

E.M.P. COMPLIANCE REPORT

AS ON 01.10.2023

DURGAPUR OPEN CASTMINE



WESTERN COALFIELDS LIMITED

CHANDRAPUR AREA

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PRESENT STATUS OF PROJECT WORK

PART - I

Name of the Project	DURGAPUR OPENCAST EXPANSION MINE
Location	At-P.O. Durgapur, Tahsil- Chandrapur, District-Chandrapur, Maharastra State.
Address for correspondence	Sub Area Manager, Durgapur Opencast Sub Area, At-P.O. Durgapur, Tahsil- Chandrapur, District-Chandrapur, Maharastra State. (M.S.) PIN - 442 404.
MOEF's Clearance No. & Date	J-11015/56/208-IA-II(M) Dated 10.11.2017
Period of Status Report	01.04.2023 to 30.09.2023
Date of Submission of Last Report	16.07.2023
Year of Commencement of Project work	1980

STATUS OF LAND ACQUISITION

TYPE OF LAND	REQUIRED AS PER EMP (In Hectares)	ACTUAL AREA ACQUIRED (In Hectares)
FOREST LAND	379.35	379.35
GOVT.LAND	172.95	172.95
AGRICULTURAL LAND	1070.20 (25 Ha. Outside ML Area)	1070.20
<i>TOTAL</i>	1622.50	1622.50

PRESENT STATUS OF LAND USE PATTERN (All Figures in Ha)

Sl.	<i>PARTICULARS</i>	As Per EMP in (Ha)
1	<u>External OB Dump</u>	461.38
2	Excavation	660.68
3	Infrastructure like Sub-station, CHP Service Building etc.	100.00
4	Undisturbed area (brought under plantation)	345.44
5	Area for village rehabilitation	25.00
6	Roads	10.00
7	Colony Land	20.00
	Total	1622.50

S OF LEGAL COMPLIANCE

A.	Consent under Water (Prevention & Control of Pollution) Act	Consent to Operate under Air & Water Act obtained from MPCB vide Format1.0/CAC/UAN No.MPCB-CONSENT-0000165635/CR/2307001646 Dtd: 26.07.2023 valid upto 31.03.2043 (Annexure-Y)
B.	Consent Fees under Water (Prevention & Control of Pollution) Act	Water cess paid up to December - 2015 Water cess has been abolished since 30.06.2017 Vide MPCB office order no.E-18/2018 Dtd. 07.02.2018.
C.	Environment (Protection) Act)	The project has been accorded Environmental Clearance by MOEF for 3.00 MTPA vide EC No. J-11015/56/2008-IA-II (M) dtd: 10.11.2017 (Annexure-X)
D.	Forest (Conservation) Act	Total forest area involved 379.35 ha. Breakup of the forest clearance is as below : <ul style="list-style-type: none"> 40.46 ha. – FLD -3679/ 1435-F3 dated 23rd may 1980 from Revenue Dept, Govt of Maharashtra ,Mantralay, Bombay. 136.54 ha. – F.8-35/2001-FC dated.19.09.2006 from MOEF 80.77 Ha.-F.8-123/2003/FC dated.8th Nov 2005 from MOEF. 121.58 ha– Stage- I FC granted Vide 8-84/2014-FC dated. 16th Sept 2015 from MOEF & CC.

PART – II

	AIR POLLUTION CONTROL	STATUS OF ENVIRONMENT
A.	No. of Ambient Air Monitoring Stations	04 Nos.(Fortnightly)
B.	* Details of Locations	Location code
1	Durgapur Village	CDOA-1
2	Filter Plant DOC/POC Township	CDOA-2
3	Sinhala Village	CDOA-3
4	Manager Office Sector V	CDOA-4
C.	** Ambient Air Quality Status for the Parameters prescribed by State Pollution Control Board.	
	A1 CDOA-1	At present at DOCP, the monitoring results at 4 stations mentioned above for the month of April-2023 to September-2023 are enclosed as (Annexure-Q)
	A ₂ : CDOA-2	
	A ₃ : CDOA-3	
	A ₄ : CDOA-4	

* Locations of the Sampling Stations have been delineated on the Working Mine Plan Enclosed.

** Detailed Report of Sampling & Analysis of Ambient Air Quality as per the Statute of Standard & Approved Laboratory: CMPDIL'S Report for the months of April-2022 to Sept.-2023 are enclosed.

	WATER POLLUTION CONTROL	
A.	No. of Stations & Frequency of Monitoring	At present 04 (Four) stations are monitored by CMPDIL Fortnightly.
B.	*Description of Locations	
	CDOW-1	Mine Discharge Sec IV / II
	CDOW-2	Mine Discharge Sec V
	CD (ETP) W-3	Workshop ETP Treated Water
	CD (STP) W-4	STP (Domestic Effluent)Treated Water
C.	Average Concentrations of Major Pollutants prescribed by State Pollution control Board	From the analysis report it can be seen that all parameters except pH value of mine discharge of Sector-V are within the permissible limit. Mine discharge of Sector-V being acidic is treated through lime dosing and diluted in abundant quarry of Padmapur OCP.

Environmental Monitoring Reports for the months of April-2023 to Sept-2023 are enclosed as (Annexure-Q).

	NOISE POLLUTION CONTROL	
A.	No. of Noise Monitoring Stations	02 No.
B.	* Description of Locations & dB (A) Value	CDON-1 CHP CDON-2 Durgapur Colony
C.	Average Concentrations of Major Pollutants prescribed by State Pollution control Board	From the analysis report it can be seen that all parameters are well within the permissible limit

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

** Detailed Report of Noise Monitoring as per the Statute to be enclosed: Report for the months of April-2022 to Sept.-2023 is enclosed as (Annexure-Q).

PART – III**STATUS OF IMPLEMENTATION OF PROVISIONS OF EMP AS ON 01.10.2023**

SI	PARTICULARS	As per EMP	01.04.2023 to 30.09.2023	Progressive
1.	Area Excavated (Hectares)	660.68	0.00	457.849
2.	Overburden Removed (MM ³)	--	7.629	278.739
3.	Overburden Back-filled (MM ³)	--	1.384	90.174
4.	Overburden Dumped OB dumps	461.38	6.245	111.65
5.	Overburden Dumped Embankment	--	--	--
6.	Area recovered under back filled (Ha.)	--	0.00	32.85
7.	Area Reclaimed Biologically (Hectares)	150.00	0.00	35.65 369.04 OB dump & plane area
8.	Annual Production : (Coal in M. Te., OBR in MM³) <u>Target Capacity: 3.00 Million T / Year Coal</u> <u>Present Capacity: 3.00 Million T / Year Coal</u>	COAL PRODUCTION (FROM:- 01.04.2023 to 30.09.2023) (i). Departmental 0.482 M .Te. <u>O.B. Removal</u> (i) Departmental :- 0.893 MM ³ (ii) Contractual :- 5.654 MM ³ Total OBR :- 6.547 MM³		

AFFORESTATION * (Nos.);

SI	LOCATION	Current Year	Progressive
1.	Dumps & Embankments	--	661800
2.	Safety Zone	--	--
3.	On other than ob dump & back filled area	----	680124
	Total	----	1341924
4	Area under plantation(Ha.)	-----	366.24 Ha.
5	No. of species / Ha.	3664 / Ha. Approx.	
6	Species planted	Teak, Sewan, Shishu, Bamboo, Neem, Karanj, Awala, Amrut, Viliatilimli, Cassia semmia, Glecidea, Eucalyptus etc.	

REHABILITATION & RESETTLEMENT

The Actual position as on 30.09.2023 are as follows.

R & R Details :

Existing (against earlier acquired land):


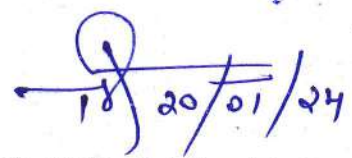
No. of Holdings	Employment given	Balance Employment	Monetary Compensation
264 (274 As per sharing basis)	202	57	15

Proposed (Against the additional land as per latest EC):

No. of Holdings	Employment Approved	Employment Given	Proposal Under Process	Monetary Compensation
NIL	NIL	NIL	NIL	NIL

1. LAND COMPENSATION :

- Rs.52.53 crores approved by Ministry of coal (MoC) for 260.09 Ha. Of tenancy land.
- Rs. 52.53 crores disbursed to 195 no. of land losers.
- Balance Rs.11.20 Crores is to be deposited in Tribunal due to dispute/court matter among the land loser.

Organisation set up at Project Level (Name & Designation of the Personnel to be given)	 Shri Harish Kumar Gawali , Sub Area, Manager Durgapur Opencast Sub Area.  Ashok Naik , Sub Area Engineer (Civil) Nodal Officer (Environment), Durgapur OCP.
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EXPENDITURE : CAPITAL
EXPENDITURE ON POLLUTION CONTROL MEASURES
AT DURGAPUR OCPAS ON 01.10.2023

(In Rs. Lakhs)

Sl. no	Head	Project	Amount in Rs. Lakh
1	Mist sprinklers in CHP	DOCP	4.58
2	Fixed Sprinklers in Haul road/approach road	DOCP	8.75
3	Black topping of roads	DOCP	76.66
4	Mobile tankers(28 Kl)	DOCP	56.00
5	Workshop ETP	DOCP	14.00
6	DETP(Colony)	DOCP	105.00
7	Sedimentation pond	DOCP	14.30
8	Land fill arrangement for ETP sludge	DOCP	2.17
9	CHP cladding	DOCP	4.38
10	Used oil collection platform	DOCP	2.45
11	Making Shed over Land fill arrangement for ETP sludge	DOCP	2.15
12	Addl. Borewell at DOCP for Dust suppression	DOCP	5.65
13	Block topping from Weigh bridge to colony gate junction -1750 mtr.	DOCP	125.46
14	Sprinkler arrangement for Coal transportation road upto Coal stack yard at Sector V (850 Mtrs.)	DOCP	28.73
15	Modification of treatment process of DETP	DOCP	6.20
16	Providing & fixing sprinkler at weigh bridge	DOCP	0.98
17	Providing & fixing sprinkler near concrete bunker at CHP	DOCP	1.87
18	Concrete pavement pavement to 100MT W.B. at DOC-SA	DOCP	6.44
19	Concrete pavement pavement to 50 MT W.B. at DOC -SA	DOCP	3.501
20	Arrangement of water supply system to rain guns & sprinklers	DOCP	17.88
21	Road sweeping machine	DOCP	36.91
22	CAAQMS	DOCP	54.52
23	Mist/ Fogger Spray Cannon at DOC	DOCP	9.00
24	G I Sheet Barricading at CHP	DOCP	5.64
		TOTAL	593.22

EXPENDITURE : REVINUE (In Rs. Lakhs)

ACCOUNT HEAD	CURRENT YEAR upto30.09.2023	PROGRESSIVE
Afforestation	0.50	376.30
Air pollution control(O & M of 3 Mobile Tankers, Rainguns, sprinklers etc.	0.00	344.54 approx.
Water pollution control(O & M of ETP, DETP & Sedimentation pond)	0.00	182.19 approx.
Monitoring	0.00	45.80 approx.
Legal Expenses(Consent fees)	20.29	124.34
Env. Audit + Water Cess	0.00	6.77
Others (JVS by MPCB)	0.30	14.79
Re-carpeting of main colony road.	0.00	190.69
Bitumen carpeting of internal road of DRM quarters at DOC-POC Township	--	12.00
GWT & pipeline sprinkler at CHP	0.00	3.12
Sprinklers along coal transportation road	--	16.88
Bitumenious carpeting of coal transportation Road	0.00	306.16
Total	0.00	1623.58


AREA NODAL OFFICER(ENV.)CHA


DY.GENERAL MANAGER, DOC-SA

**DURGAPUR OPENCAST EXPANSION PROJECT
CHANDRAPUR AREA
WESTERN COALFIELDS LIMITED**

PART-IV

Sub: - Compliance of Environmental Clearance Condition.
Ref: - EC Letter No. J-11015/56/2008-IA-II(M) Dated 10.11.2017
PERIOD :-01.04.2023 to 30.09.2023

Sr. No.	Condition	Compliance																							
i	The maximum production from the mine shall not exceed the sanctioned capacity of 3 MTPA as mentioned in the EC.	Noted & shall be maintained.																							
ii	The validity of the EC is for the life of the Mine or as specified in the EIA Notification. 2006, whichever is earlier.	Noted																							
iii	Standard Operating Procedures are required to be prepared and vetted by the company headquarters for adoption of environmental measures in course of various mining activities right from drilling, blasting to coal dispatch be submitted to EAC for Monitoring.	SOP is mine specific as per local conditions (Annexure-A) In addition Safety Management Plan (SMP) again is mine specific and is reviewed at periodic interval. The last SMP for Durgapur Opencast Project submitted to WCL-Headquarter for review.(Annexure-B)																							
iv	Transportation of coal should be carried out by covered trucks. Mitigation measures to be undertaken to control dust and other fugitive emission all along the roads by providing sufficient numbers of water sprinklers.	Transportation of Coal from this mine is totally dedicated to CSTPS. The entire coal produced from the mine is dispatched to CSTPS via Aerial Ropeway. In view of the above, as there is no road dispatch to CSTPS/outside mine premises, hence possibility of air pollution due to fugitive emission is negligible.																							
v	Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.	<p>The occupational health hazards are regularly maintained as per statute under IME & PME.Details as follows:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th><th colspan="2">PME/IME</th></tr> <tr> <th>Departmental</th><th>Contractual (IME)</th></tr> </thead> <tbody> <tr> <td>2018</td><td>180</td><td>08</td></tr> <tr> <td>2019</td><td>311</td><td>215</td></tr> <tr> <td>2020</td><td>221</td><td>31</td></tr> <tr> <td>2021</td><td>134</td><td>06</td></tr> <tr> <td>2022</td><td>110</td><td>66</td></tr> <tr> <td>2023 (Jan-Sept)</td><td>68</td><td>97</td></tr> </tbody> </table>	Year	PME/IME		Departmental	Contractual (IME)	2018	180	08	2019	311	215	2020	221	31	2021	134	06	2022	110	66	2023 (Jan-Sept)	68	97
Year	PME/IME																								
	Departmental	Contractual (IME)																							
2018	180	08																							
2019	311	215																							
2020	221	31																							
2021	134	06																							
2022	110	66																							
2023 (Jan-Sept)	68	97																							

vi	Controlled blasting techniques should be adopted to control ground vibration and fly rocks.	As per the blasting permission issued by DGMS, blasting is carried out taking stipulated precaution. (Annexure-C)																																																																																			
vii	Thick green belt of 30-40 m width to be provided to mitigate / check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yard, loading/ transfer points and also along internal roads/ main approach roads.	<div>1. As mentioned in point (iv), there is no road dispatch to CSTPS/outside mine premises, hence possibility of air pollution due to fugitive emission is negligible.</div> <div>2. Plantation done till date in the mine and surrounding, including avenue plantation, is as given below.</div> <div>A. Plantation details on Plain land:<table><tr><th>Sl. No.</th><th>Year of plants</th><th>No. of Plants</th><th>Area in Ha.</th><th>Location</th></tr><tr><td>1</td><td>1986-87</td><td>5200</td><td>1.00</td><td>Near MQ water tank</td></tr><tr><td>2</td><td>1989-90</td><td>123000</td><td>23.75</td><td>Near Check Post, HEMM & VIP Guest House</td></tr><tr><td>3</td><td>1990-91</td><td>213000</td><td>34.00</td><td>In front of NM tank, WTP, CHP & Foothill of C dump</td></tr><tr><td>4</td><td>1991-92</td><td>25000</td><td>4.50</td><td>Haul road, near check post and along water channel</td></tr><tr><td>5</td><td>1992-93</td><td>30000</td><td>6.00</td><td>LPG go-down & Near Filter Plant</td></tr><tr><td>6</td><td>1993-94</td><td>60000</td><td>12.00</td><td>Near CHP & Behind B type qtr.</td></tr><tr><td>7</td><td>1996-97</td><td>50000</td><td>10.00</td><td>Near workshop</td></tr><tr><td>8</td><td>1997-98</td><td>60000</td><td>12.30</td><td>Near filter plant, Hanuman mandir& View point</td></tr><tr><td>9</td><td>1998-99</td><td>12574</td><td>5.25</td><td>Avenue & Behind workshop</td></tr><tr><td>10</td><td>1999-2000</td><td>24000</td><td>7.50</td><td>Near pond, Haul road side & Marathi School</td></tr><tr><td>11</td><td>2000-01</td><td>2900</td><td>1.00</td><td>Near NB type (Neem Plant)</td></tr><tr><td>12</td><td>2001-02</td><td>2500</td><td>1.00</td><td>Near Bank (Neem Plant)</td></tr><tr><td>13</td><td>2002-03</td><td>3000</td><td>1.50</td><td>Near masque (Neem Plant)</td></tr><tr><td rowspan="2">14</td><td rowspan="2">2003-04</td><td>5000</td><td>2.00</td><td>Near filter plant (Neem Plant)</td></tr><tr><td>1000</td><td>0.50</td><td>Near CHP Durgapur Village (Neem Plant)</td></tr><tr><td>15</td><td>2004-05</td><td>35000</td><td>14.00</td><td>Between DRM Qtrs. And coal transportation road</td></tr></table></div>	Sl. No.	Year of plants	No. of Plants	Area in Ha.	Location	1	1986-87	5200	1.00	Near MQ water tank	2	1989-90	123000	23.75	Near Check Post, HEMM & VIP Guest House	3	1990-91	213000	34.00	In front of NM tank, WTP, CHP & Foothill of C dump	4	1991-92	25000	4.50	Haul road, near check post and along water channel	5	1992-93	30000	6.00	LPG go-down & Near Filter Plant	6	1993-94	60000	12.00	Near CHP & Behind B type qtr.	7	1996-97	50000	10.00	Near workshop	8	1997-98	60000	12.30	Near filter plant, Hanuman mandir& View point	9	1998-99	12574	5.25	Avenue & Behind workshop	10	1999-2000	24000	7.50	Near pond, Haul road side & Marathi School	11	2000-01	2900	1.00	Near NB type (Neem Plant)	12	2001-02	2500	1.00	Near Bank (Neem Plant)	13	2002-03	3000	1.50	Near masque (Neem Plant)	14	2003-04	5000	2.00	Near filter plant (Neem Plant)	1000	0.50	Near CHP Durgapur Village (Neem Plant)	15	2004-05	35000	14.00	Between DRM Qtrs. And coal transportation road
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16	2007-08	2200	1.00	Near Colony turning & near DETP
17	2012-13	8500	3.39	Near CHP Premises Near HEMM (2.52 Ha)
18	2013-14	16250	6.50	Near DOC Check post
19	2016-17	1000	0.40	Behind Colony entry gate
	Total	680124	147.59	

B. Plantation on OB Dumps and (Internal & External Backfilled Area):

Sl. No	Year of Plantation	No of Plants	Area in Hect.	Location	Type of Dump
1.	1990-91	2000	0.70	C dump foot hill	External
2.	1993-94	50000	10.00	E dump	External
3.	1994-95	23010 12500 34736 22754	20.00	D dump H dump C dump C dump	External Internal External External
4.	1995-96	84000	15.00	E dump	External
5.	1996-97	50000	19.50	A & B dump	External
6.	1997-98	24000 9000	10.65	G dump H dump	Internal Internal
7.	1998-99	6250 21250	11.00	G dump E dump	Internal External
8.	1999-00	16000	8.00	C dump	External
9.	2000-01	25000 15000 10000	20.00	A & B C dump C dump	External External External
10.	2002-03	10000	9.00	I dump	Internal
11.	2005-06	68000	27.00	A & B	External
12.	2007-08	22800	9.00	Sect. V side	External
13.	2009-10	50000	20.00	Dump A & B, and On	External
14.	2010-11	50000	20.00	Dump & slopes	External
15.	2012-13	28500	8.00	On Dump slopes	External
16.	2018-19	15000	6.00	Sector V	Internal
17.	2020-21	5000	2.00	Near View	Internal
18.	2020-21	7000	2.80	Kargil Dump	External
	Total	661800	218.65		

(a)	<u>Mining</u>	
(i)	No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environmental, Forest and Climate Change. No change in the calendar plan including Excavation, quantum of coal and waste should be made.	Noted. No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environmental, Forest and Climate Change. No change in the calendar plan including Excavation, quantum of coal and waste shall be made.
(ii)	Mining shall be carried out as per the approved mining plan, and also abiding by the relevant laws related to coal mining and the circulars issued by Directorate General mines safety (DGMS). An approved progressive Mine Closure Plan shall strictly be complied with and submitted.	Noted. Mining is being carried out as per the approved mining plan, and also abiding by the relevant laws related to coal mining and the circulars issued by Directorate General mines safety (DGMS). The copy of MCP Approval by WCL Board is enclosed (Annexure-D). Progressive Mine Closure activities like backfilling, reclamation etc. are carried out simultaneously with mining operations
(b)	<u>Land Reclamation</u>	
(i)	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once on three years for monitoring land use pattern and report submitted to Ministry of Environmental, Forest and Climate Change its Regional Office.	Digital processing of entire mine lease area using remote sensing technique for DOCP is carried out every year. The report of 2021 copy enclosed (Annexure-E). The same is also uploaded on company website.
(ii)	Final mine avoid depth should not be more than 40 m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with thick top soil. The land after mining should be restored for agriculture or forestry purpose.	As per the approved mining plan the final depth is 150 m. In this regards it is submitted that a formal request for modification of the said condition has been submitted to MoEF. Formal letter from MoEF recommending is RECEIVED (Annexure-F)

(iii)	The top soil, if any, shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The Overburden dumps should be vegetated with suitable native species to prevent erosion and surface run off. The entire excavated are shall be backfield and afforested in line with the approved Mine Closure Plan. Monitoring and Management of rehabilitated areas should continue until the vegetation becomes self- sustaining. Compliance shall be submitted to the Ministry of Environment, Forest and climate Change and its Regional Office six monthly basis.						
		Re mo val	Year of Plantati on	No of Plants	Area in Hect.	Location	Type of Dump
		1.	1990-91	2000	0.70	C dump foot hill	External
		2.	1993-94	50000	10.00	E dump	External
		3.	1994-95	23010 12500 34736 22754	20.00	D dump H dump C dump C dump	External Internal External External
		4.	1995-96	84000	15.00	E dump	External
		5.	1996-97	50000	19.50	A & B dump	External
		6.	1997-98	24000 9000	10.65	G dump H dump	Internal Internal
		7.	1998-99	6250 21250	11.00	G dump E dump	Internal External
		8.	1999-00	16000	8.00	C dump	External
		9.	2000-01	25000 15000 10000	20.00	A & B C dump C dump	External External External
		10.	2002-03	10000	9.00	I dump	Internal
		11.	2005-06	68000	27.00	A & B	External
		12.	2007-08	22800	9.00	Sect. V side	External
		13.	2009-10	50000	20.00	Dump A & B, and On	External
		14.	2010-11	50000	20.00	Dump & slopes	External
		15.	2012-13	28500	8.00	On Dump slopes	External
		16.	2018-19	15000	6.00	Sector V	Internal
		17.	2020-21	5000	2.00	Near View	Internal
		18	2020-21	7000	2.80	KargilDump	External
	Total	661800	218.65				
(iv)	Greenbelt shall be developed all along the mine lease area in a phased manner. The width of the green belt should not be less than 100 ha. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	Plantation has been carried in 366.24 Ha in total at various locations in Durgapur Opencast Project with an approx. 1341924 nos. of plants. Details provided above.					

(c)	<u>Emission, Effluents, and Waste Disposal</u>	
(i)	Transportation of coal by road should be carried out by covered truck only. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM 2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board in this regard.	<ol style="list-style-type: none"> 1. Transportation of Coal outside mine premises is done to CSTPS through Ariel Ropeway. 2. Internal Transportation is carried out via tarred road. <ol style="list-style-type: none"> a. 79 no of sprinklers are provided along Coal transport road, approach road to weighbridge and Coal stock yard b. 08 no of Rain guns are provided in CHP Area, Coal Stock yard and ETP Premises. c. 85 nos. of Mist spray arrangement in CHP. d. 4 No. of Mobile tankers are deployed on Haul roads and Coal Transport roads. e. Approx. 5 km coal transport road is tarred (black topped) to reduce dust emissions. f. 22 nos. of sprinklers are provided at CHP. g. 2 no. of fogger canon is deployed at CHP.
(ii)	Vehicular emissions shall be kept under control and regularly monitored. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centers.	<ol style="list-style-type: none"> 1. Coal is transported outside mine premises to CSTPS through Ariel ropeway hence no vehicular emission arises. 2. Vehicles engaged in internal road transport from Coal Stockyard to Crusher are awarded contract after checking their PUC Certificate.
(iii)	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO2 and NOx location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the state pollution control board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr etc carried out at least once in six months.	<p>Following four Ambient Air Quality Monitoring Stations have been established in the core zone and buffer zone for PM10, PM2.5, SO2 & NOx monitoring.</p> <ol style="list-style-type: none"> a. Manager Office, Quarry V-Core zone. b. Filter Plant Core zone c. Durgapur Village buffer zone. d. Sinhala Village buffer zone. <p>These stations have been established as per metrological data & in consultation with MPCB. The Ambient Air Quality Monitored at this stations is as per the Env. Protection Amendment Rules 2000. Env. Monitoring Reports are regularly submitted to Regional Office MoEF& CC and MPCB. Vide email from anoenv.cha@coalindia.in.</p> <p>Heavy metals monitoring is done on half yearly basis. Report submitted Vide email from wclchaenv@gmail.com. copy enclosed as (Annexure-H)</p>
(iv)	Crusher/feeder and breaker material transfer points should invariably be provided with dust suppression system. Belt-conveyors should be fully covered to avoid air borne dust. Drills shall	<p>Crusher is provided with mist spray system. Belt conveyor covered side cladding. Photograph attached.</p> <p>Drills-</p> <ol style="list-style-type: none"> 1. Total 6 no. of drills are in operation. 2. Two no. of drills are wet operated. 3. All drills are fitted with dust extractors.

	be wet operated or fitted with dust extractors.	
(v)	The project proponent shall not alter the major channels around the side site. Appropriate embankment should be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary should be of suitable dimensions and critical patches should be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundations.	<p>At present there is no alteration of major channels.</p> <p>This diversion, if any, will be carried out only after due permission of State Government Authorities & with design of CDO, Nashik. During implementation, the recommendation of the State Government/CDO Nashik will be duly followed and the same will be intimated to your good office.</p> <p>The embankment has been built to prevent the danger of inundation of the mine. It has length of approx. 200 m, width of 50 m at top and average height of 20 m.</p> <p>Embankment has plantation and is stabilized.</p>
(vi)	Rain water harvesting shall be implemented for conservation and augmentation of ground water resources in the area in consultation with Central ground Water Board.	<p>Rain water harvesting structure covering the area 477 sq. m exist at Sub area Manager Office of Durgapur Opencast Project (DOCP) with total 9 No. of collecting pits with dimensions 0.9m x 0.6m x 0.3m connected to 1 No. main recharge pit of dimension 1.2m x 1m x 1m.</p> <p>Other Recharge structure constructed in the 10 km buffer zone of the project are as follows:</p> <p>Artificial recharge to ground water system at the periphery of the anticipated influence area by local stagnation in low lying areas/drains by providing Checkdam on Zarpat river of 100 m length near Anchaleshwar Temple.</p> <p>Additionally, Roof Top Rainwater harvesting system is installed at AGM Office, Chandrapur area for recharging ground water.</p>
(vii)	Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps and OB dumps to prevent run off of water and flow of sediments directly in to the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. the drain shall be regularly de-silted particularly after monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. Dimension of the	<p>Catch drains of size (Avg. Width: 3.50 mtr, Avg. Depth: 2.50 mtr) are provided around periphery of the OB dumps as well as soil dumps to arrest silt and sediment flow from the respective dump sites. In case of OB benches in the quarry, cross drainage are provided which carries silt and sediment into the mine sump (300m X200m X5m) made at the floor which accumulates all the silt and act as first stage settling pond with adequate retention time for proper settling of suspended particles. The supernatant water is the pumped out through pumps onto the surface into the surface settling tank of dimensions 176 mx 6m x 1.30m for secondary treatment. The clear water from surface sedimentation tank is being used for watering the mine area. Roads and green belt development. The catch drains mentioned above are being regularly de-silted and maintained properly.</p> <p>Garland drains of dimension (Avg. width: 3.50 mtr, Avg.</p>

	retaining wall to be constructed 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.	depth: 2.50 mtr) are provided around the periphery of the excavated area (approx. 5 km), which carries surface runoff and the drains are regularly de-silted before onset of monsoon. The mine sump is having sufficient capacity to deal with peak rainfall. Surface runoff from these garland drains collected into sump which allow accumulation of silt material and sufficient retention time for settling of silt materials.
(viii)	Industrial waste water (CHP, workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	<p>Workshop ETP of 150 KLPD capacity in operation with pre-settling tank, drain, oil & grease trap, sedimentation tank & clear water tank. The treated effluent is reused for washing of HEMM & dust suppression. There is no discharge of effluents to outside nallah.</p> <p>Mine water discharge water is made to pass through mine sump and surface sedimentation pond tanks with adequate retention time for settling of suspended particles before mine water is discharged outside.</p> <p>Regular water quality monitoring is carried out by CMPDIL and reports of the same are being submitted regularly to RO, MoEF& CC and MPCB. Details of submission are as follows:</p> <ol style="list-style-type: none"> 1) vide email from anoenv.cha@Coalindia.in on dtd: 05.06.2023 for the month of April-2023 2) vide email from anoenv.cha@Coalindia.in on dtd: 08.07.2023 for the month of May-2023 3) vide email from anoenv.cha@coalindia.in on dtd: 05.08.2023 for the month of June- 2023 4) vide email from anoenv.cha@coalindia.in on 02.09.2023 for the month of July-2023 5) vide email from anoenv.cha@coalindia.in on dtd:01.10.2023 for the month of August-2023 6) vide email from anoenv.cha@coalindia.in on dtd: 29.10.2023 for the month of September-2023
(d)	<u>Noise & Vibration Control</u>	
(i)	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 plug/muffs.	In order to control excessive noise during operation regular maintenance of all HEMMs, plantation in the open spaces, around mine periphery is done and supply of Personnel Protection Equipment namely ear plugs and muffs to the workers in the core zone.
(ii)	Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.	Controlled blasting is being done as per DGMS guidelines with delay detonators and shock tubes.

