GOURI -I O/C	BGOA-1	07-04-2023
2	SAM OFFICE -GOURI SUB AREA	BGOA-2	07-04-2023

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

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Environment Laboratory CMPDI RI-IV, NAGPUR Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE /HM50		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & O	Cd ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	GAURI II OC		SAMPLING PLAN : LQR 47	
No. of Pages	1	_		•

SI No.	Name of location	Location Code	Date of sampling
1	GOURI VILLAGE	BGOA-4	05-04-2023

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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE /HM51		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S.		SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb,	Ni, Cr & Cd ) in air samples (AST	M D 4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	SASTI OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			

SI No.	Name of location	Location Code	Date of sampling
1	GOURI COLONY /FILTER PLANT	BSOA-3	07-04-2023
2	SAM OFFICE -SASTI OC	BSOA-1	07-04-2023
3	AREA STORE	BSOA-2	08-04-2023

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

**BDL: BELOW DETECTION LIMIT** 

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Test Report Air quality monitoring data for heavy metals	Ambient
Т	est Report Air quality monitoring data for heavy metals

TEST REPORT NO.	RIN/TR/JUNE /HM52			DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR S			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (A	s, Pb, Ni, Cr & C	d) in air samples (ASTM D	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	SASTI UG			SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	SASTI COLONY	BSUOA-3	08-04-2023
2	SASTI VILLAGE	BSUOA-4	08-04-2023

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

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Environment Laboratory Test Re CMPDI RI-IV, NAGPUR	port Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE /HM53			DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR 5			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	NEW DHOPTA	LA OC		SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	SAM OFFICE DHOPTALA SUB AREA	BDOA-1	08-04-2023
2	MANAGER OFFICE - DHOPTALA OC	BDOA-2	09-04-2023

SL No	Parameter	Method of Dete	Detection	Obse	National Ambient Air Quality	
51. 110.	Farameter	analysis	limit	BDOA-1	BDOA-2	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**

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				C386:I391	
TEST REPORT NO.	RIN/TR/JUNE /HM54			DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPU		R	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	BALLARPUR L	IG		SAMPLING PLAN : LQR 47	
No. of Pages	1				

SI No.	Name of location	Location Code	Date of sampling
1	MANGER OFFICE -BALLARPUR UG	BBUOA-1	09-04-2023
2	FILTER PLANT COLONY	BBUOA-4	09-04-2023

SL No.	Parameter	Method of	Detection	Obse	National Ambient Air Quality	
51. 140.	Tarameter	analysis	limit	BBUOA-1	BBUOA-4	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 μg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0072	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**

**BDL: BELOW DETECTION LIMIT** 

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TEST REPORT NO.	RIN/TR/JUNE /HM55			DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (A	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	BALLARPUR O	С		SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	PREMISES OF SUB AERA OFFICE	BBOA-3	08-04-2023
2	SUBSTATION -BALLARPUR OC	BBOA-2	08-04-2023

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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE /HM56		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPU	JR	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd ) in air samples (ASTM D 4185)			
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	PAUNI OC		SAMPLING PLAN : LQR 47	
No. of Pages	1	-		-

SI No.	Name of location	Location Code	Date of sampling
1	WEIGH BRIDGE	BPOF-1	05-04-2023

SI No Parar	Parameter	Method of	Detection	Observed Value	National Ambient Air Quality
51. 110.	Farameter	analysis	limit	BPOF-1	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m³	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0086	0.02 μg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	0.0048	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	**

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE /HM57		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPU	R	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	GAURI I OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			-

SI No.	Name of location	Location Code	Date of sampling
1	CHP/ Coal unloading point	BGOF-1	06-04-2023
2	W. Bridge	BGOF-2	06-04-2023

SL No	Parameter	Method of	Detection	Observed Value		National Ambient Air Quality           Standard NAAQS, 2009           0.006 μg/m <sup>3</sup> (Annual average)           1.0 μg/m <sup>3</sup> (24 Hourly average)           0.02 μg/m3 (Annual average)
51. 140.	Tarameter	analysis	limit	BGOF-1	BGOF-2	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0071	0.0083	0.02 μg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	0.0018	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE /HM58		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPU	JR	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr &	Cd ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	SASTI OC		SAMPLING PLAN : LQR 47	
No. of Pages	1	-		-

