WESTERN COALFIELDS LIMITED OFFICE OF THE SUB AREA MANAGER SASTI SUB AREA

Ref.No. WCL/BA/SAM/SSA/Civil/ 237 Date:- 30, 11, 2023 To

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 SASTI EXPANSION OC MINE, Ballarpur Area, WCL.

Dear Sir,

Enclosed herewith please find, Six Monthly Environment Compliance report in respect of SASTI EXPANSION OC MINE for period from 01.04.2023 to 30.09.2023.

EC NO: J-11015/435/2006 IA-II(M) DTD:17/05/2007

Thanking you.

Yours Faithfully,

Sub Area Manager, Sasti Sub Area

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-11015/435/2006-IA.II(M) Government of India Ministry of Environment & Forests

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

> > Dated: 17th May 2007

To

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

Sub: Sasti Expansion Opencast Coal Mine Project (production from 1.60 MTPA to 2.50 MTPA and lease area from 714.09 ha to 919.69 ha) of M/s Western Coalfields Ltd. (WCL), located near village Sasti, Tehsil Rajura, District Chandrapur, Maharashtra - environmental clearance - reg.

Sir,

This has reference to letter No. 43011/145/2006-CPAM dated 29.11.2006 of Ministry of Coal forwarding your application on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. The proposal is for expansion in production from 1.60 million tonnes per annum (MTPA) to 2.50 MTPA and lease area from 714.09 ha to 919.69 ha. Of the total lease area, 899.49 ha consist of agricultural land and 20.20 ha is wasteland. No forestland is involved. A township exists at a distance of 5.5 km from mine site. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Of the total lease area, area for excavation is 344 ha, 235.30 ha is for OB dumps, 35.52 ha is for infrastructure including CHP, 15 ha is for roads, 24 ha is for railways, 50 ha is for greenbelt, 91 ha is safety zone, 46 ha is area for rationalisation and 78.87 ha is undisturbed (for future excavation). River Wardha flows at a distance of 2.5 km from the ML boundary. Gouri nalalh, a tributary of River Wardha, flows along the 3 sides of the lease boundary. The project involves modification of the natural drainage by strengthening of a seasonal nallah flowing within the ML. Project does not involve R&R. Mining will be opencast by mechanised method. Expansion of the annual rated capacity of the mine is from 1.60 MTPA to 2.50 MTPA of coal production. Mineral transportation of 7500 TPD of coal is by road involving 1500 coal trucks from CHP. Ultimate working depth of the mine is 150 m bgl. Water table is in the range of 0.60 m - 7.40 m bgl in the core zone and upto 13m bgl in the buffer zone. Mining has intersected water table. Peak water requirement is 1050 m3/d, which is to be met from mine pit water. Of the total OB generation, 31.33 Mm3 of OB is already accumulated in five external OB dump of a maxm. of 60m height and of the balance 51.15 Mm3 to be generated, 29.72% would be backfilled. Balance life of the mine at the proposed rated capacity is 18 years. Public Hearing was held on 26.10.2005. NOC has been obtained on 29.05..2006. The project has been approved by M/s WCL on 15.11.2005 at a rated capacity of 2.50 MTPA. Capital cost of the project is Rs. 83.5149 crores.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Sati Expansion Opencast Extension Coal Mine Project of M/s WCL for expansion in production of coal at 2.50 MTPA rated capacity involving a total lease area of 919.69 ha under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under Para 2.1.1 of MOEF Circular dated 13.10.2006 and subject to conditions specified below:

A. Specific Conditions

- Mining shall be carried out as per statuette at a safe distance from the Gouri nallah/Wardha (i) river flowing close to the lease boundary.
- (ii)The embankment to be constructed along the seasonal nallah shall be of suitable dimensions and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- (iii) Topsoil shall be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- OB should be stacked at the earmarked five external OB dumpsite within ML area which (iv)shall be a maximum height of 60m only and consist of four benches of 15m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on an yearly basis.
- (v)Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.

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

- Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to (vi) check run-off and siltation should be based on the rainfall data.
- Drills should be wet operated only. (vii)
- Controlled blasting should be practiced with use of delay detonators. The mitigative measures (viii) for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.

High efficiency bag filters/water sprinkling system to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc. shall be installed and operated effectively at all times of operation.

- An area not less than 451.65 ha shall be brought under afforestation which includes reclaimed external OB dump (235.30 ha), backfilled area (166.35 ha), along ML boundary, along roads & infrastructure, green belt (50 ha), and area in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of (xi) which 166.35ha shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 63 ha of decoaled void which is being converted into a water reservoir, shall be gently sloped along the upper benches, terraced and reclaimed with plantation. The outer periphery of the water body shall be fenced.

3+4 1

(x)

(ix)

(xii) The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.

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

A Final Mine Closure Plan along with details of Corpus Fund should be submitted immediately upon receipt of EC to the Ministry of Environment & Forests RO, Bhopal for approval.

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

(xvi) Consent to Operate shall be obtained before expanding mining operations in the additional lease area and for the enhanced rated capacity after fulfilling the conditions imposed in the NOC.

B. General Conditions

xiv)

(xv)

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO2 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RPM, SO2 and NOx) should be regularly submitted to the Ministry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
- (vi) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs.
 - (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.

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VIL

- Vehicular emissions should be kept under control and regularly monitored. Vehicles used for (viii) transporting the mineral should be covered with tarpaulins and optimally loaded.
- (ix)Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
- (x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

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

- (xi) A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (xii) The funds earmarked for environmental protection measures should e kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.
- (xiii) The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any (xiv) suggestion/representation has been received while processing the proposal.
- State Pollution Control Board should display a copy of the clearance letter at the Regional (xv)Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- The Project authorities should advertise at least in two local newspapers widely circulated (xvi) around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in.

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

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

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

> (Dr.T.Chandini) Director

Copy to:

- 1. Secretary, Ministry of Coal, New Delhi.
- 2. Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New 7 Bldg., Madam Cama Road, MUMBAI - 400032..

SASTI EXPANSION OPENCAST COAL MINE MOEF CLEARANCE LETTER No. J-11015/435/2006.IA,II (M) DATED 17.05.2007 FOR SASTI EXPANSION OCM FOR A PRODUCTION OF 2.50 MTY.

SN	ENVIRONMENTAL CLEARANCE	
	CONDITIONS	COMPLIANCE
Α	Specific Conditions	
(i)	Mining shall be carried out as per statuette at a safe distance from the Gouri nallah / Wardha River flowing close to the lease boundary.	Mining activities are restricted within lease hold boundary at a distance of 1.85 km from Gouri Nallah & 2.50 km from Wardha River .
(ii)	The embankment to be constructed along the seasonal nallah shall be of suitable dimensions and stablised with plantation so as to withstand the peak water flow and prevent mine inundation.	Suitable embankment of proper dimension has been constructed to protect the area/ Mine from flood water as per DGMS norms. Dimensions of embankment is given as below. Length - 3570 mtr. Top width & RL - 20 mtr., 181.5 to 218.5 Bottom width & RL - 56 to124 mtr., 172.5 to 180.00 Height - 9.00mtr to 38.00mtr. Erstwhile embankment as mentioned above has been realigned since a portion of embankment of about 1000 m has come under excavation area.
(iii)	Topsoil shall be stacked properly with proper slope at earmarked site (s) and should not e kept active and shall be used for reclamation and development of green belt.	Details of dumps are as follows: Dump no:5 Height = 34m Area = 21.251 Ha Slope = 28 degrees Part of the above dump is reclaimed with plantation Dump no: 1 Height = 22 m Area = 15.754 Ha Slope = 28 degrees It is an active dump created in 2018-19.
(iv)	OB should be stacked at the earmarked five external OB dump site within ML area which shall be a maximum height of 60m only and consist of four benches of 15m each. The ultimate slope of the dump shall not exceed 28 degree, Monitoring and management of reclaimed dumpsite should continue	All 5 external O.B. Dumps were stacked at ear marked Dump sites only and 4 out of 5 dumps are afforested. The overall slope of the Dumps is 28 degree. However the afforestation has become so dense that side slope is not at all visible. The plantation has attained the height of approx 9 to 10 mtrs and the vegetation has become self sustaining.

(v)	until the vegetation becomes self- sustaining. Compliance status should be submitted to the Ministry of Environment & Forest and its Regional office located at Bhopal on an yearly basis. Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for	Settling / sedimentation pond of appropriate size has been constructed to treat the industrial (Mine activity area) effluent including water pumped out from mine considering peak discharge. The water so treated is being used within the mine
	watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly. Garland drains (size gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material	premises for dust suppression, watering of HEMM & FOR PLANTATION, Industrial use, fire fighting Garland drains of appropriate different sizes of 3.00x2.00, 2.00x1.5, & 1.5.x1.00mtr. for a total length of 12235.00mtr.have been provided along the periphery of excavated area as well as OBD. Desilting is being done every year before onset of monsoon.
(vi)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	Retaining wall of proper dimension have been constructed at the toe of OB Dumps which are adjacent to coal transport roads. The Dumps are also thickly planted on top as well as on slope. The afforestation have become so dense and self sustaining that the side slope is not at all visible. The plants have attained the height of approx, 9 to 10 mtrs. In the present operating portion of mine specially benches, such retaining wall is not required. More over cross drainage in OB benches have been provided which carry all the silts & sediments ultimately to mine sump provided at the floor of seam. The sump capacity is sufficient enough to allow settlement of suspended matter significantly and only supernatant water is pumped out on surface.
(vii)	Drills should be wet operated only.	Drills are fitted with wet drilling arrangement.
(viii)	Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly	Controlled blasting is being done as per scientific investigations for design of controlled blasting pattern with SME explosives at Sasti Expansion Opencast mine done by CSIR- Central Institute
	implemented.	attached as ANNEXURE .