(e)	<u>Occupational Health & Safety</u>																								
(i)	Besides carrying out regular periodic health check-up of their workers, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency/institution within the District/State and the results reported to this Ministry and to DGMS.	<p>Periodic Health Checkup of 20% workforce is done every year. Details of IME/PME for Departmental and Contractual Manpower is given below:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th><th colspan="2">PME/IME</th></tr> <tr> <th>Departmental</th><th>Contractual (IME)</th></tr> </thead> <tbody> <tr> <td>2018</td><td>180</td><td>08</td></tr> <tr> <td>2019</td><td>311</td><td>215</td></tr> <tr> <td>2020</td><td>221</td><td>31</td></tr> <tr> <td>2021</td><td>134</td><td>06</td></tr> <tr> <td>2022</td><td>110</td><td>66</td></tr> <tr> <td>2023 (Jan-Sept)</td><td>68</td><td>97</td></tr> </tbody> </table>	Year	PME/IME		Departmental	Contractual (IME)	2018	180	08	2019	311	215	2020	221	31	2021	134	06	2022	110	66	2023 (Jan-Sept)	68	97
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(ii)	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. Supervisory staff shall be held responsible ensuring compulsory wearing of dust mask.	<p>The persons exposed to dusty area being provided with protective gears like dust masks with goggles which is also a statutory requirement.</p> <p>As per statute all personnel working in mines will be given training and retraining for safety aspects.</p> <p>For surveillance of occupation health among workers periodic medical examination of approx. 1/5 workers of DOCP are sent for periodical medical examination every year under health surveillance programme (Periodical Medical Examination).</p>																							
(iii)	In case of outsourcing of work through MDO, the project proponent shall ensure the strict enforcement of the above conditions.	Noted. The mine is not outsourced to MDO, however part of mining operations is carried out through Hiring of Equipment (HOE) contract.																							
(f)	<u>Biodiversity</u>																								
(i)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.	As there is no Schedule-I species present in the Mine lease area hence not applicable. A study has been commissioned by WCL and CTPS, Chandrapur to NEERI and Wildlife Institute of India regarding "Impact Assessment of coal mines of WCL and Thermal Power Station of CTPS on wildlife and preparation of Management Plan". The study of two year duration is in progress and based on the findings of the study, suitable action shall be taken.																							

(g)	<u>Implementation of action plan as per public hearing and CSR activities</u>																			
(i)	Implementation of action plan on the issues raised during the Public Hearing shall be ensured. The project proponent shall complete all the tasks as per the action plan submitted with budgetary provisions during the public hearing. Land oustees should be compensated as per the norms laid out R&R Policy of the Company or the national R&R Policy or R&R Policy of the state Government, whichever is higher.	<p>Public Hearing was last conducted on 30.10.2009. Copy of Public hearing compliance enclosed as (Annexure-J).</p> <p>R&R details:</p> <p>Existing (against earlier acquired land):</p> <table><tr><th>No. of Holdings</th><th>Employment given</th><th>Balance Employment</th><th>Monetary Compensation</th></tr><tr><td>264(274 as per sharing basis)</td><td>202</td><td>57</td><td>15</td></tr></table> <p>Proposed (against the additional land as per latest EC):</p> <table><tr><th>No. of Holdings</th><th>Employment Approved</th><th>Employment given</th><th>Proposal under process</th><th>Monetary Compensation</th></tr><tr><td>NIL</td><td>NIL</td><td>NIL</td><td>NIL</td><td>NIL</td></tr></table> <p>Land Compensation: Rs. 52.53 Crores approved by Ministry of Coal(MoC) for 260.09 Ha. Of tenancy land.</p> <p>Rs. 52.53 Crores disbursed to 208no.of Land losers.</p> <p>Balance Rs. 11.20 Crores is to be deposited in Tribunal due to dispute/court matter among the land loser.</p>	No. of Holdings	Employment given	Balance Employment	Monetary Compensation	264(274 as per sharing basis)	202	57	15	No. of Holdings	Employment Approved	Employment given	Proposal under process	Monetary Compensation	NIL	NIL	NIL	NIL	NIL
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(ii)	The Board of every company, shall ensure that the company spends in every financial year, at least two percent of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy under section 135 of the companies Act 2013, for the socio economic development of the neighborhood.	<p>Developmental activities are undertaken in CSR are as per UNDP Human Development Indices like providing basic infrastructure (Roads, drinking water, sanitation facilities etc), Skill development Training for Employment & Entrepreneurship development for improving GDP, Primary schools for promoting basic education and Medical Camps for Health care and lifespan improvement are undertaken in CSR activities.</p> <ul style="list-style-type: none">• On rotation basis most of the villages are covered till the life of the project.• As per the revised CSR rules of CIL dated 30/12/2015, under Companies Act, fund allocation for CSR is Rs.2/tonne of Coal produced or 2 % of the average net profit of the company for the immediate preceding financial years.• Villages under 25 km radius of project are covered for implementation of CSR Works.• To implement CSR activities, a village level committee termed as “gram sabha of gram panchayat” requests list of activities to be undertaken in their respective villages.• The CSR activities are carried out through following set																		

		<p>up:</p> <ol style="list-style-type: none"> 1. Board level Committee headed by one Independent Director & 2 Functional Directors 2. WCL-HQ CSR & Sustainability Committee constituted of HoDs of Environment, Civil, Finance & Medical. 3. Area level CSR Committee headed by Area General Manager, HoDs of Civil, Personnel, Finance & CSR <ul style="list-style-type: none"> • The above mentioned committees scrutinize the proposals or request from the villages at each level before approval and then implement the activities. At the end of the financial year, the activities undertaken by CSR fund is audited and uploaded onto WCLs website which fulfills the requirement of monitoring. <p>Apart from Socio-Economic welfare programmes, additionally, programmes related to Environment are also being carried out.</p> <ol style="list-style-type: none"> 1. Construction of APJ Abdul Kalam Eco park @ 5.00 crores. 2. Cleaning/ desilting of Erai river of Chandrapur @ Rs.5.41 crores. 3. 100 Ha Plantation done on degraded forest land in 2014-15 at Babupeth and Morwa for Rs. 2.02 crores. 4. 50 Ha Plantation done on degraded forest land in 2015-16 at Babupeth for Rs. 1.20 crores. 5. Rs. 25 lakhs given to Chandrapur Municipal Corporation-Chandrapur for development/plantation in open spaces in Chandrapur city. 6. Rs. 9 lakhs given to CMC-Chandrapur for cleaning of Ramalalake.
(h)	<u>Corporate Environment Responsibility</u>	
(i)	The Company should have a well laid down environment policy approved by the Board of Directors.	A well laid down Policy exists for Coal India Limited and the copy of the same is enclosed as (Annexure-I).
(ii)	To have proper checks and balances, the company should have a well laid down system of reporting of non-compliance/ violations of environmental norms to the Board Of Directors of the Company and / or stakeholders at large .	To have proper checks and balances the Company has a well laid down Environment policy for stakeholder at large. Environment monitoring reports and all other relevant information is being uploaded on WCL website in public domain.
(iii)	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 Organization.	<p>A full-fledged Environmental Cell with qualified & trained team of engineers exists at WCL HQ headed by GM (Env.), who report to Director (Tech) who is also Functional Director of the WCL Board.</p> <p>Environment Cell at Area level is headed by GM(Opn)/ Area General Manager and assisted by Area Nodal Officer (Env.) and Assistant Managers.</p>

		At Project level the cell as headed by Sub Area Manager & assisted by Nodal Officer (Env) of the Project.				
(iv)	The funds earmarked for environmental protection measures should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional office.	The funds earmarked for Environmental protection measures are kept separate and are not used for any other purpose. Details of Budget allocated and expenditure incurred for the 2021-22, till date is given below:				
		Year	Budget Allocated (Lakhs)		Expenditure Incurred (Lakhs)	
			Capital	Revenue	Capital	Revenue
		2021-22	196.02 (Area)	2256.71 (Area)	5.64 (DOC)	1221.32 (Area)
		2020-21	26 (DOC)	452.37 (Area)	14.15 (DOC)	357.81 (Area)
		2019-20	23 (DOC)	484.40 (AREA)	7.49 (DOC)	354.15 (AREA)
		2018-19 (till date)	186.25 (DOC)	297.90(Area)	75.77 (DOC)	264.07 (Area)
		2017-18	16.02 (DOC)	531 (Area)	2.21 (DOC)	275.66 (Area)
		2016-17	16.50 (DOC)	411.36 (Area)	16.35 (DOC)	353.88 (Area)
(i)	<u>Statutory Obligations</u>					
(i)	Environmental Clearance is granted subject to final outcome of Hon’ble Supreme Court of India. Hon’ble High Court, NGT and any other Court of Law, if any as may be applicable to the project.	Noted.				
(ii)	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, as applicable to the project.	Noted.				
(iii)	The project proponent shall obtain consent to Establish and consent to Operate from the concerned State Pollution Board prior to increase in capacity of washery and effectively implement all the conditions stipulated there in .	Noted.				
(iv)	Project proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) for drawl of water of water (surface and ground water).	Ground Water NOC obtained vide NOC No. CGWA/NOC/MIN/ORIG/2019/6731 dtd. 28.11.2019 VALID UPTO 27.11.2021& Application of Renewal dtd; 29.09.2022. copy enclosed as (Annexure-K). The NOC renewal has been approved, formal copy of NOC Renewal is awaited.				
(j)	<u>Monitoring of Project</u>					
	Regular monitoring of ground	Regular monitoring of ground water level & quality in bore				

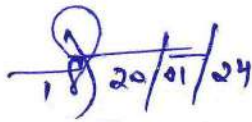
	<p>water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The Monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environmental, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.</p>	<p>wells is being done by establishing a network of existing wells by Anacon Laboratories, Nagpur on regular basis in core & 10km radius buffer zone.</p> <p>The Monitoring results are regularly submitted to Regional office, MoEF& CC and SPCB. (Annexure-L)</p>
(ii)	<p>The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguard to the Ministry of Environment, Forest and climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.</p>	<p>Noted for Compliance.</p> <p>Details of Last submitted Reports to Regional Office, MoEF& CC;</p> <ul style="list-style-type: none"> • Submitted on dtd. 16.07.2023 vide email form anoenv.cha@Coalindia.in (For Oct-22 to March-23) • Submitted on dtd. 12.11.2022 vide email form durgapurocwcl@gmail.com (For April-22 to Sept-22) • Submitted on dtd. 06.06.2022 vide email form durgapurocwcl@gmail.com (For Oct-21 to March-22) • Submitted on dtd. 30.11.2021 vide email form durgapurocwcl@gmail.com (For April-21 to Sept-21) • Submitted on dtd. 30.05.2021 vide email form durgapurocwcl@gmail.com (For Oct-20 to March-21) • Submitted on dtd. 20.11.2020 vide email from durgapurocwcl@gmail.com (For April-20 to Sept.-20)
(iii)	<p>The Regional office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional office by furnishing the requisite data/information/monitoring reports.</p>	<p>Noted for Compliance.</p> <p>Full co-operation from Project Authorities will be extended to Officers of Regional Office, MoEF& CC, Nagpur by furnishing the requisite data/information/monitoring reports.</p>

(iv)	The activities pertaining to development of green belt/horticulture shall be reported to concerned Regional office of MoEF& CC on six monthly basis from the date of commencement of mining operations.	Noted
(v)	For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring.	<p>Complied.</p> <p>Details of Last submitted Report:</p> <p>Details of Last submitted Reports to Regional Office, MoEF& CC;</p> <ul style="list-style-type: none"> Submitted on dtd. 16.07.2023 vide email form anoenv.cha@Coalindia.in (For Oct-22 to March-23) Submitted on dtd. 12.11.2022 vide email form durgapurocwcl@gmail.com (For April-22 to Sept-22) Submitted on dtd. 06.06.2022 vide email form durgapurocwcl@gmail.com (For Oct-21 to March-22) Submitted on dtd. 30.11.2021 vide email form durgapurocwcl@gmail.com (For April-21 to Sept-21) Submitted on dtd. 30.05.2021 vide email form durgapurocwcl@gmail.com (For Oct-20 to March-21) Submitted on dtd. 20.11.2020 vide email from durgapurocwcl@gmail.com (For April-20 to Sept.-20)
(k)	Miscellaneous	
(i)	A copy of clearance letter will be marked to concerned panchayat/ local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	A copy of clearance letter was marked to Sarpanch, Durgapur Gram panchayat& Sinhala Gram Panchayat, Dist- Chandrapur vide WCL/CHA/AGM/ENV/698 dtd: 17.11.2017, copy enclosed as (Annexure-M)
(ii)	An electronic copy of the EC letter shall be marked to the concerned State pollution Control Board, Regional office, District Industry Sector and Collector's Office/ Tehsildar Office information in public domain with 30 days.	An Electronic Copy of the EC letter was duly emailed to the concerned State Pollution Control Board, Regional office, District Industry Sector and Collector office via email id: prashantthaker208@gmail.com dtd: 19.11.2017, copy enclosed as (Annexure-N). Same has been sent in hard copy vide letter WCL/CHA/AGM/ENV/698 dtd: 17.11.2017.

(iii)	<p>The EC letter shall be uploaded on the company's website. The compliance status of the stipulated EC condition shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.</p>	<p>Noted.</p> <p>The EC letter uploaded on the company website www.westerncoal.nic.in</p> <p>Six Monthly EC Compliance is being regularly submitted to the Regional Office of MoEF, Nagpur.</p> <p>Details of Last submitted Report:</p> <ul style="list-style-type: none"> • Submitted on dtd. 16.07.2023 vide email form anoenv.cha@Coalindia.in (For Oct-22 to March-23) • Submitted on dtd. 12.11.2022 vide email form durgapurocwcl@gmail.com (For April-22 to Sept-22) • Submitted on dtd. 06.06.2022 vide email form durgapurocwcl@gmail.com (For Oct-21 to March-22) • Submitted on dtd. 30.11.2021 vide email form durgapurocwcl@gmail.com (For April-21 to Sept-21) • Submitted on dtd. 30.05.2021 vide email form durgapurocwcl@gmail.com (For Oct-20 to March-21) • Submitted on dtd. 20.11.2020 vide email from durgapurocwcl@gmail.com (For April-20 to Sept.-20)
(iv)	<p>The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7days of the issue of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.Environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.</p>	<p>Complied.</p> <p>Advertisement of EC was published in the following newspapers:</p> <ol style="list-style-type: none"> 1. The Hitvada (English) Dated 19.11.2017 2. Chandrapur Samachar (Marathi) Dated 19.11.2017 <p>Copy enclosed as (Annexure-O).</p>
(v)	<p>The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the PP for the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC condition and shall be sent to the respective Regional Office of the MoEF& CC by-email.</p>	<p>Complied.</p> <p>The Environment Statement for the financial year 2022-23 has already been submitted online on MPCB (Maharashtra Pollution Control Board) Portal vide MPCB-ENVIRONMENT_STATEMENT-0000060992 dtd: 29.09.2023 and the same has been uploaded on WCL Website.</p> <p>Copy enclosed as (Annexure-P).</p>
5	<p>The Proponent shall abide by all the commitments and</p>	<p>Agreed and being complied</p>

	recommendations made in the EIA/EMP report and also that during presentation to the EAC. The commitments made by the project proponent to the issues raised during public hearing shall also be implemented by the proponent.	
6	The proponent shall obtain all necessary clearances/ approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agreed
7	The PP shall set up an Environment Audit cell with the responsibility and accountability to ensure implementation of all the EC conditions.	<p>An Environment Cell already exists at the project level, Area Level and Corporate level.</p> <p>At project level, the Environment Cell consists of a Nodal Officer (Env) and is headed by Sub-Area Manager. At Area level, the cell is headed by GM (Operations) and is assisted by Area Nodal Officer (Environment) who report directly to the Area General Manager.</p> <p>At corporate level, the Environment Cell consists of an elaborate team led by GM (Environment) which reports to Director Tech (Projects & Planning)</p>
8	Concealing factual data or submission of false/ fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this EC and attract action under the provisions of Environment (Protection) Act, 1986.	Noted
9	The above conditions will be enforced inter-alia, under the provisions of the water (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court Law relating to the subject matter. The project proponent shall ensure to undertake and	Agreed

	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.	
10	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Noted



**SAE (Civil)
DOC SA**



**Mine Manager
DOCM**



**SAM
DOCSA**

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

Monitoring Report

DATA SHEET

No.WCL/CHA/DOC/1

1.Project type :River- valley/Mining/Industry/ : MINING

Thermal/Nuclear/Other (Specify)

2. Name of the Project : DURGAPUR OPENCAST PROJECT
3. Clearance letter (s)/ OM No. & date : J-11015/56/2008-IA.II(M) Dtd. 10.11.2017.
4. Location
- a) District : CHANDRAPUR
- b) State : MAHARASHTRA
- c) Latitude/Longitude : Lat.19 °- 53'-35''to 19-54''-33''
Long. 79-18'-04'' to 19-19-30''
- 5.Address for correspondence :
- a) address of concerned Project Executive
Project Chief Engr. (With Pin code & Tel: Sub Area Manager,Durgapur Sub Area
. /telex/Fax P.O.Durgapur,Dist Chandrapur (M.S)
Ph. 07172-265269,265270,265633
- 6, Salient features
- a)of the project : Enclosed as I
- b)of the Environmental management : Enclosed as II
Plans
7. Break up of the project area : 1622.50 Ha.
- a)submergence area : forest & non forest : Not Applicable
- b)others

FOREST LAND	379.35 Ha.
GOVT. LAND	172.95 Ha.
AGRICULTURAL LAND	1070.20 Ha.
TOTAL	1622.50 Ha.

8. Break up of the project affected population with enumeration of those losing houses/ dwelling units only, agricultural land only, both dwelling units &Agricultural land& landless labourers/artisan : No. of holdings 264,
,Employment given 202,Proposal under process 57,
Monetary Compensation 15.
- a) SC , ST/ ADIWASI : -----

- b) Others : -----
(Please indicate whether these figures are based : ----
on any scientific and systematic survey carried
out or only provision figures, if as survey is
carried out give details and years of Survey)
9. Financial details :
- a) Project cost as originally planned : Rs. 378.871 Crores
and subsequent revised estimates
and year of price reference
- b) Allocation made for environmental : Details enclosed as II.
management plans with item wise and
year wise break-up
- c) Benefit cost ratio/Internal Rate of :
Return and the year of assessment ----
- d) Whether © includes the cost :
of environmental management ----
as shown in the above
- e) Actual expenditure incurred on the : Rs. 390.64 Crores (as on 30.09.2022)
Project so far
- f) Actual expenditure incurred on the : Capital-Rs. 593.22 Lakhs and
Environmental management plans Revenue Expenditure of Rs.1623.58
Lakhs as on 30.09.2023.
10. Forest land requirement
- a) The status of approval for diversion of : Forest land acquired vide Sanction no;
forest land for non-forestry Sanction : No. 8-123/2003-FC dt. 08.11.2005&
No. 8-35/2001-FC dt. 12-06-2002
- b) The status of clearing felling : Rs. 68.50 Lakhs has been deposited
with Forest Dept. vide Letter no.
WCL/CHA/DOC/SA/L&R/2537
Dtd. 30.03.2017.
- c) The status of compensatory :
afforestation ,if any Rs. 23.399 lakhs
- d) Comments on the viability &
sustainability of compensatory :
afforestation programme in the light of NOT APPLICABLE actual field
experience so far
11. The status of clear felling in non-forest
areas (such as reservoir, approach roads),
if any with quantitative information : NOT APPLICABLE

12. Status of construction
a) Date of commencement
(Actual and/of planned) : 1980
b) Date of completion : -----
(Actual and/of planned)
13. Reasons for the delay if the project
is yet to start : Not Applicable.
14. Dates of site visits:- : Visited on 22.03.2019.
a) The date on which the project was
monitored by the Regional office
on previous occasions, if any.
15. Details of correspondence with project
authorities for obtaining action plans
information on status of compliance to
safeguards other than the routine letters
for logistic support for site visits) : -----
- (The first monitoring report may contain
the details of all the letters issued so far,
but the later reports may cover only
the letters issued subsequently).

ENVIRONMENTAL MANAGEMENT PLAN - B

Salient features of environmental protection measures

(* As applicable)


AREA NODAL OFFICER(ENV.),CHA


DY.GENERAL MANAGER,DOCSA

SALIENT FEATURES OF THE PROJECT

Name of Project	:	Durgpaur Opencast Expansion Project
Capacity of Project	:	3.00 Million Te./Yr.
Capital Investment	:	Rs. 378.871 Crores
Life of Project	:	Upto 2033 (approx)
Land Required	:	1622.50 ha (As per EMP)
Quarry/Excavation Area	:	660.68 Ha. (As per EMP)
No. Of seams/Seam thickness	:	1/16-18 M
Depth of Working (Maximum)	:	165 M (BGL)
Total Coal Production	:	65.16 Million Tonne
Total Over Burden Removal	:	247.876 M Cum
Stripping Ratio	:	1::6.58 t/Cum
Environment Provision Including R P R	:	Rs. 1.55 Crores

No.J-11015/56/2008-IA-II (M) pt. file
Government of India
Ministry of Environment, Forest and Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi-3
Dated: 10th November, 2017

To,

The General Manager (Environment),
M/s Western Coalfields Ltd,
Coal Estate, 9th Floor, Civil Lines,
Nagpur - 1 (Maharashtra)

Email: gmenvironment.wcl@nic.in; wclenv@yahoo.in

Sub: Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in District Chandrapur (Maharashtra) - Environmental Clearance - reg.

Sir,

This refers to your letter No. WCL/ENV/HQ/20-C&3-C/96 dated 15.03.2016, along with online proposal No. IA/MH/CMIN/62601/2008 dated 17.02.2017 and subsequent letters dated 21.02.2017, 22.02.2017, 23.02.2017, 24.02.2017, 11.09.2017, 13.09.2017, 16.09.2017, 23.09.2017 and 26.09.2017 on the above-mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for grant of environmental clearance to Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in District Chandrapur (Maharashtra), dovetailing the EC for Phase-I granted on 16th March, 2012.

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Projects in its 6th meeting held on 27-28 February, 2017 and 19th meeting held on 26th September, 2017. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) The EC for Durgapur OC Project for 2.3 MTPA for a total lease area of 1354.64 ha was accorded vide letter dated 30th March, 2007.

(ii) The terms of reference for Durgapur Extension (Deep) OC was granted vide letter dated 12th June, 2008 for its expansion from 2.3 MTPA to 3 MTPA with increase in land area from 1354.64 ha to 1645.82 ha (included additional forest land of 121.58 ha for which stage-I forest clearance was under process). Based on the said ToR, public hearing was conducted on 30th October, 2009 and the EIA/EMP was submitted. The project was granted EC by the Ministry vide letter dated 16th March, 2012.



(iii) Total project area now includes 1186.54 ha of the existing land (257.77 ha of forest land for which stage-I FC was earlier granted in stages), additional area of 410.96 ha (includes 121.58 ha of forest land) and 25 ha for village rehabilitation. For diversion of the remaining forest land of 121.59 ha, stage-forest clearance was granted on 16th December, 2015.

(iv) The increase in total project area from 1186.54 ha to 1622.50 ha with the mining capacity remaining the same, would result in sustainability of coal mining operations, assured supply of coal to the consumers and increase in the life of the mine ultimately

(v) The land use pattern the project site will be as follows:

Pre-Mining: The total land requirement for this project is 1622.50 ha

S.N.	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	Total
1	Agricultural land	1045.20	25.00	1070.20
2	Forest land	379.35	-	379.35
3	Waste land/Govt. Land	172.95	-	172.95
4	Grazing land	-	-	-
5	Surface water bodies	-	-	-
6	Settlements	-	-	-
7	Others (specify)	-	-	-
	Total	1597.50	25.00	1622.50

Post- Mining:

S. No.	Item	Land use (ha)				Total
		Plantation	Water Body	Public use	Un-disturbed	
1	External OB Dump	350.00	0.00	0.00	111.38	461.38
2	Excavation	150.00	175.00	0.00	335.68	660.68
3	Infrastructure like Sub-station, CHP Service Buildings etc.	10.00	0.00	90.00	0.00	100.00
4	Undisturbed area (brought under plantation)	100.00	0.00	0.00	245.44	345.44
5	Area for village rehabilitation	4.00	0.00	21.00	0.00	25.00
6	Road	2.00	0.00	8.00	0.00	10.00
7	Colony Land	4.00	0.00	16.00	0.00	20.00
	Total	620.00	175.00	135.00	692.50	1622.50

(vi) Total geological reserve is 49.76 MT. The mineable reserve 47.27 MT, extractable reserve is 47.27 MT. The percent of extraction would be 95%.

