वेस्टर्न कोलफील्ड्स लिमिटेड
Western Coalfields Limited
(मिनिरत्न कंपनी) (A Miniratna Company)
(कोल इंडिया लि० की अनुषंगी कंपनी)
(A Subsidiary of Coal India Limited)
क्षेत्रीय महाप्रबंधक कार्यालय, माजरी क्षेत्र
Office of the Area General Manager, Majri Area
Po: Kuchna; Th: Bhadrawati: Dist: Chandrapur – 442503
पर्यावरण विभाग
Environment Department

संदर्भ संख्या/ *Ref. No.* वेकोलि/माक्षे/क्षेमप्र/पर्यावरण/*2023/265* दिनांक/ *Date* : *25.11.2023*

प्रति,
Addl. Principal Chief Conservator of Forests,
पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय,
क्षेत्रीय कार्यालय (WCZ),
ग्राउंड फ्लोर, ईस्ट विंग, न्यू सेक्रेटरियट बिल्डिंग,
सिविल लाइंस, नागपुर-440001, (महाराष्ट्र)

विषय: Six Monthly Report against compliance of conditions of Environmental Clearance for New Majri –II(A) Opencast Coal Mine of Majri Area, WCL (As on 30th September 2023)

संदर्भ: Environment Clearance letter no. J-11015/306/2008.IA.II(M) dt.19.05.2009

महोदय,

Please .find enclosed herewith Six Monthly Report against compliance of conditions of Environmental Clearance for New Majri –II(A) Opencast Coal Mine of Majri Area, WCL (As on 30th September 2023).

This is for your kind information and necessary action please.

धन्यवाद

भवदीय

25/11/2023

क्षेत्रीय केन्द्रस्थ अधिकारी (पर्यावरण), माजरी क्षेत्र

संलग्नक : यथोपरी
प्रतिलिपि :

- प्रादेशिक अधिकारी, महाराष्ट्र प्रदूषण नियंत्रण बोर्ड, उधयोग भवन, प्रथम तल, रेल्वे स्टेशन रोड, चंद्रपुर - 442 401
- क्षेत्रीय महाप्रबंधक, माजरी क्षेत्र
- महाप्रबंधक (पर्यावरण), व०० को०० लि०००० मुख्यालय , नागपुर
- उप-क्षेत्रीय प्रबंधक, न्यू माजरी उपक्षेत्र

WESTERN COALFIELDS LIMITED

MAJRI AREA

NEW MAJRI - II ((A) OPENCAST

COAL MINE EXPANSION PROJECT

SIX MONTHLY EC COMPLIANCE REPORT

AS ON 30TH SEPTEMBER 2023

WESTERN COALFIELDS LIMITED

SIX MONTHLY ENVIRONMENTAL MONITORING REPORT

PART-I

Name of the project	**MAJRI –II (A) OPENCAST COAL MINE EXPANSION PROJECT**
Location and Address	Office of the Sub Area Manager, New Majri Opencast Sub Area, Majri Area PO: Shivjinagar, Ta: Bhadrawati, Dist: Chandrapur, Maharashtra – 442 503
Address for correspondence	Office of the Sub Area Manager, New Majri Opencast Sub Area, Majri Area PO: Shivjinagar, Ta: Bhadrawati, Dist: Chandrapur, Maharashtra – 442 503
MOEF's clearance letter no. & date	J-11015/306/2008.IA.II(M) Date: 19.05.2009
Period of this status report	As on 30th September 2023
Date of last report submitted	29.05.2023
Date of commencement of project work	August 1975.

STATUS OF LAND ACQUISITION:

Type of land	Required as per EMP (Ha)	Actual acquired (Ha) as on 30.09.2023
Forest	Nil	Nil
Agriculture	742.518	742.518
Other	32.02	32.02
Total	774.538	774.538

STATUS OF LEGAL COMPLIANCES:

a.	Consent under Air (Prevention & Control of Pollution) Act	CTO obtained vide letter no. format1.0/CC/UAN No. 0000107569/CR-2111000542 dated 15.11.2021 for 2.50 MTY capacity for the period upto 31.03.2023. Renewal of CTO applied vide UAN No. 160655 dated 27.01.2023
b.	Consent under Water (Prevention & Control of Pollution) Cess Act	
c.	Environment (Protection) Act	Env. Clearance obtained for 2.50 MTY vide letter no. J-11015/306/2008-IA.II(M) dated 19.05.2009.
d.	Forest (Conservation) Act	Not applicable.

PART – II

STATUS OF ENVIRONMENT

AIR POLLUTION CONTROL:-

a. No. of ambient air monitoring stations : Four

b. Name of the location:

1. NMOC Sub Station
2. Patala Magazine
3. Kuchna Colony
4. Primary health Centre, Majri Basti

c. Ambient air quality status for the parameters prescribed by State Pollution Control Board (Average 95% time weighted values):

Sl.No	Location	SPM	RPM	SO2	NOx
1.	NMOC Sub Station	Enclosed CMPDIL monitoring reports for the period from April 2023 to September 2023			
2.	Patala Magazine				
3.	Kuchna Colony				
4.	Primary health Centre, Majri Basti				

WATER POLLUTION CONTROL:

a. No. of stations and frequency of monitoring: There are two stations & frequency of monitoring is Fortnightly.

b. Description of locations:

1. Mine water discharge.
2. Workshop (ETP) water discharge.

c. Average concentration of major pollutants prescribed by State Pollution Control Board (fig. in mg/lit except pH) :

Sl.No	Location	pH	BOD	COD	DO	TSS	O/G
1.	Mine water discharge	Enclosed CMPDIL monitoring reports for the period from April 2023 to September 2023					
2.	Workshop (ETP) water discharge						

NOISE POLLUTION CONTROL:

a. No. of noise monitoring stations:- Two.

b. Description of location and dB(A) value:- (i) Field maintenance shed, (ii) Colony

Sl.No	Location	Day – dB(A)	Night – dB(A)
1	Field maintenance shed	Enclosed CMPDIL monitoring reports for the period from April 2023 to September 2023	
2	Colony		

PART-III

STATUS OF IMPLEMENTATION OF PROVISIONS OF EMP

***LAND USE STATUS*:-**

Area reclaimed biologically: NIL
(Tree plantation on backfilled area)

Sl No	Particulars	As per EMP	01.04.2023 to 30.09.2023	Progressive As on 30.09.2023
1.	Area excavated (Ha)	537.50	Nil	385.78
2.	OB removed (Mm3)	269.538	8.196 Incl. Top Soil	251.776 Incl. Top Soil
3.	Top soil removed (Mm3)	Not available	0.866	36.456
4.	OB backfilled (Mm3)	195.625	9.01 Incl. Top Soil	178.687 Incl. Top Soil
5.	OB dumped (Mm3)	73.913	--	73.913
6.	Area recovered for reclamation (physical reclamation)	403.125	--	34.00

PRODUCTION:-

(i) Targeted Capacity: - 2.50 MTY (sanctioned capacity)

(ii) Present Capacity: - 2023-24: 0.798 MT (actual production as on 30.09.2023)

***AFFORESTATION* :-**

Sl.No	Location	01.04.2023 to 30.09.2023	Progressive As on 30.09.2023
1.	OB Dump & embankments	15,000	111,000
2.	Safety zones	Nil	Nil
3.	Backfilled areas	Nil	Nil
4.	Other areas	Nil	76,254
	Total	Nil	1,87,254

Area under plantation (Progressive): - 74.90 Ha. & 7.8 Km along the road & embankment

No. of plants per Hectare :- 2500 plants/Ha (earlier plantation 5000 plants/Ha)

Species planted: - Karanj, Kini, Sirus, Arjun, Gulmohar, Peltophorum etc.