(ix)	High efficiency bag filters / water sprinkling system to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc. shall be installed and operated effectively at al times of operation.	 Adequate Fixed type water sprinklers are provided in & around C.H.P. Weigh Bridges, coal transport roads, transfer points etc. as per direction of M.P.C.B., Chandrapur. They are being properly maintained & operated. Details of Air pollution Control measures are given as below :- 1. Fixed sprinklers are provided at 100 MT weighbridge - 08 Nos. 2. Fixed sprinklers are provided at Main CHP - 06 Nos. 3. Along Coal transportation road – 04 nos 4. Crusher unloading Area of both mini CHP & Main CHP are enclosed with CGI sheet and sprinklers are provided at coal unloading Area and loading point at mini CHP. 6. Concrete pavement provided at coal unloading Area and loading point at Main CHP. 7. Conveyor belt of mini CHP and main CHP are enclosed with CGI sheets along with sprinklers. 8. Brooming and maintenance of coal transport road and weigh bridge road is done regularly. 9. Spraying of water by 5 Nos. of Mobile Water Tankers (Hired-1 nos. Of 4 KL, Departmental – 2nos. of 28 KL each and HOE contractor – 2 nos. Of 28 KL each) 10.Concrete pavement is provided in w/s complex. 11.Coal carrying Trucks are covered with Tarpaulin. 12.Tarring of 06.00 km length of internal roads used by Coal Transportation trucks. 13. One no. of trolley mounted fogger has been commissioned at Sasti OC mine with a throw of 100m.

(x)	An area not less than 451.65 ha shall be brought under afforestation which includes reclaimed external OB dump (235.30 ha), backfilled area (166.35 ha),	Noted 5.15 20.75 reclai	d and will lakhs dor Ha of ba imed.	be compli ne in Sasti ckfilled are	ed. Total Pla OCM in 1 ea has been b	antation of 69.15 Ha. bioogically	
	along ML boundary, along roads & infrastructure, green belt (50 ha) and	Sr no.	Year	Plantatio n (nos.)	Area (Ha)	Species	
	area in township located outside the lease by planting native species in	1	1993-94	47425	9.48	Neem,	Sissoo,
	consultation with the local DFO/	2	1994-95	60000	12.0	Gulmohar	Mango,
	Agriculture Department. The density of the trees should be around 2500 plants	3	1995-96	40000	8.0	Soniya,	Bija,
	per ha.	4	1995-96	25000	5.0	Maruk,	Kavath,
		5	1996-97	35000	14	Knair, Kadamba,	Karanj, Siras,
		6	1997-98	22000	8.0	Bamboo,	Arjun,
		7	1997-98	37000	14.4	Ber, etc.	
		8	1997-98	2000	0.4		
		9	1998-99	66575	26.17		
		10	1998-99	34000	13.50		
		11	1998-99	2000	0.70		
		12	1999-00	34000	13.30		
		13	2000-01	30000	12.0		
		14	2002-03	18750	7.50		
		15	2002-03	22250	8.90		
		16	2007-08	25000	10.0		
		17	2009-10	2000	0.80		
		18	2013-14	12500	5.00		
			TOTAL	515000	169.15		
(xi)	A Progressive Mine Closure Plan shall be implemented by reclamation of quarry area of which 166.35 Ha shall be	It is done backt	being don in Sasti (filled area	ne. Total Pl OCM in 16 has been bi	antation of 59.15 Ha. 20 oogically rec	5.15 lakhs 0.75 Ha of claimed.	
	backfilled and afforested by planting native plant species in consultation with the local DFO / Agriculture	Sr no.	Year	Plantatio n (nos.)	Area (Ha)	Species	
	should be around 2500 plants per ha.	1	1993-94	47425	9.48	Neem,	Sissoo,
	The balance 63 ha of decoaled void	2	1994-95	60000	12.0	Gulmohar Amla	Mango, Jamun
	which is being converted into a water reservoir shall be gently sloped along	3	1995-96	40000	8.0	Soniya,	Bija,
	the upper benches, terraced and	4	1995-96	25000	5.0	Maruk,	Kavath,

periphery of the water body shall be fenced.	6 7 8 9 10 11 12 13 14 15 16 17 18	1997-981997-981997-981998-991998-991998-991999-002000-012002-032007-08	22000 37000 2000 66575 34000 2000 34000 30000 18750 22250	8.0 14.4 0.4 26.17 13.50 0.70 13.30 12.0 7.50 8.90	Kadamba, Bamboo, Ber, etc.	
	7 8 9 10 11 12 13 14 15 16 17 18	1997-981997-981998-991998-991998-991999-002000-012002-032002-032007-08	37000 2000 66575 34000 2000 34000 30000 18750 22250	14.4 0.4 26.17 13.50 0.70 13.30 12.0 7.50 8.90	Ber, etc.	
	8 9 10 11 12 13 14 15 16 17 18	1997-981998-991998-991998-991999-002000-012002-032002-032007-08	2000 66575 34000 2000 34000 30000 18750 22250	0.4 26.17 13.50 0.70 13.30 12.0 7.50 8.90		
	9 10 11 12 13 14 15 16 17 18	1998-991998-991998-991999-002000-012002-032002-032007-08	6657534000200034000300001875022250	26.17 13.50 0.70 13.30 12.0 7.50 8.90		
	$ \begin{array}{c} 10 \\ 11 \\ 12 \\ 13 \\ 14 \\ 15 \\ 16 \\ 17 \\ 18 \\ \end{array} $	1998-991998-991999-002000-012002-032002-032007-08	34000 2000 34000 30000 18750 22250	13.50 0.70 13.30 12.0 7.50 8.90		
	11 12 13 14 15 16 17 18	1998-991999-002000-012002-032002-032007-08	2000 34000 30000 18750 22250	0.70 13.30 12.0 7.50 8.90		
	12 13 14 15 16 17	1999-002000-012002-032002-032007-08	34000300001875022250	13.30 12.0 7.50 8.90		
	13 14 15 16 17	2000-01 2002-03 2002-03 2007-08	30000 18750 22250	12.0 7.50 8.90		
	14 15 16 17	2002-03 2002-03 2007-08	18750 22250	7.50 8.90		
	15 16 17	2002-03 2007-08	22250	8.90	_	
	16 17	2007-08				
	17		25000	10.0		
	10	2009-10	2000	0.80		
	10	2013-14	12500	5.00		
		TOTAL	515000	169.15		
xiii Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of two years and the results reported to this Ministry and to DGMS.	Periodical medical Examinations (P.M.E.) are carried out on compulsorily on each employee once in five years with the purpose of detecting and keeping records of diseases with specific importance to Coal Worker's Pneumoconiosis. This is covered under Statute. During P.M.E., the candidates are subjected to a complete clinical examination, (including acuity of vision and hearing), radiological examination of chest and routine examination of blood and urine. In case some abnormality is detected during the course of the above examination, further investigations are carried out, as required. When a person is diagnosed as having a certain disease, he is referred to the concerned specialist for confirmation and initiation of treatment.					

		Sr	Year	IME (nos.)		PME (nos.)
		no.		Departm ental	Contract ual	Departme ntal
		1	2017-18	-	165	292
		2	2018-19	-	172	314
		3	2019-20	-	160	287
		4	2020-21	-	93	252
		5	2021-22	-	51	236
(xiv)	A Final mine Closure Plan along with details of Corpus Fund should be submitted immediately upon receipt of EC to the Ministry of Environment & Forests RO, Bhopal for approval.	Mine closure guidelines came into force from 27/08/2009, wherein detailed framework fo Mine Closure Plan was described. Thereafte MCP for Sasti OC was prepared. As per amended guidelines the competant authority to approv MCP of mines of Govt. Companies will b concerned board of Company. Following th directives of MoC, MCP of Sasti OC was prepared and the same was approved by WCl Board on 25/08/2012				
(xv)	For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1:1500) of the core zone and buffer zone from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series) and the report submitted to MOEF and its Regional Officer at Bhopal. Consent to operate shall be obtained before expanding mining operations in the additional lease area and for the enhanced rated capacity after fulfilling the conditions imposed in the NOC.	Consupto MTI has prod MPC	sent to ope 31/03/20 PA .Attach been ma uction caj CB-CONS	erate has be 23 for pr ed as ANN de for Co pacity of 2 ENT-00001	en obtained roduction of EXURED. onsent to 2.50 MTPA 52899	for validity capacity 2.0 Application Operate for vide UAN dated