(vii) The coal grade is GCV 4581 k Cal /kg (Grade G-10). The stripping ratio is 1:6.58 m³ /tonne. The average Gradient is 1 in 8 to 1 in 10. There will be one seam with average gradient thickness ranging 13.24 m to 17.51 m.

(viii) Total estimated water requirement is 790 m³/day industrial demand and 1400 m³/day for domestic demand. The level of ground water ranges from 2.87 m to 8.57 m.

- (ix) The method of mining would be Opencast with Shovel-Dumper combination.
- (x) There are eight external OB dumps with Quantity of 116.85 Mm3 and area of 461.38 ha and 3 internal dump and 202.59 Mm3 in an area of 485.68 ha. The final mine void would be in 175 ha with depth 150 m.
- (xi) Total quarry area is 660.68 ha. Out of total backfilled quarry area of 485.68 ha, 150 ha area shall be reclaimed with plantation. A void of 175.00 ha with depth 150 m which is proposed to be converted into a water body.
- (xii) The life of mine is 17 Years.
- (xiii) Transportation: Coal transportation in pit by through Dumpers from in pit to pit head coal handling plant, Coal from CHP to consumer is transported by belt conveyer.
- (xiv) There is R&R of Sinhala, Navegaon, Masala Tukum and old Masala involved. There are 1275 nos. of PAFs.
- (xv) Cost: Total capital cost of the project is Rs. 378.8711Crores. CSR Cost based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs 2.00 per Tonne of Coal Production of the previous year whichever is higher. R&R Cost 126.4425 Crores. Environmental Management Cost: Capital – Rs155.00 Lakhs and Revenue- @ Rs 6/tonne.
- (xvi) Water body: one seasonal nallah flows through the block boundary. Nallah are proposed to be diverted. The re-alignment of this nala is proposed along periphery of external dump.
- (xvii) Approvals: Ground water clearance:-NOC for withdrawal of groundwater from CGWA was granted vide letter no.21-4(21)/CR/CGWA/2007-764 dated 31-08-2007 as per prevalent rules. Further as per amended rules of 2012 application for grant of NOC for dewatering of Groundwater has been submitted to CGWB dated 07-06-2016.
- (xviii) Mining Plan for the project was approved by the WCL Board on 21st February, 2017. Mine closure plan is an integral part of mining plan.
- (xix) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xx) Total forest area involved 379.35 ha. Breakup of the forest land clearance is as below:
 - 40.46 ha - FLD- 3679/1435 – F3 dated 23rd May, 1980 from Revenue Department, Govt. of Maharashtra, Mantralaya, Bombay
 - 136.54 ha - F.8 – 35/2001 – FC dated 19.09.2006 from MOEF
 - 80.77 ha - F.8 – 123/2003 – FC dated 8th November, 2005 from MOEF
 - 121.58 - Stage – I FC granted vide 8-84/2014-FC Dated 16th September 2015 from MoEF&CC
- (xxi) Total afforestation plan shall be implemented covering an area of 620ha at the post-mining. Density of tree plantation 2500 trees/ ha of plants.
- (xxii) There are no court cases/violation pending with the project proponent.
- (xxiii) The monitoring report on compliance status of existing EC conditions has been forwarded to the Ministry by Regional Office, MoEF&CC Nagpur vide letter No.F-3-18/2012 (Env.) dated 7th September, 2017. Subsequently, the Action Taken Report on the observations (partially complied conditions) of the Regional Office has been submitted by the project proponent. The same was also presented before the EAC during the meeting.

4. The Expert Appraisal Committee in its 19th meeting held on 26th September, 2017, has recommended the proposal for grant of Environmental Clearance subject to compliance of certain terms and conditions. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to **Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a**

total area of 1622.50 ha located in District Chandrapur (Maharashtra), under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to compliance of the terms and conditions, and environmental safeguards as under:

- (i) The maximum production from the mine shall not exceed the sanctioned capacity of 3 MTPA as mentioned in the EC.
- (ii) The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.
- (iii) Standard Operating Procedures are required to be prepared and vetted by the company headquarters for adoption of environmental measures in course of various mining activities right from drilling, blasting to coal dispatch be submitted to EAC for monitoring.
- (iv) Transportation of coal should be carried out by covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.
- (v) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (vi) Controlled blasting techniques should be adopted to control ground vibration and fly rocks.
- (vii) Thick green belt of 30-45 m width to be provided to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads

4.1 The grant of Environmental Clearance is further subject to compliance of generic conditions as under:

(a) Mining

- (i) No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environment, Forest and Climate Change. No change in the calendar plan including excavation, quantum of coal and waste should be made.
- (ii) Mining shall be carried out as per the approved mining plan, and also abiding by the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS). An approved progressive Mine Closure Plan shall strictly be complied with and submitted.

(b) Land Reclamation

- (i) Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.
- (ii) Final mine void depth should not be more than 40 m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with thick top soil. The land after mining should be restored for agriculture or forestry purpose.
- (iii) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The overburden dumps should be vegetated with suitable native species to prevent erosion and surface run off. The entire excavated area shall be backfilled and afforested in line with the

approved Mine Closure Plan. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

(iv) Greenbelt shall be developed all along the mine lease area in a phased manner. The width of the green belt along forest area should not be less than 7.5 m, and the total area covered by 3 tier green belt shall not be less than 100 ha. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.

(c) Emissions, Effluents, and Waste Disposal

(i) Transportation of coal by road should be carried out by covered trucks only. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5} such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board in this regard.

(ii) Vehicular emissions shall be kept under control and regularly monitored. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centres.

(iii) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.

(iv) Crusher/feeder and breaker material transfer points should invariably be provided with dust suppression system. Belt-conveyors should be fully covered to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(v) The project proponent shall not alter the major channels around the site. Appropriate embankment should be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary should be of suitable dimensions and critical patches should be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.

(vi) Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources in the area in consultation with Central Ground Water Board.

(vii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. Dimension of the retaining wall to be constructed 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.

(viii) Industrial waste water (CHP, workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.

(d) Noise & Vibration Control

- (i) 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.
- (ii) Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.

(e) Occupational Health & Safety

- (i) Besides carrying out regular periodic health check-up of their workers, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- (ii) 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. Supervisory staff shall be held responsible for ensuring compulsory wearing of dust mask.
- (iii) In case of outsourcing of work through MDO, the project proponent shall ensure the strict enforcement of the above conditions.

(f) Biodiversity

- (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

(g) Implementation of Action Plan as per Public Hearing and CSR Activities

- (i) Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing. Land oustees should be compensated as per the norms laid out R&R Policy of the Company or the National R&R Policy or R&R Policy of the State Government, whichever is higher.
- (ii) The Board of every company, shall ensure that the company spends, in every financial year, at least two per cent. of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy under Section 135 of the Companies Act, 2013, for the socio economic development of the neighbourhood.

(h) Corporate Environment Responsibility

- (i) The Company should have a well laid down Environment Policy approved by the Board of Directors.



- (ii) To have proper checks and balances, the Company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large.
- (iii) 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 Organization.
- (iv) The funds earmarked for environmental protection measures should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.

(i) Statutory Obligations

- (i) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law, if any, as may be applicable to the project.
- (ii) This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, as applicable to the project.
- (iii) The project proponent shall obtain Consent to Establish and Consent to Operate from the concerned State Pollution Control Board prior to increase in capacity of washery and effectively implement all the conditions stipulated therein.
- (iv) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) for drawl of water (surface and ground water).

(j) Monitoring of Project

- (i) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- (ii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
- (iii) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
- (iv) The activities pertaining to development of green belt/horticulture shall be reported to concerned Regional Office of MoEF&CC on six monthly basis from the date of commencement of mining operations.
- (v) For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring.



(k) Miscellaneous

- (i) A copy of clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
- (ii) An electronic copy of the EC letter shall be marked to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.
- (iii) The EC letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.
- (iv) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.
- (v) The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the PP for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.

5. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.

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

7. The PP shall set up an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

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

9. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The project



proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

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

SK
10/11/2017
(S. K. Srivastava)
Scientist E

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg, Madam Cama Road, **Mumbai** - 32
3. The APCCF, MOEF&CC (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur (Maharashtra)
4. The Member Secretary, Maharashtra State Pollution Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi -110 032
6. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The District Collector, **Chandrapur**, Government of Maharashtra
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board

SK
10/11/2017
(S. K. Srivastava)
Scientist E

MAHARASHTRA POLLUTION CONTROL BOARD

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



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

RED/L.S.I (R35)
No:- Format1.0/CAC/UAN No.MPCB-
CONSENT-0000165635/CR/2307001646

Date: 26/07/2023

To,
M/s. Durgapur Opencast Mine,
Western Coalfields Limited,
P.O. Durgapur, Tal & Dist-Chandrapur.



Sub: Renewal of consent with decreased in CI under RED category.

- Ref:**
1. Earlier renewal of Consent to operate granted by Board vide No.Format1.0/ CAC/UAN-109836/CR/2211000592 dated 09.11.2022 valid up to 31.03.2023
 2. Minutes of Consent Appraisal Committee (CAC) Meeting held on 03.07.2023.

Your application No.MPCB-CONSENT-0000165635 Dated 19.03.2023

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

1. **The consent to renewal is granted for a period up to 31/03/2024**
2. **The capital investment of the project is Rs.414.5063 Crs. (As per C.A Certificate submitted by industry Existing CI-Rs.418.9872 Cr - decrease in C.I. - Rs. 4.4809 Cr = Total CI Rs.414.5063 Cr)**
3. **Consent is valid for the manufacture of:**

Sr No	Product	Maximum Quantity	UOM
Products			
1	Coal	3	MTPA

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

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	2690	As per Schedule-I	Recycle to the maximum extent for Dust Suppression & Fire Fighting and remaining on land for plantation/ Irrigation/Gardening.

Sr No	Description	Permitted	Standards to	Disposal
2.	Domestic effluent	1200	As per Schedule-I	Recycle to the maximum extent for Dust Suppression & Fire Fighting and remaining on land for plantation/Irrigation/ Gardening

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

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

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
1	Over Burden	484742	m3/month	Reuse	Backfilling and Reclamation of Land

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

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
1	5.1 Used or spent oil	5	KL/M	Recycle	Send to Authorised Recycler/Reprocessor
2	5.2 Wastes or residues containing oil	1.5	Ton/M	Incineration	CHWTSDF
3	35.3 Chemical sludge from waste water treatment	3	Ton/M	Landfill	CHWTSDF

- The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities
- The applicant shall comply with the conditions of the Environmental Clearance granted by MoEFCC,GoI vide letter No.J-11015/56/2008-IA.II(M) dtd. 10.11.2017.
- PP shall convert existing water sprinkling arrangement into chemical fogging arrangement (MgCl₂) within three months period.
- Ambient Air Quality monitoring station shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀,PM_{2.5},SO₂ & NO_x. Monitoring of heavy metals such as Hg, As ,Ni, Cd, Cr etc shall be carried out at least once in six months.
- By forfeiting the BG of Rs.5.0 Lakh towards noncompliance of consent conditions and exceeding the AAQM results.

14. PP shall provide Tyre wash system within 3 months and submit the BG of Rs.5.0 Lakh towards compliance of same.
 15. PP shall provide adequate Treatment & disposal facilities for acidic mine water within 3 months and submit the BG of Rs.5.0 Lakh towards compliance of same.
 16. PP shall submit the valid renewal NOC of CGWA within 3 months period.
 17. PP shall submit the BG as per BG regime of mine.
 18. PP shall provide Mechanized sweeping machines within 3 months and submit the BG of Rs.5.0 Lakh towards compliance of same.
 19. PP shall develop a 3-tier green belt plantation all along the major approach roads.
 20. Industry shall submit the undertaking on stamp paper regarding the compliances of above points within a month.
 21. PP shall carry out over burden dump management as per CPCB guidelines.
 22. PP shall carry out plantation as per EC condition before ensuing monsoon.
 23. The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent.
- . This consent is issued as per communication letter dated 03/11/2022 which is approved by competent authority of the board.



Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	2029013.00	MPCB-DR-18233	28/03/2023	NEFT

Copy to:

1. Regional Officer, MPCB, Chandrapur and Sub-Regional Officer, MPCB, Chandrapur
 - They are directed to ensure the compliance of the consent conditions.
 - They are directed to forfeit the bank guarantee of Rs.5.0 Lakh towards noncompliance of consent conditions and exceeding the AAQM results.
2. Chief Accounts Officer, MPCB, Sion, Mumbai
3. CAC desk -For record and website up-dation purposes

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] ETP having capacity-150 KLD comprises of O & G trap, pre-settling tank-dosing tank-final treated tank provided for treatment of workshop effluent and for treatment Mine Water discharge-Sedimentation tank of capacity-1281 KLD provided.
- B] The Applicant shall operate the effluent treatment plant (ETP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent:

Sr.No	Parameters	Limiting concentration not to exceed in mg/l, except for pH
(1)	pH	5.5 to 8.5
(2)	Oil & Grease	10
(3)	BOD (3 days 27°C)	30
(4)	Total Suspended solids	100
(5)	Total Dissolved solids	2100
(6)	COD	250

- C] The treated effluent shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise. In no case, effluent shall find its way outside factory premises.
2. A] As per your application, you have provided Sewage Treatment Plant of designed capacity 2250 CMD for the treatment of 1200 CMD of sewage.
 - B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

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

- C] The treated effluent shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise. In no case, effluent shall find its way outside factory premises.
3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
 4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.

5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	550.00
2.	Domestic purpose	1500.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	100

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

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

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

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

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. Control Equipments
- Coal handling plant shall be provided with GI sheet enclosures & automatic water sprinkler and shall be operated continuously.
 - Scientific spraying of water on all working area, dump area, stock piles with the help of appropriate dust suppression system.
 - Coal transportation shall be done by installing conveyors wherever possible & mechanically covered closed trucks shall be used for transportation. Overloading of dumpers shall be avoided to prevent spillages

- d. The applicant shall carry out tree plantation along road side, around dumps or compulsory afforestation as per proposal approved by Forest Department. The tree plantation programme shall be taken up well in advance of the actual mining activity, so that green belt of sufficient width & height is developed between mining area/road and surrounding environment.
- e. Black topped metal roads shall be provided and shall be well maintained to prevent dust formation.
- f. Slope of the over burden shall have slope not more than 28o to the horizontal. The overburden shall be covered by vegetation for stabilization.
- g. Correct type & quantity of explosive shall be used to avoid excess dust formation & vibration in the surrounding area.

6. Standards for Ambient Air Pollutants:

The Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur dioxide (SO₂) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall not exceed the standards specified in the table given below:

Dust Generating Sources:

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

Pollutant	Time weighted average	Concentration in Ambient Air
Suspended Particulates Matter (SPM)	Annual Average	360 µg/m ³
	24 hours	500 µg/m ³
Respirable Particulate Matter (size less than 10 µm) (RPM)	Annual Average	180 µg/m ³
	24 hours	250 µg/m ³
Sulphur Dioxide (SO ₂)	Annual Average	80 µg/m ³
	24 hours	120 µg/m ³
Oxides of Nitrogen as NO _x	Annual Average	80 µg/m ³
	24 hours	120 µg/m ³

- i. In case of any residential or commercial or industrial place falls within 500 metres of any dust generating sources, the National Ambient Air Quality Standards notified vide MOEFCC GOI notification dtd 16.11.2009 as ammended shall be made applicable.
- ii. The applicant shall provide minimum three ambient air quality monitoring stations within mining area which should be monitored for SPM, RSPM, SO₂, NO_x, HC, CO etc. The Annual Arithmetic Mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval shall conform to the National Ambient Air Quality Standards prescribed under Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986. The records of results of monitoring done shall be made available for inspection to the officers of the Board.

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

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

8. Other conditions:

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

SCHEDULE-III

Details of Bank Guarantees:

Sr. No.	Consent (C2E/ C2O /C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C2R	Rs. 2.0 Lakh	15 days	Regular monitoring of ground water level and quality should be carried out by establishing the network of existing wells and constructing new piezometers during mining operations	6 Monthly	31.03.2025
2	C2R	Rs.5.0 Lakh	15 days	Catch drain and siltation ponds of appropriate size should be constructed to arrest silt and sediment flow from soil, OB and mineral dumps. Water so collected should be utilized for watering of the mining area, roads green belt developers etc.	Regular Activity	31.03.2025
3	C2R	Rs.25.0 Lakh	15 days	Coal transportation shall be done by covered trucks. Overloading of shall be avoided to prevent spillages.	6 Months	31.03.2025
4	C2R	Rs.5.0 Lakh	15 days	Coal Handling Plant (CHP) & loading / unloading area will be provided with Dust Collector and Automatic Water Sprinkler.	3 Months	31.03.2025
5	C2R	Rs.5.0 Lakh	15 days	Convert existing water sprinkling arrangement into chemical fogging arrangement (M ₉ Cl ₂)	2 Months	31.03.2025

Sr. No	Consent (C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
6	C2R	Rs.5.0 Lakh	15 days	PP shall provide adequate Treatment & disposal facilities for acidic mine water within 3 months	3 Months	31.03.2025
7	C2R	Rs.5.0 Lakh	15 days	Adoption and installation of tyre wash system to mining transportation at entry and exit point of mining area.	3 Months	31.03.2025
8	C2R	Rs.5.0 Lakh	15 days	Use of toppers/binders/surfactants on the top surface of coal pile on trucks carrying coal on road to minimize spillage during transportation	3 Months	31.03.2025
9	C2R	Rs.5.0 Lakh	15 days	Over burden (OB) should be stacked at earmarked dumpsites only and should not be kept active for long period. Proper terracing of OB should be carried out so that the overall slope will come down to 28°. Over Burden shall be disposed by way of backfilling.	Regular Activity	31.03.2025
10	C2R	Rs.5.0 Lakh	15 days	PP shall provide Mechanized sweeping machines within 3 months	3 months	31.03.2025
11	C2R	Rs.25.0 Lakh	15 days	O & M of pollution control system & compliance of consent/Environment Clearance conditions	Regular Activity	31.03.2025

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

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
1	C2R	Rs.25.0 Lakh	Within 15 days	Towards O & M of Pollution control system and compliance of consent/EC conditions	Rs.5.0 Lakh (to be forfeited)	toward noncompliance of consent conditions and exceeding the AAQM results

BG Return details

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

SCHEDULE-IV

General Conditions:

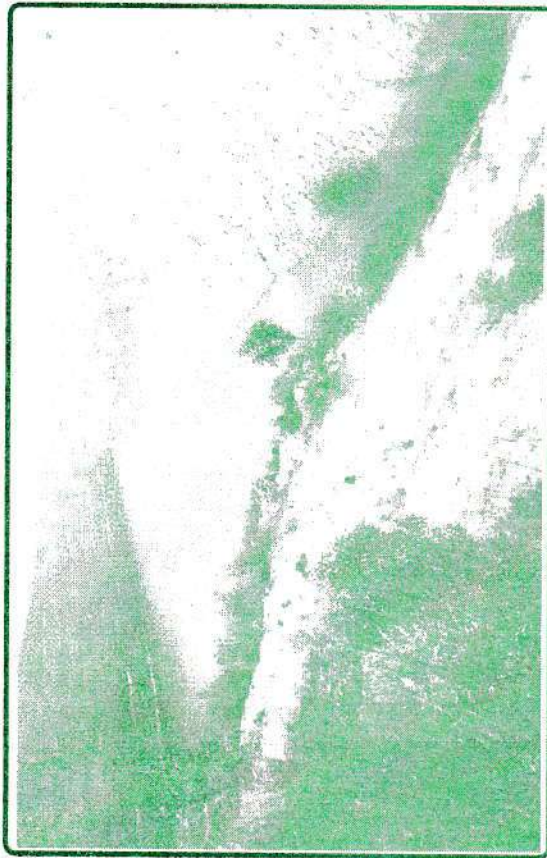
1. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
2. If the MIDC pipeline is broken/ overflowing chamber, in such cases industry shall not discharge their treated effluent into MIDC drain, it shall be sent to CETP by tanker.
3. Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
4. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
5. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipment, the production process connected to it shall be stopped.
6. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
7. The firm shall submit to this office, the 30th day of September every year, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
8. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the H&OW(M&TM) Rules 2016, which can be recycled/processed/ reused/ recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/ reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
9. The industry should comply with the Hazardous & Other Wastes (M & TM) Rules, 2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous & Other Wastes (M & TM) Rules, 2016 for the preceding year April to March in Form-IV by 30th June of every year.
10. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
11. The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.
12. Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
13. The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.

14. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
15. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
16. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
17. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
18. The industry should not cause any nuisance in surrounding area.
19. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
20. The applicant shall maintain good housekeeping.
21. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end
22. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
23. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipment provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.

24. The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises
25. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
26. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dtd. 18.11.2009 as amended.

This certificate is digitally & electronically signed.





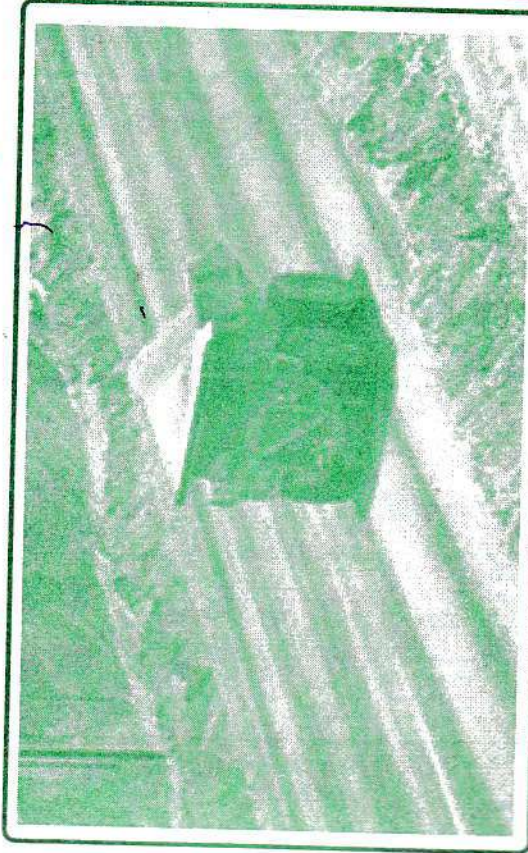
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चंद्रपुर क्षेत्र
दुर्गापुर ओपन कास्ट माईन



One of the deepest mine of WCL working at a depth of 140 m

सुरक्षित कार्यप्रणाली
सेफ ऑपरेटिंग प्रोसीड्युअर / प्रॉक्टीस

SOP (एस. ओ. पी.)

अनुक्रमनिका

अ.क्र.	आर्टिकल के नाम	पेज नं.
१)	कोल स्टॉक में काम करने हेतु सुरक्षित कार्य प्रणाली	०१
२)	डंपर के इंजिन और टार्क कन्वर्टर को एक साथ उतारने और लगाने के लिये सुरक्षित कार्य प्रणाली	०२
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WESTERN COALFIELDS LIMITED, CHANDRAPUR AREA

SAFETY MANAGEMENT PLAN

DURGAPUR OPENCAST MINE

(Revised on 21.08.2018)

***DURGAPUR SUB AREA,
CHANDRAPUR AREA,
WESTERN COAL FIELDS LIMITED
(SUBSIDIERY OF COAL INDIA LTD.)***

"SAFETY MANAGEMENT PLAN"

DURGAPUR O/C MINE

CERTIFICATE

This is to certify that the Safety Management Plan (SMP) has been prepared under regulation 104 of CMR 2017 on the basis of latest risk assessment of all the activities/operations of Durgapur Opencast Mine and updated as on Tuesday, 21st August 2018.



(J. Majumdar)

Mine Manager, DOCM



(Vilas Bodhe)

Safety Officer, DOCM



(S. B. Prasad)

Agent/SAM, DOCSA

The SMP of the above mine is prepared & reviewed at the mine level and has been accepted, reviewed & vetted at our end.

Area General Manager,
Chandrapur Area,



(Balaram Singh)

ASO, CHANDRAPUR AREA

Safety Management Plan

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(7)

पंजीकृत

भारत सरकार
श्रम एवं रोजगार मंत्रालय
खान सुरक्षा महाविदेशालय
नागपुर क्षेत्र संख्या- 11

दस्तावेज क्र. 0712-2513085, 2513087 (कार्यालय)
2513085 (फैक्स) तार कोड: 'माइन्स'
राष्ट्रिय मंत्रालय, वी-ब्लॉक, केन्द्रीय कार्यालय परिसर,
सेगीज.9 हिल्स, नागपुर -440006

पत्र सं. ना.क्षे.स.-11/010604/अनुमति 98(1)&(3)/सी/सी/31/2015/ 1287 नागपुर, दिनांक: 02/07/2015

प्रेषक,
खान सुरक्षा विदेशक
नागपुर क्षेत्र सं-11, नागपुर।

प्रति, अभिनेता,
दुर्गापुर ओपनकास्ट माइन,
मेसर्स वेस्टर्न कोलफील्ड्स लिमिटेड,
पोस्ट : उर्जा नगर, जिला : चंद्रपुर. 442404

Sub: Permission under Regulation 98(1)&(3) of the Coal Mines Regulations 1957 to extract coal by mechanised opencast method at Durgapur Opencast Mine of M/s. WCL.-
Renewal thereof.

Dear Sir.

- 1.0 Please refer to your application vide letter no. WCL/CHA/ DOCM/ Agent/2015/397. dated 30-05-2015 for renewal of permission granted to extract coal seam by mechanized opencast method at Durgapur Opencast Mine.
- 2.0 In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Regulations 98(1) & (3) of the Coal Mines Regulations, 1957 and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I hereby renew the permission letter no. NR-II/010604/Permission 98(1) & (3)/2012/1045 dated 05-07-2012 to extract coal seam by mechanized opencast method in conjunction with deep hole drilling and blasting at Durgapur Opencast mine of M/s. WCL. subject to the following conditions being strictly complied with:
 - 2.1 The conditions as mentioned in the Annexure 'A' of this permission letter shall be strictly complied with.
 - 2.2 No shot shall be fired within 300 m of the any village, dwellings and other places where safety of the persons is likely to be endangered.
 - 2.3 High transmission line belonging to MSEB passing over the property shall be safe guarded from flying fragments of blasting and no workings shall be extended within 45 m of trestles of this transmission line without obtaining necessary permission under Regulation 105 of the Coal Mines Regulations, 1957.