REHABILITATION & RESETTLEMENT :-

Sl.No	Particulars	SC	ST	Others
1.	No. of land oustees	Not available	Not available	362 (Total including all)
2.	No. of land oustees rehabilitated	06	04	295 (Total including all 305)
3.	No. of PAPS/PAFS to be resettled	Not applicable	Not applicable	Not applicable
4.	No. of PAPS/PAFS resettled	Not applicable	Not applicable	Not applicable
5.	Area of new site (Ha)	Not applicable	Not applicable	Not applicable
6.	Status of development	Not applicable	Not applicable	Not applicable
7.	Civic amenities provided at new resettlement site	Not applicable	Not applicable	Not applicable

Organizational setup at project level :-
(Name and designation of the personnel to be given)

1. Shri R.Arumugam,
   Sub Area Manager.

2. Shri R.S. Tiwari,
   Ch. Manager (Mining)

3. Shri M. Pandiaraj
   SAE (Civil)/Nodal Officer (Env)

EXPENDITURE:-

CAPITAL

Account head	01.04.2023 to 30.09.2023	Progressive As on 30.09.2023
Reclamation (HEMM)	Nil	Rs. 354.00 lakhs
Air pollution control	Nil	Rs. 59.28 Lakhs
Water pollution control	Nil	Rs. 27.94 Lakhs
CAAQMS, Piezometer, Water meter & Others	Rs 1.57 lakhs	Rs. 97.74 Lakhs

REVENUE

Account head	01.04.2023 to 30.09.2023	Progressive As on 30.09.2023
Afforestation	Rs 18.31 lakhs	Rs. 202.25 Lakhs
Monitoring	Rs. 22.00 lakhs	Rs. 256.58 Lakhs
MPCB JVS	Rs 0.48 lakhs	Rs. 1.48 lakhs
Statutory expenses	Rs 0.15 lakhs	Rs. 154.12 Lakhs
Air pollution control	Rs 0.86 lakhs	Rs. 73.59 lakhs
Water pollution control	Rs 0.04 lakhs	Rs. 46.64 lakhs
Ground water abstraction charges	Nil	Rs. 387.96 lakhs
CAAQMS AMC & other exp.	Nil	Rs 0.53 lakhs
Others	Rs 0.20 lakhs	Rs. 826.68 Lakhs

Project : **New Majri-II(A) Opencast Coal Mine Expansion Project.**

Clearance letter No. : **J-11015/306/2008-IA.II(M)**

Date : **19th May 2009**

1. Specific Conditions

<table>
<tr><th>SN</th><th>Condition</th><th>Compliance</th></tr>
<tr><td>i.</td><td>No additional land, manpower and equipment shall be used for the expansion project.</td><td>Noted. No additional land, manpower and equipment are being used for the expansion project.</td></tr>
<tr><td>ii.</td><td>No OB from the expansion project shall be dumped on existing external OB dump or no new ext. OB dumps shall be created. The OB generated from the balance life of the project shall be concurrently backfilled into decoaled void. The existing dumps shall be biologically reclaimed using a mix of native species and ultimate slope of the dumps shall not exceed 28 degree. Monitoring and management of reclaimed dumpsite shall continue until vegetation in all the dumps becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and Regional Office located at Bhopal on yearly basis.</td><td>No OB from the expansion project is being dumped on existing OB dumps and no new ext. OB dump being created. The OB generated from the balance life of the project shall be concurrently backfilled into de-coaled void. The reclamation of external OB dump has already been started. The plantation on OB are given below:-
<table>
<tr><th>SN</th><th>OB Dump</th><th>Area OB top & slope</th><th>Ht</th><th>Plantation</th></tr>
<tr><td>1</td><td>Wardha Dump</td><td>58.22 Ha</td><td>50 Mt. Avg</td><td>1,45,554</td></tr>
<tr><td>2</td><td>Konda Dump/Sirna dump</td><td>115.05 Ha</td><td>50 Mt. Avg</td><td>41,700</td></tr>
<tr><td colspan="4">Total</td><td>1,87,254</td></tr>
</table>
The species planted are mix of native species namely Karanj, Kini, Sirus, Arjun, Gulmohar, Peltophorum etc.

The ultimate slope of dump shall be maintained within 28 degree. Monitoring and management of reclaimed dump sites is being done continuously so that they become self sustaining.</td></tr>
<tr><td>iii.</td><td>Catch drain and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and material dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drain shall be regularly desilted and maintained properly.

Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50 % safety margin over and above the peak sudden rain fall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provided adequate retention period to allow proper settling of silt material.</td><td>Catch drains of size 3.0 m x 1.5 m of 4.0 km length around OB dumps & Garland drains of size 5.0 m x 2.0 m of 7.0 km length around quarry area has been constructed to arrest silt & sediments. The sump provided at the floor of the seam is 4.5 Ha at Sector A & 2.10 Ha at Sector B. The water so collected is utilized for watering mine area, roads, green belt development etc. The drains are de-silted & maintained before onset of every monsoon.</td></tr>
</table>