B	General Conditions	
(i)	No change in mining technology and	Noted.
	scope of working should be made	No change has been made.
	without prior approval of the Ministry	
	of Environment and Forests.	
(ii)	No change in the calendar plan	Noted.
	including excavation, quantum of	
	mineral coal and waste should be made.	
(iii)	Four ambient air quality monitoring	Four ambient air quality monitoring stations are
	stations should be established in the	established as below :-
	core zone as well as in the buffer zone	1. BSOA-1 – Filter plant at Gouri colony.
	for SPM, RPM, SO2 and NOx	2. BSOA-2 - Sasti village.
	monitoring. Location of the stations	3. BSOA-3 – SAM Office.
	should be decided based on the	4. BSOA-4 – Area Store.
	meteorological data, topographical	Monitoring of SPM, RPM, SO2 and NOx is
	features and environmentally and	being done fortnightly. Monitoring reports for the
	ecologically sensitive targets in	month of August 2022 and September 2022
	consultation with the State Pollution	attached as Annexure.
	Control Board.	
(iv)	Fugitive dust emissions (SPM and RPM	Adequate Fixed type water sprinklers are
) from all the sources should be	provided in & around C.H.P. Weigh Bridges, coal
	controlled regularly monitored and data	transport roads, transfer points etc. as per
	recorded properly. Water spraying	direction of M.P.C.B., Chandrapur. They are
	arrangement on haul roads, wagon	being properly maintained & operated. Details of
	loading, dump trucks (loading and	Air pollution Control measures are given as
	unloading) points should be provided	
	and properly maintained.	1. Fixed sprinklers are provided at 100 MI
		weighbridge - 08 Nos.
		2. Fixed sprinklers are provided at Main CHP -
		00 NOS.
		5. Along Coal transportation road – 04 nos
		4. Crusher unloading Area of bour mini CHP &
		sprinklars are provided at
		spinikiers are provided at
		5 Concrete payement provided at coal unloading
		Area and loading point at mini CHP
		6 Concrete payement is provided at coal
		unloading
		Area and loading point at Main CHP
		7 Conveyor belt of mini CHP and main CHP are
		enclosed with CGI sheets along with sprinklers
		8. Brooming and maintenance of coal transport
		road
		and weigh bridge road is done regularly.
		9.Spraying of water by 5 Nos. of Mobile Water

		 Tankers (Hired-1 nos. Of 4 KL, Departmental – 2nos. of 28KL each and HOE contractor – 2 nos. Of 28 KL each) 10.Concrete pavement is provided in w/s complex. 11.Coal carrying Trucks are covered with Tarpaulin. 12.Tarring of 06.00 km length of internal roads used by Coal Transportation trucks. 13. One no. of trolley mounted fogger has been commissioned at Sasti OC mine with a throw of
		100m. Fugitive dust concentration report enclosed as ANNEXURE.
(v)	Data on ambient air quality (SPM,RPM,SO2 and NOx) should be regularly submitted to the ministry including its Regional office at Bhopal and to the State Pollution Control Board and the Central Pollution Control board once in six months.	Ambient Air quality monitoring is being carried out as per GSR 742(E). The monitoring reports on quarterly basis are submitted to MOFF, and MPCB Chandrapur as per directives. Monitoring reports for the period 01.08.2022 to 30.09.2022 enclosed as ANNEXURE .
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, of HEMM etc. should be provided with ear plugs / muffs.	Regular monitoring through CMPDIL is being done on fortnightly basis and the results are within limits, Workers exposed to high noise level are provided with ear plugs/muffs. HEMM are properly maintained and kept in good condition. Noise proof cabins of HEMM are also provided. Sound level meter is used for measuring noise levels at work place and records are maintained.
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Sedimentation/Settling tank is provided in the mine. Mine water is pumped out after proper treatment. The results of mine water are within permissible limit. ETP along with oil skimmer is provided at workshop along with recycling system ETP sludge is properly stacked in the sludge yard as per the directives of MPCB. ETP – 150 KL / day. The effluent discharge are monitored as per GSR 742(E). Monitoring reports for the period 01.08.2022 to 30.09.2022 enclosed as ANNEXURE.
(viii)	Vehicular emissions should be kept under control and regularly monitored. Vehicles used used for transport-ing the	Vehicular emissions are being monitored regularly and it is kept under control. Trucks used for transporting of coal are being covered with

	mineral should be covered with	tarpaulins.					
(iv)	tarpaulins and optimally loaded.Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consulta-tion with the State Pollution Control Board	CMPDI Laboratory exists at Nagpur, which monitors all the mines of WCL.				ich	
(x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and informa-tion on safety and heath aspects. Occupational health surveillance programme of the workers	Protect workm regular aspects require VTC tr	ive respir en exposed ly given at VT ments und aing is as f	atory de d to dust training C. (Th er Mines follows:	evices are t area. Wo on safet nis is t s Safety A	provided rkers are a y and hea he statut ct). Details	to ilso alth ory s of	
	should be undertaken periodically to	Sr no.	Year	VTV (r	105.) montal	Contr	
	observe any contractions due to exposure to dust and to take corrective	1	2017-18	122	IIIeiiidi	149	
	measures, if needed.	2	2017-10	131		138	
	3	2019-20	124		101		
	4	2020-21	117	.7 94			
		5	2021-22	117	117 71		
	Periodi is bein Hospita action o PME o in inter PPE ki	cal Medic g done in al to detect can be take f every pe val of five t distributio	al Exam every a t any dis en up. erson em years at on detail	ination of five years ease so th ployed in area hosp s is as foll	every wor in our A at appropri mine is do ital. ows:	ker rea jate one	
		Sr no	PPE Equ	lipment	2020-21	2021-22	
		1	Helmet		300	292	
		2	Mask		296	287	
		3	Goggles		181	176	
		4	Earplugs		156	147	
		5	Jacket		457	452	
		6	Shoes		492	497	
		7	Gumboot	S	357	397	
		8	Bottles		567	576	

(xi)	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	At HQ, WCL- The cell is headed by GM (Env) reporting to Director (Technical). The team comprises of multi-disciplinary trained executive. At Area level – Area General Manager heads the Environment Department assisted by GM (oprn), ANO(Envt), &1 Assistant Managers of Environment discipline. At Unit Level- Environment Management Cell is headed by Sub-Area Manager and assisted by Mine Manager, Project Nodal Officer (Env) at unit level.
(xii)	The funds earmarked for environmental protection measures should e kept in separate account and should not be diverted for other purpose.Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.	The funds earmarked for Environmental protection measures are kept in separate account and it is not used for any other purpose. Expenditure statements are shown in every six monthly compliance report which is being sent to MOEFCC. Revenue expenditure till March 2022 = 521.508 lakhs. Capital expenditure till March 2022 = 671.73 lakhs
(xiii)	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office (s) of the Regional office by furnishing the requisite data/ information/ monitoring reports.	Noted.
(xiv)	A copy of E.C. will be marked to concerned panchayat / local VGP, if any, from whom any suggestion/ representation has been received while processing the proposal.	Clearance letter has been sent to concerned Gram Panchayat vide letter No. WCL/BA/SSA/910 dated : 26.06.2007.
(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office / Tehsildar's Office for 30 days.	Noted.
(xvi)	The Project authorities should 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	Complied. Attached as ANNEXURE .

	within seven days of the clearance letter	
	informing that the project has been	
	accorded environmental clearance and a	
	copy of the clearance letter is available	
	with the State Pollution control Board	
	and may also be seen at the website of	
	the ministry of Environment & Forests	
	at <u>http://envfor.nic.in</u> .	
3	The Ministry or any other competent	Agreed.
	authority may stipulate any further	
	condition for environment protection.	
4	Failure to comply with any of the	Agreed.
	conditions mentioned above may result	
	in withdrawal of this clearance and	
	attract the provisions of Environment	
	(Protection) Act. 1986.	
5	The above conditions will be enforced	
	inter-alia, under the provisions of the	Agreed.
	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.	

Sub Area Manager, Sasti Sub Area.



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:	Sasti Expn. Oc Mine				
Project Address:	Village - Sasti, Tehsil - Rajura, District - Chandrapur				
Town:	Sasti (ct)	Rajura			
District:	Chandrapur	State:	Maharashtra		
Pin Code:					
Communication Address:	General Manager (env), Wcl(hq), Coal Estate, Civil Lines, Nagpur, Nagpur, Maharashtra - 440001				
Address of CGWB Regional Office :	Central Ground Water Board Central Region, N.s. Building, Civil Lines, Nagpur, Maharashtra - 440001				

1.	NOC No.:		CGW	/A/NOC/MIN/O	RIG/20)21/12	2462		1	$\langle \rangle$					
2.	Application	n No.:	21-4/	21-4/1878/MH/MIN/2018				1	3.	Cate (GW	egory: /RE 2017)	Sa	fe		
4.	Project Sta	atus:	Existi	ing Project				1	5.	NOC	C Type: New				
6.	Valid from	n:	03/08	3/2021			.0		7.	Vali	d up to:	02	/08/202	3	
8.	Ground Wa	ater Abst	raction	Permitted:			Sec.	1							
	Fresh	Water		Saline	Wate	r, N	2		Dewatering Total			Total			
	m³/day	m³/ye	ear	ar m³/day m³/year m³/			m³/d	ay		m³/year		³/day	m³	/year	
	0.00	0.00	2					7062	00		2577630.0	00			
9. Details of ground water abstraction /Dewatering structures															
Total Existing No.:1									1	otal Pro	osed N	lo.:0			
	DW DCB BW TW					MF	M	Pu	D٧	V DCB	BW	TW	MP	MPu	
Abstraction Structure* 0 0 0					1		0	0	0	0	0	0	0		
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps															
10. Ground Water Abstraction/Restoration Charges paid (Rs.):									15465780.00						
11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.			No. of Piezometers Monitoring Mechanism		nanism										
CM								Manual	DWLR*	DWLF	R With T	elemetry			
	**DWLR - Dig	gital Water I	_evel Re	ecorder				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.)