- 3.0 This permission is being issued considering the existing equipment in the mine. If new machinery of different type/ model / capacity is deployed, this office shall be informed of such changes, in writing, immediately.
- 4.0 Please note that, this permission is subject to the following additional conditions.
- 4.1 In the event of any change in the circumstances connected with this permission which is likely to endanger the life of persons employed in the mine or the mine, the mining operations for which this permission has been granted shall be stopped forthwith and intimation sent to the undersigned thereof. The said mining operation shall not be resumed without express and fresh written permission from this Directorate.
- 4.2 If at any time any of the conditions subject to which this permission has been granted is violated or not complied with, this permission shall be deemed to have been revoked with immediate effect.
- 4.3 The above permission may be amended or withdrawn at any time, if considered necessary in the interest of safety.
- 4.4 This permission is being issued specifically under the regulations mentioned above and without prejudice to any other provisions of law, which may be or may become applicable at any time.
- 5.0 The permission shall be remaining valid upto 30-06-2018.

भवदीय
2/2/15
(के. नागेश्वर राव)
खान सुरक्षा निदेशक,
नागपूर क्षेत्र सं०-॥

(Annexure to letter no. 1789

Nagpur,

dated 02/07/2015)

Conditions for adopting a system of deep hole blasting and /or working opencast mine with the help of heavy earth moving machinery for digging, excavation and removal of overburden & coal under Regulation 98 of the Coal Mines Regulations, 1957 at Durgapur Opencast Mine of M/s Western Coalfields Ltd.

1.0 GENERAL:

1.1 Except where otherwise provided for in this permission all provisions of the Coal Mines Regulations, 1957 relating to opencast workings, use of explosives and machinery shall be strictly complied with.

2.0 OPENCAST WORKINGS:

2.1.1 Soft overburden which consists of black cotton soil, alluvial soil, clay, morrum or other similar ground shall be removed only by back hoe shovel cutting below the level on which it stands. The height of benches shall not be more than the cutting depth of the machine used for digging, but in any case shall not exceed 5 m and no work shall be done within a distance of 10 meters from the toe of such benches.

2.1.2 The width of last bench in black cotton soil just above coal or any other hard strata like sand stone etc. shall be at least 4 times the height of bench i.e., 20 m.

2.1.3 Height of benches in coal and overburden other than soft strata shall not be more than cutting height / depth of the machine used for digging, excavation or removal but in any case, shall not exceed 10 m.

2.1.4 Width of benches in coal and over burden shall not be less than

(i) Width of widest machine working on the bench, plus 5 metres.

OR

(ii) If dumpers or tippers ply on the bench, 3 (three) times the width of the largest dumper / tipper.

OR

(iii) The height of the bench, whichever is more but in any case shall not be less than 10 m.

2.2 Quarrying operations shall be conducted from top downwards only.

2.3 Workings shall not be made parallel to the fault planes and the fault planes shall be exposed thoroughly.

2.4 If Tipping Trucks or similar transport vehicles are deployed for transportation of coal / over burden, separate roads for such Tipping Trucks or of similar type vehicles shall be provided.



A suitable 'Code of Traffic Rules' for regulating the movement of Heavy Earth Moving Machinery (commensurate with the capacity/size, type of machines used in the mechanized opencast mine) and Tipping Trucks/ vehicles shall be framed and enforced.

- 2.5 Pay Loaders shall be provided with substantially constructed Operator's cabin and it shall not be deployed within the swing radius of any Excavator. The height of bench/ coal stock shall not be more than the vertical reach of the pay-loader, but in any case shall not exceed 5 metres.

To avoid crowding of equipments, a distance of atleast 50 m shall be maintained between two pay loaders and the maximum deployment of tipper trucks per pay loader, at a given time, shall be not more than four.

3.0 FENCING AROUND OPENCAST WORKINGS:

- 3.1 The periphery around the limits of opencast workings shall be kept fenced with a substantially constructed fencing.

- 3.2 The edges of benches of the opencast workings shall be kept suitably fenced in accordance to standards detailed in DGMS circular no. 11/1959.

4.0 SPOIL OVERBURDEN OR DEBRIS BANKS:

- 4.1 Spoils, overburden or debris shall be deposited in premises exclusively occupied by the Owner of the mine.
- 4.2 Top soil / black cotton soil shall not be dumped/ mixed with other overburden material. A separate area shall be exclusively fixed for dumping top soil/ black cotton soil.
- 4.3 Black cotton soil shall be removed up to a minimum depth of 3m, prior to commencing of dumping operations of overburden material. The said area shall be filled with coarse grained sand stone. Suitable drainage system, to prevent accumulation of water at the base of the dump, shall be provided.
- 4.4 No top soil, sludge, alluvium, black cotton soil or any other soil of low bearing capacity shall be allowed to be dumped on the floor of de-coaled area, to form the base of an internal dump.
- 4.5.1 Height of dumps made of top soil / black cotton soil shall not exceed 15 m, unless otherwise permitted by this Directorate. Height of each lift/ stage of the dump shall be not more than 10 m and the width thereof shall not be less than 20 m.
- 4.5.2 Height of dumps made of overburden material other than top soil, shall not exceed 45 m measured from its base unless otherwise permitted by this Directorate. Height of each lift/ stage of the dump shall not be more than 10 m. Bench width of the dump yard shall not be less than 20 m.

- 4.6 Preferably dump yard shall be made away from the river / water body. Spoils, overburden or debris shall not be deposited near a river, jore or any natural course of water, which may at a later date, slide into the said water source. The overburden dump site shall be properly located to comply with the following criteria-
- i) A parapet wall, about 1 to 1.5 in height shall be constructed with proper foundation, at a distance of 45m from the bank / HFL of the river.
 - ii) The toe of the dump shall be at a minimum distance equal to the twice of ultimate planned height of the dump, from the parapet wall.
 - iii) Before reaching the limiting height, if the dump material slides, no further dumping shall be done in the said dump yard.
- 4.7 In case of existence of any road, power transmission line, building, structure etc. not belonging to the Owner, dumping shall be done in such a way that the distance between the toe of dump and the said road etc. is not less than twice the ultimate planned dump height.
- 4.8 The slope of a spoil bank face shall be determined by natural angle of repose of the material being deposited, but shall in no case exceed 37 degrees from the horizontal. The spoil bank face shall not be retained by artificial means at an angle in excess of its natural angle of repose.
- 4.9 Discontinuous dumping shall be avoided. The top/ crest of the dump shall be leveled. For reducing the ground water pressure in the dump rock above phreatic surface, effective drainage system shall be provided both inside and outside the overburden dump. In this regard, the guidelines provided in DGMS circular (Tech) no.2 of 2001 in designing pit slope shall be followed.
- 4.10 A drain / bund shall be formed around the periphery of the dump, to divert rainwater away.
- 4.11 No person shall or shall be permitted to approach the toe of an active spoil bank where they may be endangered from material rolling down the face. The dump area shall be substantially fenced, in accordance with Regulation 112 of the Coal Mines Regulations, 1957, to prevent inadvertent entry of any person to the dump. Suitable signs for warning the persons at conspicuous places shall also be displayed.
- 4.12 The embankment against rivers/ water bodies shall be made over proper foundation and in accordance with sound principles of civil engineering. The embankment facing river / water body side shall be pitched and suitably lined to resist erosion by water current. The height of the embankment shall be restricted to 3 m above the HFL. The embankment shall not be used as a substitute for a dump yard
- 4.13 The coal face shall be at least 60 m away from the toe of the dump made in the de-coaled area to prevent danger from collapse / sliding of dump.
- 4.14 Precautions shall be taken to prevent spontaneous heating and fire in the carbonaceous shale and coal dumped along with the overburden rock.

4.15 Slope monitoring of dump shall be done meticulously and the readings shall be entered in a bound page book kept for the purpose. In case of any movement/ slide in the dump, dumping operations shall be discontinued and the matter shall be immediately informed to this Directorate.

4.16 Proper liaison shall be maintained with command area authorities of the nearby river(s) to ensure suitable action in times of high floods or clogging of river channels and the resultant back waters.

5.0 ROADS FOR TIPPING TRUCKS AND DUMPERS ETC.:

5.1 All roads for Dumpers, Trucks or other mobile machinery shall be constructed to suit its load capacity and shall be maintained in good condition.

5.2 Where practicable, all roads from the opencast workings shall be arranged to provide one way traffic. Where this is not practicable, no road shall be of a width less than three (3) times plus 5m width of the largest vehicle plying on the road.

5.3 Sharp curves shall be avoided on the haul roads. All corners and bends on roads shall be made in such a way that the operators and drivers of vehicles have clear view of a distance of not less than 3 times the breaking distance of the largest HEMM working at 40 KMPH.

Where it is not possible to ensure a visibility for a distance as mentioned above there shall be provided with two roads of width not less than 2 times plus 3 m of largest vehicle plying on the road with a strong road divider, at centre with adequate lighting and reflector along the divider.

The road divider shall be of height not less than the diameter of the tyre of largest vehicle plying on road with width at bottom not less than 2.5 m and width at top not less than 1 m.

5.4 Where any road exists above the level of the surrounding area, a strong parapet wall or embankment of height not less than the diameter of the tyre of largest vehicle plying on road with width at bottom not less than 2.5 m and width at top not less than 1 m, shall be provided to prevent any out of control vehicle from getting off the road and falling to the bottom.

5.5 The haul roads shall not have a gradient steeper than 1 in 16, except for short ramps, where the gradient shall not be steeper than 1 in 10.

5.6.1 All Light Motor Vehicles, including trucks carrying persons, shall be provided with colored flags, of adequate height, so that they could be seen by the dumper operator even from a distance of about 15 m. They shall be fitted with beacon lights and audible warning devices/ siren.

5.6.2 Ordinarily, no person shall be allowed to move / remain on ground, where HEMM are in operation. A suitable platform of adequate height shall be provided for the supervisors / work persons to be positioned, while HEMM are in motion.

5.6.3 No person shall be allowed on foot/ two wheelers inside the mine. Arrangements shall be made to effectively prevent any unauthorized person from entering mine.

5.6.4 A separate road shall be maintained in the mine for light motor vehicles used for inspection and transportation of persons.

6.0 ADDITIONAL DUTIES OF ASSISTANT MANAGER INCHARGE OF OPENCAST WORKING:

6.1 The opencast workings, in each shift, shall be placed under the charge of an assistant manager to have overall control and guidance of all operations.

6.2 During the shift, Assistant Manager shall:-

6.2.2 make frequent inspections for evidence of any unsafe conditions including evidence of slide of material from high wall and also guide so that operations are conducted in a safe and efficient manner.

6.2.3 not allow any person to work under overhanging ledges or where there is evidence of slides until such danger has been removed.

6.2.3 ensure that every loose material is removed from high walls before drillers are engaged there.

7.0 ADDITIONAL DUTIES OF ENGINEERS PLACED IN CHARGE OF MACHINES AND EQUIPMENTS IN OPENCAST WORKINGS:

7.1 During each shift, the machines and equipments at work shall be placed under the charge of a qualified and experienced engineer for effective inspection, examination, safe operations and maintenance of the machines, equipments and accessories. During shift the Engineer / Engineers shall;

7.1.1 inspect, examine machines, equipments and accessories and satisfy himself that they are in sound and safe working order;

7.1.2 ensure that every machine, equipment or accessories used is in a safe and efficient manner.

7.2 Before a valid gate pass is issued for entry of trucks and other vehicles, not belonging to management into the mine, the mine engineer shall ensure the road-worthiness of such vehicles.

8.0 EXAMINATION, REPAIR AND MAINTENANCE OF MACHINES:

8.1.1 Machinery shall be maintained as per the schedules provided by Original Equipment Manufacturers. A code of practice for inspection, examination and repair of all breakdowns and repairs etc. shall be drawn up and practiced. A copy of the same shall be submitted to this Directorate.

8.1.2 Every drilling and earth moving machinery or equipment or accessory (herein after called machine) shall be thoroughly examined at least once in each shift and maintained in good and safe working conditions.

8.1.3 A record of all such examinations and maintenances shall be maintained in a bound pagged register and shall be signed by the Engineer in charge of the shift and countersigned by the Colliery Engineer.

8.2.1 Every machine shall be allocated at least one day in every week for examination and maintenance, when it shall be thoroughly examined and inspected by the Engineer, who shall satisfy himself that it is mechanically sound and is in efficient working order before it is allowed to be re-used.

A report of every maintenance made under clause 8.2.1 shall be recorded in a bound pagged book kept for the purpose, and shall be signed and dated by person making the inspection and countersigned by the Engineer.

8.2.2 If the Engineer, Mechanical Foreman or other competent person making an inspection, notices any defect in any machinery, the said machinery shall not be used until the defect has been remedied.

8.2.3 Any defect in machinery reported by its Operator shall be promptly attended to.

8.2.4 Except for testing, trial or adjustment, which must necessarily be done while the machine is in motion, every machine shall be shut down and positive means taken to prevent in operation while any repair or manual lubrication is being done.

8.2.5 The Operator or Driver shall not leave the machine while it is running unless it is placed under the charge of a competent person.

9.0 **GENERAL LIGHTING:** Adequate general lighting arrangements shall be provided in the mine workings as per the standards specified vide Government Notification No. GSR 804, dated 18-06-1975, published in the Gazette of India dated 28-06-1975 part III Section 3(I). (DGMS circular, No. 1 of 1976).

10.0 **PROTECTIVE EQUIPMENT:** Every person working in the opencast working shall be provided with approved type of Personal Protective Equipment such as safety goggles, reusable air plug, visibility harness, dust respirators etc.

11.0 **PRECAUTIONS AGAINST DUST:** Adequate arrangements, to suppress dry dust by wetting shall be made on roads and benches where Tipping Trucks and Dumpers operate. All drills shall be provided with wet drilling arrangement and it shall be maintained in working order. No dry drilling operation shall be carried out.

12.0 **DRILLING AND BLASTING OF DEEP HOLES:**

12.1 Only proper type of crawler mounted blast hole drill machines, designed for mining purposes, shall be used.

All control switches for all drilling operations including tramming and set up shall be centralized in a properly designed operator's cabin located at the drilling end. Drill shall be provided with hydraulically operated carousel/ rod changer. Suitable hydraulic jacks with controls from operator's cabin shall be provided for leveling of the machine.

The drill shall have in built dust collection/ suppression system. A jet water shall be directed on to the cutting edge to wet the cuttings or other equally efficient device approved by the Chief Inspector shall be provided and kept in operation to prevent the atmosphere being charged with dust.

12.2 PRECAUTIONS WHILE DRILLING:

12.2.1 The position of every deep hole to be drilled shall be distinctly marked by the Overman /competent person so as to be readily seen by the Drillers.

12.2.2 (i) No drilling shall be commenced in an area where shots have been fired, until the Shot firer has made a thorough examination at all places, including remaining butts of old deep holes, for unexploded charges that the drill may strike.

(ii) No drill or bore rod or pick shall be inserted in butts of old deep holes even if an examination has failed to reveal presence of explosives.

12.2.3 (i) Drilling and charging of deep holes shall not be carried out in the same area at the same time.

(ii) Drilling operations shall not be carried on simultaneously on two benches, at places directly one above the other.

12.3 DUTIES OF DRILL OPERATORS:

12.3.1 At the beginning of his shift, the Drill Operator shall examine the drilling equipment and satisfy himself that;

- a) crown blocks are mounted securely;
- b) where compressed air drills are used, all hoses connections are in order; and
- c) the drilling equipment is in safe working condition.
- d) wet drilling system is in order.

12.3.2 The Drill Operator shall ensure that;

- a) work persons are kept clear of auger and drill stem while the drill is in motion;
- b) work persons do not work under suspended tools, when tools are removed from the holes, these shall be lowered on the platform; and
- c) all finished drill holes are properly plugged so as avoid possible leg injuries to any one accidentally stepping into the hole.

12.4 GENERAL:

12.4.1 All conditions specified by the Chief Inspector of Mines in the documents granting permission to carry a larger quantity of explosives in a single case or canister or for the

use at one time in one place of more than one such case or canister, in relaxation of Regulation 157 of the Coal Mines Regulations, 1957, shall be strictly complied with.

12.4.2 Notwithstanding anything contained in the Coal Mines Regulations, 1957, the preparation of charges and the charging and stemming of holes shall be carried out under the personal supervision of an Overman who shall fire the shots in deep holes.

12.5 CHARGING OF DEEP HOLES:

12.5.1 Explosives shall be delivered first to the hole furthest from the 'Priming Station' so as to avoid persons walking among piles of explosives.

12.5.2 Not more than one hole shall be in the process of being charged at any one face at any one time.

12.5.3 All charging, stemming and connecting up shall be done while standing on the solid, that is to say, on the side of holes remote from the quarry face.

12.6 PRECAUTIONS DURING FIRING:

12.6.1 (a) Shots shall not be fired except during the hours of day light. All holes charged on any one day shall be fired on the same day.

(b) As far as practicable, the shot firing shall be carried out either between shifts, or during the rest interval, or at the end of work for the day.

12.6.2 The danger zone shall be distinctly demarcated (by means of red flags properly arranged and supported) at least 30 minutes before firing of holes is done.

12.6.3 Ten minutes before firing, a siren installed for the purpose shall be blown three times for one minute each at intervals of one minute; and no shots shall be fired unless the blasting Overman, with assistance of sufficient number of persons, appointed in writing by the Manager for the purpose, has ensured that all persons have left the danger zone or have taken adequate shelter.

12.6.4 No shot shall be fired when there is traffic on any road or railway track within the danger zone.

12.7 PRECAUTIONS AGAINST ELECTRICAL STORM:

12.7.1 Lightning arrestors of suitable design shall be erected at different locations/working areas of the mine keeping in view the radius of protection/coverage of each arrestor.

12.7.2 During the approach and progress of an electric storm, the following precautions shall be taken:

a) No explosives, particularly detonators shall be handled.

- b) If charging operations have begun, the work shall be discontinued until the storm has passed.
- c) All exposed wires shall be coiled up and, if possible placed in the mouth of the holes and kept covered by stemming material.
- d) All wires shall be removed from contact with the steel rails of a haulage track so as to prevent the charge being exploded prematurely by a local strike of the lighting.

13.0 DESIGN, OPERATION AND MAINTENANCE OF SHOVELS:

13.1 DESIGN:

- 13.1.1 (a) Every shovel shall be so designed as to afford the Operator clear and uninterrupted vision all around.
- (b) Every shovel shall be provided with:-
 - (i) Efficient warning devices;
 - (ii) adequate front and rear lights and a portable lamp for emergency, unless the shovel is not used after day-light hours; and
 - (iii) An efficient portable fire extinguisher so placed as to be within easy reach of the Operator.

13.1.2 A special retracting ladder shall be mounted on the excavating machine.

13.2 OPERATION:

- 13.2.1 Every shovel shall be under the charge of a competent person authorized in writing by the Manager, herein called the 'Operator'.
- 13.2.2 (a) No person other than the Operator or his Helper if any, or the Manager or any person so authorized in writing by the Manager shall ride on a shovel .
- (b) No person shall be permitted to ride in the bucket of a Shovel.
- 13.2.3 Shovel dippers shall be lowered to the ground during greasing operations.
- 13.2.4 (a) No Shovel shall be operated in a position where any part of the machine suspected leads are brought closer than 3 m to exposed high voltage lines, unless the current has been cut off and positive means taken to prevent the lines from being energized. A notice of this requirement shall be posted at the Operator's position.
- (b) Electrical cables, if any, shall be laid in such a manner that they are not endangered either by falling rocks or by any mobile equipment.
- 13.2.5 If more than one stripping machines are in use in any area either on the same bench or on different benches, the machines shall be so spaced that there is no danger of accident from flying or falling objects from one machine to the other.

13.3 DUTIES OF SHOVEL OPERATORS:

- 13.3.1 At the commencement of every shift, the Operator shall personally inspect and test the machine, paying special attention to the following details:

- (i) that every warning device is in working order; or
- (ii) if the machine is required to work after day-light hours, lights are in working order.

The Operator shall maintain a record of every inspection made under clause 13.3.1 in a bound page book kept for the purpose and shall sign every entry made therein.

13.3.2 (i) The Operator shall keep the cabin window clean so as to ensure clear vision at all times.

(ii) The walkways in or about the cabin of any Shovel shall be kept free of loose tools, grease containers or other materials that might fall or present a falling or tripping hazard.

13.3.3 (i) The Operator shall not operate the machine when persons are in such proximity as to be endangered.

(ii) He shall not swing the bucket over passing haulage units. While Trucks/Dumpers are being loaded, he shall swing over the body of the Truck/Dumpers and not over the cabin, unless the cabin is protected by a substantially strong cover.

13.3.4 Before leaving the machine, the Operator shall lower the bucket to the ground.

13.3.5 The Operator shall not allow any unauthorized person to ride on the machine.

14.0 DESIGN, OPERATION AND MAINTENANCE OF TIPPING TRUCKS/ DUMPERS:

14.1 Every Tipping Truck or Dumper shall be provided with:

- i) efficient brakes;
- ii) side and rear view mirrors to increase the visibility of the dumper/ truck operator while reversing;
- iii) Rear view camera to have uninterrupted clear view of the rear side of the truck /dumper; audio-visual alarm while reversing.
- iv) efficient audible warning devices;
- v) efficient head-lights and tail lights, if the truck or dumper is required to work after day-light hours and if the tipper is provided with rear flap door, it shall be of self-closing and self-opening type, to prevent manual operation.
- vi) cabin guard extension to fully cover the driver/ operator's cabin
- vii) limiting speed device to regulate the maximum speed of the vehicle to be operated.

14.2 OPERATION:

14.2.1 Every Tipping Truck or Dumper shall be under the charge of a competent person authorized in writing by the Manager herein called the 'Driver'.

14.2.2 No person other than the Driver or his Helper if any or any person authorized in writing by the Manager, shall ride in the cabin / onboard of the Truck or Dumper.

- 14.2.3 (i) As far as possible, loaded Tipping Trucks or Dumpers shall not be reversed on gradients.
(ii) Sufficient stop blocks shall be provided at every tipping point and these shall be used on every occasion, material is dumped.
(iii) Standard Traffic Rules shall be adopted and followed during movement of all Tipping Trucks and Dumpers. They shall be prominently displayed at relevant places in the opencast workings and Tipping Truck/Dumpers roads.

14.2.4 When not in use, every Tipping Truck or Dumper shall be moved to and parked at proper parking places.

14.2.5 No person shall be permitted to work on the chassis of a Tipping Truck or Dumper, with the body in a raised position until the Tipping Truck or Dumper body has been securely locked in position. The mechanical hoist mechanism shall not be dependent upon to hold the body of the Tipping Truck or Dumper in a raised position.

14.3 DUTIES OF TIPPING TRUCK / DUMPER OPERATORS:

14.3.1 (a) Before commencing work, the Driver shall personally inspect and test the vehicle, paying special attention to the following details:

- (i) that brakes are in working order;
- (ii) that the warning devices are in working order; and
- (iii) that the lights are in working order if the vehicle is required to work after day-light hours.

He shall not take out the vehicle for work nor shall drive the vehicle, unless he is satisfied that it is mechanically sound and in efficient working order. He shall always wear the seat belt when the truck/ dumper is in operation.

(b) The Driver shall maintain a record of every inspection made, in a bound paged book kept for the purpose and shall be signed and dated by the person making the inspection.

14.3.2 (i) The Driver shall handle the Tipping Truck/Dumper carefully and keep it under control at all times. He shall negotiate downhill gradients in low gear so that minimum braking is required.

(ii) He shall not drive too fast, shall avoid distractions and shall drive defensively. He shall not attempt to overtake another vehicle unless he can see clearly for enough ahead to be sure that he can pass it safely. He shall also sound audible warning signal before overtaking.

(iii) When approaching stripping equipment, the Driver of the Tipping Truck or Dumper shall sound audible warning signal and shall not attempt to pass the stripping equipment until he has received a proper audible signal in reply.

(iv) Before crossing a road, he shall reduce his speed, look at both directions along the road and shall proceed across the road only if it is safe to do so.

(v) The Driver shall not operate the Truck or Dumper in reverse unless he has a clear view of the area behind the vehicle or he has the assistance of a 'spotter' or tripman' duly authorized in writing for the purpose by the Manager. He shall give an audible warning signal before reversing a Tipping Truck or Dumper.

(vi) The Driver shall be sure of clearance before driving through tunnels, archways, plant structure etc.

(vii) The Driver shall not drive 'nose to tail' particularly behind a vehicle with twin near wheels from which a stone piece wedged between the tyres may ply back into the windscreen of his vehicle.

14.3.3 The Driver shall see that the vehicle is not overloaded and that material is not loaded in a Tipping Truck or Dumper as to project horizontally beyond the sides of its body and that any material projecting beyond the front or rear is indicated by the red flag during day and a red light after day-light hours.

14.3.4 The Driver shall not allow any unauthorized person to ride on the vehicle. He shall also not allow more than the authorized number of persons to ride on the vehicle.

15.0 **TESTING OF BRAKE:** At least once in two weeks, the brakes of the Tipping Truck, Dumper or any such other vehicles shall be tested as indicated below:

15.1 **SERVICE BRAKE TEST:** The brake shall be tested on a specified gradient and speed when the vehicle is fully loaded. The vehicle shall stop within a specified distance when the brake is applied. The specified stopping distance shall be obtained from the manufacturer of the vehicle.

15.2 **PARKING BRAKE TEST:** The parking brake shall be capable to hold the vehicle when it is fully loaded and placed at the maximum gradient of roadway which is permitted for a period of at least ten minutes.

15.3 A record of such test shall be maintained in a bound paged book and shall be signed by the person carrying out the test and the Engineer and Manager.

16.0 **INSPECTION AND OTHER PRECAUTIONS:**

16.1 Surprise inspection shall be carried out by the Engineer/Superior official at an interval not exceeding 15 days to ensure that the examination schedule of machinery/equipment are carried out.

- 16.2 While inflating tyres, suitable protective cages shall be used. Tyres shall never be inflated by sitting either in the front or on the top of the same.
- 16.3 While the vehicle is being loaded / unloaded on gradient, the same shall be secured stationary by parking brake and other means such as, suitably designed stopper blocks which could be placed below the tyres.
- 16.4 Operation and maintenance of heavy machineries such as Shovel, Dumpers etc. shall be done strictly in accordance with the operation instructions. The operation instructions and maintenance schedule shall be obtained from the manufacturers.
- 16.5 It shall be the duty of the Manager to issue duty charts (in the language which is understood by the person concerned) to various Operators/Supervisors connected with the use of Heavy Earth Moving Machinery and both the Manager and the Engineer shall be responsible to ensure that all the precautions and guidelines listed in the permission are strictly followed.
- 17.0 **Miscellaneous**
- 17.1 The recommendations of DGMS (Tech.) Circular No.18 of 1975 & DGMS (Tech.) Circular No. 3 of 2007 (Regarding protection of workers against Noise & Vibration in Working Environment) shall be implemented forthwith.
- 17.2 In order to check entry of unauthorized vehicles in mine premises, mine management shall establish properly manned check gate(s) at the entrance(s) where record of entry and exit of each such vehicle shall be maintained.
- 17.3 All persons deployed by the contractor for working in a mine must undergo vocational training, initial / periodical medical examination. They shall be issued cards stating the name of the contractor and the work and its validity period, indicating status of vocational training & medical examination.
The contractor shall submit to DGMS returns, indicating Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons. The return shall be submitted quarterly (by 10th of April, July, October & January) for contracts of more than one year and for contracts of less than one year, returns shall be submitted monthly
- 17.4 Employees engaged in driving/HEMM operation jobs shall undergo eye refraction test at least once in a year.
- 18.0 The recommendations of XI National Conference on Safety in Mines circulated vide DGMS (Tech.) Circular (MAMID)/ 05 dated 17-07-2013 shall be implemented forthwith.