SI No.	Name of location	Location Code	Date of sampling
1	Main CHP	BSOF-1	07-04-2023
2	W. Bridge	BSOF-2	07-04-2023

SI No	Parameter	Method of	Detection	Obse	erved Value	National Ambient Air Quality
51. 110.	Farameter	analysis	limit	BSOF-1	BSOF-2	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0082	0.0076	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	0.0016	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE	/HM59		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WC	L(HQ), NAGPU	R	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	NEW DHOPTALA OC			SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	CHP/ Coal unloading point	BNDOF-1	08-04-2023
2	W. Bridge	BNDOF-2	08-04-2023

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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE	/HM60		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	BALLARPUR OC			SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	CHP/Coal moni. Point	BBOF-1	09-04-2023
2	W. Bridge	BBOF-2	09-04-2023
3	Rly. Siding	BBOF-3	09-04-2023

SL No	Parameter	Method of	Detection		Obse	erved Value	National Ambient Air Quality	
51. 140.	Tarameter	analysis	limit	BBOF-1	BBOF-2	BBOF-3	National Ambient Air Quality Standard NAAQS, 2009 0.006 µg/m <sup>3 (Annua average) 1.0 µg/m<sup>3</sup> (<sup>24</sup> Hourly average) 0.02 µg/m3 (Annual average) **</sup>	
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)	
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)	
3	Nickle, µg/m³	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0081	BDL	BDL	0.02 µg/m3 (Annual average)	
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	BDL	**	
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	BDL	**	
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	BDL	**	

**BDL: BELOW DETECTION LIMIT** 

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient
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TEST REPORT NO.	RIN/TR/JUNE /HM61			DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (	As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR			SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	GOURI DEEP OC			SAMPLING PLAN : LQR 47	
No. of Pages	1				-

SI No.	Name of location	Location Code	Date of sampling
1	WEIGH BRIDGE	BGDOF1	02-04-2023
2	СНР	BGDOF2	02-04-2023

SL No	Parameter	Method of	Detection	Obse	erved Value	National Ambient Air Quality	
51. NO.	Tarameter	analysis	limit	BGDOF1	BGDOF2	National Ambient Air Quality         Standard NAAQS, 2009         0.006 µg/m <sup>3</sup> (Annual average)         1.0 µg/m <sup>3</sup> (24 Hourly average)         0.02 µg/m3 (Annual average)         **         **	
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)	
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)	
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0074	0.0071	0.02 µg/m3 (Annual average)	
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	BDL	BDL	**	
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	**	
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Air quality monitoring data for heavy metals	Ambient

TEST REPORT NO.	RIN/TR/JUNE /HM59		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPU	R	SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & C	d ) in air samples (ASTM D 4	4185)	
NAME OF AREA	BALLARPUR		SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	PAUNI II OC		SAMPLING PLAN : LQR 47	
No. of Pages	1			-

SI No.	Name of location	Location Code	Date of sampling
1	CHP/ Coal unloading point	BP2OF-1	05-04-2023
2	W. Bridge	BP2OF-2	05-04-2023

SL No	Parameter	Method of Detection		of Detection Observed Value		
51. 140.	Tarameter	analysis	limit	BP2OF-1	BP2OF-2	Standard NAAQS, 2009
1	Arsenic, µg/m <sup>3</sup>	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	0.006 µg/m <sup>3 (Annual</sup> average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m <sup>3</sup>	BDL	BDL	1.0 µg/m <sup>3</sup> (24 Hourly average)
3	Nickle, µg/m <sup>3</sup>	ASTM D 4185	0.007 µg/m <sup>3</sup>	0.0082	0.0071	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m <sup>3</sup>	ASTM D 4185	0.0045 µg/m <sup>3</sup>	0.0049	BDL	**
5	Cadmium, µg/m <sup>3</sup>	ASTM D 4185	0.0015 µg/m <sup>3</sup>	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m <sup>3</sup>	BDL	BDL	**

**BDL: BELOW DETECTION LIMIT** 

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**ENVIRONMENTAL MONITORING REPORT** 

# **GOURI DEEP OC**

**BALLARPUR 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

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report		TC-7102
TEST REPORT NO.	RIN/TR/SEPT-23/43	DATE OF ISSUE	27-10-23