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ENVIRONMENTAL MONITORING REPORT

SASTI 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

AN ISO 9001:2015 COMPANY

тс.7102

TEST REPORT NO.		RIN/TR/MAY-23/48 DATE OF ISSUE 30-06-20				30-06-2023	
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 d volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)						ty Assurance guidance document 7)	
SAMPLE DESCRIPTION		AIR SAMPLE SAMPLING PLAN :				LQR 47	
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:				16-05-23 TO 15-06-23	

SAM OFFICE-SASTI OC BSOA1									
			PARAMETERS (
DATE(dd:mm:yy) OF SAMPLING	SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)		
FROM TO		5	5	2	6	10			
08-05-2023 09-05-2023		244	142	44	12	BDL	Clear Sky/Calm		
21-05-2023 22-05-2023		238	136	38	13	BDL	Clear Sky/Calm		
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120			

AREA STORE BSOA2									
		PARAMETERS (24 hourly va	llues in μg/m³)					
		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)		
FROM	TO	5	5	2	6	10			
08-05-2023	09-05-2023	228	130	34	11	BDL	Clear Sky/Calm		
22-05-2023	23-05-2023	232	132	36	12	BDL	Clear Sky/Calm		
STANDARDS FOR COAL 25 TH Septe	600	300	-	120	120				

GOURI COLONY FILTER PLANT BSOA3									
			PARAMETERS (
DATE(dd:mm:yy	() OF SAMPLING	SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)		
FROM	TO	5	5	2	6	10			
08-05-2023	09-05-2023	132	34	24	7	BDL	Clear Sky/Calm		
22-05-2023	23-05-2023	126	32	22	6	BDL	Clear Sky/Calm		
NAAQ	S, 2009	-	100	60	80	80			

SASTI VILLAGE BSUA4									
DATE(ddummua			PARAMETERS						
DATE(dd.mm.y)	() OF SAMPLING	SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)		
FROM	TO	5	5	2	6	10	(3Ky/ Willd)		
12-05-2023	13-05-2023	132	34	22	6	BDL	Clear Sky/Calm		
22-05-2023	23-05-2023	134	32	24	7	BDL	Clear Sky/Calm		
NAAQS, 2009		-	100	60	80	80			

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Analysed by

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SAMPLE DESCRIPTION	Water sample							
Test Required	pH: IS 302	5 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2	2017),COD: APHA (23rd Edition) 5220 C :2017,O &G:					
Test Required	IS 3025-Pa	t 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:	BSOW1					
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			
08-05-2023	7.95	14	24	BDL			
23-05-2023	7.58	22	32	BDL			
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10			

ETP DISCI	HARGE:	BSOW2							
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					
08-05-2023	7.84	16	24	BDL					
23-05-2023	7.67	18	28	BDL					
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10					

STP(DOMESTIC EFFLUENT)TREATED: BSOW3								
DATE OF SAMPLE	ANALYSIS	RESULTS						
COLLECTION	TSS (in mg/l)	BOD(in mg/l)						
DETECTION LIMIT	10	2						
08-05-2023	22	10.8						
23-05-2023	18	11.2						
GENERAL STANDARDS FOR								
DISCHARGE OF								
ENVIRONMENT	100	30						
POLLUTANTS GSR 801E								
EPA 1993								

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Environment Laboratory CMPDI
RI-IV, NAGPUR

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	

	CHP:	BSON1		
		NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
MAY'23	05-05-2023	64.5	63.6	
MAY'23	MAY'23 19-05-2023		62.6	
NOISE POLLUTION (I	75	70		

GOURI COLONY: BSON2				
	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
MAY'23	05-05-2023	42.6	41.7	
MAY'23	19-05-2023	43.6	42.7	
NOISE POLLUTION (55	45		



Ashwin B Wasnik Reviewed by

h 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.

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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

INDEX

SI. No.	PARTICULARS	PAGE NO.
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		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	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

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

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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 /HM48		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	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		National Ambient Air Quality		
51. 100.	rarameter	analysis	limit	BP2OA-1	BP2OA-2	BP2OA-3	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	BDL	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	0.0049	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

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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 /HM49		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	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	r Method of	Detection	Obse	National Ambient Air Quality	
51. 140.	Tarameter	analysis	limit	BGOA-1	BGOA-2	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 μg/m ³	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	**

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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), NAGPL	JR	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

SL 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 ³	ASTM D 4185	0.0007 µg/m ³	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	BDL	0.02 μg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	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	1	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 & 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 Paramete		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 ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	BDL	BDL	BDL	0.02 μg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

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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			SAMPLE DESCRIPTION	AIR SAMPLE
TEST REQUIRED	Heavy metals (A	s, Pb, Ni, Cr & C	d) in air samples (ASTM D 4	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 ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	**

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

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Environment Laboratory CMPDI RI-IV, NAGPUR		Test Re	port quality monitor	ing data for heavy metals	Ambient Air
				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 UG			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	erved Value	National Ambient Air Quality
51. 140.	Tarameter	analysis	limit	BBUOA-1	BBUOA-4	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 μg/m ³	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	0.0072	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

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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	/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 OC			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

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

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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 & C	Cd) 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	WEIGH BRIDGE	BPOF-1	05-04-2023

Sl. No. Parameter	Parameter	Method of	Detection	Observed Value	National Ambient Air Quality
	Farameter	analysis	limit	BPOF-1	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m³	ASTM D 4185	0.007 µg/m ³	0.0086	0.02 μg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	0.0048	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	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), NAGPUR		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	CHP/ Coal unloading point	BGOF-1	06-04-2023
2	W. Bridge	BGOF-2	06-04-2023

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

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

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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		National Ambient Air Quality		
51. 140.	Tarameter	analysis	limit	BBOF-1	BBOF-2	BBOF-3	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m³	ASTM D 4185	0.007 µg/m ³	0.0081	BDL	BDL	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	BDL	**

BDL: BELOW DETECTION LIMIT

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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	STM D 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	National Ambient Air Quality	
51. 140.	Tarameter	analysis	limit	BGDOF1	BGDOF2	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	0.0074	0.0071	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	BDL	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	**

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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	I No Barameter Met		Detection	Obse	erved Value	National Ambient Air Quality
51. 140.	Tarameter	analysis	limit	BP2OF-1	BP2OF-2	Standard NAAQS, 2009
1	Arsenic, µg/m ³	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	0.006 µg/m ^{3 (Annual} average)
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m ³	BDL	BDL	1.0 µg/m ³ (24 Hourly average)
3	Nickle, µg/m ³	ASTM D 4185	0.007 µg/m ³	0.0082	0.0071	0.02 µg/m3 (Annual average)
4	Total Chromium, µg/m ³	ASTM D 4185	0.0045 µg/m ³	0.0049	BDL	**
5	Cadmium, µg/m ³	ASTM D 4185	0.0015 µg/m ³	BDL	BDL	**
6	Mercury, μg/m3	ASTM D 4185	0.0007 µg/m ³	BDL	BDL	**

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ENVIRONMENTAL MONITORING REPORT

SASTI 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

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TEST REPORT NO.		RIN/TR/JUNE-23/48 DATE OF ISSU		DATE OF ISSUE		31-07-23
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 Assurved volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)				y Assurance guidance document)		
SAMPLE DESCRIPTION		AIR SAMPLE		SAMPLING PLAN :		LQR 47
SAMPLING METHOD : LSOP 4		PERIOD OF PERFORMANCE OF LAB ACTIVITIES: 16-06-23 TO 15-07			16-06-23 TO 15-07-23	

SAM OFFICE-SASTI OC BSOA1							
			PARAMETERS	(24 hourly va	alues in µg/m³)		
DATE(dd:mm:yy) OF SAMPLING		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	TO	5	5	2	6	10	(Sky) Wind)
14-06-23	15-06-23	238	136	38	13	BDL	cloudy sky/light breeze
29-06-23	30-06-23	244	144	42	12	BDL	cloudy sky/light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

AREA STORE BSOA2							
	、		PARAMETERS (24 hourly va	alues in µg/m³)		
		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	TO	5	5	2	6	10	(Sky/ Wild)
14-06-23	15-06-23	228	132	36	26	BDL	cloudy sky/light breeze
29-06-23	30-06-23	218	128	32	22	BDL	cloudy sky/light breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

		GOURI CO	LONY FILTER PLANT	BSOA3			
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in μ g/m ³)					
		SPM PM ₁₀ PM _{2.5} No ₂		So ₂			
FROM	TO	5	5	2	6	10	
07-06-23	08-06-23	136	36	26	8	BDL	Clear Sky/Calm
08-06-23	09-06-23	138	38	28	7	BDL	cloudy sky/light breeze
13-06-23	14-06-23	132	30	22	6	BDL	Clear Sky/Calm
14-06-23	15-06-23	134	32	24	8	BDL	cloudy sky/light breeze
20-06-23	21-06-23	128	34	26	7	BDL	Clear Sky/Calm
21-06-23	22-06-23	130	32	28	6	BDL	cloudy sky/light breeze
27-06-23	28-06-23	134	38	26	7	BDL	Clear Sky/Calm
28-06-23	29-06-23	136	36	24	8	BDL	cloudy sky/light breeze
NAAQ	S, 2009	-	100	60	80	80	

			SASTI VILLAGE	BSUA4			
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m ³)					
		SPM PM ₁₀ PM ₂		PM _{2.5}	PM _{2.5} No ₂		ENVIRONMENT CONDITIONS
FROM	TO	5	5	2	6	10	(3ky/Willd)
07-06-23	08-06-23	134	32	22	6	BDL	Clear Sky/Calm
08-06-23	09-06-23	128	30	24	7	BDL	cloudy sky/light breeze
13-06-23	14-06-23	126	34	26	7	BDL	Clear Sky/Calm
14-06-23	15-06-23	132	36	22	8	BDL	cloudy sky/light breeze
20-06-23	21-06-23	126	32	24	6	BDL	Clear Sky/Calm
21-06-23	22-06-23	136	34	26	7	BDL	cloudy sky/light breeze
27-06-23	28-06-23	138	38	28	8	BDL	Clear Sky/Calm
28-06-23	29-06-23	124	30	22	6	BDL	cloudy sky/light breeze
NAAQ	S, 2009	-	100	60	80	80	