[Signature] 2/2/15
Director of Mines Safety
Nagpur Region No. II.

BOARD MATTER
CONFIDENTIAL

WESTERN COALFIELDS LIMITED
BOARD SECRETARIAT
COAL ESTATE, CIVIL LINES, NAGPUR

WCL/BD/SECTT/BM-244/2013/918

DATE : 02/02/2013

Reproduced below is the relevant excerpt from the minutes of 244th meeting of the Board of Directors of WCL held on 28th January, 2013 :

"ITEM NO.244/C-3

SUB: Mine Closure Plans prepared by CMPDI, RI-IV for 48 (forty eight) nos coal mine projects of WCL as per guidelines issued by Ministry of Coal.

- i) In consideration of the proposal brought out in the agenda note and as explained by Shri A. Azami, GM (Env), the Board, after deliberation approved the proposal of Mine Closure Plan of 48 Nos. of Coal Mines of WCL prepared by CMPDI, RI-IV based on the guidelines of Ministry of Coal (MOC) dated 27.08.2009 and updated on 25.04.2012 as communicated by the Under Secretary, MOC dated 31.05.2012 for annual corpus of Rs. 11133.93 lakhs as on 01.04.2012 of these mines and total amount of Rs. 132423.20 lakhs after 5% annual compounding as a mine closure cost.
- ii) The Mine Closure Plan will be effective from the year 2012-13.
- iii) GM (Env.) to take necessary action in the matter."

Action Taken Report (ATR), duly approved by Concerned Director, on the decision/directive of the Board, if any, may kindly be sent to Board Secretariat for information of the Board at the next meeting.

SR. MANAGER (FINANCE)/
COMPANY SECRETARY

✓ GM (ENV)

cc : DIRECTOR (TECHNICAL)
DIRECTOR (FINANCE)
DIRECTOR (PERSONNEL)

hm (min)
for n. 9



Western Coalfields Limited Environment Department

Regd. Office: 'Coal Estate', Civil Lines, Nagpur – 440 001.

Ref No.: WCL/ENV/HQ/22-Q/-78

Date: 08.02.2013

To,
Shri V.S.Rana,
Under Secretary to Govt of India,
Ministry of Coal, Shastri Bhawan,
New Delhi 110 001.

Sub : Submission of approved Mine Closure Plans (MCP) of WCL mines.
Ref : MOC guidelines for preparation of Mine Closure Plan dated 07.01.2013.

Dear Sir,

This has reference to above mentioned guidelines on the subject matter, As stipulated in clause 2 (v) of the aforesaid guidelines we are enclosing herewith following 63 Nos of approved MCPs of WCL projects in 4 copies of each mines for your kind perusal.

In this regard it is to mention that, the MCPs of 15 projects of WCL (List -A) were approved by WCL Board in its meeting held on 25th August 2012 and 48 Nos of MCP (List - B) approved in WCL Board on 28th Jan 2013.

List - A : 15 MCPs approved by WCL Board on 25th August 2012 are as follows:

Sl No	Name of Project	Sl No	Name of Project	Sl No	Name of Project	Sl No	Name of project
1	Pimpalgaon OC	5	Niljai OC	9	Kolgaon OC	13	Sasti OC
2	Kolarpimpri OC,	6	Mungoli OC	10	Gondegaon OC	14	Pauni OC
3	Junad OC	7	Naigaon OC	11	kamptee UG to OC	15	NavinKunada OC
4	Ghonsa OC	8	Ghugus OC	12	Inder UGto OC.		

List - B: 48 MCPs approved by WCL Board on 28.01.2013 are as follows:

Sl No	Name of Project	Sl No	Name of Project	Sl No	Name of Project	Sl No	Name of project
1	Rawanwara Khas UG	13	Ambara UG	25	Saoner UG	37	DRC UG
2	Barkui OC	14	Tandsi UG	26	Silewara UG	38	CRC UG
3	Mahadeopuri UG	15	Mohan UG	27	Adasa UG	39	Mana& Nandgaon UG
4	Vishnupuri - I UG	16	Jhama UG	28	Pipla UG	40	Bhatadi OC
5	Vishnupuri- II UG	17	Damua OC.	29	Telwasa OC	41	Mahakali UG
6	Naheriya UG	18	Tawa UG	30	Dhorwasa OC	42	HLUG.
7	Urdhan OC	19	Tawa - II UG	31	New Majri OC	43	Ballarpur OC
8	Chhinda OC	20	Chhatrapur -I UG	32	New Majri- III UG	44	Ballarpur UG
9	Thesgora UG	21	Chhatrapur -II UG	33	Umred OC	45	Gouri-I&II (A) OC
10	Mathani UG	22	Sami UG.	34	MKD- II OC	46	Sasti UG
11	Shivpuri OC.	23	Shobhapur UG	35	Murpar UG	47	Rajur UG
12	Ganpati UG	24	Patansaongi UG	36	Durgapur OC	48	Kumbharkhani UG

Yours faithfully,

General Manager (Env)

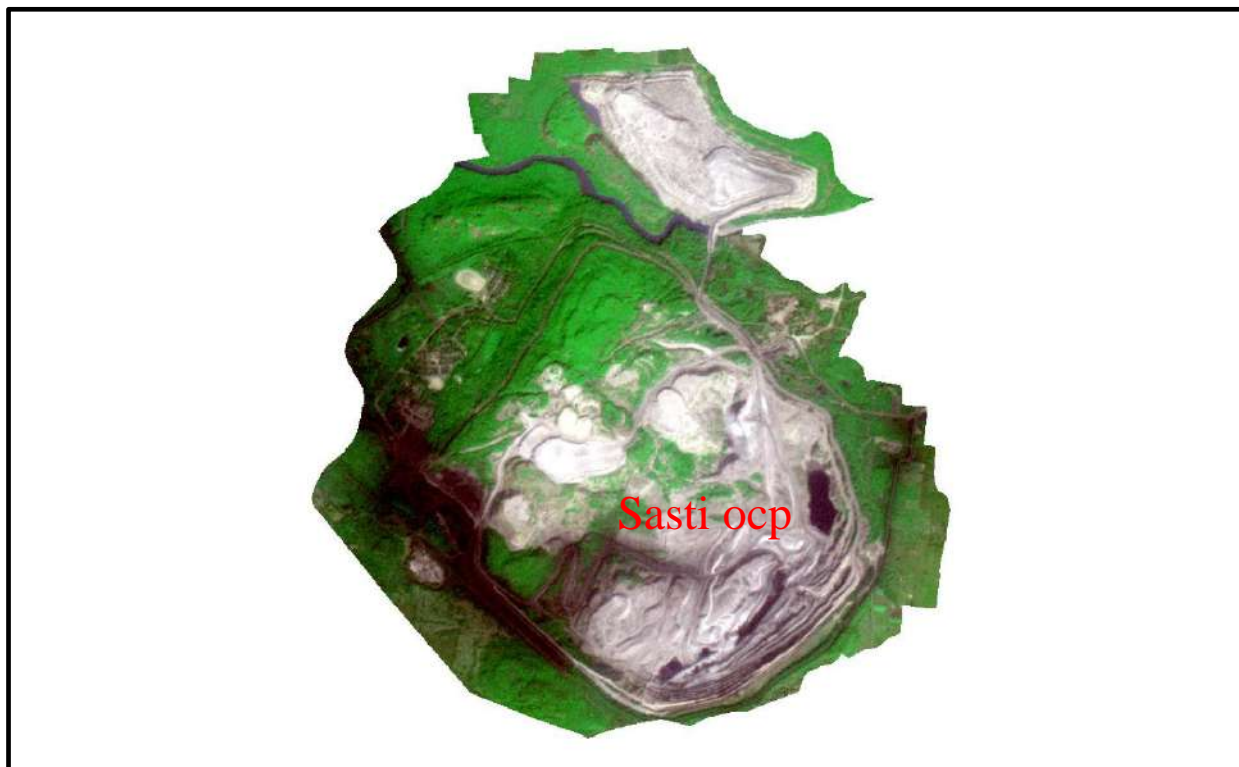
Copy to:

1. CGM (WBP/FP/ENV), CIL, Kolkata.
2. Regional Director, CMPDI, RI_ IV, Nagpur.
3. CGM/GM- BLR/ CND / WA / WNA / MA / NAGPUR / UMRER / PENCH / KANHAN & PATHAKHERA AREAS-
4. GM Finance), WCL.
5. TS to (Director (Tech)

Mine wise details of Mine Closure Plan as Approved by WCL Board in 244th meeting held on 28th January 2013

Sl. No.	Name of Project	Total Project area as per EC (ha)	Rate in lakhs /ha	Current value of Corpus Fund in Rs. Lakhs	WPI Base Year (164.80)	Balance Life Yrs as on 1.4.12	Annual Corpus in Rs. Lakhs	Starting year	Total amt in Escrow A/c with 5% escalation on every year (Rs. In Lakhs)
27	Mohan(Maori) UG	800.00	1.00	1017.28	July12	9	113.03	12-13	1246.33
28	Ambara UG	775.510	1.00	986.14	July12	9	109.57	12-13	1208.18
29	Jharna UG	713.00	1.00	906.65	July12	2	453.32	12-13	929.30
30	Damua OC	65.45	6.00	499.35	July12	5	99.87	12-13	551.84
31	New Majri-III UG	1342.54	1.00	1707.18	July12	2	853.59	12-13	1749.86
32	Rajur UG	1695.60	1.00	2156.13	July12	28	77.00	12-13	4497.28
33	Kumbharkahni UG	442.00	1.00	562.05	July12	9	62.45	12-13	688.61
34	Durgapur OC	1186.54	6.00	9052.86	July12	9	1005.87	12-13	11091.33
35	HLC-I & III UG	748.97	1.00	952.39	July12	31	30.72	12-13	2173.94
36	Mahakali UG	404.98	1.00	514.97	July12	33	15.61	12-13	1249.42
37	DRC UG	779.29	1.00	990.95	July12	71	13.96	12-13	8638.77
38	Mana & Nandgaon UG	606.52	1.00	771.25	July12	17	45.37	12-13	1172.32
39	CRC UG	194.30	1.00	247.07	July12	2	123.54	12-13	253.26

**Land Restoration/Reclamation Monitoring of more than
5 million cu.m. (Coal+OB) Capacity Opencast Coal Mines of Western
Coalfields Limited based on Satellite Data of the Year 2021**



Submitted to
Western Coalfields Limited



cmpdi
A Mini-Ratna Company

**Land Restoration/Reclamation Monitoring of more than
5 million cu.m. (Coal+OB) Capacity Opencast Coal Mines of Western Coalfields
Limited based on Satellite Data of the Year 2021**

March 2022



**Remote Sensing Cell
Geomatics Division
CMPDI, Ranchi**

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Executive Summary

- 1.0 Project** Land restoration / reclamation monitoring of 14 opencast coal mines of Western Coalfields Ltd. (WCL) producing 5 million cu.m. and more (Coal+OB) per year based on satellite data, regularly on annual basis. Among 14 opencast coal mines projects, 4 projects namely Yekona-I&II(Amal), New Majri UG to OC, Pauni-II(Expn) and MKD-I(Expn) have been included in 2021 for the first time as their capacity (Coal+OB) have been increased to category of more than 5 million cubic meter from category of less than 5 million cu.m. per year.
- 2.0 Objective** Objective of the land restoration / reclamation monitoring is to assess the area of backfilled, plantation, social forestry, active mining area, water bodies, and distribution of wasteland, agricultural land and forest in the leasehold area of the project. This will help in assessing the progressive status of mined land reclamation and to take up remedial measures, if any, required for environmental protection.
- 3.0 Salient Findings**
- Out of total leasehold area of 150.99 Km² of 14 projects of WCL viz. Sasti, Padmapur, Durgapur, Mugoli, Umrer, Ukni, Niljai, New Majri. Makardhokra-III, Penganga, Yekona-I&II (Amal), New Majri UG to OC, Pauni-II (Expn.) and MKD-I(Expn.) considered for monitoring during 2021-22 ; the total excavated area is 35.00 Km² out of which 10.53 Km² area (30.09%) is backfilled, 3.84 Km² area (10.97%) has been planted and 20.63 Km² area (58.94%) is under active mining. It is evident from the analysis that 41.06% area of the OC projects has been reclaimed (biological and technical) and balance 58.94% area is under active mining. Project wise details are given in Table-1 & Fig-1. (For comparison purpose, refer Table-1).
 - On comparing the status of land reclamation for the year 2021 with respect to the year 2020 in different projects, it is evident from the analysis that total area under land reclamation has increased from 12.39 Km² (Yr. 2020) to 14.37 Km² (Yr.2021). Out of 14 projects of WCL, Sasti OC ranks on top for land reclamation (85.53%) followed by Umrer OC (64.30%) and Mugoli OC (44.05%).
 - Area of biological reclamation (plantation) has increased from 3.39 Km² (Yr.2020) to 3.84 Km² (Yr.2021) whereas area of technical reclamation (area under backfilling) has increased from 9.00 Km² (Yr. 2020) to 10.53 Km² (Yr.2021) in WCL. The total increase of 1.98 Km² under reclamation is the result of the efforts of the Western Coalfields Ltd. taken up towards environmental protection.

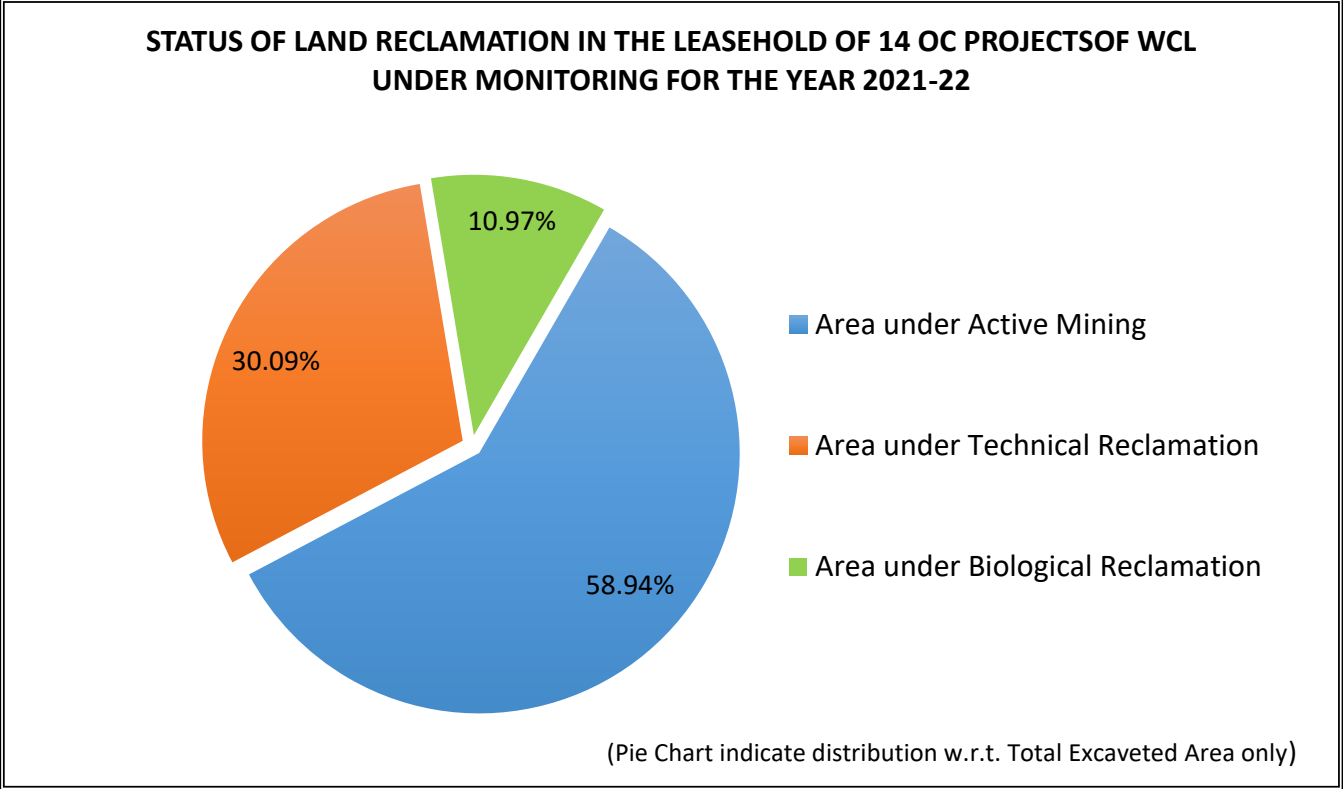




















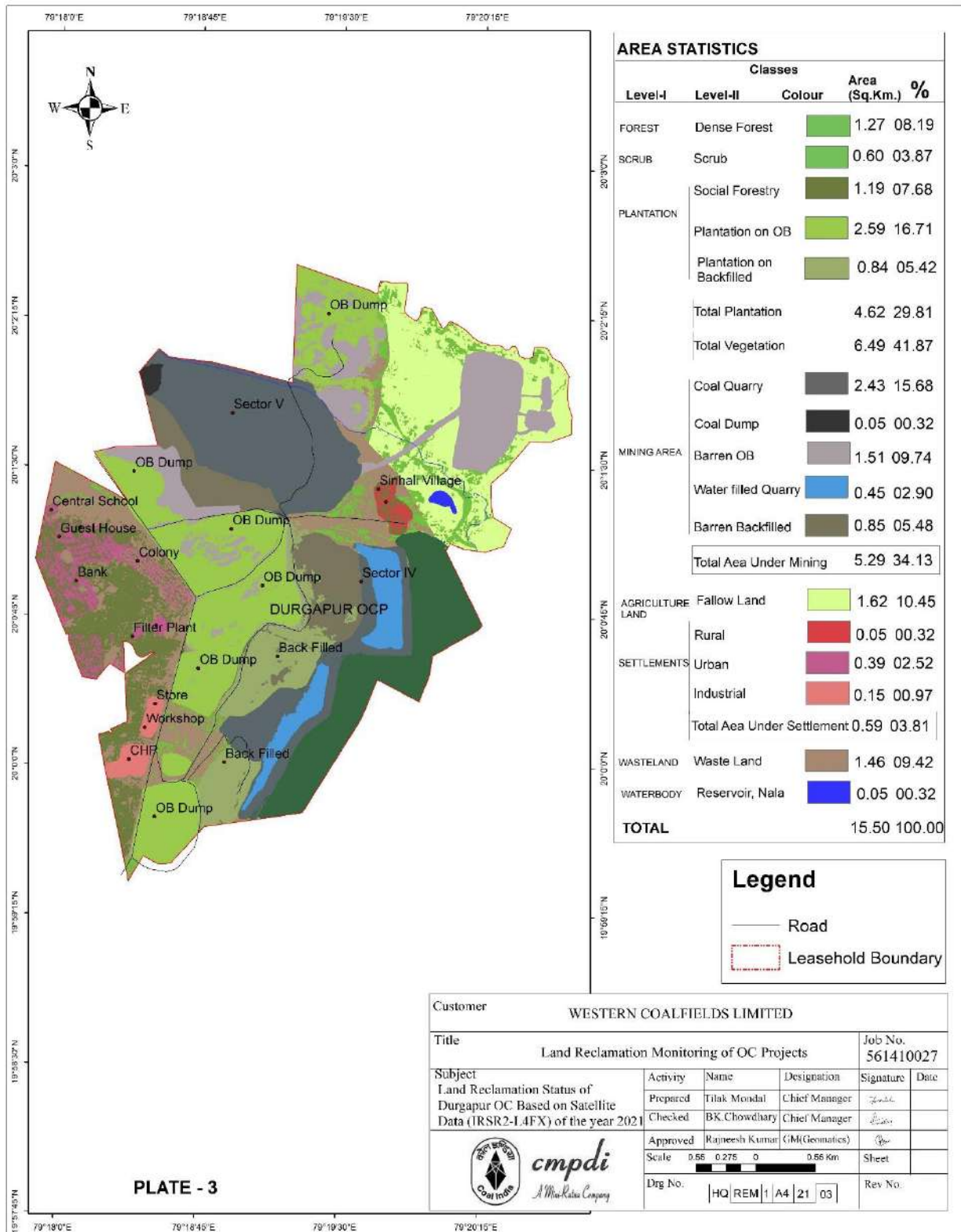


Fig.1: Pie Chart indicating distribution (%) of reclamation activities in 14 OC Mines of WCL

TABLE - 2
Status of Land Use / Reclamation in OC Mines(>5mcu.m) of Western Coalfields Ltd based on Satellite data of the Year 2021

(Area in Sq.Km)																																	
			Sasti		Padmapur		Durgapur		Mugoli		Umrer		Ukni		Niljai		New Majri		MKD-III		Penganga		Yekona-I&II (Amal)		MKD-I (Expn.)		New Majri Ug to OC		Pauni -II (Expn)		Total		
			Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	
FORESTS	Dense Forest		0.00	0.00	0.00	0.00	1.27	8.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.84	
	Open Forest		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Total Forest			0.00	0.00	0.00	0.00	1.27	8.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.84	
SCRUBS																																	
	Scrubs		0.68	7.39	0.61	7.36	0.60	3.87	2.07	16.49	0.00	0.00	2.01	15.64	1.68	9.54	0.05	0.65	0.57	6.18	1.48	19.40	2.83	16.86	0.91	14.81	0.99	14.02	1.29	11.82	15.77	10.44	
PLANTATION	Social Forestry		0.65	7.07	0.81	9.77	1.19	7.68	0.47	3.75	2.31	24.44	0.72	5.60	1.23	6.98	1.47	18.99	0.07	0.76	0.39	5.11	0.03	0.18	0.00	0.00	0.33	4.67	0.08	0.77	9.75	6.46	
	Plantation on OB Dump		1.70	18.48	1.95	23.52	2.59	16.71	1.71	13.63	1.58	16.72	1.64	12.76	1.65	9.37	1.32	17.05	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.71	0.00	0.00	0.19	1.77	14.37	9.52	
	Plantation on Backfill		0.79	8.59	0.20	2.41	0.84	5.42	0.14	1.12	1.40	14.81	0.00	0.00	0.11	0.62	0.36	4.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84	2.54		
	Total Plantation (Biological Reclamation)			3.14	34.13	2.96	35.71	4.62	29.81	2.32	18.49	5.29	55.98	2.36	18.37	2.99	16.98	3.15	40.70	0.07	0.76	0.39	5.11	0.03	0.18	0.04	0.71	0.33	4.67	0.27	2.54	27.96	18.52
Total Vegetation			3.82	41.52	3.57	43.06	6.49	41.87	4.39	34.98	5.29	55.98	4.37	34.01	4.67	26.52	3.20	41.34	0.64	6.93	1.87	24.51	2.86	17.04	0.95	15.52	1.32	18.69	1.56	14.36	45.00	29.80	
ACTIVE MINING	Coal Quarry		0.55	5.98	1.01	12.18	2.43	15.68	1.88	14.98	1.58	16.72	1.81	14.09	2.83	16.07	2.16	27.91	1.02	11.05	0.77	10.09	0.40	2.38	0.93	15.19	0.71	10.06	0.48	4.35	18.56	12.29	
	Coal Dump		0.00	0.00	0.00	0.00	0.05	0.32	0.00	0.00	0.12	1.27	0.10	0.78	0.11	0.62	0.00	0.00	0.00	0.00	0.23	3.01	0.13	0.76	0.00	0.00	0.04	0.57	0.15	1.33	0.93	0.62	
	Advance Quarry Site		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	1.74	0.19	0.13		
	Quarry Filled With Water		0.00	0.00	0.21	2.53	0.45	2.90	0.00	0.00	0.01	0.11	0.06	0.47	0.00	0.00	0.12	1.55	0.00	0.00	0.00	0.00	0.01	0.06	0.04	0.65	0.00	0.00	0.05	0.47	0.95	0.63	
	Total Area under Active Mining			0.55	5.98	1.22	14.72	2.93	18.90	1.88	14.98	1.71	18.10	1.97	15.33	2.94	16.70	2.28	29.46	1.02	11.05	1.00	13.11	0.54	3.20	0.97	15.84	0.75	10.63	0.87	7.89	20.63	13.66
RECLAIMED	Barren OB Dump		0.78	8.48	2.06	24.85	1.51	9.74	2.15	17.13	0.17	1.80	3.03	23.58	3.72	21.12	0.46	5.94	2.50	27.09	1.53	20.05	0.44	2.62	0.12	1.88	0.89	12.61	1.85	16.89	21.21	14.05	
	Barren Backfilled Area (Technical Reclamation)		2.46	26.74	0.61	7.36	0.85	5.48	1.34	10.68	1.68	17.78	0.48	3.74	1.34	7.61	1.13	14.60	0.31	3.36	0.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	6.97		
	Total Area			3.24	35.22	2.67	32.21	2.36	15.23	3.49	27.81	1.85	19.58	3.51	27.32	5.06	28.73	1.59	20.54	2.81	30.44	1.86	24.38	0.44	2.62	0.12	1.88	0.89	12.61	1.85	16.89	31.74	21.02
Total Area Under Mine Operation			3.79	41.20	3.89	46.92	5.29	34.13	5.37	42.79	3.56	37.67	5.48	42.65	8.00	45.43	3.87	50.00	3.83	41.50	2.86	37.48	0.98	5.82	1.09	17.72	1.64	23.24	2.72	24.78	52.37	34.68	
WASTELANDS	Waste Lands		0.92	10.00	0.42	5.07	1.46	9.42	0.42	3.35	0.09	0.95	1.02	7.94	1.74	9.88	0.28	3.62	0.20	2.17	1.76	23.07	0.66	3.93	0.32	5.32	0.51	7.22	0.73	6.67	10.53	6.97	
	Fly Ash Pond / Sand Body		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.33	0.05	0.71	0.15	1.40	0.28	0.19	
Total Wasteland			0.92	10.00	0.42	5.07	1.46	9.42	0.42	3.35	0.09	0.95	1.02	7.94	1.74	9.88	0.28	3.62	0.20	2.17	1.76	23.07	0.66	3.93	0.40	6.65	0.56	7.93	0.88	8.07	10.81	7.16	
WATERBODIES	Reservoir, nallah, ponds		0.06	0.65	0.12	1.45	0.05	0.32	0.00	0.00	0.25	2.65	0.00	0.00	0.03	0.17	0.01	0.13	0.03	0.33	0.11	1.44	0.11	0.66	0.04	0.53	0.04	0.57	0.23	2.08	1.08	0.72	
	Total Waterbodies			0.06	0.65	0.12	1.45	0.05	0.32	0.00	0.00	0.25	2.65	0.00	0.00	0.03	0.17	0.01	0.13	0.03	0.33	0.11	1.44	0.11	0.66	0.04	0.53	0.04	0.57	0.23	2.08	1.08	0.72
AGRICULTURE	Crop Lands		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	10.40	0.00	0.00	5.08	30.26	0.77	12.49	0.96	13.60	0.59	5.41	8.36	5.54		
	Fallow Lands		0.00	0.00	0.00	0.00	1.62	10.45	2.04	16.25	0.00	0.00	1.78	13.85	2.14	12.15	0.00	0.00	3.36	36.40	0.88	11.53	7.05	42.01	2.88	46.99	2.46	34.84	4.88	44.60	29.09	19.27	
	Total Agriculture			0.00	0.00	0.00	0.00	1.62	10.45	2.04	16.25	0.00	0.00	1.78	13.85	2.14	12.15	0.00	0.00	4.32	46.80	0.88	11.53	12.13	72.27	3.65	59.48	3.42	48.44	5.47	50.01	37.45	24.8
SETTLEMENTS	Urban Settlement		0.09	0.98	0.00	0.00	0.39	2.52	0.12	0.96	0.15	1.59	0.00	0.00	0.34	1.93	0.34	4.39	0.00	0.00	0.00	0.00	0.01	0.06	0.01	0.10	0.07	0.99	0.02	0.05	1.54	1.02	
	Rural Settlement		0.00	0.00	0.00	0.00	0.05	0.32	0.03	0.24	0.00	0.00	0.02	0.16	0.20	1.14	0.00	0.00	0.00	0.00	0.03	0.39	0.03	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.24	
	Industrial Settlement		0.52	5.65	0.29	3.50	0.15	0.97	0.18	1.43	0.11	1.16	0.18	1.40	0.49	2.78	0.04	0.52	0.21	2.28	0.12	1.57	0.01	0.06	0.00	0.00	0.01	0.14	0.07	0.65	2.38	1.58	
	Total Settlement			0.61	6.63	0.29	3.50	0.59	3.81	0.33	2.63	0.26	2.75	0.20	1.56	1.03	5.85	0.38	4.91	0.21	2.28	0.15	1.97	0.05	0.28	0.01	0.10	0.08	1.13	0.09	0.70	4.28	2.83
Grand Total			9.20	100.00	8.29	100.00	15.50	100.00	12.55	100.00	9.45	100.00	12.85	100.00	17.61	100.00	7.74	100.00	9.23	100.00	7.63	100.00	16.79	100.00	6.14	100.00	7.06	100.00	10.95	100.00	150.99	100.00	