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:			15-09-23 TO 15-10-23	

	MANAGER OFFICE BGD01							
		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>x</sub>	So <sub>x</sub>	(Sky/Wind)	
FROM	TO	5	5	2	6	10	(Sky/ Willu)	
02-09-23	03-09-23	310	178	56	16	10	Cloudy Sky /Light Breeze	
18-09-23	19-09-23	298	169	48	18	11	Cloudy Sky /Light Breeze	
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120		

		MUTRA VILLAGE	BGDO2			
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS				
		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	5	2	6	10	
02-09-23	03-09-23	84	30	12	BDL	Cloudy Sky /Light Breeze
18-09-23	19-09-23	79	32	12	BDL	Cloudy Sky /Light Breeze
NAAQS	5, 2009	100	60	80	80	

		GOYEGAON VILLAGE	BGDO3			
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS				
		<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	2	6	10	
02-09-23	03-09-23	83	34	10	BDL	Cloudy Sky /Light Breeze
18-09-23	19-09-23	70	28	10	BDL	Cloudy Sky /Light Breeze
NAAQ	5, 2009	100	60	80	80	

		ANTARGAON VILLAGE	BGDO4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS					
		PM <sub>10</sub>	PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)	
FROM	TO	5	2	6	10	(Sky/ Wild)	
02-09-23	03-09-23	78	36	14	BDL	Cloudy Sky /Light Breeze	
18-09-23	19-09-23	69	40	12	BDL	Cloudy Sky /Light Breeze	
NAAQ	5, 2009	100	60	80	80		

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Analysed by

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SAMPLE DESCRIPTION	Water sam	Vater 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: BGDW1							
DATE OF SAMPLE		ANALYSI	S RESULTS				
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2			
02-09-23	7.85	34	64	BDL			
18-09-23	7.36	44	44	BDL			
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10			

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ETP(WORKSHOP) DISCHARGE: BGDW2							
DATE OF SAMPLE		ANALYSI	S RESULTS				
COLLECTION	pH TSS (in mg/l) COD(in mg/l) O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2			
02-09-23	7.65	32	44	BDL			
18-09-23	7.63	48	28	BDL			
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10			

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

**Test Report** 



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

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

	MANAGER OFFICE:	BGON1	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	05-09-23	54.7	53.6
SEPT'23	21-09-23	55.6	54.5
NOISE POLLUTI CON	75	70	

	СНР	BGON2	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	05-09-23	57.6	56.5
SEPT'23	21-09-23	57.5	56.9
NOISE POLLUTI CON	75	70	

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Ashwin B Wasnik Reviewed by

Deepanshu Sahu

Authoriesed by

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2. Laboratory activities are performed at the Laboratory permanent facility that is ground floor, Environment Lab, CMPDI RI-IV, Nagpur.

- 3. This report refers to the values related to the items tested.



# **ENVIRONMENTAL MONITORING REPORT**

# **GOURI DEEP OC**

# **BALLARPUR 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

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

TEST REPORT NO.		RIN/TR/JULY-23/43   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 guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)					Assurance guidance document		
SAMPLE DESCRIPTION	J	AIR SAMPLE		SAMPLING PLAN :		LQR 47	
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIES:				16-07-23 TO 14-08-23	

		MA	NAGER OFFICE	BGDO1			
		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>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	ТО	5	5	2	6	10	
11-07-2023	12-07-2023	210	142	38	16	BDL	Cloudy / Light Breeze
29-07-2023	30-07-2023	230	138	43	14	BDL	Cloudy / Light Breeze
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	AL MINE, GSR 742(E), ember 2000	600	300	-	120	120	

MUTRA VILLAGE BGDO2						
		PARAMETER				
DATE(dd:mm:yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	PM <sub>10</sub> PM <sub>2.5</sub> No <sub>x</sub> So <sub>x</sub>			ENVIRONMENT CONDITIONS
FROM	TO	5	2	6	10	
11-07-2023	12-07-2023	43	20	8	BDL	Cloudy / Light Breeze
29-07-2023	30-07-2023	45	26	10	BDL	Cloudy / Light Breeze
NAAQS	5, 2009	100	60	80	80	

		GOYEGAON VILLAG	E BGDO3				
		PARAMETERS	PARAMETERS (24 hourly values in $\mu g/m^3$ )				
DATE(dd:mm:yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	ENVIKUNIVIENT CONDITIONS (Sky/Wind)	
FROM	TO	5	2	6	10		
11-07-2023	12-07-2023	50	26	8	BDL	Cloudy / Light Breeze	
29-07-2023	30-07-2023	56	28	8	BDL	Cloudy / Light Breeze	
NAAQ	5, 2009	100	60	80	80		