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SAMPLE DESCRIPTION	Water sam	ple	
Tost Boguirod	pH: IS 302	5 -Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA	2017),COD: APHA (23rd Edition) 5220 C :2017,O &G:
rest Required	IS 3025-Par	t 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA	A 2019)
SAMPLING METHOD	LSOP 5	PERIOD OF PERFORMANCE OF LAB ACTIVITIES :	16-06-23 TO 15-07-23

MINE WATER	BSOW1						
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			
13-06-23	8.61	18	28	BDL			
27-06-23	8.24	16	24	BDL			
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10			

ETP DISC	BSOW2					
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		
13-06-23	8.89	22	32	BDL		
27-06-23	8.54	26	36	BDL		
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10		

STP(DOMESTIC EFFLUENT)TREATED: BSOW3						
DATE OF SAMPLE	ANALYSIS	RESULTS				
COLLECTION	TSS (in mg/l)	BOD(in mg/l)				
DETECTION LIMIT	10	2				
13-06-23	24	12.4				
27-06-23	28	12.8				
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30				

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Test Report



NOISE LEVEL MONITORING DATA

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

	CHP:	BSON1	
		NOISE LE	EVEL IN dB(A)
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'23	10-06-23	64.5	63.6
JUNE'23	64.8	63.7	
NOISE POLLUTION	75	70	

	BSON2		
		NOISE LEVEL IN dB(A)	
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'23	10-06-23	42.5	41.7
JUNE'23	42.6	41.8	
NOISE POLLUTION (R	55	45	

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ENVIRONMENTAL MONITORING REPORT

SASTI 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

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RI-IV, NAGPUR	Environment Laboratory CMPDI RI-IV, NAGPUR	rest Report	And the second s
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TEST REPORT NO. RIN/TR/JULY-23/48 DATE OF ISSUE 31-08-2023				31-08-2023		
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)				
SAMPLE DESCRIPTION		AIR SAMPLE		SAMPLING PLAN :		LQR 47
SAMPLING METHOD : LSOP 4 PERIOD OF PERFORMANCE OF LA			LAB ACTIVIT	TES:		16-07-23 TO 14-08-23

SAM OFFICE-SASTI OC BSOA1							
			PARAMETERS (2	24 hourly va	alues in µg/m³)		
DATE(dd:mm:yy) OF SAMPLING	SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	ТО	5	5	2	6	10	(589/ 10114)
13-07-2023	14-07-2023	245	156	48	14	BDL	Cloudy Sky / Light Breeze
27-07-2023	28-07-2023	265	142	42	15	BDL	Cloudy Sky / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

AREA STORE BSOA2							
	、		PARAMETERS (24 hourly va	alues in µg/m³)		
		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	ТО	5	5	2	6	10	
13-07-2023	14-07-2023	205	122	40	13	BDL	Cloudy Sky / Light Breeze
27-07-2023	28-07-2023	234	136	30	14	BDL	Cloudy Sky / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

GOURI COLONY FILTER PLANT BSOA3							
		PARAMETERS	(24 hourly va	alues in µg/m³)			
DATE(dd:mm:yy) OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS	
FROM	ТО	5	2	6	10		
04-07-2023	05-07-2023	50	29	10	BDL	Cloudy Sky / Light Breeze	
05-07-2023	06-07-2023	53	32	11	BDL	Cloudy Sky / Light Breeze	
11-07-2023	12-07-2023	60	34	12	BDL	Cloudy Sky / Light Breeze	
12-07-2023	13-07-2023	48	20	8	BDL	Cloudy Sky / Light Breeze	
18-07-2023	19-07-2023	50	24	10	BDL	Rainy Sky / Light breeze	
19-07-2023	20-07-2023	48	28	12	BDL	Rainy Sky / Light breeze	
25-07-2023	26-07-2023	45	20	8	BDL	Rainy Sky / Light breeze	
26-07-2023	27-07-2023	53	23	8	BDL	Rainy Sky / Light breeze	
NAAQ	S, 2009	100	60	80	80		

SASTI VILLAGE BSUA4							
		PARAMETERS	(24 hourly va	alues in µg/m ³)			
DATE(dd:mm:yy	() OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS	
FROM	ТО	5	2	6	10	(3Ky/ Willu)	
04-07-2023	05-07-2023	54	29	12	BDL	Cloudy Sky / Light Breeze	
05-07-2023	06-07-2023	59	33	13	BDL	Cloudy Sky / Light Breeze	
11-07-2023	12-07-2023	62	36	14	BDL	Cloudy Sky / Light Breeze	
12-07-2023	13-07-2023	54	30	10	BDL	Cloudy Sky / Light Breeze	
18-07-2023	19-07-2023	54	27	8	BDL	Rainy Sky / Light breeze	
19-07-2023	20-07-2023	45	25	7	BDL	Rainy Sky / Light breeze	
25-07-2023	26-07-2023	40	22	7	BDL	Rainy Sky / Light breeze	
26-07-2023	27-07-2023	56	30	9	BDL	Rainy Sky / Light breeze	
NAAQ	S, 2009	100	60	80	80		

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FUGITIVE DUST MONITORING

TEST REQUIRED	SPM: IS 51	82 Part-4:19	99(RA 2019	9), PM-10: IS-5182 Part 23:2006(RA 2017) & PM2.5: USEPA Quality Assurance guidance
SAMPLE DESCRIPTION		Air sample(Fugitive)	
SAMPLING METHOD :	LSOP 4			PERIOD OF PERFORMANCE OF LAB ACTIVITIES: 16-05-23 TO 15-06-23

	WEIGH BRIDGE BSOF1						
		PARAMETERS (2	24 hourly values in μg/m³)				
DATE(dd:mm:y	y) OF SAMPLING	SPM PM ₁₀		ENVIRONMENT CONDITIONS (Sky/Wind)			
FROM	то	5	5				
25-Jul-23	26-Jul-23	520	356	Cloudy Sky / Light Breeze			
		MAIN CHP	BSOF2				
		PARAMETERS (2					
DATE(dd:mm:y	y) OF SAMPLING	SPM	PM ₁₀	ENVIRONIVIENT CONDITIONS (Sky/Wind)			
FROM	то	5	5				
25-Jul-23	26-Jul-23	487	386	Cloudy Sky / Light Breeze			

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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 : 16-07-23 TO 14-08-23				

MINE WATER	BSOW1			
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
09-07-2023	7.56	24	36	BDL
18-07-2023	7.64	18	28	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP DISC	BSOW2			
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
09-07-2023	7.65	22	32	BDL
18-07-2023	7.45	18	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT)TREATED: BSOW3						
DATE OF SAMPLE	ANALYSIS RESULTS					
COLLECTION	TSS (in mg/l)	BOD(in mg/l)				
DETECTION LIMIT	10	2				
09-07-2023	28	9.2				
18-07-2023	32	10.4				
GENERAL STANDARDS FOR						
DISCHARGE OF						
ENVIRONMENT	100	30				
POLLUTANTS GSR 801E						
EPA 1993						

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

NOISE LEVEL MONITORING DATA

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

	CHP:	BSON1		
		NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMIFLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
JULY'23	14-07-2023	61.7	60.8	
JULY'23	28-07-2023	57.8	56.9	
NOISE POLLUTION (REGULATION AND CONTROL) RULES,2000		75	70	

	GOURI COLONY:	BSON2			
		NOISE LE	NOISE LEVEL IN dB(A)		
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME		
	DETECTION LIMIT	20	20		
JULY'23	14-07-2023	42.6	41.9		
JULY'23	28-07-2023	43.7	42.8		
NOISE POLLUTION (R	REGULATION AND CONTROL) ULES,2000	55	45		



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ENVIRONMENTAL MONITORING REPORT

SASTI OC

BALLARPUR AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068



AUGUST 2023

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	TC.7142

TEST REPORT NO.		RIN/TR/AUG-23/48 DATE OF ISSUE 30-09-2023				30-09-2023
NAME OF CUSTOMER		GM(ENV.), WCL(HQ), NAGPUR				
TEST REQUIRED	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 documer volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)					y Assurance guidance document)
SAMPLE DESCRIPTION AIR SAMPLE SAMPLING PLAN : LQR 47			LQR 47			
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES: 15-08-23 TO 15-09-23			15-08-23 TO 15-09-23	

		SA	M OFFICE-SASTI OC	BSOA1			
		PARAMETERS (24 hourly values in μg/m ³)					
DATE(dd:mm:y)	() OF SAMPLING	SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	TO	5	5	2	6	10	
10-08-2023	11-08-2023	267	158	42	16	BDL	Clear Sky / Light Breeze
24-08-2023	25-08-2023	276	169	41	16	BDL	Clear Sky / Light Breeze
STANDARDS FOR COA	L MINE, GSR 742(E), dt.	600	200		430	420	
25 [™] Septe	mber 2000	600	300	-	120	120	

AREA STORE BSOA2							
		PARAMETERS (24 hourly values in $\mu g/m^3$)					
		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	ТО	5	5	2	6	10	
10-08-2023	11-08-2023	210	136	37	12	BDL	Clear Sky / Light Breeze
24-08-2023	25-08-2023	235	123	34	12	BDL	Clear Sky / Light Breeze
STANDARDS FOR COAL 25 TH Septe	L MINE, GSR 742(E), dt. ember 2000	600	300	-	120	120	