iv.	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall besides on the rainfall data.	Retaining wall at the toe of dump with sufficient dimensions is prepared wherever required. In addition to this, following measures are being taken to arrest the flow of silt. The external OB dumps were declared dead long back in 1990 and plantation over these dumps were made from the year 1992. The strata of the dump is very hard. Moreover, external OB dumps have been thickly covered with plantation which arrest the flow of silts. Details of plantation done on OB dump over the top surface and on the slope are emphasized below – • On OB slope & top – 96,000 nos. • Area Covered- 38.40 Ha. In addition to this, catch drains/ garland drains are constructed all around the OB dumps. Size of garland drain – 5.0 m x 2.0 m. These drains collect all the flow of silt and are cleaned before onset of every monsoon. Further, Cross drainage has been made along OB benches (size of catch drains– 3.0 m x 1.5 m) & water flows to the main mine sump at the floor of the seam which has got sufficient capacity allowing significant settlement of silt material. Capacity of the main mine sump – 170 MG In line with this, catch drains of size 3.0 m x 1.5 m are also constructed around the periphery of mine working which are also cleaned before onset of every monsoon.
v.	Drills shall be wet operated only.	Complied. All the drills used in the mine are wet operated.
vi.	Controlled blasting shall be practiced with use delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Controlled blasting is in practice with due permission from DGMS. All conditions stipulated by DGMS for control of ground vibration and for arresting fly rocks & boulders are strictly followed during actual operation. Moreover, the records of blasting are also maintained by using vibrometer.
vii.	High efficiency bag filters/ water sprinkling system to check fugitive emission from crushing operation, conveyor system – rope way, haulage roads, transfer points, etc. shall be installed and operated effectively at all times of operation.	The control of dust in the CHP is being done by Wind barrier, Side Cladding along conveyor belts and dust suppression through water spraying. CHP has been provided with sufficient (10 nos.) fixed type dust suppression arrangement at all the dust generating points like receiving pit, transfer point, conveyor belt and loading point. These are maintained & operated properly. Whole dust in CHP area is being suppressed effectively through this system. In CHP areas, the main principle behind providing fixed water sprinklers is to prevent – Dust generated at the source To arrest dust from raising in to the atmosphere For that effect, water spraying system is adopted right at the generating source to control dust from mixing in the atmosphere. The fugitive emission is well within the permissible limit.

viii.	An area not less than 581.025 Ha shall be brought under afforestation which includes reclaimed external OB dumps (177.90 Ha), backfilled area (403.125 Ha), along ML boundary, along road and infrastructure, green belt and area for rationalization area within the lease and within the township by planting native species in consultation with the local DFO- Agriculture Department. The density of the tree shall be around 2500 plants per Ha.	Effective green belt has been developed around the mine premises. Details of plantation done along with the species planted are depicted below – Plantation done on OB slope & top – 111,000 nos. Plantation done on plain area viz. around CHP area, along road & around colonies – 76,254 nos Total plantation done – 1,87,254 nos. Density of plantation - 2500 nos/Ha Total area covered - 74.90 Ha & 7.8 kms of road Species planted - Kini, Arjun, Sirus, Gulmohur, Karanj etc. And the remaining shall be done in due course of time depending on the availability of dead dumps in each subsequent year. The plantation has been done through expert, Govt., forest agencies such as FDCM of Maharashtra and Madhya Pradesh Rajya Van Vikas Nigam of Madhya Pradesh.
xi.	A Progressive Mine Closure Plan shall be implemented by reclamation of the quarry area of 537.50 Ha of which 403.125 Ha shall be backfilled and afforested by planting native plants species in consultation with the local DFO- Agriculture Department. The density of the tree shall be around 2500 plants per Ha.	A progressive Mine Closure Plan as per approved EMP (403.125 Ha to be backfilled out of 537.50 Ha of quarry area). Total excavated area is 385.78 Ha as on 30.09.2023 out of which 34.00 Ha has been backfilled. Backfilling is still in progress. Backfilled area will be afforested by planting native plants species in consultation with the local DFO- Agriculture Department keeping the density of the tree around 2500 plants per Ha.
x.	Additional water requirement if any shall be met from mine water discharge.	Noted. Additional water requirement if any will be met from mine water discharge.
xi.	Ground water shall not be used for mining operation.	Noted. Ground water is not being used for mining operations and shall not be used in future also.
xii.	The Company shall identify sites for construction of water harvesting structures for augmentation of ground water resource in case of decline in water table is observed over the project life.	Noted. Sites for construction of water harvesting structures shall be identified for augmentation of ground water resource in case of decline in water table is observed over the project life. Till date no such decline in water table has been recorded.
xiii.	ETP of sufficient capacity shall be provided for workshop and CHP waste water and maintained and operated properly. An STP of adequate capacity shall also be provided to treat the domestic effluent and recycle the treated water for green belt development. Mine water discharge from the mine shall be treated to confirm to prescribed standards.	ETP of 100 KLD capacity is provided for workshop waste water & is in operation. Individual septic tanks & soak pits provided for colony. Mine pumped out water is treated in Sedimentation tank of dim. 32 m x 8.5m x 1.8 m so as to confirm the prescribed standards. Sewage Treatment Plant of 0.40 MLD capcity is provided at Ekta Nagar Colony and people of this mine also reside at same colony. Same is being used to treat the domestic effluent generated
xiv.	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from work force engaged in active mining operation shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of 2 years and the results reported to this Ministry and to DGMS.	Complied.

xv.	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted for approval to the Ministry of Environment and Forest RO, Bhopal 5 years before closure of mine.	Final Mine Closure plan has been prepared and As on 31.03.2023, an amount of Rs 59.96 crores has been deposited in Escrow account (A/c no. 0897107600001203 (Renewed)). Progressive Mine closure claim of Rs 21.52 crores for the period 2012-13 to 2016-17 is reimbursed. Balance as on 31.03.2023 is Rs 53,00,30,217.00 /-.
xvi.	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 500) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in three 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.	Land use pattern of the mine is studied every year through Satellite imagery. Monitoring of same has been done by CMPDIL during 2022-23 and report of same is uploaded on WCL Website
xvii.	The Socio- economic development of the village covered under CSR shall be monitored over the life of the project using UNDP Human Development Indices and reported as part of the report submitted to MOEF RO, Bhopal.	Noted. Socio-economic development measures are being continuously taken in nearby villages. The monitoring of CSR using UNDP Human development Indices is being developed.
2.	**General conditions**	
Sl. No.	**Condition**	**Compliance**
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted. No change in mining technology and scope of working has been made not envisaged in future.
ii.	No change in calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted. No change in calendar plan including excavation, quantum of mineral coal and waste has been made nor envisaged in future.
iii.	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO2, NOx & heavy metals such as Hg, Pb, Cr, As, etc. Location of the stations shall be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	The ambient air quality monitoring at present is being carried out at four stations in core as well as buffer zone which are as follows:- 1. Sub Station NMOC, 2. Patala Magazine, 3. Kuchna Colony,4. Primary Health Centre, Majri Basti. The monitoring reports for April to September 2023 is enclosed herewith. In addition to above, monitoring of fugitive emission is also being done at 2 stations namely :- 1. Field maintenance shed, 2. Railway Siding. The above locations have been finalized on the basis of meteorological data, topographical features etc. The information regarding above has been given to State Pollution Control Board.