		ANTARGAON VILLAG	E BGDO4			
		PARAMETERS (24 hourly values in $\mu g/m^3$ )				
DATE(dd:mm:yy	) OF SAMPLING	<b>PM</b> <sub>10</sub>	<b>PM</b> <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	ТО	5	2	6	10	
11-07-2023	12-07-2023	39	18	6	BDL	Cloudy / Light Breeze
29-07-2023	30-07-2023	48	24	9	BDL	Cloudy / Light Breeze
NAAQS	5, 2009	100	60	80	80	

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# **FUGITIVE DUST MONITORING**

TEST REQUIRED	SPM: IS 5	PM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017) & PM2.5: USEPA Quality Assurance		
SAMPLE DESCRIPTION Air sample		(Fugitive)		
SAMPLING METHOD : LSOP 4		PERIOD OF PE	ERFORMANCE OF LAB ACTIVITIES:	16-07-23 TO 14-08-23

	WEIGH BRIDGE BGDOF1				
		PARAMETERS			
DATE(dd:mm:)	y) OF SAMPLING	SPM	PM <sub>10</sub>		
FROM	то	5	5		
29-Jul-23	30-Jul-23	460	325	Cloudy / Light Breeze	
	-				
		СНР	BGDOF2		
DATE/ddummu		PARAMETERS	(24 hourly values in μg/m <sup>3</sup> )		
DATE(dd:mm:)	y) OF SAMPLING	SPM	PM <sub>10</sub>	CONDITIONS (Sky/Wind)	
FROM	то	5	5		
28-Jul-23	29-Jul-23	510	360	Cloudy / Light Breeze	

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Environment Lab CMPDI RI-IV, NA	ooratory AGPUR	Test Report	TC-7102
SAMPLE DESCRIPTION	Water sample		

		P. 0		
Test Desuined	pH: IS 3025 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C			
Test Required	:2017,0 &0	5: IS 3025-Part 39:1991(RA 2019) & BOD: IS 3025 (Part	t 44): 1993 (RA 2019)	
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-07-23 TO 14-08-23	

MINE WATER DISCHARGE: BGDW1				
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
10-07-2023	7.54	26	32	BDL
25-07-2023	7.65	32	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP) DISCHARGE: BGDW2					
DATE OF SAMPLE		ANALYSI	S RESULTS		
COLLECTION	COLLECTION pH TSS (in mg/l) COD(in mg/l)				
DETECTION LIMIT	2	10	4	2	
10-07-2023	7.65	30	36	BDL	
25-07-2023	7.40	18	28	BDL	
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102
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### **NOISE LEVEL MONITORING DATA**

SAMPLE DESCRIPTION	NOISE SAM	1PLE
Test Required	CPCB PRO	CTOCOL FOR AMBIENT NOISE MEASUREMENT, JULY-2015
SAMPLING METHOD	LSOP 6	

	BGON1		
	DATE OF SAMPLE	NOISE LEVEL IN dB(A)	
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	14-07-2023	57.6	56.5
JULY'23	28-07-2023	53.6 52.8	
NOISE POLLUTI CON	75	70	

	СНР	BGON2		
	DATE OF SAMPLE	NOISE LEVEL IN dB(A)		
MONTH	COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
JULY'23	14-07-2023	59.6	58.7	
JULY'23	28-07-2023	56.7	55.9	
NOISE POLLUTI CON	75	70		



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**ENVIRONMENTAL MONITORING REPORT** 

# **GOURI DEEP OC**

**BALLARPUR 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

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report		TC-7192	
TEST REPORT NO.	RIN/TR/JUNE-23/43	DATE OF ISSU	E 3:	1-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
CDNA 16 5402 D-++ 4.40				

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		SAMPLIN	IG PLAN :	LQR 47	
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIES:				16-06-23 TO 15-07-23	