GOURI COLONY FILTER PLANT BSOA3						
		PARAMETERS (
DATE(dd:mm:y)	() OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS
FROM	TO	5	2	6	10	(SKy/WIIId)
01-08-2023	02-08-2023	59	24	8	BDL	Cloudy Sky /Light Breeze
02-08-2023	03-08-2023	48	33	12	BDL	Rainy Sky /Light Breeze
08-08-2023	09-08-2023	50	29	11	BDL	Clear Sky /Light Breeze
09-08-2023	10-08-2023	36	27	12	BDL	Clear Sky /Light Breeze
16-08-2023	17-08-2023	45	18	7	BDL	Clear Sky /Light Breeze
17-08-2023	18-08-2023	52	23	10	BDL	Cloudy Sky /Light Breeze
22-08-2023	23-08-2023	62	30	11	BDL	Cloudy Sky /Light Breeze
23-08-2023	24-08-2023	50	26	12	BDL	Cloudy Sky /Light Breeze
29-08-2023	30-08-2023	59	27	13	BDL	Clear Sky /Light Breeze
30-08-2023	31-08-2023	46	18	10	BDL	Clear Sky /Light Breeze
NAAQ	S, 2009	100	60	80	80	

	SASTI VILLAGE BSUA4						
		PARAMETERS	(24 hourly va	alues in µg/m³)			
DATE(dd:mm:y	() OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS	
FROM	TO	5	2	6	10	(SKy/WIIId)	
01-08-2023	02-08-2023	42	27	12	BDL	Cloudy Sky /Light Breeze	
02-08-2023	03-08-2023	38	20	10	BDL	Rainy Sky /Light Breeze	
08-08-2023	09-08-2023	50	26	9	BDL	Clear Sky /Light Breeze	
09-08-2023	10-08-2023	56	30	11	BDL	Clear Sky /Light Breeze	
16-08-2023	17-08-2023	54	26	11	BDL	Clear Sky /Light Breeze	
17-08-2023	18-08-2023	42	19	12	BDL	Cloudy Sky /Light Breeze	
22-08-2023	23-08-2023	58	32	11	BDL	Cloudy Sky /Light Breeze	
23-08-2023	24-08-2023	61	24	14	BDL	Cloudy Sky /Light Breeze	
29-08-2023	30-08-2023	69	36	13	BDL	Clear Sky /Light Breeze	
30-08-2023	31-08-2023	64	30	12	BDL	Clear Sky /Light Breeze	
NAAQ	S, 2009	100	60	80	80		

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Environment Labora RI-IV, NAGF	atory CMPDI PUR	Test Report				TC-7102			
SAMPLE DESCRIPTION	Water sample								
Test Required	pH: IS 3025 -Part 11:198 IS 3025-Part 39:1991(RA	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 P	ERFORMANCE OF	LAB ACTIVITI	ES: 15-	08-23 TO 15-09	-23			
	•								
	MINE WATER DI	SCHARGE:	BSOW1						
	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				
	10-08-2023	7.54	28	44	BDL				
	24-08-2023	7.6	18	36	BDL				
	STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10				
	ETP DISCHA	ARGE:	BSOW2]			
	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				
	10-08-2023	7.98	24	36	BDL				
	24-08-2023	7.65	20	32	BDL				
	STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10				
	STP(DOMESTIC EFFLU	JENT)TREATED:	BSOW3			· 			
	DATE OF SAMPLE	SAMPLE ANALYSIS RESULTS							
	COLLECTION	TSS (in mg	g/l)	BOD(ii	n mg/l)				
	DETECTION LIMIT	10 26 34 100		2	2				
	10-08-2023			1	.2				
	24-08-2023			10).2				
	GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E FPA 1993			30					

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RI-IV, NAGPUR

Test Report



NOISE LEVEL MONITORING DATA

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

	CHP:	BSON1		
MONTH		NOISE LEVEL IN dB(A)		
	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
AUG'23	05-08-2023	58.9	57.8	
AUG'23	21-08-2023	57.8	56.7	
NOISE POLLUTION (75	70		

	GOURI COLONY:	BSON2		
MONTH		NOISE LEVEL IN dB(A)		
	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME	
	DETECTION LIMIT	20	20	
AUG'23	05-08-2023	42.8	41.7	
AUG'23	AUG'23 21-08-2023			
NOISE POLLUTION (55	45		

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ENVIRONMENTAL MONITORING REPORT

SASTI 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

AN ISO 9001:2015 COMPANY

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

TEST REPORT NO.		RIN/TR/SEPT-23/48 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			LQR 47			
SAMPLING METHOD :	LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES: 15-09-23 TO 15-10-23				15-09-23 TO 15-10-23

SAM OFFICE-SASTI OC BSOA1							
		PARAMETERS (24 hourly values in μg/m ³)					
DATE(dd:mm:yy) OF SAMPLING		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	TO	5	5	2	6	10	(Sky/Wild)
07-09-23	08-09-23	265	132	45	18	10	Rainy Sky /Calm
21-09-23	22-09-23	278	145	52	18	10	Rainy sky /light breeze
STANDARDS FOR COA	L MINE, GSR 742(E), dt.	C00	200		120	120	
25 TH September 2000		600	300	-	120	120	

AREA STORE BSOA2							
	、 、	PARAMETERS (24 hourly values in µg/m ³)					
		SPM	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)
FROM	то	5	5	2	6	10	
07-09-23	08-09-23	240	142	39	16	BDL	Rainy Sky /Calm
21-09-23	22-09-23	240	139	46	16	BDL	Rainy sky /light breeze
STANDARDS FOR COAL 25 TH Septe	L MINE, GSR 742(E), dt. ember 2000	600	300	-	120	120	

	GOURI COLONY FILTER PLANT BSOA3						
		PARAMETER	RS (24 hourly va	alues in µg/m ³)			
DATE(dd:mm:y	y) OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	ENVIRONMENT CONDITIONS	
FROM	TO	5	2	6	10	(SKy/ Willa)	
05-09-23	06-09-23	78	31	13	BDL	Rainy sky / Light Breeze	
06-09-23	07-09-23	64	32	12	BDL	Rainy sky / Light Breeze	
12-09-23	13-09-23	70	36	14	BDL	Rainy sky / Light Breeze	
13-09-23	14-09-23	74	34	12	BDL	Rainy sky / Light Breeze	
19-09-23	20-09-23	84	28	13	BDL	Cloudy Sky /Calm	
20-09-23	21-09-23	60	30	12	BDL	Rainy sky /	
26-09-23	27-09-23	79	29	14	BDL	Clear Sky / Calm	
27-09-23	28-09-23	74	36	12	BDL	Clear Sky / Calm	
NAAO	S, 2009	100	60	80	80		

	SASTI VILLAGE BSUA4						
DATE/ddummuu		PARAMETERS					
DATE(du.mm.y	() OF SAMPLING	PM ₁₀	PM _{2.5}	No ₂	So ₂	(Sky/Wind)	
FROM	TO	5	2	6	10	(Sky) Willa)	
05-09-23	06-09-23	80	35	11	BDL	Rainy sky / Light Breeze	
06-09-23	07-09-23	75	34	10	BDL	Rainy sky / Light Breeze	
12-09-23	13-09-23	72	32	12	BDL	Rainy sky / Light Breeze	
13-09-23	14-09-23	69	28	13	BDL	Rainy sky / Light Breeze	
19-09-23	20-09-23	87	30	11	BDL	Cloudy Sky /Calm	
20-09-23	21-09-23	80	39	10	BDL	Rainy sky /	
26-09-23	27-09-23	79	30	12	BDL	Clear Sky / Calm	
27-09-23	28-09-23	86	33	13	BDL	Clear Sky / Calm	
NAAQ	S, 2009	100	60	80	80		

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Environment Labora RI-IV, NAGF	atory CMPDI PUR	Test R	Report				
SAMPLE DESCRIPTION	Water sample						
Test Required	pH: IS 3025 -Part 11:19 IS 3025-Part 39:1991(R	-Part 11:1983(RA 2017),TSS: IS 3025-Part 17:1984(RA 2017),COD: APHA (23rd Edition) 5220 C :2017,O &G 39:1991(RA 2019) & BOD: IS 3025 (Part 44): 1993 (RA 2019)					
SAMPLING METHOD	LSOP 5 PERIOD OF	PERFORMANCE OF	LAB ACTIVITI	ES: 15-	09-23 TO 15-10	-23	
	MINE WATER	DISCHARGE:	BSOW1				
	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		
	07-09-23	7.85	20	20	BDL		
	21-09-23	7.38	28	32	BDL		
	STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10		
	ETP DISCH	IARGE:	ARGE: BSOW2				
	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		
	07-09-23	7.55	30	48	BDL		
	21-09-23	7.35	40	40	BDL		
	STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000		100	250	10		
	LUENT)TREATED:	BSOW3					
	DATE OF SAMPLE		ANALYSIS	RESULTS			
	COLLECTION	TSS (in mg	:/l)	BOD(ii	n mg/l)		
	DETECTION LIMIT	10		2	2		
	07-09-23	50		1	2		
	21-09-23	42		13	3.8		
	GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPD 1993	100		3	0		

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Environment Laboratory CMPDI RI-IV, NAGPUR

Test Report



NOISE LEVEL MONITORING DATA

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

	CHP:	BSON1	
		NOISE LE	EVEL IN dB(A)
MONTH	DATE OF SAMIFLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	05-09-23	56.7	55.8
SEPT'23	21-09-23	58.8	57.9
NOISE POLLUTION (I	75	70	

	GOURI COLONY:	BSON2	
		NOISE LEVEL IN dB(A	
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	05-09-23	42.6	41.7
SEPT'23	21-09-23	42.7	41.8
NOISE POLLUTION (55	45	

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DRINKING WATER MONITORING REPORT

BALLARPUR AREA

WESTERN COALFIELDS LTD.