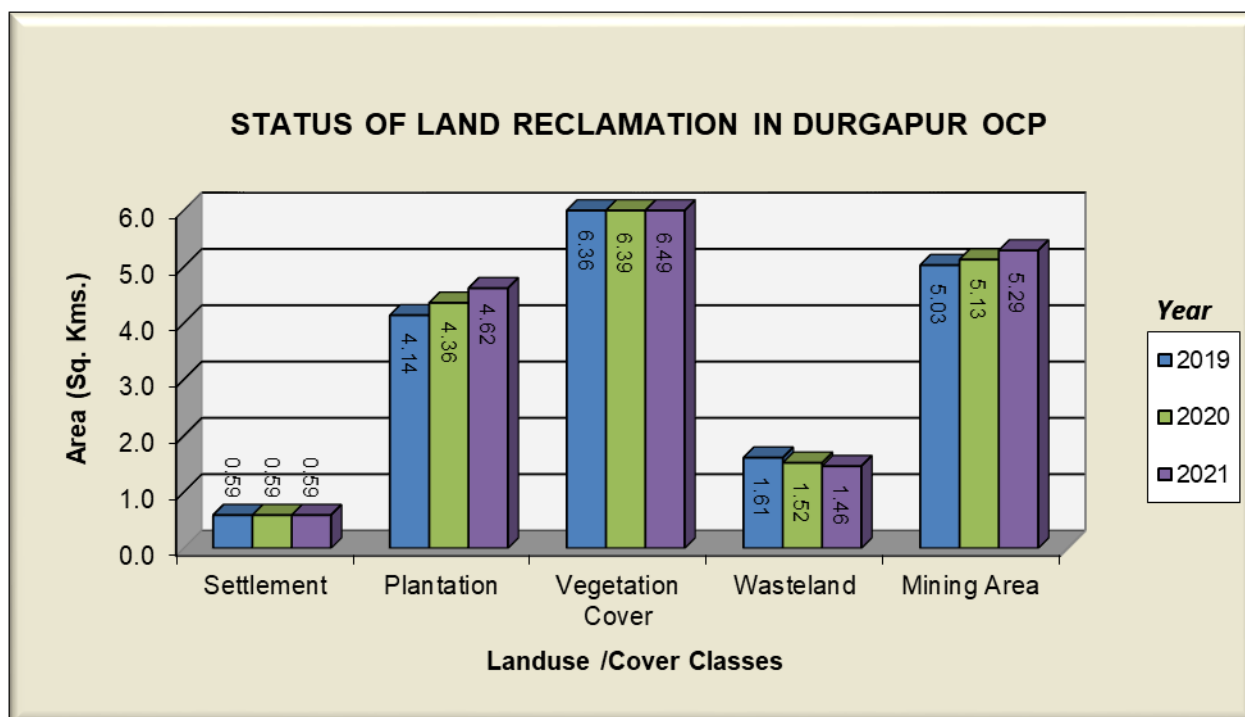


Figure 6

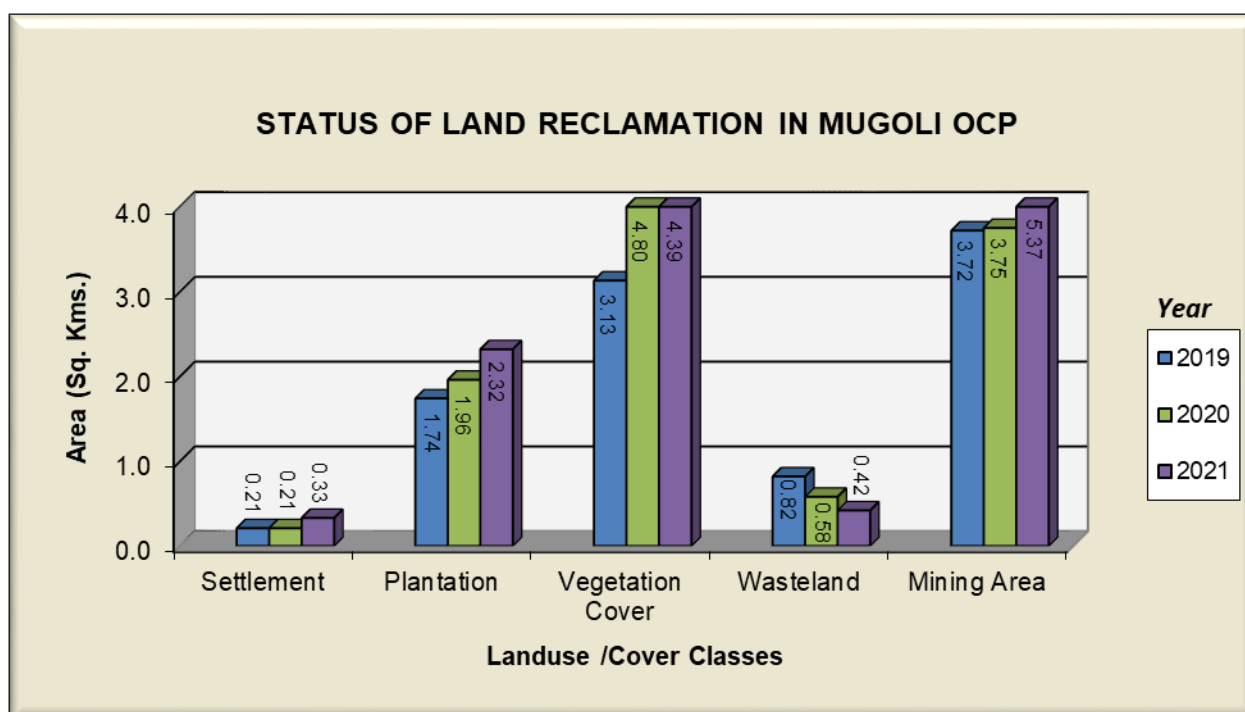


Figure 7



Photograph-3: Plantation on External OB dump of (Durgapur OCP)



Photograph-4: Plantation on Embankment (Mugoli OCP)

Minutes of the 30th meeting of the EAC held on 17-18 May, 2018 for appraisal of Coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3

A. The 30th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 17-18 May, 2018 in the Ministry to consider the proposals relating to coal mining sector. The lists of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

There being no comments from any of the members of the Committee, minutes of the 28th meeting of the EAC held on 17-18 April, 2018 were confirmed.

C. Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

Agenda No.30.1

Jayant Opencast Coal mine Expansion project from 15.5 MTPA to 25 MTPA in an area of 3177 ha of M/s Northern Coalfields Limited located in District Singrauli (Madhya Pradesh) - for EC

[IA/MP/CMIN/62083/2017, F.No.J-11015/12/2017-IA.II(M)]

30.1.1 The proposal is for grant of environmental clearance for Jayant Opencast Coal mining Expansion project from 15.5 MTPA to 25 MTPA in an area of 3177 ha of M/s Northern Coalfields Limited located in District Singrauli (Madhya Pradesh).

30.1.2 The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The project with its capacity of 15.5 MTPA in the mine lease area of 2704 Ha was earlier granted EC vide letter J-11015/382/2008-IA.II (M) dated 10th December, 2008.
- (ii) ToR for the project was granted vide letter no. J-11015/12/2017-IA.II (M) dated 15.06.2017.
- (iii) The latitudes and longitudes of the project are 24°06'26.08" N to 24°11'40.86" N and 82°38'2.01" E to 82°40'55.64" respectively.
- (iv) Joint Venture: No joint venture
- (v) Coal Linkage :Singrauli Super Thermal Power Station (SSTPS) of NTPC through their own MGR system and other consumers by Public Railway
- (vi) Employment generated/to be generated: 2690(Sanctioned manpower as per EPR- option -II) Present Manpower is 2074 as on 31.03.2018
- (vii) Benefits of the project: The project will be able to supply planned quantity of coal to Singrauli Super Thermal Power Station (SSTPS) of NTPC through their own MGR system, other thermal power stations of the nation and other consumers by Public Railway system, thus meeting the energy requirement of the country.

The land usage of the project will be as follows:

EC Letter Condition No.	EC Condition	Modification requested	Reason for Modification
			Expansion Mine (Phase-I + Phase-II).

30.9.3 The Committee, after deliberations, recommended the proposal for amendment in the environmental clearance dated 23rd January, 2018, as proposed by the project proponent and mentioned in the table at para 30.9.2 above. All other terms and conditions stipulated in the EC dated 23rd January, 2018, shall remain unchanged.

Agenda No.30.10

Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in District Chandrapur (Maharashtra)- For Amendment in EC

[IA/MH/CMIN/62601/2008, F.No.J-11015/56/2008-IA.II(M)]

30.10.1 The proposal is for grant of amendment in Environmental Clearance for Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in District Chandrapur (Maharashtra).

30.10.2 The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) The EC for the project was granted vide letter No.J-11015/56/2008-IA.II(M) dated 10th November, 2017. Now, the request is for amendment in the EC conditions as per the reasons given below:

EC Letter Condition No.	EC Condition	Modification requested	Reason for Modification
(b) Land Reclamation (ii)	Final mine void depth should not be more than 40 m. The void area should be converted into water body. The remaining areas should be backfilled up to the ground level and covered with thick top soil. The land after mining	The condition may be modified as: Final mine void should be in conformity with the post mining land-use plan, which remains an integral part of the approved mining plan and the EIA/EMP submitted to MoEF& CC.	As per approved mining plan, EIA/EMP and as recorded in the EC in point no. (x) There are eight external OB dumps with quantity of 116.85 Mm ³ in an area of 461.38 ha and 3 internal dumps with quantity of 202.59 Mm ³ in an area of 485.68 ha. The final mine void would be in 175 ha with depth of 150 m. In view of above, final mine void depth upto 40m and complete backfilling of void, Plantation & converting land for agriculture

EC Condition No.	Letter	EC Condition	Modification requested	Reason for Modification
		should be restored for agriculture or forestry purpose.		purpose is not technically feasible.

30.10.3 The Committee after deliberation recommended the proposal for amendment in the environmental clearance granted dated 10th November, 2017, as proposed by the project proponent and mentioned in the table at para 30.10.2 above. All other terms and conditions stipulated in the EC dated 23rd January, 2018, shall remain unchanged.

Agenda No.30.11

Giral Lignite Mining project of 1 MTPA in an area of 2655.70 ha of M/s Rajasthan State Mines & Minerals Limited located in District Barmer (Rajasthan)-For EC amendment

[IA/RJ/CMIN/21938/2014, F.No.J-11015/94/2014-IA.II(M)]

30.11.1 The proposal is for grant of amendment in Environmental Clearance for Giral Lignite Mining project of 1 MTPA in an area of 2655.70 ha of M/s Rajasthan State Mines & Minerals Limited located in District Barmer (Rajasthan).

30.11.2 The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

(i) The EC for the project was granted vide letter No.J-11015/94/2014-IA.II(M) dated 12th March, 2015. Now, the request is for amendment Original Area and the demarcated area by the Department of Mines and Geology, Government of Rajasthan in the EC

(ii) Department of mines and Geology Government of Rajasthan had sanctioned a mining lease near village Giral in district Barmer Rajasthan for an area of 2655.70 ha to M/s RSMML in the year 1994. Environmental clearance for Giral Lignite Mines was also approved and granted for the same area i.e. 2655.70 ha by MOEF&CC on 12th March, 2015.

(iii) During the renewal of the Mining Lease due to closing error in demarcation conducted by Department of mines and Geology Government of Rajasthan the original area 2655.70 ha was reduced to 2639.823 ha.

(iv) Despite the fact that the area was reduced the position of lease pillar were remain in the same position as it was earlier.

EC letter point no.	As mentioned in EC letter dated 12-03-2015	Changes required	Justification
Subject	Giral Lignite Mines project (1 MTPA in an ML area of 2655.70 ha., Latitude N-26° 01' 24" to 26° 05' 16" and longitude E-71° 13' 47" to 71°	Giral Lignite Mines project (1 MTPA in an ML area of 2639.823 ha., Latitude N-26° 01' 24" to 26° 05' 16" and longitude E-71° 13' 47" to 71°	Due to Closing Error

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

WESTERN COALFIELDS LTD.



APRIL 2023 TO JUNE 2023

Environment Laboratory
CMPDI

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

AN ISO 9001:2015 COMPANY

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Sl. No.	PARTICULARS	PAGE NO.
1	HEAVY METAL ANALYSIS REPORT	1 TO 19

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 /HM29	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	CHANDRAPUR	SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	DURGAPUR OC	SAMPLING PLAN : LQR 47	
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	MANAGER OFFICE -SECTOR V	CDOA-1	15-04-2023
2	DURAGAPUR VILLAGE	CDOA-2	15-04-2023
3	MANAGER OFFICE Q-IV	CDOA-3	15-04-2023
4	FILTER PLANT DOC /POC COLONY	CDOA-4	15-04-2023

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value				National Ambient Air Quality Standard NAAQS, 2009
				CDOA-1	CDOA-2	CDOA-3	CDOA-4	
1	Arsenic, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0007 $\mu\text{g}/\text{m}^3$	BDL	BDL	BDL	BDL	0.006 $\mu\text{g}/\text{m}^3$ (Annual average)
2	Lead, $\mu\text{g}/\text{m}^3$	IS 5182 PART 22	7.0 $\mu\text{g}/\text{m}^3$	BDL	BDL	BDL	BDL	1.0 $\mu\text{g}/\text{m}^3$ (24 Hourly average)
3	Nickle, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.007 $\mu\text{g}/\text{m}^3$	0.0073	BDL	BDL	BDL	0.02 $\mu\text{g}/\text{m}^3$ (Annual average)
4	Total Chromium, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0045 $\mu\text{g}/\text{m}^3$	BDL	BDL	BDL	BDL	**
5	Cadmium, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0015 $\mu\text{g}/\text{m}^3$	BDL	BDL	BDL	BDL	**
6	Mercury, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0007 $\mu\text{g}/\text{m}^3$	BDL	BDL	BDL	BDL	**

BDL: BELOW DETECTION LIMIT



SCIENTIFIC ASSISTANT


DEEPANSHU SAHU
AUTHORIZED SIGNATORY

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3	** This parameter not regulated as per NAAQS

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 /HM39	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	CHANDARAPUR	SAMPLING METHOD : LSOP 4	
NAME OF PROJECT	DURGAPUR	SAMPLING PLAN : LQR 47	
No. of Pages	1		

Sl No.	Name of location	Location Code	Date of sampling
1	CHP	CDOF-1	16-04-2023
2	CHECK POST/AYYAPA MANDIR	CDOF-2	16-04-2023

Sl. No.	Parameter	Method of analysis	Detection limit	Observed Value		National Ambient Air Quality Standard NAAQS, 2009
				CDOF-1	CDOF-2	
1	Arsenic, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0007 $\mu\text{g}/\text{m}^3$	BDL	BDL	0.006 $\mu\text{g}/\text{m}^3$ (Annual average)
2	Lead, $\mu\text{g}/\text{m}^3$	IS 5182 PART 22	7.0 $\mu\text{g}/\text{m}^3$	BDL	BDL	1.0 $\mu\text{g}/\text{m}^3$ (24 Hourly average)
3	Nickle, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.007 $\mu\text{g}/\text{m}^3$	0.0083	BDL	0.02 $\mu\text{g}/\text{m}^3$ (Annual average)
4	Total Chromium, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0045 $\mu\text{g}/\text{m}^3$	0.0046	BDL	**
5	Cadmium, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0015 $\mu\text{g}/\text{m}^3$	BDL	BDL	**
6	Mercury, $\mu\text{g}/\text{m}^3$	ASTM D 4185	0.0007 $\mu\text{g}/\text{m}^3$	BDL	BDL	**

BDL: BELOW DETECTION LIMIT



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COAL INDIA LIMITED

CORPORATE

ENVIRONMENTAL

POLICY

2012





Environmental Policy Statement:

Coal India Limited (CIL) is committed to protect the environment through prevention, mitigation of pollution, proper disposal and recycling of wastes, conservation of bio-diversity and bringing awareness among all its stakeholders for continual improvement in environmental performances following the best practices.

OBJECTIVES:

Coal India Limited shall endeavour to:

- 1. Conduct mining and associated operations in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects and Design Projects with due consideration of Sustainable Development.**
- 2. Prevent pollution of surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.**
- 3. Ensure compliance of Environment Clearance (EC) and Forestry Clearance (FC) conditions and other statutory conditions issued by regulatory agencies.**
- 4. Implement Environment Management Plans (EMP) in all mines effectively to mitigate pollutions of air, water, noise and land caused by mining operations.**
- 5. Strive to conserve bio-diversity.**
- 6. Conserve natural resources through the principle of REDUCE, REUSE, RECYCLE, REDEFINE and REPLACE. Put special thrust on efficient energy utilization as a measure to reduce carbon foot-print.**
- 7. Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective actions.**
- 8. Create awareness about environment among the employees and the local communities through pro-active communication and training.**

Strategies for Implementation of Environmental Policy:

Back Ground:

CIL subscribes to the view of Sustainable Development. Unless the environment can sustain the developmental activities, any pursuit of development in isolation can cause irreparable damage to the ecosystem and associated environmental attributes. Keeping this view in mind, CIL attaches top priority towards eco-friendly sustainable development and approved its 'Corporate Environmental Policy' in December 1995. However, the present policy is the amendment of 1995 Policy and is complimentary to the National Environmental Policy.

The modification in the present policy is the outcome of the experiences gained since 1995 and incorporating the modifications / amendments made time to time in environmental policies and additional requirements notified by Ministry of Environment & Forest (MOEF) and other statutory organisations concerning mine closure, reclamation of degraded land, environmental & forestry clearance etc. and also with the objective of revisiting the corporate policy.

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

Strategies: CIL adopts the strategies appended below for effective implementation:

1. Mine Planning on Sustainable Development:

- a) Coal, being a non-renewal energy source, extraction shall be planned prudently to meet national requirement. The projects shall be designed on the principle of Sustainable Development with due consideration to environment, safety and aspirations of the stakeholders at the planning stage itself.
- b) While preparing the Project Reports, the efforts shall be to incorporate latest mining equipments with higher capacity and mining technologies those are more environments friendly.

2. Environmental Impact Assessment (EIA) & Environment Mitigation Plan (EMP)

- a) Mining shall be carried out to facilitate the maintenance of stipulated environmental standards of quality of various pollutants within the limits under the relevant acts, statutes and National Environmental Policy 2006.
- b) EIA and EMP for all new and existing mines, washeries, central and regional workshops and other industrial units shall be formulated as per MoEF guide lines for obtaining Environmental Clearance (EC). Similarly, in the existing projects for enhancement of production capacities with or without increase in land, change of technology and renewal of lease etc. fresh EC is required to be sought as per norms. Further, the operations in these units shall be guided by the consent letters for air and water issued by the respective State Pollution Control Boards (SPCB).
- c) Detailed Mine Closure Plans shall be prepared for all existing and new mines as per the MoC (Ministry of Coal) guidelines.

3. Compliance of the statutory requirements:

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

4. Measures to mitigate pollution:

a) Air Pollution:

- i) Generation of dust is to be controlled at the source to the possible extent with necessary measures during drilling, loading, unloading, CHP transfer points etc.
- ii) Dust generation is to be minimized along coal / waste transportation roads.
- iii) Green belt is to be created around the source of dust.

b) Water Pollution

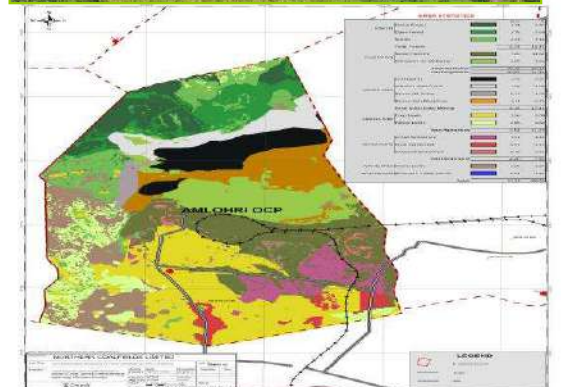
- i) **The** mine water and other effluent shall be treated effectively to ensure the discharge norms as per statute. The treated effluent shall be utilized to the extent possible with a view to achieve maximum water conservation.
- ii) Oil & grease from the effluent shall be removed by Oil & Grease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

c) Noise / ground vibration:

- i) All measures to minimise noise pollution will be taken including provision of ear muffs / plugs etc. and rotation of place of deployment.
- ii) Controlled blasting techniques shall be followed to reduce ground vibration as well as noise pollution.

d) Land Reclamation:

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



e) Mine Closure Plans:

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

f) Mine Fire:

CIL shall endeavour to reduce occurrence of mine fire and subsidence in built-up areas. Action Plan for mine fire control shall be implemented. Monthly report shall be submitted to top management of the subsidiary and CIL and Quarterly to company board. Monitoring will be done through Satellite Surveillance.

g) Monitoring:

- i) All receptors in and around the mining projects will be monitored regularly to assess the efficacy of the pollution control / mitigation measures to ensure air & water quality and noise level within standards.
- ii) Effect of mining on the hydrology of the area will be monitored through measurement of water level and its quality of nearby wells and bore holes provided for this purpose. Conservation of water through rain water harvesting shall be taken up.
- iii) Area and unit environmental cells shall have regular interaction with the people in and around the coal mines and other allied units on matters related to environment to take necessary and timely corrective actions.
- iv) Environmental initiatives and monitoring through Internal Environmental Audit will be conducted for generating useful data for taking corrective actions and mitigation measures.
- v) The annual budget (revenue & capital) shall be prepared based on the action plan including monitoring of various bench marks and the budget utilisation.

h) Other measures:

- i) Special emphasis shall be given to undertake R&D related to various facets of coal mine environmental management in collaboration with Central Mine Planning and Design Institute (CMPDI) and other competent institutions.
- ii) Besides ensuring statutory compliance, the CIL desires to set high standards and continual improvement.
- iii) A number of mines and establishments of CIL are ISO 14001 certified and balance mines and establishments shall be ISO 14001 certified in phased manner.

5. Preservation of bio-diversity:

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

6. Coal Beneficiation / Coal washeries:

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

7. Conservation and Clean Technology:

- a) R&D projects shall be taken up to promote clean coal technology and improve the existing technologies.
- b) Energy saved is energy produced. A system may be evolved to conduct regularly energy audit voluntarily to take corrective actions to reduce carbon foot print.
- c) Clean Development Mechanisms will be explored for reducing emission of Green House Gases by exploration, identification, preparation of projects reports for extraction of methane from Coal Bed, Coal Mine, Abandoned Mine, Ventilation Air, UG Coal Gasification, generation and utilisation of renewable energy etc.



8. Awareness Programmed:

- a) Publicity and propaganda to generate awareness through exchange & communication of information, news letters and periodicals on environment, seminars, work-shops, celebration of World Environment Day etc. at CIL / Subsidiary HQs, Areas & units shall be undertaken. Regular training programmes will be organised at various levels to inculcate awareness among employees.
- b) Courses on environmental and forestry laws and Environmental Protection Measures and the corporate Policy shall be organised for project executives for improving knowledge.
- c) CIL shall give annual awards for achieving excellence in environment related issues and activities. These awards will be in recognition for implementation

of EMP, land reclamation and compliance of statutes, proper maintenance of air & water quality and noise level.

Implementation of Policy:

i) Manpower: CIL shall have environmental divisions at decision making & operational levels in its structure. The environment department shall be set up and strengthened at:

- i) CIL Corporate HQ at Kolkata
- ii) Subsidiary HQs
- iii) Areas / Units / Collieries / Workshops / Washeries
- iv) CMPDI (HQ) & CMPDI Regional Institutes

ii) Roles and Responsibilities: The environmental department, set up at company HQs, Areas and Unit levels with appropriate manpower and resources, shall be responsible for implementation of policy, obtaining EC, FC, consent to establish & operate, statutory requirements and undertaking mitigation measures besides preparation of action plan every year and also to intimate the status of implementation to the management regularly.

Possibilities of entering into joint Venture with the agencies having expertise on the Mine reclamation activities are to be explored.

iii) Funding the environmental activities: For projects having approved EMPs, the capital and revenue fund provision for environmental activities has been provided in its project report. For other units, suitable provision shall be kept in the revenue budget as per the requirements. The fund earmarked shall be spent exclusively on environmental purposes and measures only.

As per the guidelines of MoC, the cost of mine closure shall be provided in the mine closure plan and deposited as ESCROW fund which shall be utilized for mine closure activities.

iv) Environmental Cost Code: As a policy, the cost code for environment related activities has been put in place, for generation of data on expenses incurred for environmental safeguards. This will help to monitor cost effectiveness of

environmental control measures undertaken and help frame future budget provisions.