MANAGER OFFICE BGDO1							
			PARAMETERS				
DATE(dd:mm:yy)	DATE(dd:mm:yy) OF SAMPLING SPM PM <sub>10</sub> PM <sub>2.5</sub>		No <sub>x</sub>	So <sub>x</sub>	(Sby/Wind)		
FROM	ТО	5	5	2	6	10	(SKy/ Willu)
07-06-23	08-06-23	255	148	44	13	BDL	CLOUDY/LIGHT BREEZE
22-06-23	23-06-23	264	152	50	12	BDL	CLOUDY/LIGHT BREEZE
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 <sup>TH</sup> September 2000		600	300	-	120	120	

		N	IUTRA VILLAGE	BGDO2			
		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>x</sub>	So <sub>x</sub>	ENVIRONIVIENT CONDITIONS (Sky/Wind)
FROM	TO	5	5	2	6	10	
07-06-23	08-06-23	132	36	26	8	BDL	CLOUDY/LIGHT BREEZE
22-06-23	23-06-23	128	34	24	7	BDL	CLOUDY/LIGHT BREEZE
NAAQS	5, 2009	-	100	60	80	80	

		GOYE	GAON VILLAGE	BGDO3			
	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>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	5	2	6	10	
07-06-23	08-06-23	126	32	22	7	BDL	CLOUDY/LIGHT BREEZE
22-06-23	23-06-23	124	30	26	8	BDL	CLOUDY/LIGHT BREEZE
NAAQS	5, 2009	-	100	60	80	80	

		ANTAR	GAON VILLAGE	BGDO4			
		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>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	5	2	6	10	
07-06-23	08-06-23	118	34	24	7	BDL	CLOUDY/LIGHT BREEZE
22-06-23	23-06-23	122	36	26	6	BDL	CLOUDY/LIGHT BREEZE
NAAQ:	S, 2009	-	100	60	80	80	

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

SAMPLE DESCRIPTION	Water sam	ple			
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 : 16-06-23 TO 15-07-23			

MINE WATER DISCHARGE: BGDW1						
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		
07-06-23	8.12	16	24	BDL		
22-06-23	8.24	18	28	BDL		
STANDARDS FOR COAL MINE, GSR 742E, dt.	5.5 - 9.0	100	250	10		
25/09/2000						

ETP(WORKSHOP) DISCHARGE: BGDW2							
DATE OF SAMPLE		ANALYSI	S RESULTS				
COLLECTION	pН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)			
DETECTION LIMIT	2	10	4	2			
07-06-23	8.72	18	28	BDL			
22-06-23	8.89	26	36	BDL			
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10			

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**Test Report** 



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

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

	MANAGER OFFICE:	BGON1		
	DATE OF SAMPLE	NOISE LEVEL IN dB(A)		
MONTH	COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
JUNE'23	12-06-23	56.7	55.8	
JUNE'23	24-06-23	57.8	56.7	
NOISE POLLUTI CON	75	70		

	СНР	BGON2	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'23	12-06-23	63.6	62.5
JUNE'23	24-06-23	63.7	62.6
NOISE POLLUTI CON	75	70	

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**ENVIRONMENTAL MONITORING REPORT** 

# **GOURI DEEP OC**

**BALLARPUR 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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC-7102
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TEST REPORT NO.		RIN/TR/MAY-23/43		DATE OF ISSU	JE	30-06-2023
NAME OF CUSTOMER		GM(ENV.), WCL(HQ), NAGPU	JR			
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 doc volume-II (part-II)-2:12:2016, NO2: IS 5182 Part-06:2006(2017), SO2: IS 5182 Part-2:2001(RA 2017)				Assurance guidance document		
SAMPLE DESCRIPTION		AIR SAMPLE		SAMPLING PLAN : LQR 4		LQR 47
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIES:				16-05-23 TO 15-06-23

MANAGER OFFICE BGDO1							
		PARAMETERS (24 hourly values in $\mu$ g/m <sup>3</sup> )					
DATE(dd:mm:yy) OF SAMPLING SPM PM <sub>10</sub>		PM <sub>2.5</sub>	No <sub>x</sub>	So <sub>x</sub>	(Sky/Wind)		
FROM	TO	5	5	2	6	10	(Sky/ Willu)
03-05-2023	04-05-2023	236	132	36	10	BDL	Clear Sky/Calm
17-05-2023	18-05-2023	228	128	32	11	BDL	Clear Sky/Calm
STANDARDS FOR COA dt. 25 <sup>TH</sup> Sept	AL MINE, GSR 742(E), ember 2000	600	300	-	120	120	