iv.	Fugitive dust emissions (SPM and RSPM and heavy metals such as Hq, Pb, Cr, As, etc) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading &unloading) points shall be provided and properly maintained.	In order to control fugitive dust emission from different sources various measures like water spraying through mobile sprinklers on haul road, coal transportation roads, approach roads, coal stock yard etc. & by fixed sprinklers in railway siding, CHP etc. have been provided and properly maintained. Fugitive emission is being monitored by CMPDIL since 2nd fortnight of May 2006 at two stations namely:-1. Field maintenance shed 2. Railway siding
v.	Data on ambient air quality (RPM, SPM, SO2, NOx & heavy metals such as Hq, Pb, Cr, As, etc) shall be regularly submitted to the Ministry including its Regional office at Bhopal and the State Pollution Control Board and the Central Pollution Control Board once in six months.	Reports on ambient air quality are being submitted to State Pollution Control Board as well as to MOEF, Regional Office, Nagpur quarterly along with Six monthly report. The same for April to September 2023 is enclosed herewith for ready reference.
vi.	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Adequate measures namely proper maintenance of HEMM and controlled blasting are in operation so as to control noise levels below 85 dBA. The workers engaged in noisy environment are provided with ear plugs/muffs. 2 nos. stations are there for monitoring the noise level data namely i. Colony, ii. Field maintenance shed.
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dated 19th May,1993 and 31st December,1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Mine water is collected in the sump in the quarry itself and pumped out after settlement of suspended particles and put in to surface natural sedimentation pond for further settlement. The quality of mine pumped out water is monitored every fortnight and all parameters are found to be within the permissible limits. The workshop is having a ETP of 100 KLD capacity with facility of recirculation of water.
viii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the material shall be covered with tarpaulins and optimally loaded.	All the light vehicles namely Jeep & trucks etc. are having valid PUC certificate for vehicular emission through RTO approved agency. Further, it may be mentioned here that the ambient air quality monitoring in and around the mine site is regularly carried out. Vehicles used for transporting the material are being covered with tarpaulins and optimally loaded.
ix.	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	A full-fledged Environmental laboratory under CMPDIL exists at Nagpur, which monitors all the mines of WCL including this mine.
x.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Personnel working in dusty areas are provided with dust masks. The workers are given training/refresher training in VTC on safety and health aspects which is also a statutory requirement under Mines Act 1952.

	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to coal dust and to take corrective measures, if needed.	Periodic Medical Examination for all workers once in every five years is carried out and records maintained to observe any disease and to take corrective measures, if needed.
xi.	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the head of the organization.	Environment Cell exists at HQ, Area, & project level. GM (Environment) of HQ directly reports to the head of the Organization. GM (ENVIRONMENT) at HQ Level Area Nodal Officer (ENV)/ Dy. Manager (Env) At AREA LEVEL Nodal Officer (ENV)/ Dy. Manager (C) At UNIT LEVEL
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to this Ministry and its Regional Office located at Bhopal.	Funds have been earmarked for environment protection measures and is kept in separate account and is not diverted for other purpose. Expenditure on environment measures has been enclosed in Part -III document.
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 officer(s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	Noted.
xiv.	A copy of clearance letter will be marked to concerned Panchayat/ Local NGO if any, from whom suggestions/ representation has been received while processing the proposal.	A copy of clearance letter given to concerned Panchayats vide letter no. 489 dated 29.06.2009. Copy of letter already submitted alongwith earlier report.
xv.	State Pollution Control Board shall display a copy of the clearance letter at Regional Office, District Industry Center and Collector's Office/Tahasildar's Office for 30 days.	Clearance letter sent to MPCB for display vide our letter no. WCL/MA/CGM/ENV/2009-10/74 dated 15.06.2009. Copy of letter already submitted alongwith earlier report.
xvi.	The project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in. The compliance status shall also be uploaded	Complied. Advertisement given in following 2 Newspapers :- 1. The Hitwada (English) dt. 24.05.2009 2. Mahavidarbha (Marathi) dt. 24.05.2009 Copies of the advertisements already submitted alongwith earlier report.

	by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at entrance of the project premises and mines office and in corporate office.	
3.	The ministry or any other competent authority may stipulate any further condition in the interest of environment protection.	Noted.
4.	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.	Noted.
5.	The above conditions will be enforced, *inter-alia*, under the provisions of the Water (Prevention & Control of Pollution) Act. 1974, the Air (Prevention & Control of Pollution) Act. 1981, the Environment (Protection) Act 1986 and the Public Liability Insurance Act 1991along with their amendments and rules. The proponent shall ensure to provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water and occupational and other diseases due to the mining operations.	Noted.

20/4/2023

Sub Area Manager
New Majri –II (A) Opencast Coal Mine
Expansion Project
Majri Area, Western Coalfields Limited

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ENVIRONMENTAL MONITORING REPORT

NEW MAJRI-II(A) OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

APRIL 2023

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

AN ISO 9001:2015 COMPANY

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

TEST REPORT NO.	RIN/TR/APRIL-23/51	DATE OF ISSUE		30-05-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			13-04-23 TO 15-05-23

NMOC SUBSTATION MMOA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
07-04-23	08-04-23	252	164	70	16	10	Clear Sky /Calm
22-04-23	23-04-23	260	168	62	18	12	Clear Sky /Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE MMOA2

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
06-04-23	05-04-23	230	150	58	15	12	Clear Sky /Calm
21-04-23	22-04-23	234	152	62	16	11	Clear Sky /Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIAPRILY HEALTH CENTRE,MAJRI BASTI MMOA3

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
07-04-23	08-04-23	112	56	38	14	BDL	Clear Sky /Calm
22-04-23	23-04-23	114	66	36	10	BDL	Clear Sky /Calm
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

KUCHANA COLONY MMOA4

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
06-04-23	07-04-23	118	65	36	13	BDL	Clear Sky / Lightbreeze
07-04-23	08-04-23	130	64	36	12	BDL	Clear Sky /Calm
13-04-23	14-04-23	118	60	30	16	BDL	Clear Sky / Lightbreeze
14-04-23	15-04-23	112	54	32	12	BDL	Clear Sky / Lightbreeze
21-04-23	22-04-23	112	56	36	12	BDL	Clear Sky /Calm
23-04-23	24-04-23	128	52	44	14	BDL	Cloudy Sky / Calm
28-04-23	29-04-23	106	60	32	10	BDL	Cloudy Sky / Moderatbreeze
29-04-23	30-04-23	116	60	40	12	BDL	Clear Sky /Calm
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

Analysed by

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

FUGITIVE DUST MONITORING

TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), 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:		13-04-23 TO 15-05-23

FIELD MAIN SHED		MOF1		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
21-04-23	22-04-23	486	392	Clear Sky / Lightbreeze

CHP		MOF2		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
21-04-23	22-04-23	522	410	Clear Sky / Lightbreeze

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	

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

MINE WATER DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-04-23	7.82	32	48	BDL
22-04-23	7.56	28	36	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-04-23	7.44	36	32	BDL
22-04-23	7.33	42	92	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-04-23	7.54	36	60	BDL
22-04-23	7.98	44	52	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100		30	

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
06-04-23	36	9
21-04-23	40	11
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

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

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'23	12-04-23	62.4	61.9
APRIL'23	28-04-23	63.4	62.9
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**75**	**70**

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
APRIL'23	12-04-23	47.5	46.8
APRIL'23	28-04-23	47.9	46.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**55**	**45**

Ashwin B Wasnik
Reviewed by

Deepanshu Sahu
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ENVIRONMENTAL MONITORING REPORT

NEW MAJRI-II(A) OC

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WESTERN COALFIELDS LTD.