Review of Environmental Policy:

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



STATUS OF PUBLIC HEARING ISSUES OF DURGAPUR O/C AS ON DATE

S.No.	ISSUE	RESPONSE
1.	Shri Swanand Soni, Shri Suresh Chopne, Shri Balu Chandekar, Shri Dudhpachare-Green Planet Society, Shri Deepak Dixit, Paryavaran Mitra Bahuuddeshiya Sanstha Stated that <u>copies of EIA & TOR were not made available to them by MPCB</u>	RO-MPCB said that copies of EIA were available for public veiwing at MPPCB office 20 nos. Executive summary in Marathi & English & EIA/EMP were provided to MPCB by WCL. This issue pertains to MPCB.
2.	Shri Swanand Soni, Shri Suresh Chopne, Shri Dudhpachare-Green Planet Society, Shri Deepak Dixit, Paryavaran Mitra Bahuuddeshiya Sanstha stated that <u>EIA data was old (2004) & not properly made/incorrect</u>	The EMP of said project had been approved by MoEF & CC
3.	Shri Swanand Soni, Shri Suresh Chopne, Shri Dudhpachare-Green Planet Society, Shri Deepak Dixit, Paryavaran Mitra Bahuuddeshiya Sanstha stated <u>that biodiversity of nearby forest areas is affected & plantation cannot replace it.</u>	Durgapur Opencast mine is in Operation since 1980 & this current expansion is only for 121.58 Ha additional land. Durgapur OCP is also 1.25 kms away from the buffer zone of TATR & as such biodiversity of nearby forest shall not be affected. WCL has done total plantation of 15,05,424 trees covering an area of 425.80 Ha till date of timber, medicinal, fruit bearing and other varaities. Also one project of recreating of biodiversity of TATR project has been successfully completed on E Dump in collaboration with NEERI-NAGPUR where more than 65 species of TATR were planted over an area of 10 Ha
4.	Shri Swanand Soni, Shri Narendra Soni, Shri Bandubhau Raipure, Dy.Sarpanch, Masala Stated <u>that OB Dumps are very steep just like mountains, close to village</u>	Overburden dumps generally take their natural angle of repose & are made in stages/lifts so as to give them stability. Till date there has been no incidence of any major dump slide at DOCP. All dumps after achieving their designated height area declare dead/inactive & massive plantation is carried out over them to provide them stability & prevent erosion. Besides this pre-monsoon cleaning of drains, nallahs near to village is done on annual basis to prevent silting

5.	Shri Suresh Chopne, Shri Balu Chandekar, stated <u>that affects of blasting like high noise levels & damage to houses</u>	Blasting at mines is carried out as per the DGMS permission & is also monitored by mine personnel & CMPDIL on regular basis for safety & other issues. Damage to houses occur due to faulty construction/uneven setting of black cotton soil or kachha construction of houses. However there is no/very less damage reported of RCC structures.
6.	Shri Balu Chandekar, Shri Ratnaparkhi, Member Gram Panchayat, Sinhala Village, Shri Dudhpachare-Green Planet Society, Shri Waman Shankar Sahu, Navegaon, Shri Bandubhau Raipure, DY Sarpanch, Sinhala <u>Stated that depletion of ground water table, drying of dug wells, creation of pond, water quality</u>	CMPDIL is carrying out 4 seasons ground water monitoring for levels and quality on regular basis in core zone & buffer zone of 10 kms for DOCP. From the reports it is seen that baring 1-2 wells of Sinhala the ground water table/levels are not affected to a great extent. However WCL realising its Corporate Social Responsibilities commitments has provided 2 nos. bore wells for Sinhala Village so as to give them water supply. Whenever maintenance of such bore well pumps is required WCL provides the same. In case of emergency/acute summer water is also provided by Mobile tankers to the affected Villagers. In the past discharge of sector-IV was done to the village pond of Sinhala Village to meet requirements of village cattle. However as the nearby villages are to be rehabilitated to R & R site future such issues shall not arise.
7.	Shri Ratnaparkhi, Member, Gram Panchayat, Sinhala Village, Shri Suresh Chopne, Shri Nathu Ganpatrao Telang, Sarpanch, Sinhala and Shri Bandhubhau Raipure, Dy Sarpanch, Sinhala <u>stated that R & R is not proper & employment to be provided.</u>	As per new CIL R & R Policy 2012, enhanced compensation rates between 6-10 lakhs will be given to land oustes, as well as house compensation, & about 270 numbers of jobs to displaced villagers of Sinhala, Navegaon, Masala tukum. R & R site at DOCP is also prepared & ready fopr allocation.



(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	M/s Durgapur OC Expansion		
Project Address:	Near Duragpur City, Wardha Valley Coalfield, Chandrapur Area Of WCL, Chandrapur, Maharashtra		
Town:	Durgapur (CT)	Block:	Chandrapur
District:	Chandrapur	State:	Maharashtra
Pin Code:	440001		
Communication Address:	M/s Durgapur OC Expansion, General Manager (ENV), WCL (HQ), Coal Estate, Civil Line, 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.:	CGWA/NOC/MIN/ORIG/2019/6731									
2.	Application No.:	21-4/344/MH/MIN/2016				3.	Category:	Mining			
4.	Project Status:	Existing Project				5.	NOC Type:	New			
6.	Valid from:	28/11/2019				7.	Valid up to:	27/11/2021			
8.	Ground Water Abstraction Permitted:										
Fresh Water			Saline Water			Dewatering			Total		
m³/day		m³/year		m³/day		m³/year		m³/day		m³/year	
32.00		11589.00						13455.00		4911075.00	
13487.00		4922664.00									
9.	Details of ground water abstraction /Dewatering structures										
Total Existing No.:10						Total Proposed No.:0					
		DW	DCB	BW	TW	MP	DW	DCB	BW	TW	MP
Abstraction Structure*		0	0	8	0	2	0	0	0	0	0
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit											
10.	Quantum of ground water recharge/harvesting(m³/year):					131658.00					
11.	Number of Piezometers (Observation wells) to be constructed/ monitored & Monitoring mechanism.					No. of Piezometers		Monitoring Mechanism			
								Manual	DWLR**	DWLR With Telemetry	
	**DWLR - Digital Water Level Recorder					2		0	1	1	

(Compliance Conditions given overleaf)

सदस्य (केन्द्रीय भूमि जल प्राधिकरण)
Member (CGWA)

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

1. 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).
2. 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).
3. All new as well as existing ground water abstraction/ de-watering structures shall be fitted with digital water flow meters by the firm at its own cost immediately on completion of their construction or grant of NOC as the case may be. In case of renewal of NOCs, all existing ground water abstraction structures shall continue to be fitted with digital water flow meters. Intimation of installation of flow meters shall be sent by the proponent to the Regional Director of CGWB within 6 months of grant of NOC. Daily ground water abstraction data shall be monitored / continue to be monitored (in case of renewal) by the firm and recorded in a log book. Details of month-wise ground water abstraction shall be submitted to the Regional Director, CGWB, once every year.
4. In case the ground water abstraction is more than 10 m³/day, monthly water level monitoring data shall be maintained and submitted annually to the Regional Office of CGWB. Wherever groundwater withdrawal is more than 500 m³/day, the firm shall install telemetry system in one of the piezometers and share USER ID and password of the telemetry system with the Regional Director, CGWB.
5. In case ground water abstraction is more than 10 m³/day, ground water quality shall be monitored once in a year (during pre- monsoon period) and the report submitted to the Regional Office, CGWB. Wherever the extraction is less than 10 m³/day, ground water quality report shall be submitted by the proponent at the time of submission of self-compliance report.
6. Ground water augmentation/harvesting measures, as stipulated in the NOC, shall be implemented (in new cases) / continue to be maintained (in case of renewal) in consultation with the concerned Regional Director, CGWB.
7. Proof of recharge/water harvesting structures constructed (photographs of structures) shall be submitted to the concerned Regional Director, CGWB within 6 months from the date of issue of NOC. The firm shall also undertake periodic maintenance of recharge/water harvesting structures at its own cost.
8. **The firm shall submit a report on the impact of ground water withdrawal on the ground water regime in and around the project area within six months.**
9. 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.
10. 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.
11. The firm shall optimize water use through recycling/ reuse of waste water after proper treatment.
12. 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.
13. 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.
14. 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.
15. The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.
16. 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.
17. This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
18. 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.
19. 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.
20. 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.

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

Government of India
Ministry of Jal Shakti
Department of Water Resources, River Development and Ganga Rejuvenation
Central Ground Water Authority (CGWA)
Application for Issue of NOC to Abstract Ground Water (NOCAP)

Application for Renewal of NOC to Dewater Ground Water for Mining Industry
(Application for Renewal of NOC)

Application Number : 21-4/344/MH/MIN/2016

Applied For Renewal : 1st

1. General Information:	
Water Quality:	Fresh Water
Purpose of Renewal Application:	Existing with Additional Ground Water Requirement
Application Type Category/ Type of Application	Coal
2. Name of Mine/Project:	DURGAPUR OC EXPANSION
3. Location Details of the Mining Unit- (Attach Site, Approved Mining Plan, Toposketch of Surrounding 10km Radius Outside) (\$) :	
Address Line 1 :	NEAR DURAGPUR CITY, WARDHA VALLEY COALFIELD
Address Line 2 :	CHANDRAPUR AREA OF WCL
Address Line 3 :	
State:	MAHARASHTRA
District:	CHANDRAPUR
Sub-District:	CHANDRAPUR
Village/Town:	Durgapur (CT)
Latitude:	
Logitude:	
Area Type :	Non-Notified
Area Type Category :	Safe
Whether industry is MSME:	No
4. Communication Address	
Address Line 1:	SUB AREA MANAGER OFFICE
Address Line 2:	DURGAPUR SUB-AREA
Address Line 3:	CHANDRAPUR
State:	MAHARASHTRA
District:	CHANDRAPUR
Sub-District:	CHANDRAPUR
Pincode:	442404
Phone Number with Area Code:	91 7172 265268
Mobile Number:	91 8275967702
Fax Number:	91 7172 255287
E-Mail:	wclchaenv@gmail.com
5. Details of Existing NOC issued by CGWA (enclose copy)	
NOC Letter No:	CGWA/NOC/MIN/ORIG/2019/6731

Government of India
Ministry of Jal Shakti
Department of Water Resources, River Development and Ganga Rejuvenation
Central Ground Water Authority (CGWA)
Application for Issue of NOC to Abstract Ground Water (NOCAP)

Application for Renewal of NOC to Dewater Ground Water for Mining Industry
(Application for Renewal of NOC)

Application Number : 21-4/344/MH/MIN/2016

Applied For Renewal : 1st

	Date of Issuance:	28/11/2019			
	Vailidity (Start):	28/11/2019			
	Validity (End):	27/11/2021			
	Reason for not applying for renewal before expiry of NOC Validity (Attach Affidavit):	Renewal applied on 26.11.2021. Application returned for submission of IAR with Modeling study			
6.	Change in Land Use Pattern after execution of Project and Surroundings (10 km Radius - Outside)				
	Due to mining activity, there is a change in land use pattern only within the Mine boundary. The details of the same are mentioned in IAR with the Modelling study. However, outside the mine boundary, there is no direct impact on land use patterns due to mining				
7.	Land Use Detail of Project Area				
	Land Use Details	Existing (sq meter)	Proposed (sq meter)	Grand Total (sq meter)	
	Green Belt Area	3662400.00	0.00	3662400.00	
	Open Land	12422814.19	0.00	12422814.19	
	Road/ Paved Area	70731.50	0.00	70731.50	
	Rooftop area of building/ sheds	69054.31	0.00	69054.31	
	Total	16225000.00	0.00	16225000.00	
8.	Whether there is a change in Topography of the Area after the execution of the Project:		Yes		
	a) Regional	No change in regional topography due to coal mining			
	b) Project Area	Within the project area, the excavation of quarry and dumping of overburden takes place, due to which topography changes within the project area.			
9.	Whether there is change in Drainage pattern of the area after the execution of the Project:		No		
	a) Regional				
	b) Project Area				
10.	Present Townships / Villages within 10 km radius of the Project:-		42		
11.	Whether the Groundwater Table will be Intersected by Activity :-			Yes	
	(a) At What Depth (m bgl)	Pre-monsoon	Post-monsoon		
	Minimum (m bgl)	3.75	2.13		
	Maximum (m bgl)	11.45	5.25		
	(b) Maximum Depth Proposed to Dewater (m bgl)	190.00			
	(c) Groundwater Flow Direction (Attach Map)(\$)	Deliberated in IAR with Modelling report			
	(d) Any Other Information	NA			
12.	Total Water Requirment for various Purpose to be Mentioned	Existing(m3/day)	Additional (m3/day)	Existing(m3/year)	Additional(m3/year)
	Ground Water Required through Abstract Structure	32.00	6.00	11680.00	2190.00
	Ground Water Abstracted on account of Dewatering / Mining Seepage	13455.00	76.00	4911075.00	27740.00

Government of India
Ministry of Jal Shakti
Department of Water Resources, River Development and Ganga Rejuvenation
Central Ground Water Authority (CGWA)
Application for Issue of NOC to Abstract Ground Water (NOCAP)

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(Application for Renewal of NOC)

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Total Ground Water Withdrawal						13487.00	82.00	4922755.00	29930.00	
13. Details of De-Watering Structure										
(a) De-Watering Existing Structure										
Number of Existing Structures:						2				
	SNo.	Type of Structure Name / Year of Construction	Depth(Meter) / Diameter(mm)	Depth to Water Level (Meters below Ground Level)	Discharge (m3/Hour)	Operational Hours(Day) / Days(Year)	Mode of Lift Name	Horse Power of Pump	Whether fitted with Water Meter	Whether Permission Registered with CGWA /If so Details Thereof
	1	Mine Pumps / -	165.00 / -			- / -	Centrifugal Pump	500.00	Yes	Yes / -
	2	Mine Pumps / -	103.00 / -			- / -	Centrifugal Pump	230.00	Yes	Yes / -
(b) De-Watering Requirement and Additional Structure Detail										
Number of Proposed Structures:						0				
	SNo.	Type of Structure Name / Year of Construction	Depth(Meter) / Diameter(mm)	Depth to Water Level (Meters below Ground Level)	Discharge (m3/Hour)	Operational Hours(Day) / Days(Year)	Mode of Lift Name	Horse Power of Pump	Whether fitted with Water Meter	Whether Permission Registered with CGWA/If so Details Thereof
14. Details of Utilization of Pumped Water (Please Attach Details)(m3/year) (\$)										
	(a)	Water Supply			No					
	(b)	Agriculture			No					
	(c)	Green Belt Development			No					
	(d)	Suppression of Dust			Yes	188796.25	517.25 m3/day			
	(e)	Recharge			No					
	(f)	Any Other Item			Domestic Use - 38 m3/day from bore well and 767.1 from seepage water, Fire fighting- 50 m3/day, Balance Water storage in old mine pit @ 10255 m3/d and discharged to stream through sedimentation tank 1941.65 m3/day					
15. Monitoring of Ground Water Regime (Attach Map(\$))										
	(a)	Location Details of the Wells / Piezometers (Latitude, Longitude, Reduced Level)				Attached in the attachment section				
	(b)	Number of Wells / Piezometers				24				
	(c)	Attach Details of GW Level of Observation Wells / Piezometers(At Least for One Year)(\$)				Attached in attachment section				
	(d)	General Quality of GW in the Area & Surroundings (\$)				Groundwater quality report Uploaded				

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	(e)	Any Other Item	Mine seepage quality and water Quality of Bore well water is uploaded							
16. Give the details of change in groundwater regime and quality after execution of the project (Attach detailed report with Map showing GW flow direction(\$))										
IAR with Modeling report attached under Extra Attachments head in attachment section										
17. Proposed Pump / Pumping Groundwater Outside the Mine Pit for Domestic or Other Use (If so, give Details):										
Number of Existing Structures:						8				
	SNo.	Type of Structure Name / Year of Construction	Depth(Meter) / Diameter(mm)	Depth to Water Level (Meters below Ground Level)	Discharge (m3/Hour)	Operational Hours(Day) / Days(Year)	Mode of Lift Name	Horse Power of Pump	Whether fitted with Water Meter	Whether Permission Registered with CGWA/If so Details Thereof
	1	Tubewell / -	40.00 / 160			- / -	Submersible Pump	1.00	Yes	Yes / -
	2	Tubewell / -	40.00 / 160			- / -	Submersible Pump	1.00	Yes	Yes / -
	3	Tubewell / -	45.00 / 200			- / -	Submersible Pump	7.50	Yes	Yes / -
	4	Tubewell / -	54.00 / 250			- / -	Submersible Pump	10.00	Yes	Yes / -
	5	Tubewell / -	60.00 / 250			- / -	Submersible Pump	12.50	Yes	Yes / -
	6	Tubewell / -	60.00 / 200			- / -	Submersible Pump	7.50	Yes	Yes / -
	7	Tubewell / -	60.00 / 160			- / -	Submersible Pump	1.00	Yes	Yes / -
	8	Tubewell / -	58.00 / 160			- / -	Submersible Pump	1.00	Yes	Yes / -
Number of Additional Structures:						1				
	SNo.	Type of Structure Name / Year of Construction	Depth(Meter) / Diameter(mm)	Depth to Water Level (Meters below Ground Level)	Discharge (m3/Hour)	Operational Hours(Day) / Days(Year)	Mode of Lift Name	Horse Power of Pump	Whether fitted with Water Meter	Whether Permission Registered with CGWA/If so Details Thereof
	1	Tubewell / -	100.00 / 350			- / -	Submersible Pump	10.00	Yes	Yes / -
18. (a). Compliance to the Condition prescribed in the NOC										
	SNo.	Conditions given in NOC			Compliance Conditions Applicable		Status of Compliance			
	1	Area Specific Plantation			Yes		Total area of 366.24 Ha is bought			

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				under plantation, this includes 218.65 Ha Ext. OB dump, 32.85 ha decoaled area and 147.59 Ha undisturbed area.
	2	Domestic Water School Sanitation	Yes	01 RO plant provided at KV school, Durgapur
	3	Groundwater quality monitoring - Pre monsoon and Post monsoon	Yes	Complied. Ground water quality is monitored at six locations, once in a year - i.e during pre-monsoon period.
	4	Maintenance of recharge structures	Yes	Complied. 01 no rooftop rainwater harvesting structure has been provided at SAM Office, Durgapur and is periodically maintained. Additional 01 rooftop RWH structure provided at GM Office in the buffer
	5	Number of Pizometers as per NOC and Water Level Record	Yes	01 no. piezometer with telemetry system has been installed. Record of the same is maintained (Lat – 200 1' 13.66" N, Long – 79018' 23.63" E). 01 additional piezometer to be installed on obtaining FC
	6	Number of Tubewells Borewales as per NOC	Yes	Borewells -08, Mine pits-02
	7	Pizometer fitted with AWLRs with telemetry as per NOC	Yes	Complied. 01 no. piezometer with telemetry installed and record of the same is maintained.
	8	Quantum of Groundwater as per NOC	Yes	13487 m3/day or 4922664 m3/year
	9	Recharge through ponds	Yes	01 no. rooftop rainwater harvesting structure provided at SAM Office, DOC. 01 rooftop RWH structure provided at GM Office in the buffer zone of mine
	10	Recycle and reuse of water	Yes	Mine Pumped out water is used for dust suppression, firefighting purpose and plantation etc. ETP of capacity 150 KLD is in operation Treated water is recycled back and used for washing of HEMM.
	11	RWH and AR structures implemented	Yes	01 no. rooftop rainwater harvesting structure provided at SAM Office, DOC. 01 rooftop RWH structure provided at GM Office in the buffer zone of mine.
	12	Submission of Compliance report to the Region	Yes	compliance of the NOC conditions has been uploaded/ submitted on 02.07.2020
	13	Water conservation measures	Yes	Mine Pumped out water is used for dust suppression, firefighting purpose and plantation etc. ETP of capacity 150 KLD is in operation Treated water is recycled

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				back and used for washing of HEMM.
	14	Water Security Plan of villages	Yes	Presently no water shortage has been observed in the nearby villages. However, if there is any water shortage in future it will be supplemented by necessary arrangement
	15	Well monitored around the plant premises	Yes	In case of Durgapur OC mine, ground water level is monitored in the core and buffer zone of the mine. Monitoring is done four times a year
	16	Wells fitted with water meter and its Record	Yes	Existing ground water abstraction structures are fitted with digital water flow meters, as per the NOC. Log book is also being maintained for ground water abstraction data

(b). Compliance to the Condition prescribed in the NOC - Other

SNo.	Conditions given in NOC	Status of Compliance
1	NA	NA

19. Gainful utilization of pump water:-

Total Dewatering 13531 m3/d and bore well pumping 38 m3/d, out of which Domestic use is 38 m3/d from bore well and 767.1 m3/d from seepage water, dust suppression 517.25 m3/d, fire fighting 50 m3/day, Balance Water storage in old mine pit @ 10255 m3/d and discharged to stream through sedimentation tank 1941.65 m3/day

20. Details of Rainwater Harvesting and Artificial Recharge Measures for Groundwater Recharge in the Area:-

Deliberated in IAR with Modeling report. Estimated yearly recharge of 184544 m3/year

MINING USE- Self Declaration

☒ I hereby certify that the data and information furnished above are true to the best of my knowledge and belief and I am aware that if any part of the data / information submitted is found to be false or misleading at any stage, the application will be rejected outright.

I hereby declare that all the mandatory documents prescribed in the application form have been uploaded and no blank /irrelevant documents have been uploaded. I am also aware that any false/ wrong submission /uploading of document will lead to rejection of my application without any notice.

It is to certify that no case related to ground water withdrawal/ contamination is pending against the industry/ project/ unit as on date. Any such case filed against the company/ project/ unit in respect of ground water withdrawal/ contamination during the pendency of this application shall be immediately brought to the notice of CGWA.

I hereby undertake that in case any environmental compensation/ penalty is imposed on the firm by any statutory authority, I shall comply with the decision of such authority.

1. Application Proforma is subject to modification from time to time.

2. Application is submitted online on website <http://cgwa-noc.gov.in> to following office.

Government of India
Ministry of Jal Shakti
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Regional Director, Central Ground Water Board Central Region, N.S. Building, Civil Lines, NAGPUR, MAHARASHTRA, 440001

3. Incomplete application will be summarily rejected.

Scanned copy of last page of application with signature and seal should be attached at prescribed place before submission of application.

4. Receipt of Processing Fee of Rs. 5000.00/- (Rupees Five Thousand Only) submitted through NON TAX RECEIPT PORTAL (<https://bharatkosh.gov.in>) should be attached along with hard copy of application.

Processing Fee:-

Bharat Kosh Transaction
Ref. No:-

Bharat Kosh Transaction
Date:-

Note:- The Processing Fee is Non-Refundable. Applicant should ensure and Check Eligibility of Submission of Application and Required Documents before Submitting Online Application.

5.	Hard copy of application required:	No		
6.	Ground Water Quality Approved	Not Define	Ground Water Charge Required:	Not Define
	Ground Water Charge Recieve:	No	Ground Water Charge Amount:	
			Ground Water Area Amount:	

Attached Files:

1). GroundWater flow Direction Map: (Refer:11-C)

S.No	Attachment Name	File Name
1	Hydrogeology Map	Hydro map_.pdf

2). GW Level of Observation Wells / Piezometer : (Refer:15-C)

S.No	Attachment Name	File Name
1	GW Level	GW Level.pdf

3). General Quality of Ground Water in the Area : (Refer:17-D)

S.No	Attachment Name	File Name
1	GW Quality	GW Quality.pdf

4). Changes in Topography : (Refer: 8)

No Attachment Found!

5). Changes in Drainage Pattern : (Refer: 9)

No Attachment Found!

6). Reason for Not Applying for Renewal before Expiring NOC : (Refer: 5)

Government of India
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(Application for Renewal of NOC)

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No Attachment Found!

7). Existing NOC : (Refer: 5)

S.No	Attachment Name	File Name
1	CGWA NOC	Durgapur OC NOC.pdf

8). Compliance to the Condition prescribed in the NOC : (Refer: 17-a)

	S.No.	Conditions given in NOC	Attachments		
			S.No.	Attachment Name	File Name
	1	Area Specific Plantation	No Attachment Found!		
	2	Domestic Water School Sanitation	No Attachment Found!		
	3	Groundwater quality monitoring - Pre monsoon and Post monsoon	No Attachment Found!		
	4	Maintenance of recharge structures	No Attachment Found!		
	5	Number of Pizometers as per NOC and Water Level Record	No Attachment Found!		
	6	Number of Tubewells Borewales as per NOC	No Attachment Found!		
	7	Pizometer fitted with AWLRs with telemetry as per NOC	No Attachment Found!		
	8	Quantum of Groundwater as per NOC	No Attachment Found!		
	9	Recharge through ponds	No Attachment Found!		
	10	Recycle and reuse of water	No Attachment Found!		
	11	RWH and AR structures implemented	No Attachment Found!		
	12	Submission of Compliance report to the Region	No Attachment Found!		
	13	Water conservation measures	No Attachment Found!		
	14	Water Security Plan of villages	No Attachment Found!		
	15	Well monitored around the plant premises	No Attachment Found!		
	16	Wells fitted with water meter and its Record	No Attachment Found!		

9). Compliance to the Condition prescribed in the NOC - Other : (Refer: 17-b)

	S.No.	Conditions given in NOC	Attachments		
			S.No.	Attachment Name	File Name
	1	NA	No Attachment Found!		

Government of India
Ministry of Jal Shakti
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(Application for Renewal of NOC)

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Applied For Renewal : 1st

10). Extra Attachment :

S.No	Attachment Name	File Name
1	Checklist affidavit Salient	1.pdf
2	CTE CTO	CTO CTE.pdf
3	Doc	Doc.pdf
4	Borewell Water Quality	Borewell Water Quality Report (DOCM).pdf
5	IAR With Modeling including CHR	Durgapur OC_IAR with Modelling including CHR.pdf

11). Bharat Kosh Reciept (Porcessing Fee):

No Attachment Found!

12). Application with Signature and Seal:

S.No	Attachment Name	File Name
1	Seal and Signature	MiningRenewSADApplicationforExternal (1).pdf

13). MSME certificate in case of MSME:

No Attachment Found!

Date :

Place :

Associated User : gmwcl

Submitted By User : gmwcl

Submission Date : 29/09/2022

* In case signed by any authorized signatory, the details of the signatory with the authorization shall be enclosed.


Name & Signature of the applicant
SUB AREA MANAGER
(With official seal)
WCL, DURGAPUR SUB AREA

REPORT ON
MONITORING OF GROUND WATER LEVEL
OF
DURGAPUR OC EXPN. MINE,
CHANDRAPUR AREA
(M.S)
WESTERN COALFIELDS LTD.



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



M/s Anacon Laboratories Pvt. Ltd., Nagpur

MoEF&CC (GOI) and NABL Recognized Laboratory

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Lab. & Consultancy: FP-34, 35, Food Park,

MIDC, Butibori, Nagpur – 441122

Mob: +91-9372960077

Email: ngp@anacon.in

Website: www.anaconlaboratories.com

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

2022-23 & 2023-24

Certificate

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

The report encompasses the Monitoring of Ground water level reports of observation wells pertaining to the DURGAPUR OC EXPN. MINE, of the Chandrapur District, Maharashtra.