JOB NO.4094423068



QE-SEPTEMBER 2023

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Environment Laboratory CMPDI RI-IV, NAGPUR

**

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					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 ₃) - 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 [°])- 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 [°])- 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 ₄ ⁻²) -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

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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-		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 ₃) - 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 [°])- 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 ⁻)- 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 ₄ ⁻²) -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(H	IQ), 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	CE		SAMPLING 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 ₃) - 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 [°])- 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 [°])- 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 ⁻²) -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			SA	MPLING 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 ₃) - 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 ⁻)- 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 ⁻)- 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 ₄ ⁻²) -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(HQ), 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	F LOCATION: FILTER PLANT			SAMPLING 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 ₃) - 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 ⁻)- 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 ⁻)- 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 ⁻²) -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(HQ), NAGPUR			SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	BALLARPUR			SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	SASTI OC			SAMPLING PLAN: LQR 47	
NO. OF PAGES	2				-

NAME OF LOCATION: FILTER PLANT				SAM		08-05-23
SL. NO.	PARAMETER	TEST METHOD		ANALYSIS RESULT	IS 10500:2012	
					REQUIREMENT (ACCEPTABLE	PERMISSIBLE LIMIT
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 ₃) - 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 ⁻)- 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 ⁻)- 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_4^{-2}) -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 Drinking water quality monitoring data

TEST REPORT NO.	RIN/TR/JUNE-23/	DW18	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	NEW DHOPTALA	OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	2			-

NAME C	OF LOCATION: MANAGER OFFI	CE		SAI	SAMPLING DATE:	
SL. NO.	PARAMETER	TEST METHOD DETECTION	ANALYSIS RESULT	IS 10500:2012		
					REQUIREMENT	PERMISSIBLE LIMIT
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 ₃) - 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 ⁻)- 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 ⁻)- 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 ⁻²) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	197	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3- B UV Spectrophotometric method:2017	0.5	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	45
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	0.05	No relaxation
		Flame Method:2014	0.00		0.00	
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	Nieker mg/1	AAS FLAME Method:2017	0.000	0.006 0.02	NO TEIAXALION	
26	Aluminum (Al)-mg/l	APHA (23rd Edition) 3113B	0.005	PDI	0.1	0.2
20	Aluminum (Al)-mg/1	AAS-GTA Method:2017	0.005	BDL	0.1	

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Test Report



Drinking water quality monitoring data

TEST REPORT NO.	RIN/TR/JUNE-23/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 C	F LOCATION: FILTER PLANT			SAMPLING DATE: 12-		12-05-23
	•				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	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 ₃) - 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 ⁻)- 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 [°])- 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 ₄ ⁻²) -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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ANDIALS N ישווייזום שווצעו דידוא ידחולות שווביווויי אוזאן אחווייניאווווג מ נבטיווזה נסכוביווונס יורחטי (). जार, & wil, (वहु उदरागेव पूचर्रातने अन्ययाच्या बायविर्ण्यांत करां आणि पर्यावरण, मंत्राराया द्वारे पर्यावरण रधीकृती विशेश्वे आहे. वालेस.0.55 गिरियन टन प्रतियर्थ पायुन 1.40 गिरियन हन प्रतिवर्ष पर्यत मारल कोलफिएउरा हिमिटिड अंगर्भम चंद्रपुर से जनदील के रगका विरताधिय सुख्या वीरवामा, मा. गंदापती, जि. पेद्रपुर (महत्यान्द्र) साठी पर्यावनना स्थीवृत्ती. वया पीविंग् मन काणि प्रयावरण मंत्रालयाच्या चाली विशेष्या वेषराम् वरकी प्राराणह קתוקעשו עלוקיהו בתו שאועו ארו הוכוזויב אלשחו ושוואטו אשי שורווווים מחנוחו मादविष्यांस यन आवि। प्रयोवरण गंत्रालया द्वारे पर्यावरण रवीवृत्ती विरोन्धे आहे. 「たちう」でいたことでいってもう विषया घरटने कोलवित्स्टरा दिनिदेख घी बोरतत्या विस्ताधित सुन्धी खाग, गु.घी. river, hild://envior.nic.ia वाहे आहि। यन आहि। पर्याप्त का मायायायाया याती ति तेन्या वेवरात्रिय पर्या प्रदा यहा कोंचेंसा प्रहतदनारतधी व सीचा क्षेत्र 714.09 हेफ्टर पासुन 919.69 हेफ्टर पर्यस सध्या रोहयो G विषा प्रयापनागती, व तीज क्षेत्र 207,31 हेक्टर गानुन 229.56 हेक्टर, पर्यंत ति आहेता. इत्यान भाषीतर राहत्ने वसांगान प्रदूषणाचे केंद्र गनत ्यानीले वात्र. यः पहले सुष्या बर्ग स्वीकृती ध्या पत्रापी भरा महाराष्ट्र पडुभण नियंत्रण मंडळ वांध्याकड प्रवलम्ब ויין אי איס ואואעיז ביו אוועע עוזיד 2.50. הוגוזיד ביז אוועי איום त्तलात्व मागृह्य शतकन्वानी पुक्तित. पूर्वणीकरीता राणसांचे विमारे जम्म जिली आग पामणे प्लास्टिक שווישוניסאראונסערפראר נושעושים איזערג אועריי אושרייט בינולוש בי करून हेयले होते. मात्र या परिसरात विश्वी मोउमा प्रमाणातर टाकरन्वा िर्भाराष्ट्रीय अपगर पुनयास)लीबरणांचे सांग, सुरू आर्गन मुच्छीनारन्यात गेल्या चद्रगर (का.प्र.)-मा. राज्य, जि. चंद्रपुर (गहाराष्ट्र) राम्जी प्रणांतम्म रविकृती. भिषित्रस्थं हिमिटेट अंगर्गय बस्लारपुर के अंगमील सारती विस्तारीय मुल्म मच्छीनाला प्रदूषगाच्या चिळख्यात ware wildule मिर्म कोदगातनी १५ वृत २० कोनगिद्धरा हिगिदेङ भी शारती विरतारीत युवी खाग गु.म अंतर्गत तलाग्याच्या -A DESIDE A SAULA CURREND. कार ANDS 12 - 2 · ane. (11) lar א נישלחה (שנים לחקובולים אין वेण्याची भागणी जोर गरू लागली Addin (Malulia मंझ्यांनी जिल्ह्याला भेट दिली? भेठा सामला आहे. मुकतेन फाविस नागगित्तरां हथा आसोग्याहर गरिणाव टाकण्यात मेतात...यामुळे.परिसवसीत धैक्याची मागणी करण्यता येत आहे शासन्ताने ताल्काळ नुचन्तान भएतई प्राला असून राजधीत शेककणांना जिल्यान मीठा प्रश्न श्रीतसन्यांग्रमोर निम्न रयातन असी ही सारिच रोरण आगी न मास्याने सेरणप्रा काणपति निर्मान cinal anta. real the ward and ונוווומושוש אונטווווט गांशु का गांगळी पर मनग म Thread I जनायराच्या चान्याचा SI गायःहे तथ THE OTHER DESIGNATION OF THE OTHER DESIGNATION जुन द्या कमाल काण्यांत आता. म रिक्षिकां मध्यत्वयस्य भवा भारते म अहिंग अधून मागील चर्नागांधून क

0110. गुरूप विद्यांग्रा जित्य, चंद्रपूर्ण चहत र्यगटनात्मक विवेदगढो मुक्तव चर्रार गारायर बहिण्कार पालनार संग्रामातील अतुलनीय यो त्यंची गेट पेतून केली. सावरतर फ्राइना शिष्ट मं गार्वपुराचा कारण्यति विनंत नदालग्रस्त भाग लागू काण र्शिश्च पोणाच निदेव गा स्तरावर या मामणी पूर्व गागणीचे निचेदन देनुम केंद्र जिसिया हासन अहीर यान याच्यासह संद्रपूर्व तो मेतृतनात जिल्हापिकारी अीचित्रा सामून बीर सारक अध्यक्ष गिरीस अंधाई स्या. सागान्तीयं जन्म पीर सावस्तर प्रेन्ट्र तर्भेः देकार्तः भारातन्वेष्याच्या गणणीर , स्वा. सायाकरांचे चंद्रगुर (का.प्र.) वितिष्यचीर सावरकर थेन्। किरितित गुन्द्रद्रगणी ;व काळात क्रांतीच्या मार मिएलिकिन मिन्धावारार ये ारणाला स्वतंत्र करण्य तीकारयतंत्री शल्माम ्रि पंचायत रागिती अ : Fal Q

dent while acquired live pertaus in the need gunt while acquired live pertaus in the destaute police, convicted them under the case of the state police, convicted them under the case of the state police, convicted them under the case of the state police, und 193 of 11°C and scorened and score and 184 1,000 the The neerved of the state chinan Sinda, Vatiba Diseta, en lifer, are Chinan Sinda, Vatiba Diseta, en lifer, are Chinan Sinda, Vatiba Diseta, en lifer, are Chinan Sinda, Vatiba Singh Rahor, Rakedi Kunur Shanna, Actua, a Singh Rahor, Rakedi Kunur Shanna, Actua a Singh Rahor, Actua a Singh Rahor, Rakedi Kunur Shanna, Actua a Singh Rahor, Rak d under sections 302 and 120 ft of Indian Penal its was handed over a life sentence under Section

sh Jaggi may move SC

ment and said that Amit Jogi was given the other. The concellation of Amit's bail by the art cultanced the Jappi family's table in the he court pronounced the verdict. Satish Jappi, leader Ramaviar Jappi, said that he respectle it clear that they would tight the case up aber. He further said that the court proved ne Court and the later course of action in this I he decided after the fourth death antivere case in the case was lake.

he then Mandahperra SHO V K Pandey under 18 and 120-th. Upon non payment of the fine, enen, who have been sentenced to five years 0 fine, are the then DSF Ann'tk Singh Gill, R another three months in pul-

: verdict, Amit and Chiman Shiph were tak-Central Jah, The court also directed the police ue year by the theft StHAY E. Backy and It Jaggi respectively anshmuded over the case. Special linveshiputing antistanted do investigation and later (Isterity fundation of definition and later (Isterity) ans who were acquitted in the police case but e years imprisonment and its 10000 fine in the Lare Lallan Singh alias Avinash Shiph, Januwan a Sunder, Vinwi Singh and Vishwaitath Rajbhar 02 and 193. Besides, Surgakant Tiwari was to live years imprisonment and Es 1,000 fine 23 and 120 (B). In case of non payment of the icts will have to stay in jail for another three The accosed. Smesh Singh and Duffi Pathak. The Central Dureau of Investigation (CJU). dover the investigation in January 2001, after ges against Amit and 30 others'in April 2001 02, 120-H, 427, 193, 248 and 34 of the Indian In security manyeurous were made in the a Thursday and the people rotering the contoughly. Jappi was numbered on June 4, 2003. mear the Mandalapara Policy Station for e and s were registered with the Mandalipera Police Think ala Party came to power in December 2000. . Kaul took over th h Jaggi respectively. P r Police (CH 2011.