JOB NO. 4094423068

MAY - 2023

Environment Laboratory

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

TEST REPORT NO.	RIN/TR/MAY-23/51		DATE OF ISSUE	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 document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			16-05-23 TO 15-06-23

NMOC SUBSTATION MMOA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
08-05-2023	09-05-2023	240	158	46	16	11	Clear Sky /Light Breeze
22-05-2023	23-05-2023	288	197	63	19	13	Clear Sky /Moderate Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE MMUA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
07-05-2023	08-05-2023	236	152	52	13	BDL	Cloudy sky /Light Breeze
21-05-2023	22-05-2023	251	159	58	14	10	Cloudy sky /Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIMARY HEALTH CENTRE,MAJRI BASTI MMOA3

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
08-05-2023	09-05-2023	145	80	30	14	BDL	Cloudy sky /Light Breeze
21-05-2023	22-05-2023	119	82	29	10	BDL	Clear Sky /Moderate Breeze
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

KUCHANA COLONY MMOA4

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
07-05-2023	08-05-2023	120	64	30	10	BDL	Clear Sky / Lightbreeze
08-05-2023	09-05-2023	127	76	36	14	BDL	Clear Sky /Calm
13-05-2023	14-05-2023	139	82	40	13	BDL	Clear Sky / Lightbreeze
14-05-2023	15-05-2023	124	70	32	14	BDL	Clear Sky / Lightbreeze
21-05-2023	22-05-2023	129	82	30	8	BDL	Clear Sky /Calm
22-05-2023	23-05-2023	117	78	28	10	BDL	Cloudy Sky / Calm
27-05-2023	28-05-2023	121	77	30	10	BDL	Cloudy Sky / Moderatbreeze
28-05-2023	29-05-2023	130	87	22	11	BDL	Clear Sky /Calm
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

Analysed by

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

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

MINE WATER DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
08-05-2023	7.85	36	56	BDL
22-05-2023	7.79	26	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
08-05-2023	7.56	28	44	BDL
22-05-2023	8.07	18	28	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
07-05-2023	7.45	44	60	BDL
25-05-2023	7.48	56	76	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
09-05-2023	40	14
22-05-2023	36	12.5
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

Analysed by

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

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	12-05-2023	65.8	64.6
MAY'23	28-05-2023	64.8	63.7
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**75**	**70**

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	12-05-2023	48.7	47.3
MAY'23	28-05-2023	48.6	47.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**55**	**45**

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

TEST REPORT NO.	RIN/TR/JUNE-23/51	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 Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		16-06-23 TO 15-07-23

NMOC SUBSTATION MMOA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
06-06-23	07-06-23	239	150	48	16	BDL	Clear Calm
16-06-23	17-06-23	261	162	53	14	BDL	Clear Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE MMUA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
01-06-23	02-06-23	274	156	52	16	10	Clear Calm
17-06-23	18-06-23	265	145	48	15	11	Clear Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIJUNEY HEALTH CENTRE,MAJRI BASTI MMOA3

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
01-06-23	02-06-23	148	85	36	11	BDL	Clear Calm
02-06-23	03-06-23	136	82	32	14	BDL	Clear Calm
07-06-23	08-06-23	124	74	40	12	BDL	Clear Calm
08-06-23	09-06-23	120	68	36	14	BDL	Clear Calm
16-06-23	17-06-23	123	60	30	12	BDL	Clear Sky Light Breez
17-06-23	18-06-23	136	69	28	14	BDL	Clear Sky Light Breez
22-06-23	23-06-23	130	68	34	14	BDL	Cloudy Clam
23-06-23	24-06-23	124	59	30	12	BDL	Rainy light Breez
29-06-23	30-06-23	135	65	30	12	BDL	Clear Sky Light Breez
30-06-23	01-07-23	142	89	36	14	BDL	Clear Sky Light Breez
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

KUCHANA COLONY MMOA4

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
01-06-23	02-06-23	129	79	36	14	BDL	Clear Calm
02-06-23	03-06-23	142	84	32	12	BDL	Clear Calm
07-06-23	08-06-23	139	76	30	11	BDL	Clear Calm
08-06-23	09-06-23	132	65	31	10	BDL	Clear Calm
16-06-23	17-06-23	125	62	30	10	BDL	Clear Sky Light Breez
17-06-23	18-06-23	142	78	36	11	BDL	Clear Sky Light Breez
22-06-23	23-06-23	136	69	40	13	BDL	Cloudy Clam
23-06-23	24-06-23	126	60	28	14	BDL	Rainy light Breez
29-06-23	30-06-23	140	85	39	14	BDL	Clear Sky Light Breez
30-06-23	01-07-23	138	68	30	12	BDL	Clear Sky Light Breez
NAAQS, 2009		**-**	**100**	**60**	**80**	**80**	

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

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

MINE WATER DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-06-23	7.69	32	44	BDL
16-06-23	7.58	28	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-06-23	7.96	28	52	BDL
16-06-23	8.02	32	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
06-06-23	7.58	44	64	BDL
16-06-23	7.98	52	68	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100		30	

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
06-06-23	32	10.5
16-06-23	44	12
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

Analysed by

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

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'23	10-06-23	59.8	58.7
JUNE'23	26-06-23	62.4	61.8
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**75**	**70**

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JUNE'23	10-06-23	47.6	46.2
JUNE'23	26-06-23	47.8	46.2
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**55**	**45**

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ENVIRONMENTAL MONITORING REPORT

NEW MAJRI-II(A) OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

JULY - 2023

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

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

TEST REPORT NO.	RIN/TR/JULY-23/51		DATE OF ISSUE	31-08-2023
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			16-07-23 TO 14-08-23