MUTRA VILLAGE BGDO2							
DATE/dduromou au	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>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	5	2	6	10	(3,0) (3,0)
03-05-2023	04-05-2023	134	34	24	6	BDL	Clear Sky/Calm
17-05-2023	18-05-2023	128	30	22	7	BDL	Clear Sky/Calm
NAAQS	5, 2009	-	100	60	80	80	

GOYEGAON VILLAGE BGDO3							
DATE/dduronou a	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>x</sub>	So <sub>x</sub>	(Sky/Wind)
FROM	TO	5	5	2	6	10	
03-05-2023	04-05-2023	136	36	26	7	BDL	Clear Sky/Calm
17-05-2023	18-05-2023	126	32	22	6	BDL	Clear Sky/Calm
NAAQ	5, 2009	-	100	60	80	80	

	ANTARGAON VILLAGE BGDO4							
		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>x</sub>	So <sub>x</sub>	(Sky/Wind)	
FROM	TO	5	5	2	6	10		
03-05-2023	04-05-2023	138	38	28	6	BDL	Clear Sky/Calm	
17-05-2023	18-05-2023	124	34	24	7	BDL	Clear Sky/Calm	
NAAQS	5, 2009	-	100	60	80	80		

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**Test Report** 



SAMPLE DESCRIPTION	Water sam	ple		
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 : 16-05-23 TO 15-06-23		

MINE WATER DISCHARGE: BGDW1								
DATE OF SAMPLE		ANALYSIS RESULTS						
COLLECTION	pН	pH   TSS (in mg/l)   COD(in mg/l)   O & G(in mg/l)						
DETECTION LIMIT	2	10	4	2				
03-05-2023	7.65	20	32	BDL				
17-05-2023	7.61	18	28	BDL				
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10				

ETP(WORKSHOP	) DISCHARGE:	BGDW2		
DATE OF SAMPLE		ANALYSI	S RESULTS	
COLLECTION	pН	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03-05-2023	7.82	18	32	BDL
17-05-2023	7.39	22	36	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

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**Test Report** 



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

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

	MANAGER OFFICE:	BGON1	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	05-05-2023	54.5	53.6
MAY'23	19-05-2023	56.9	55.5
NOISE POLLUTI	75	70	

	СНР	BGON2	
	DATE OF SAMPLE	NOISE LEV	/EL IN dB(A)
MONTH	COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	05-05-2023	64.6	63.7
MAY'23	19-05-2023	64.7	63.8
NOISE POLLUTI CON	75	70	

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Maharashtra Pollution Control Board



महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Scale

Person Name

Fax Number

07173230076

Umesh Chandra Singh

Industry Category

**Consent Number** 

Format1.0/CC/UAN

Establishment Year

No.0000164784/CR/2308000921

1.S.I

Red

2012

FORM V (See Rule 14) Environmental Audit Report for the financial Year ending the 31st March 2023

Unique Application Number MPCB-ENVIRONMENT\_STATEMENT-0000060608

### PART A

#### **Company Information**

Company NameApplication UAN numberWestern Coal Fields Ltd Gouri Deep Opencast<br/>Mine164784AddressPlot no: 62 110 189 of antargaon, 165 141 of<br/>goyegaon etc, Gouri Deep Opencast Mine,

WCL, Ballarpur Area, Taluka: Rajura, Dist: Chandrapur: 442706

Plot noTaluka62 110 189 of antargaon, 165 141 of goyegaonRajura

**Capital Investment (In lakhs)** 10034.8

**Pincode** 442905

Telephone Number 9511762772

**Region** SRO-Chandrapur

Last Environmental statement submitted online yes

**Consent Valid Upto** 

2025-03-31

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

Submitted Date 28-09-2023

**City** Chandrapur

Village

**Designation** Sub ARea Manager

Email envgourideep@gmail.com

Industry Type R35 Mining and ore beneficiation

**Consent Issue Date** 

2023-08-11

# Date of last environment statement submitted

Sep 25 2022 12:00:00:000AM

Product Information Product Name COAL	<b>Consent Quantity</b> 0.60	<b>Actual Quantity</b> 0.563	<b>UOM</b> MT/A
By-product Information By Product Name	Consent Quantity	Actual Quantity	UOM
NĂ	0	0	CMD