Training Seed, Supananda and Nitona and anyoked by Chief Secretories and anyoked by Chief ITTHE MULL'S.

terme for LAS officers to save house officers from mass trans-fer of officials that offer cone with change of guard in states Director General of Police and The meeting was called here by the Dail'P to discuss the fixed and containing committees for approximation of Chiel Secretary,

with a two year former for in IAS officer for colject to rear

not average to a two year tensity of an IAS officer subjection sum the state peak "We have places on opinion to the Tarparing of Personal COMMENT IS here to transfer and I mining that the Conditions 10

officer, bolding nov post, room lefore completion of the tenur as per the decision of the Chief Atomics



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Sub 1: Singhoil Open Cast Coal Mine Frojnst of Wastern Castlevils Lindleri boated near Vilage Sueyout, Tah 1: Propriet IVst 1: Hongru (Maturadura), Environmatal dearancehasterna recenter in the Suegori Open Cast Coal Nave of Western Coalite/15 Lindred, Europa Ana 4: 0: 00 million tories per annum (MEA) of coal production and a row of the cleanance letter is sociable with the Maturadus (Procent Cradial Nami and may also be soon at webside of the Maturadus (Procent Cradial Nami and may also be soon at webside of the Maturadus (Pro-mark may also be soon at webside of the Maturadus (Proathin Therefore inc.in LIOFT

(Maluardala), Jinväorunental deanave las lever meschet la tuo Espansion of Sasis Open Cast Coal June of Weben Fusibility travel Balloning Auen for 1.60 million tones per auruura (attriv) to 2.50 MITA of coal production and Lease area ison /14.09 hab 0.919 folte, a cvPr of the chan area folder is avaitable with the Matuaradata (Catolan, a cvPr of the produced production and Lease of the Matuaradata (Catolan, a cvPr of the chan area folder is avaitable with the Matuaradata (Catolan, a cvPr of the produced production and Lease of the Linkvirg of (Incommuned and Fuend (MOLF) attribute some and website of the Linkvirg of (Incommuned and Fuend (MOLF) attribute some solution. Goot Participation open Cast Cost More Project (production from the Stible Sinsil Expansion Open Cast Cost More Project (production E.O. M.H.Y. to 2:50 M.H.Y. and esservior / M. Citacker from the Costlered surface to an Village Sask fails (how a region of the Costlered standard near Village Sask fails (how a region of the More

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Maharashtra Pollution Control Board



महाराष्ट्र प्रदूषण नियंत्रण मंडळ

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

Unique Application Number MPCB-ENVIRONMENT_STATEMENT-0000060657

PART A

Company Information

Company Name	Application UAN number	
Western Coal Fields Ltd Sasti Opencast Mine	152899	
Address		
Sasti Opencast Mine, WCL, Ballarpur Area, Taluka: Rajura, Dist: Chandrapur - 442706		
Plot no	Taluka	Village
-	Rajura	-
Capital Investment (In lakhs)	Scale	City
28126.79	LSI	Chandrapur
Pincode	Person Name	Designation
442706	Ravi Mohan Krishna	Sub Area Manager
Telephone Number	Fax Number	Email
8275968348	07173230076	envsocm@gmail.com
Region	Industry Category	Industry Type
SRO-Chandrapur	Red	R35 Mining and ore beneficiation
Last Environmental statement submitted online	Consent Number	Consent Issue Date
yes	Format1.0/CAC/UAN No.MPCBCONSENT-0000152899/CO/2302001891	2023-02-27
Consent Valid Upto	Establishment Year	Date of last environment statement submitted
2023-12-31	1985	Sep 25 2022 12:00:00:000AM
Industry Category Primary (STC Code) & Secondary (STC Code)		

Submitted Date

28-09-2023

Product Information			
Product Name	Consent Quantity	Actual Quantity	UOM
COAL	2.5	2.45	MT/A
By-product Information			
By Product Name	Consent Quantity	Actual Quantity	UOM
-	0	0	MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consum Water Consumpt	nption in m3/day ion for		Consent Quanti	ty in m3/day	Actual	Quantity in	m3/day
Process Cooling Domestic			566				
			0		0		
			40		40		
All others			210		0		
Total			816		606		
2) Effluent Gener	ration in CMD / MLD						
Particulars			Conse	ent Quantity	Actual (Quantity	UOM
			0004		0450		СМД
DOMESTIC EFFLUE	NT		20		20		СМД
2) Product Wise	Process Water Cons	umption (cubic meter of				
Name of Product	s (Production)		D fi	uring the Previous nancial Year	: Duri Fina	ng the curre ncial year	ent UOM
COAL			0.	141	0.084	4	CMD
3) Raw Material (Consumption (Consu	Imption of	f raw material				
per unit of produ	i <mark>ct)</mark> torials		Dur	ing the Brovieus	Durin	a the currer	-+ UOM
Name of Raw Ma	Leriais		fina	ncial Year	Finan	cial year	10 0014
EXPLOSIVE			1.60	6	1.495		
4) Fuel Consump	tion						
Fuel Name			Consent quantity	Actua	l Quantity		UOM
Diesel			0	4173			KL/A
Part-C							
Pollution dischar	ged to environment	/unit of ou	ıtput (Parameter as s	specified in the co	nsent issue	ed)	
Pollutants Detail	Quantity of Pollutants discharged (kl Quantity	Co dis ./day) PH .Co	ncentration of Pollut charged(Mg/Lit) Exc ,Temp,Colour ncentration	ants Percer ept from p standa %varia	itage of vai rescribed ords with re ition	riation easons Sta	ndard Reason
WATER REPORT ATTACHED IN PART	0	0		-		-	-
[B] Air (Stack)							
Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concent dischar	tration of Pollutants ged(Mg/NM3)	Percentage o variation from prescribed st with reasons	f n andards		
	Quantity	Concent	tration	%variation		Standard	Reason
-	0	0		-		-	NO STACK EMMISSION

HAZARDOUS WASTES					
1) From Process Hazardous Waste Type	Total Durin	a Previous Financial vear	Total I	During Current Financial year	иом
5.1 Used or spent oil	40	g i letteus i manetal yeur	10	burning current i munchur yeur	KL/A
5.2 Wastes or residues containing	oil 1		1		Ton/Y
2) From Pollution Control Faci	lities				
Hazardous Waste Type		Total During Previous Fin year	ancial	Total During Current Financial year	UOM
35.3 Chemical sludge from waste	water treatment	8		4	Ton/Y
Part-E					
SOLID WASTES					
1) From Process					
Non Hazardous Waste Type T	otal During Pre	vious Financial year	Total Durir	ng Current Financial year	UOM
OVERBURDEN 4	719000		8473000		M3/Anum
2) From Pollution Control Faci	lities				
Non Hazardous Waste Type	Total Dur	ring Previous Financial yea	ar Total	During Current Financial year	иом
-	0		0		Ton/Y
3) Quantity Recycled or Re-uti	lized within the				
Unit Wasto Tyre		Total During Draviau	Einoneiol	Total During Current Financi	
waste Type		year	Financiai	year	31 0014
0		0		0	Kg
0		0		0	Kg
Part-F					

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

1) Hazardous Waste Type of Hazardous Waste Generated 5.2 Wastes or residues containing oil	Qty of Hazardous Waste 0	ИОМ Ton/Y	Concentration of Hazardous Waste
35.3 Chemical sludge from waste water treatment	0	Ton/Y	
5.1 Used or spent oil	0	KL/A	-
2) Solid Waste Type of Solid Waste Generated	Qty of Solid Waste 0	UOM Ton/Y	Concentration of Solid Waste

Part-G

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
-------------	--	---	---	---	-----------------------------------	---

IN COMPARISION	0	0.989	1312000	627000	0	0
TO PREVIOUS FINANCIAL YEAR						

Part-H

Additional measures/investment proposal for environmental pro [A] Investment made during the period of Environmental Statement	tection abatement of pollution,	prevention of pollution.
Detail of measures for Environmental Protection	Environmental Protection Measures -	Capital Investment (Lacks) 0
[B] Investment Proposed for next Year		
Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Installation of CAAQMS along with room with proper electric fittings,air conditioners, furnitures, etc.	Air quality monitoring	87
Construction of Piezometer and procurement of DWLR with and without telemetry	Ground water monitoring	16

Part-I

Any other particulars for improving the quality of the environment.

Particulars

-

Name & Designation Ravi Mohan Krishna, Sub Area Manager

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000060657

Submitted On:

28-09-2023