NMOC SUBSTATION		MMOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
04-07-2023	05-07-2023	231	147	40	14	BDL	CLEAR / CALM
18-07-2023	19-07-2023	255	157	50	12	BDL	RAINY / CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE		MMUA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	**PM_{10}**	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	5	2	6	10	
02-07-2023	03-07-2023	266	146	50	14	10	CLEAR / CALM
17-07-2023	18-07-2023	260	154	46	17	10	CLOUDY / CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIMARY HEALTH CENTRE,MAJRI BASTI		MMOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	2	6	10	
03-07-2023	04-07-2023	78	32	10	BDL	CLEAR / CALM
04-07-2023	05-07-2023	80	33	12	BDL	CLEAR / CALM
10-07-2023	11-07-2023	71	38	11	BDL	RAINY / CALM
11-07-2023	12-07-2023	64	36	13	BDL	RAINY / CALM
18-07-2023	19-07-2023	56	30	12	BDL	RAINY / CALM
19-07-2023	20-07-2023	70	28	11	BDL	RAINY / CALM
25-07-2023	26-07-2023	62	33	13	BDL	RAINY / CALM
26-07-2023	27-07-2023	50	31	14	BDL	CLOUDY / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

KUCHANA COLONY		MMOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	**$PM_{2.5}$**	**NO_2**	**SO_2**	
FROM	TO	5	2	6	10	
03-07-2023	04-07-2023	72	35	12	BDL	CLEAR / CALM
04-07-2023	05-07-2023	76	30	14	10	CLEAR / CALM
10-07-2023	11-07-2023	71	28	11	BDL	RAINY / CALM
11-07-2023	12-07-2023	60	33	10	BDL	RAINY / CALM
18-07-2023	19-07-2023	63	31	12	BDL	RAINY / CALM
19-07-2023	20-07-2023	67	35	13	BDL	RAINY / CALM
25-07-2023	26-07-2023	62	43	12	BDL	RAINY / CALM
26-07-2023	27-07-2023	65	28	14	BDL	CLOUDY / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

Analysed by

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

FUGITIVE DUST MONITORING

TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), 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:		16-07-23 TO 14-08-23

FIELD MAIN SHED		MOF1		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
11-07-2023	12-07-2023	410	230	RAINY / CALM

CHP		MOF2		
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	
FROM	TO	5	5	
11-07-2023	12-07-2023	380	218	RAINY / CALM

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

SAMPLE DESCRIPTION	Water sample	
Test Required	pH: IS 3025 -Part 11:1983(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 DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
04-07-2023	7.04	30	48	BDL
18-07-2023	8.00	24	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
04-07-2023	7.40	26	56	BDL
18-07-2023	6.50	34	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
04-07-2023	7.64	40	60	BDL
18-07-2023	7.36	48	52	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993		100		30

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
04-07-2023	36	14
18-07-2023	40	10
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

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

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	12-07-2023	64.8	63.7
JULY'23	20-07-2023	51.6	50.0
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**75**	**70**

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	12-07-2023	47.5	46.5
JULY'23	20-07-2023	45.6	43.8
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**55**	**45**

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ENVIRONMENTAL MONITORING REPORT

NEW MAJRI-II(A) OC

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068

AUGUST - 2023

Environment Laboratory
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JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	

TEST REPORT NO.	RIN/TR/AUG-23/51	DATE OF ISSUE		30-09-2023
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR			
TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)			
SAMPLE DESCRIPTION	AIR SAMPLE		SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:			15-08-23 TO 15-09-23

NMOC SUBSTATION MMOA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
08-08-2023	09-08-2023	223	142	48	12	BDL	CLOUDY / CALM
16-08-2023	17-08-2023	262	150	51	10	BDL	CLEAR / CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE MMUA1

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
01-08-2023	02-08-2023	240	128	42	12	10	RAINY / CALM
17-08-2023	18-08-2023	230	131	40	14	10	CLOUDY / CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIMARY HEALTH CENTRE,MAJRI BASTI MMOA3

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-08-2023	02-08-2023	70	28	10	BDL	CLOUDY / CALM
02-08-2023	03-08-2023	68	30	11	BDL	RAINY / CALM
08-08-2023	09-08-2023	60	34	12	BDL	CLOUDY / CALM
09-08-2023	10-08-2023	54	28	14	BDL	CLOUDY / CALM
14-08-2023	15-08-2023	60	36	13	BDL	CLEAR / CALM
16-08-2023	17-08-2023	60	32	12	BDL	CLEAR / CALM
21-08-2023	22-08-2023	72	32	13	BDL	CLEAR / CALM
22-08-2023	23-08-2023	56	28	10	BDL	CLOUDY / CALM
27-08-2023	28-08-2023	57	30	14	10	CLEAR / CALM
28-08-2023	29-08-2023	58	30	16	10	CLEAR / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

KUCHANA COLONY MMOA4

DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
01-08-2023	02-08-2023	64	30	11	BDL	CLOUDY / CALM
02-08-2023	03-08-2023	70	36	12	10	RAINY / CALM
08-08-2023	09-08-2023	68	30	14	BDL	CLOUDY / CALM
09-08-2023	10-08-2023	56	34	10	BDL	CLOUDY / CALM
14-08-2023	15-08-2023	66	38	14	11	CLEAR / CALM
16-08-2023	17-08-2023	70	33	13	10	CLEAR / CALM
21-08-2023	22-08-2023	73	37	14	BDL	CLEAR / CALM
22-08-2023	23-08-2023	60	40	12	BDL	CLOUDY / CALM
27-08-2023	28-08-2023	62	34	16	12	CLEAR / CALM
28-08-2023	29-08-2023	68	40	15	10	CLEAR / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	

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

MINE WATER DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
09-08-2023	7.50	38	60	BDL
27-08-2023	7.24	30	52	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
09-08-2023	6.88	32	40	BDL
27-08-2023	7.00	24	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
10-08-2023	7.02	30	24	BDL
25-08-2023	6.98	44	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100		30	

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
09-08-2023	44	11.4
27-08-2023	22	16.8
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

Analysed by

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	08-08-2023	54.3	52.2
AUG'23	23-08-2023	55.7	54.2
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
AUG'23	08-08-2023	43.1	42.0
AUG'23	23-08-2023	44.2	43.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45

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ENVIRONMENTAL MONITORING REPORT

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MAJRI AREA

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SEPTEMBER- 2023

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

TEST REPORT NO.	RIN/TR/SEPT-23/51	DATE OF ISSUE	27-10-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR		
TEST REQUIRED	SPM: IS 5182 Part-4:1999(RA 2019), PM-10: IS-5182 Part 23:2006(RA 2017), PM2.5: USEPA Quality Assurance guidance document volume-II (part-II)-2.12:2016, NO2: IS 5182 Part-06:2006(2017), SO2:IS 5182 Part-2:2001(RA 2017)		
SAMPLE DESCRIPTION	AIR SAMPLE	SAMPLING PLAN :	LQR 47
SAMPLING METHOD : LSOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:		15-09-23 TO 15-10-23