## Part-B (Water & Raw Material Consumption)

1) Water Consumption Water Consumption Process	ion in m3/day for	<b>Consent Quantity</b> 222.00	in m3/day	Actual Quantity 222.00	in m3/day	
Cooning		0.00		0.00		
Domestic		10.00		10.00		
All others		170.00		30.00		
lotal		402.00		262.00		
2) Effluent Generati Particulars	on in CMD / MLD	<b>Conse</b> 1237	ent Quantity	<b>Actual Quantit</b>	y (	<b>УОМ</b> ^МП
		1237		1237		_MD
2) Product Wise Pro process water per u Name of Products (I	cess Water Consumption nit of product) Production)	on (cubic meter of	During the Previo	us During the	e current	иом
coal (CUBIC METER/TC	DNNE)		<b>financial Year</b> 0.135	<b>Financial y</b> 0.144	/ear	CMD
3) Raw Material Cor per unit of product) Name of Raw Mater EXPLOSIVES (KG/TONN	<b>asumption (Consumption</b> ials NE)	n of raw material Di fii 0.	<b>uring the Previous</b> nancial Year 833	During the o Financial ye 0.954	current ar	UOM
4) Fuel Consumption Fuel Name Diesel	<u>n</u>	<b>Consent quantity</b> 0	<b>Actual</b> 2833	Quantity	UOI KL/A	M
Part-C						
Pollution discharged	d to environment/unit o	f output (Parameter as	specified in the con	isent issued)		
Pollutants Detail	Quantity of Pollutants discharged (kL/day) Quantity	Concentration of Pollut discharged(Mg/Lit) Exc PH,Temp,Colour Concentration	ants Percent ept from pr standaı %variat	tage of variation rescribed rds with reasons tion	Standard	Reason
WATER REPORT ATTACHED IN PART I	0	0	-		-	-
[B] Air (Stack) Pollutants Detail	Quantity of Pollutants discharged (kL/day) Quantity	Concentration of Pollu discharged(Mg/NM3) Concentration	ıtants Percent from pr standar %variat	tage of variation rescribed rds with reasons tion	Standard	Reason
NO AIR STACK MONITORING	0	0	-		-	-
Part-D						

5.2 Wastes of residues containi	ng oil 0		1		Ton/Y
2) From Pollution Control Fa	acilities				
Hazardous Waste Type		Total During Previous Fin year	nancial	Total During Current Financial year	UOM
35.3 Chemical sludge from was	te water treatment	2.0		2	Ton/Y
Part-E					
SOLID WASTES					
1) From Process	Tatal During Dua		Tatal Duri		
OVERBURDEN	1675000	vious Financiai year	1510000	ng Current Financiai year	M3/Anum
2) From Pollution Control Fa	acilities				
Non Hazardous Waste Type	Total Du	ring Previous Financial ye	ar Tota	l During Current Financial year	UOM
-	0		0		CMD
3) Quantity Recycled or Re-i	utilized within the	•			
unit		-			
Waste Type		Total During Previou year	ıs Financial	l Total During Current Financi year	al UOM
0		0		0	CMD
Part-F					
Please specify the character indicate disposal practice ad	ristics(in terms of dopted for both th	concentration and quant nese categories of wastes	um) of haza	ardous as well as solid wastes a	nd
1) Hazardous Waste					
Type of Hazardous Waste G	enerated	<b>Qty of Hazardous Waste</b>	UOM	Concentration of Hazardous W	aste
0		0	KL/A	-	
2) Solid Waste					
	ted	Qty of Solid Waste	ИОМ	<b>Concentration of Solid Was</b>	te
Type of Solid Waste Genera	ccu	-			
Type of Solid Waste General OVERBURDEN		1510000	M3/Anum	-	

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	0	0.410	37000	221000	0	0

measures

## Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution. [A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)	
CAPITAL EXPENDITURE	VARIOUS AIR, WATER AND NOISE CONTROL MEASURES INCLUDING CESS.	0	
[B] Investment Proposed for next Year			
Detail of measures for Environmental P	rotection Environmental Protection Measures	Capital Investment (Lacks)	
Trolley mounted fogging machine	-	15	
CAAQMS	-	87	
Part-I			

Any other particulars for improving the quality of the environment.

### Particulars

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### Name & Designation

Umesh Chandra Singh, SUB AREA MANAGER

### UAN No:

MPCB-ENVIRONMENT\_STATEMENT-0000060608

# Submitted On:

28-09-2023