NMOC SUBSTATION		MMOA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
12-09-23	13-09-23	242	150	50	14	12	CLOUDY / CALM
27-09-23	28-09-23	258	141	42	12	10	CLOUDY / CALM
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PATALA MAGAZINE		MMUA1					
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	5	2	6	10	
02-09-23	03-09-23	255	138	46	14	12	cloudy/ calm
17-09-23	18-09-23	270	145	50	15	11	clear/Moderate breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25TH September 2000		**600**	**300**	**-**	**120**	**120**	

PRIMARY HEALTH CENTRE,MAJRI BASTI		MMOA3				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
05-09-23	06-09-23	68	36	8	BDL	CLOUDY / CALM
06-09-23	07-09-23	70	32	10	BDL	CLOUDY / CALM
12-09-23	13-09-23	55	30	12	10	CLOUDY / CALM
13-09-23	14-09-23	60	34	12	BDL	CLOUDY / CALM
19-09-23	20-09-23	58	40	10	BDL	CLOUDY / RAINY
20-09-23	21-09-23	72	36	12	BDL	CLOUDY/RAINY
26-09-23	27-09-23	59	24	10	BDL	CLOUDY/LIGHT BREEZE
27-09-23	28-09-23	60	34	14	10	CLOUDY / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

KUCHANA COLONY		MMOA4				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m^3)				ENVIRONMENT CONDITIONS (Sky/Wind)
		PM_{10}	$PM_{2.5}$	NO_2	SO_2	
FROM	TO	5	2	6	10	
05-09-23	06-09-23	68	30	10	BDL	CLOUDY / CALM
06-09-23	07-09-23	52	32	12	10	CLOUDY / CALM
12-09-23	13-09-23	60	29	10	BDL	CLOUDY / CALM
13-09-23	14-09-23	43	24	9	BDL	CLOUDY / CALM
19-09-23	20-09-23	59	35	12	BDL	CLOUDY / RAINY
20-09-23	21-09-23	70	38	14	10	CLOUDY/RAINY
26-09-23	27-09-23	51	30	10	BDL	CLOUDY/LIGHT BREEZE
27-09-23	28-09-23	60	28	14	10	CLOUDY / CALM
NAAQS, 2009		**100**	**60**	**80**	**80**	

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

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

MINE WATER DISCHARGE:	MMOW1			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
13-09-23	7.20	32	56	BDL
27-09-23	7.46	38	48	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MMOW2			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
13-09-23	6.60	30	32	BDL
27-09-23	6.80	32	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP:	MAJRI AREA HOSPITAL			
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
12-09-23	6.68	44	36	BDL
17-09-23	6.58	34	52	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100		30	

STP:	MMUW3	
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
12-09-23	46	10.8
26-09-23	28	13.2
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	100	30

Analysed by

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

NOISE LEVEL MONITORING DATA

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

FIELD MINE SHED:		MMON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	08-09-23	56.7	55.4
SEPT'23	24-09-23	57.0	56.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**75**	**70**

KUCHNA COLONY:		MMON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
SEPT'23	08-09-23	45.7	44.2
SEPT'23	24-09-23	44.8	43.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		**55**	**45**

Ashwin B Wasnik
Reviewed by

Deepanshu Sahu
Authoriesed by

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DRINKING WATER MONITORING REPORT

MAJRI 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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Drinking water quality monitoring data	TC-7102

TEST REPORT NO.	RIN/TR/JUNE-23/DW31	DATE OF ISSUE	31-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	2		

NAME OF LOCATION:	SAM OFFICE			SAMPLING DATE:	09-05-23	
					IS 10500:2012	
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	Unobjectionable	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	7.87	6.5 to 8.5	No relaxation
5	Total Hardness (as $CaCO_3$) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	324	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	122	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	0.98	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	615	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	54.4	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	24	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 SO_4^{-2}) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	44	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3-B UV Spectrophotometric	0.5	9.10	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	164	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

SCIENTIFIC ASSISTANT

DEEPANSHU SAHU

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Environment Laboratory CMPDI RI-IV, NAGPUR	**Test Report** **Drinking water quality monitoring data**	TC-7102

TEST REPORT NO.	RIN/TR/JUNE-23/DW32	DATE OF ISSUE	31-07-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	2		

NAME OF LOCATION:	KUCHNA COLONY			SAMPLING DATE:	05-05-23	
					IS 10500:2012	
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	Unobjectionable	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	8.37	6.5 to 8.5	No relaxation
5	Total Hardness (as $CaCO_3$) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	228	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	26	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	510	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	30.40	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	32.10	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	0.5	11.13	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	0.015	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	160	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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DRINKING WATER MONITORING REPORT

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO.4094423068

QE-SEPTEMBER 2023

Environment Laboratory
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Environment Laboratory CMPDI RI-IV, NAGPUR	**Test Report** **Drinking water quality monitoring data**	

TEST REPORT NO.	RIN/TR/SEPT-23/DW31	DATE OF ISSUE	27-10-2023
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	2		

NAME OF LOCATION:	SAM OFFICE				SAMPLING DATE:	13-07-2023
					IS 10500:2012	
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	Unobjectionable	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	6.89	6.5 to 8.5	No relaxation
5	Total Hardness (as $CaCO_3$) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	120	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	30	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.120	0.2	1
9	Fluoride (as F^-)- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.48	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	252	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	35.2	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	7.77	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	56.01	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3-B UV Spectrophotometric	0.5	3.31	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	52	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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Environment Laboratory CMPDI RI-IV, NAGPUR	**Test Report** **Drinking water quality monitoring data**	

TEST REPORT NO.	RIN/TR/SEPT-23/DW32	DATE OF ISSUE	27-10-2023
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	2		

NAME OF LOCATION:	KUCHNA COLONY			SAMPLING DATE:	13-07-2023	
					IS 10500:2012	
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	Unobjectionable	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	7.44	6.5 to 8.5	No relaxation
5	Total Hardness (as $CaCO_3$) - mg/l	IS 3025 Part-21 EDTA Metod: 2014	4	260	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	28	250	1000
8	Residual Chlorine -mg/l	APHA, 23rd Edition 4500-G DPD Colorometric method: 2017	0.02	0.097	0.2	1
9	Fluoride (as F^-)- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.50	1	1.5
10	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	420	500	2000
11	Calcium (as Ca) -mg/l	IS 3025 Part-40 : 2014	1.6	44.8	75	200
12	Magnesium (as Mg) -mg/l	APHA (23rd Ed.) 3500 B, Calculation Method:2017	3	35.96	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	39.08	200	400
16	Nitrates (as NO3) - mg/l	APHA (23rd Edition) 4500-NO3-B UV Spectrophotometric	0.5	4.29	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	352	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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SURFACE WATER MONITORING REPORT

MAJRI AREA

WESTERN COALFIELDS LTD.

JOB NO.4634420034

QE-JUNE 2023

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Environment Laboratory CMPDI RI-IV, NAGPUR	**Test Report** **Surface water quality monitoring data**	

TEST REPORT NO.	RIN/TR/JUNE-23/SW17	DATE OF ISSUE	31-08-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	1		

NAME OF LOCATION:	UP STREAM OF WARDHA RIVER W.R.T. MINE DISCHARGE			SAMPLING DATE:	23-05-23
SL. NO.	**PARAMETER**	**TEST METHOD**	**DETECTION LIMIT**	**ANALYSIS RESULT**	
1	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.05	
2	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	1	
3	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	330	
4	Oil & Greese - mg/l	IS 3025 (Part 39): 1991 (RA 2003) Partition gravimetric Method	2	BDL	
5	Dissolved Oxygen - mg/l	IS 3025 (Part-38):1989 (RA 2003) Winkler Azide Method	0.1	5.2	
6	B.O.D. (3 days at 27^{o}C) - mg/l	IS 3025 Part 44 : 1993 (RA 2014)	2	4.2	
7	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	
8	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL	
9	Hexavalent Chromium -mg/l	APHA, 23rd Edition 3500-Cr B Colorimetric Method: 2017	0.01	BDL	
10	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL	
11	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL	
12	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL	
13	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL	
14	Fluoride (as F^{-})- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.23	
15	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL	
16	Nitrate Nitrogen - mg/l	APHA, 23rd Edition 4500-NO^{3} B UV Spectrophotometric Method: 2017	0.5	BDL	
17	Sulphate (as SO_4^{-2}) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	120.3	
18	Chlorides (as Cl^{-})- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	50	

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report Surface water quality monitoring data	

TEST REPORT NO.	RIN/TR/JUNE-23/SW18	DATE OF ISSUE	31-08-23
NAME OF CUSTOMER	GM(ENV.), WCL(HQ), NAGPUR	SAMPLE DESCRIPTION	WATER SAMPLE
NAME OF AREA	MAJRI	SAMPLING METHOD: LSOP 5	
NAME OF PROJECT	NEW MAJRI II A OC	SAMPLING PLAN: LQR 47	
NO. OF PAGES	1		

NAME OF LOCATION:	DOWN STREAM OF WARDHA RIVER W.R.T. MINE DISCHARGE	SAMPLING DATE:	23-05-23

SL. NO.	PARAMETER	TEST METHOD	DETECTION LIMIT	ANALYSIS RESULT
1	pH Value	IS 3025 Part-11 Electrometric Method: 2017	2	7.58
2	Colour (Hazen)	IS 3025 Part-4 Pt-Co Method: 2017	1	3
3	TDS -mg/l	IS 3025 Part-16 Gravimetric Method: 2017	25	430
4	Oil & Greese - mg/l	IS 3025 (Part 39): 1991 (RA 2003) Partition gravimetric Method	2	BDL
5	Dissolved Oxygen - mg/l	IS 3025 (Part-38):1989 (RA 2003) Winkler Azide Method	0.1	4.6
6	B.O.D. (3 days at 27°C) - mg/l	IS 3025 Part 44 : 1993 (RA 2014)	2	3
7	Arsenic (As)-mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL
8	Lead as (Pb) -mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.005	BDL
9	Hexavalent Chromium -mg/l	APHA, 23rd Edition 3500-Cr B Colorimetric Method: 2017	0.01	BDL
10	Copper (as Cu) -mg/l	IS 3025 Part-42 AAS Flame Method :2014	0.03	BDL
11	Zinc as (Zn) -mg/l	IS 3025 Part-49 AAS Flame Method:2014	0.01	BDL
12	Selenium (Se) –mg/l	APHA, 23rd Edition 3114 C AAS-VGA Method:2017	0.005	BDL
13	Cadmium as (Cd)- mg/l	APHA, 23rd Edition 3113 B AAS GTA Method:2017	0.0005	BDL
14	Fluoride (as F^-)- mg/l	APHA, 23rd Edition 4500-F D SPADNS Method: 2017	0.02	0.98
15	Iron (as Fe) -mg/l	IS 3025 Part-53 AAS Flame Method:2014	0.06	BDL
16	Nitrate Nitrogen - mg/l	APHA, 23rd Edition 4500-NO^3 B UV Spectrophotometric Method: 2017	0.5	1.93
17	Sulphate (as SO_4^{-2}) -mg/l	APHA (23rd Edition) 4500E Turbidimetric Method:2017	2	131.5
18	Chlorides (as Cl^-)- mg/l	IS 3025 Part-32 1988 Argentometric Method:2014	2	54

BDL: BELOW DETECTION LIMIT

SCIENTIFIC ASSISTANT

DEEPANSHU SAHU
AUTHORIZED SIGNATORY

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

MAJRI 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

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

TEST REPORT NO.	RIN/TR/JUNE /HM98		DATE OF ISSUE
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR		SAMPLE DESCRIPTION
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185)		
NAME OF AREA	MAJRI		SAMPLING METHOD : LSOP 4
NAME OF PROJECT	NEW MAJRI -II (A) OC		SAMPLING PLAN : LQR 47
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	NMOC SUBSTATION	MMOA-1	07-04-2023
2	PRIMARY HEALTH CENTRE MAJRI BASTI	MMOA-3	07-04-2023
3	KUCHNA COLONY	MMOA-4	06-04-2023

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value		
				MMOA-1	MMOA-3	MMOA-4
1	Arsenic, µg/m^3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL	BDL
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m^3	BDL	BDL	BDL
3	Nickle, µg/m^3	ASTM D 4185	0.007 µg/m^3	0.0074	BDL	BDL
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 DETECTIO

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

TEST REPORT NO.	RIN/TR/JUNE /HM105		DATE OF ISSUE
NAME OF CUSTOMER	GM(ENV.),WCL(HQ), NAGPUR		SAMPLE DESCRIPTION
TEST REQUIRED	Heavy metals (As, Pb, Ni, Cr & Cd) in air samples (ASTM D 4185)		
NAME OF AREA	MAJRI		SAMPLING METHOD : LSOP 4
NAME OF PROJECT	NEW MAJRI II A OC		SAMPLING PLAN : LQR 47
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	FIELD MAIN. SHED AT SEC C HAUL ROAD	MMOF-1	21-04-2023
2	NMOC CHP	MMOF-2	21-04-2023

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value	
				MMOF-1	MMOF-2
1	Arsenic, µg/m^3	ASTM D 4185	0.0007 µg/m^3	BDL	BDL
2	Lead, µg/m3	IS 5182 PART 22	7.0 µg/m^3	BDL	BDL
3	Nickle, µg/m^3	ASTM D 4185	0.007 µg/m^3	0.0078	0.0082
4	Total Chromium, µg/m^3	ASTM D 4185	0.0045 µg/m^3	0.0041	0.0044
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 DETECTIO

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