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



Ajinkya Nakod
(Geologist)



Gyanchand Bohra
NABET Accredited EIA Expert
for Hydrogeology & Geology

Nagpur.
August-2023



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

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TABLE/FIGURE	NAME OF SUB MINE PROJECT	GROUND WATER MONITORING DETAILS OF WELL	Page No.
I-FIGURE	DURGAPUR OC EXPN. MINE,	GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF DURGAPUR OC EXPN. MINE,	7
I-TABLE	DURGAPUR OC EXPN. MINE,	GROUND WATER MONITORING OF WELL DATA FROM DEC 2022(POST-MONSOON) , JAN-FEB 2023 (WINTER) & MAY-2023 (PRE-MONSOON)	8
III	DURGAPUR OC EXPN. MINE,	ANALYSIS REPORT	11

INTRODUCTION

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

M/s Anacon Laboratories Pvt. Ltd. has been awarded the Work of "Groundwater level Monitoring (i.e. bore well / piezometer Water levels) and Water quality analysis (as per IS10500) for 76 projects / mines of WCL (situated in the state of Madhya Pradesh – Chhindwara & Betul districts and Maharashtra – Nagpur, Chandrapur & Yeotmal districts) for one year as per condition stipulated in Environmental Clearance letters issued by MoEF & CC & NOC issued by CGWA" vide work order वेकोलि/मुख्यालय/पर्यावरण/14-L/77 on date: 08.12.2022.

This Ground Water Level Monitoring report is prepared for DURGAPUR OC EXPN. MINE, Incline mines of Chandrapur area of WCL for 3 seasons i.e. DEC 2022 (POST-MONSOON), JAN-FEB 2023 (WINTER) & MAY-2023 (PRE-MONSOON). These mines are located in Chandrapur District of Maharashtra.

GENERAL HYDROGEOLOGICAL CONDITION

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

A. HARD ROCK FORMATIONS

ARCHEAN METAMORPHICS

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

VINDHYAN LIMESTONE

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

DECCAN TRAP BASALT

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

B. SOFT ROCK FORMATIONS

GONDWANA SANDSTONE

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

ALLUVIUM

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

**DURGAPUR OC EXPN. MINE,
CHANDRAPUR AREA
WESTERN COALFIELDS LTD.**

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

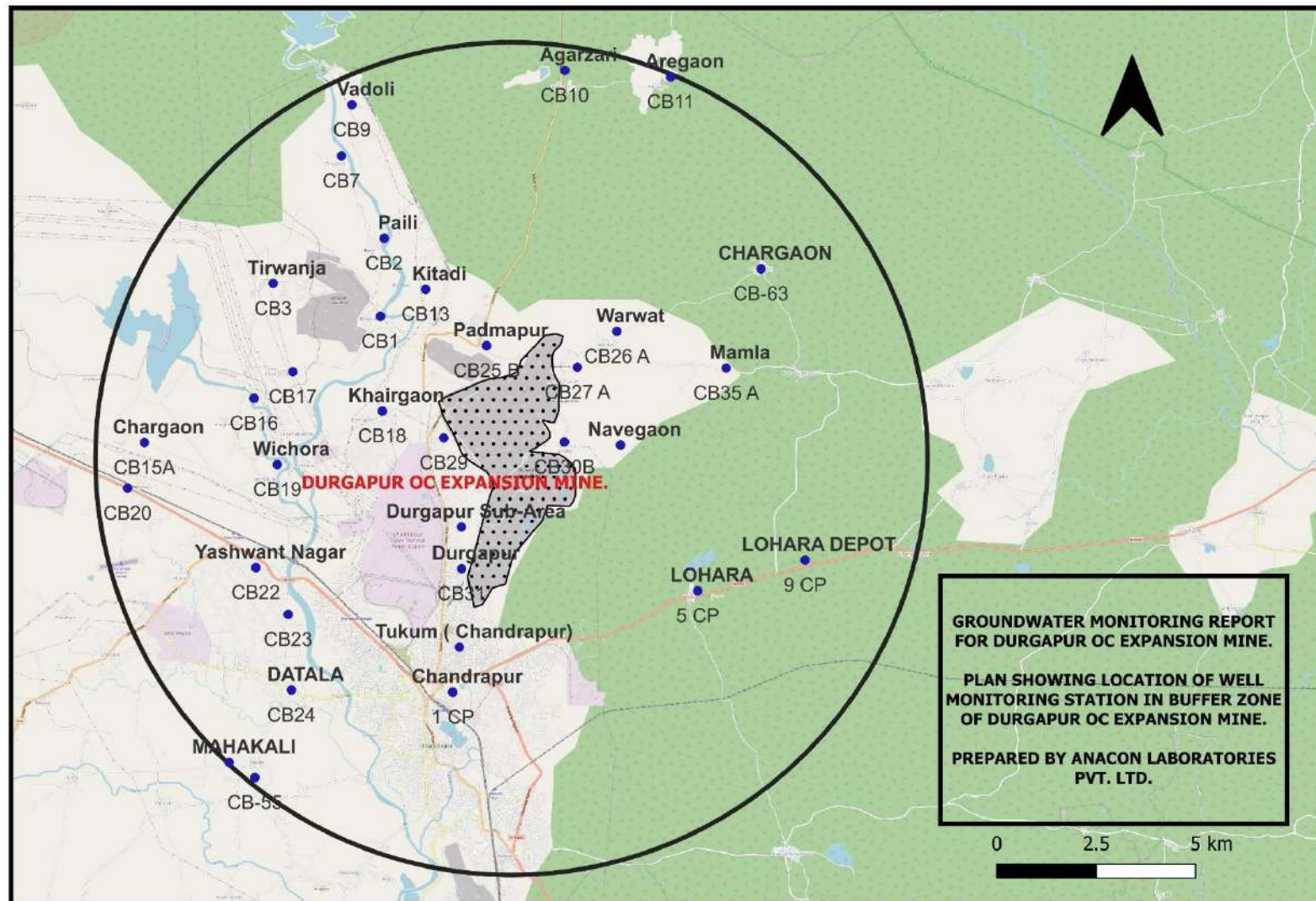


FIGURE-I: GROUND WATER MONITORING STATION (OBSERVATION WELLS IN AND AROUND OF DURGAPUR OC EXPN. MINE)

Table: I Ground Water Level Monitoring Data from Dugwells/Piezometer in Buffer Zone of Durgapur OC Expn., Chandrapur Area

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec-22	JAN - FEB-23	May-23		
1	CB1	Bhatadi	Centre of village , near OHT	20°3'13.7"	79°17'5.86"	212	8.84	3.81	0.61	3.5	4.95	6.19	agriculture	basalt
2	CB2	Paili	Centre of village , near Budha Samaj Mandir	20°4'21.18"	79°17'9.08"	230	9.76	2.73	0.81	3.85	5.25	2.41	agriculture	limestone
3	CB3	Tirwanja	North of village , near Primary school & Hanuman Mandir	20°3'42.12"	79°15'33.03"	189	7.67	3.85	0.85	4.35	6.15	6.11	domestic	limestone
4	CB7	Chincholi	Centre of village , near Vittal Jungani house (East)	20°5'32.43"	79°16'32.14"	187	9.83	4.82	0.62	4.65	6.35	7.83	agriculture	laterite
5	CB9	Vadoli	West of village ,near There's home	20°6'16.67"	79°16'41.17"	200	12.86	4.12	0.91	3.65	5.35	9.19	agriculture	laterite
6	CB10	Agarzari	Adjacent (west) to Tadoba road , near Bus stop & Hanuman Mandir	20°6'46.4"	79°19'45.41"	241	9.91	2.93	0.47	4.15	6	7.72	domestic	basalt

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec-22	JAN - FEB-23	May-23		
7	CB11	Aregaon	700m west of village , adjacent to Agarzari - Aregaon road	20°6'40.82 "	79°21'17"	236	8.61	3.95	0.81	2.85	5.85	6.19	domestic	laterite
8	CB13	Kitadi	North of village , near Zila Parishad school	20°3'37.1"	79°17'44.99"	197	10.4	4.12	0.76	5.25	7.75	8.82	agriculture	basalt
9	CB15 A	Chargaon	North of village , near Hanuman temple	20°1'24.53 "	79°13'41.68"	201	8.78	4.39	0.45	4.35	7.35	7.73	domestic	limestone
10	CB16	Nagpur	About 200m NE of village , adjacent to Tirwanja road	20°2'2.86"	79°15'16.59"	239	9.87	3.13	0.51	6.45	8	8.13	domestic	limestone
11	CB17	Chak Tirwanja	W of village , near Zila Parishad school	20°2'25.76 "	79°15'50.06"	199	12.31	2.76	0.73	7.15	10.25	11.42	domestic	basalt
12	CB18	Khairgaon	North of village , near Primary school	20°1'51.9"	79°17'7.44 "	205	11.42	2.41	0.55	6.85	7.65	8.91	agriculture	laterite
13	CB19	Wichora	West of village , near Budha Samaj	20°1'5.57"	79°15'36.64"	215	11.02	2.14	0	7	9.45	10.10	agriculture	laterite

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec-22	JAN - FEB-23	May-23		
14	CB20	Marwa	West of village & Nagpur - Chandrapur road (in the field)	20°0'45.11 "	79°13'27.1 "	219	8.82	4.31	0.76	4.25	6.35	7.16	agriculture	basalt
15	CB22	Yashwant Nagar	Centre of village , near Zila Parishad school & Hanuman Mandir	19°59'36.4 4"	79°15'18.1 5"	217	7.87	3.97	0.82	3.65	4.25	6.35	agriculture	limestone
16	CB23	Kosara	West of village , adjacent to road	19°58'55.9 "	79°15'46.1 "	238	12.25	3.91	0.94	4.45	5.35	11.42	agriculture	basalt
17	CB25 B	Padmapur	About 50 m E of Tadoba road in the field, About 400 m N of new village	20°2'48.37 "	79°18'37.7 5"	248	15.87	3.14	1.31	5.35	6.25	11.19	domestic	limestone
18	CB26 A	Warwat	Centre of village, near temple	20°3'0.76" "	79°20'30.4 1"	233	8.81	2.42	0.81	3.15	4.15	7.93	agriculture	basalt
19	CB27 A	Masala Tukum	South of village , adjacent to Warwat road	20°2'29.65 "	79°19'56.2 9"	240	8.41	2.87	0.62	6.15	7.75	7.95	agriculture	limestone
20	CB24	DATALA	SE of village , in Shanti Kunj Nagar	19°57'50.5 1"	79°15'48.8 9"	187	14.28	4.3	0.62	5.85	7.45	12.14	agriculture	laterite

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec-22	JAN - FEB-23	May-23		
21	CB28 A	Navegaon	Near OH Tank, South of village , East of Warwat road	20°1'22.36 "	79°20'33.6 2"	215	8.42	3.88	0.61	4.75	6.4	6.91	agriculture	laterite
22	CB29	Padmapur Sub -Area Office	Outside SAM office, adjacent to Tadoba road (E)	20°1'28.65 "	79°18'0.69 "	222	10.13	2.61	0.63	4.25	5.75	8.85	agriculture	basalt
23	CB31	Durgapur	East of Tadoba road , inside St. Mary's Convent compound	19°59'35.3 9"	79°18'16.1 8"	198	11.47	3.27	0.45	3.85	4.85	10.15	agriculture	basalt
24	CB32	Durgapur Sub-Area	Trade Union office compound (INTUC), MQ type quarters	20°0'11.63 "	79°18'15.9 8"	243	8..93	2.34	0.72	7.35	7.9	7.28	agriculture	limestone
25	CB30 B	SINHALA	100 m East from Road between Sinhala nad Navegaon	20°1'25"	79°19'45"	240	12.48	3.29	0.91	8.25	9.35	11.49	agriculture	basalt
26	CB33	Tukum (Chandrapur)	Adjacent (East) to Tadoba road in garden, near Petrol pump.	19°58'27.6 8"	79°18'14.2 3"	212	9.85	3.3	0.77	7.25	8.25	9.10	agriculture	basalt
27	CB35 A	Mamla	C of village	20°2'29"	79°22'5"	189	9.82	3.24	72	4.15	6.2	8.60	agriculture	basalt

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec-22	JAN - FEB-23	May-23		
28	CB-55	DEWADA	EAST 100M FROM NIMKAR DAILY NEEDS ADJACENT TO THE ROAD.	19°56'34.87"	79°15'17.28"	215	11.5	4.8	0.2	3.5	4.6	9.49	domestic	basalt
29	CB-63	CHARGAON	ADJACENT TO CHARGAON ROAD INSIDE THE VILLAGE	20°3'54.81"	79°22'35.2"	190	11.2	5.2	0.6	4.1	5.25	10.52	domestic	basalt
30	1 CP	Chandrapur	Infront of Telephone exchange LIC office	19°57'48.74"	79°18'8.45"	223	8.41	2.73	0.61	3.65	6.95	7.25	agriculture	laterite
31	5 CP	LOHARA	Adjacent to Lohara Mul road Near Naka Bungalow	19°59'16.4"	79°21'40.41"	215	8.2	2.29	0.61	5.45	7.7	7.95	agriculture	basalt
32	9 CP	LOHARA DEPOT	Adjacent to Lohara Mul road Infront of Lohara Bamboo dept.	19°59'42.93"	79°23'13.3"	171	16.25	1.19	0.61	9.75	10.25	13.41	agriculture	basalt
33	PZ - 1	MAHAKALI	Filter plant	19°56'48"	79°14'55"	198	8.45	2.91	0.71	4.15	6.95	PIEZOMETER IS NOT SITUATED WELL MONITOR	agriculture	laterite

Sr. NO	Well No.	Name of village	Well location	LAT	LONG	R.L. in m	Well dia (m)	Well depth (m bmp)	Height of measuring point (m agl)	Depth to water level (m bgl)			Utility / Owner	Formation Tapped
										Dec- 22	JAN - FEB- 23	May-23		
												ING ARE DONE		

ANALYSIS REPORT



**Anacon
Laboratories**



TC 5458

Test Report

ULR No.- TC545823000001925F

Test Report No.: ALPL/18072023/08- 46

Dated 18.07.2023

Page 1 of 1

Test Report No.: ALPL/18072023/08-46		Sample Inward No. ALPL/24062023/W-1/54-46		Analysis Start 24.06.2023	
Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Inward Date 24.06.2023		Analysis End 14.07.2023	
		Reference -		Sample Category Water	
		Sample Name Ground Water		Sample Particulars/Details Ground Water (Sample ID: 1 CP): (Chandrapur Area)	
Sample Collected By Mr. Akash Kirnake		Sampling Date 19.05.2023 Sampling Time Not Mentioned		Sampling Location Chandrapur	
Tests Required: Chemical Testing.					

TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	83.21
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	35.73
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	25.92
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.12
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	8.76
8	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL- 2)
9	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.09
11	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	3.86
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	244
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
14	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	100.5
II	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL- 0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.01
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
Note: For all the parameters, the test results shall be referred to tested sample(s) and applicable to tested parameters only.						

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● "mg/l" is equivalent to "ppm". ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

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

Verified By

per
Mangesh Fande
Technical Manager

Snehal Raut
Deputy Technical Manager

Authorized Signatory

Chiranjay Garway
Deputy Quality Manager

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

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TC 5458

Test Report

ULR No.- TC545823000001925F

Test Report No.: ALPL/18072023/08-1

Dated 18.07.2023

Page 1 of 1

Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Sample Inward No. ALPL/24062023/W-1/54-1		Analysis Start 24.06.2023	
		Inward Date 24.06.2023		Analysis End 14.07.2023	
		Reference -			
Sample Name Ground Water		Sample Particulars/Details Ground Water (Sample ID: CB1); (Chandrapur Area)			Sample Category Water
Sample Collected By Mr. Akash Kirmake		Sampling Date 15.05.2023		Purpose of analysis Drinking	Quantity Received 1 Ltr
Tests Required: Chemical Testing.		Sampling Time Not Mentioned		Sampling Location Bhatadi	
TEST RESULTS					

TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	83.21
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	42.11
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	26.88
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.13
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	6.42
8	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL- 2)
9	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.13
11	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	6.34
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	226
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.2
14	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	93.6
II	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL- 0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	BDL(DL- 0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

NOTE: ● Please see watermark “Original Test Report” to confirm the authenticity of this report. ● Results shall be confirmed by the client.

● Test report shall be valid only for the purpose mentioned above.

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

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

Verified By

For
Mangesh Fande
Technical Manager

Snehal Raut
Deputy Technical Manager

Authorized Signatory

Chiranjay Garway
Deputy Quality Manager

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

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TC 5458

Test Report

ULR No.- TC54582300001925F
Test Report No.: ALPL/18072023/08-2

Dated 18.07.2023

Page 1 of 1

Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Sample Inward No. ALPL/24062023/W-1/54-2	Analysis Start 24.06.2023
		Inward Date 24.06.2023	Analysis End 14.07.2023
		Reference -	
Sample Name Ground Water	Sample Particulars/Details Ground Water (Sample ID: CB2); (Chandrapur Area)		Sample Category Water
Sample Collected By Mr. Akash Kirmake	Sampling Date 15.05.2023	Purpose of analysis Drinking	Quantity Received 1 Ltr
Tests Required: Chemical Testing.	Sampling Time Not Mentioned	Sampling Location Paili	

TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	78.5
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	40.83
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	29.76
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.14
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	10.51
8	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL- 2)
9	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.04
11	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	7.35
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	245
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.2
14	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	117.6
II	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL- 0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.01
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be as per the test report only. ● Test report shall be valid for 3 months from the date of issue.

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

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

Verified By

Mangesh Fande
Mangesh Fande
Technical Manager

Snehal Raut
Snehal Raut
Deputy Technical Manager

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

Authorized Signatory

Chinmay Garway
Chinmay Garway
Deputy Quality Manager

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

Anacon Laboratories Pvt. Ltd. Nagpur Lab

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

+ 91 8045685558 Email : info@anacon.in

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**Anacon
Laboratories**

Test Report



TC 5458

ULR No.- TC545823000001925F
Test Report No.: ALPL/18072023/08- 3

Dated 18.07.2023

Page 1 of 1

Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Sample Inward No. ALPL/24062023/W-1/54-3	Analysis Start 24.06.2023
		Inward Date 24.06.2023	Analysis End 14.07.2023
		Reference -	Sample Category Water
Sample Name Ground Water	Sample Particulars/Details Ground Water (Sample ID: CB3); (Chandrapur Area)		Purpose of analysis Drinking
Sample Collected By Mr. Akash Kirnake	Sampling Date 15.05.2023	Quantity Received 1 Ltr	
Tests Required: Chemical Testing.		Sampling Time Not Mentioned	Sampling Location Tirwanja

TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	81.64
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	37.00
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	22.08
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.13
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	7.59
8	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL- 2)
9	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.96
11	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	6.74
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	213
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
14	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	86.4
II	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL- 0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
19	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
20	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	BDL(DL- 0.01)
21	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
22	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

NOTE: ● Please see watermark “Original Test Report” to confirm the authenticity of this report ●

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'.

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

Verified By

Mangesh Fande
Mangesh Fande
Technical Manager

Snchal Raut
Snchal Raut
Deputy Technical Manager

Authorized Signatory

Chintay Garway
Chintay Garway
Deputy Quality Manager

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

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

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**Anacon
Laboratories**



TC 5458

Test Report

ULR No.- TC545823000001925F

Test Report No.: ALPL/18072023/08- 5

Dated 18.07.2023

Page 1 of 1

Issued To : M/s Western Coalfields Limited (WCL) Futala Road, Coal Estate, Civil Lines, Nagpur, WCL HQ (M.S), 440001		Sample Inward No. ALPL/24062023/W-1/54-5	Analysis Start 24.06.2023
		Inward Date 24.06.2023	Analysis End 14.07.2023
		Reference -	
Sample Name Ground Water	Sample Particulars/Details Ground Water (Sample ID: CB7); (Chandrapur Area)		Sample Category Water
Sample Collected By Mr. Akash Kirnake		Purpose of analysis Drinking	Quantity Received 1 Ltr
Tests Required: Chemical Testing.		Sampling Date 15.05.2023	Sampling Location Chincholi
		Sampling Time Not Mentioned	

TEST RESULTS

TEST RESULTS						
S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
I	Chemical Testing 1. Water					
1	Alkalinity	mg/l	IS 3025 (Part 23) : 1986	200	600	83.21
2	Colour	Hazen	IS 3025 (Part 4) : 2021	5	15	1
3	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	250	1000	37.00
4	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	33.6
5	Residual Chlorine	mg/l	IS 3025 (Part 26) : 2021	0.2	1	BDL(DL- 0.1)
6	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.15
7	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	10.51
8	Nitrate (as NO ₃)	mg/l	APHA method 23rd edition: 2017	45	No relaxation	BDL(DL- 2)
9	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
10	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.25
11	Sulphate (as SO ₄)	mg/l	IS 3025 (Part 24) : 2022	200	400	7.82
12	Total dissolved solids	mg/l	IS 3025 (Part 16) : 2023	500	2000	255
13	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.1
14	Total hardness (as CaCO ₃)	mg/l	IS 3025 (Part 21) : 2009	200	600	127.2
II	Chemical Testing 2. Residues In Water					
15	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
16	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL(DL- 0.01)
17	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
18	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
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23	Nickel (as Ni)	mg/l	IS 3025 (Part 2) : 2019	0.02	No relaxation	BDL (DL - 0.01)
24	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL- 0.001)
25	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
26	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)

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

Verified By

Mangesh Fande
Mangesh Fande
Technical Manager

Snehal Raut
Snehal Raut
Deputy Technical Manager

Authorized Signatory

Chinmay Garway
Chinmay Garway
Deputy Quality Manager

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

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वेस्टर्न कोलफिल्ड्स लिमिटेड

Western Coalfields Limited

(मिनिरल कंपनी) (A Miniratna Company)

(कोल इंडिया लि. की अनुषंगी कंपनी)

(A Subsidiary of Coal India Limited)

महाप्रबंधक कार्यालय चन्द्रपुर क्षेत्र/Office of Area General Manager, Chandrapur

विभाग-पर्यावरण

Department of Environment

CIN-U10100MH1975GOI018626

FAX:- 07172-256124

Website:- westerncoal.nic.in

पंजी, का : कोयला विहार, सिविल लाइन्स नागपुर, (महा) -440001/ Regd.off: Coal Estate,Civil Lines, Nagpur(MS)-440001

संदर्भ संख्या/Ref NO:वेकोलि/चक्षे/महाप्र/ पर्यावरण/ 698

दिनांक/Date: 17.11.2017

प्रति,

- 1.The Collector-Chandrapur
- 2.The Regional Officer-MPCB, Udyog Bhavan, Station Road-Chandrapur
- 3.The General Manager-DIC, Udyog Bhavan, Station Road-Chandrapur
- 4.The Tehsildar-Collector Office, Chandrapur
- 5.The sarpanch-Sinhala Gram Panchayat-Dist. -Chandrapur
- 6.The Sarpanch-Durgapur Gram Panchayat-Dist. -Chandrapur

Subject : Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in District chandrapur (Maharashtra) – Environmental Clearance - reg.

Ref : No. J-11015/56/2008-IA-II (M) pt. file dtd: 10.11.2017

With reference to the above subject and referred letter and in compliance of General Condition under (k) Miscellaneous condition no. 1 & 2 we are hereby submitting a copy of the above mentioned EC document.

Kindly arrange for display of the EC document on your notice board/uploading on your Website for information of general public for a period of thirty days.

Regards

भवदीय
डॉ. शिंदे 17.11.17.
 क्षेत्रीय केन्द्रस्थ अधिकारी (पर्यावरण)
 चन्द्रपुर क्षेत्र

प्रतिलिपि:

1. क्षेत्रीय महाप्रबंधक, चन्द्रपुर क्षेत्र
2. उपक्षेत्रीय प्रबंधक, दुर्गापुर ओसी
3. ओसी

01C



Environment Deptt. WCL-Chandrapur Area <wclchaenv@gmail.com>

Fwd: Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in Dstrict chandrapur (Maharashtra) – Environmental Clearance - reg.

1 message

rajesh ratawa <ratawa.rajesh@gmail.com>
To: wclchaenv@gmail.com

Mon, Oct 29, 2018 at 12:07 PM

----- Forwarded message -----

From: **RAJESH MANAGEMENTTRAINEE** <rajeshratawa@coalindia.in>

Date: Sun, Nov 19, 2017 at 11:17 AM

Subject: Durgapur Extension Deep OC Phase-II of 3 MTPA of M/s Western Coalfields Limited in a total area of 1622.50 ha located in Dstrict chandrapur (Maharashtra) – Environmental Clearance - reg.

To: <collector.chandrapur@maharashtra.gov.in>, <didic.chandrapur@maharashtra.gov.in>, <didicchandrapur@gmail.com>, <rochandrapur@mpcb.gov.in>, <srochandrapur@mpcb.gov.in>

Cc: GM GM <gmenvironment.wcl@coalindia.in>, HB SR.MANAGER <hbshinde@coalindia.in>, <hbshinde@rediffmail.com>, <ratawa.rajesh@gmail.com>

TO,

- 1.The Collector-Chandrapur
- 2.The Regional Officer-MPCB, UdyogBhavan, Station Road-Chandrapur
- 3.The General Manager-DIC, UdyogBhavan, Station Road-Chandrapur

Ref :No. J-11015/56/2008-IA-II (M)_pt. filedtd: 10.11.2017

Dear Sir,

With reference to the above subject and referred letter and in compliance of General Condition under(k) Miscellaneous condition no. 1 & 2 we are hereby submitting a copy of the above mentioned EC document.

Kindly arrange for display of the EC document on your notice board/uploading on your Website for information of general public for a period of thirty days.

Regards

Rajesh Ratawa
Asst. Mgr (Environment)
WCL-Chandraur Area

--

Rajesh Ratawa



EC DURGAPUR OC.pdf
408K

papers and other waste material from the track, cess/drain and land within Railway boundary on daily basis in DEN(S)/NGP section. (i) Approximate Cost : Rs. 2481635.00, (ii) Earnest Money : Rs. 49640.00 Date & time of closing of tender : 20.12.2017 at 15:00 hrs. Complete details and instructions for e-tendering and on line participation for the above work is available on Railway's website www.treps.gov.in
Divisional Railway Manager (Works)
Central Railway, Nagpur
297/DC/147 For & On Behalf of the President of India
SECURITY HELP LINE 182

PRIORITY, GADCHIROLI
Date : 18th November, 2017

ICE ::

Court, in Suo Moto Public
ty is appointed as Nodal
in general regarding Pot

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ad/ potholes the Hon'ble
to raise grievances about
in area as the case may

complaint about condition of
in area as the case may
all or by post or by hand

complaints to concerned

etary,
Services Authority,
chiroli

wards at above address. For details visit www.ip.mra.gov.in,
www.eprocure.gov.in or above mentioned office address. CGPDTM



Western Coalfields Limited

(A subsidiary of Coal India Ltd.)

NOTICE

Environmental Clearance has been accorded for Durgapur Extension Deep OC Phase-II (For 3.00 MTPA with a total area 1622.50 ha) under Chandrapur Area of M/s Western Coalfields Limited by Ministry of Environment & Forests vide letter no. J-11015/56/2008-IA.II (M) dated 10/11/2017 and a copy of the clearance letter is available with the Maharashtra Pollution Control Board and may also be seen at website of the Ministry of Environment, Forests & Climate Change (MoEF & CC) at <http://environmentclearance.nic.in>

Published in Hitvada, 19-Nov-2017

GOVERNMENT OF MAHARASHTRA OFFICE OF THE EXECUTIVE ENGINEER PUBLIC WORKS DIVISION NO. 2, NAGPUR

Email: div2nagpur.ee@mahapwd.com, Tel No. 0712-2565048

E-TENDER NOTICE NO. 34 YEAR 2017-18

Online E-tenders in "B-1" forms are invited by Executive Engineer Public Works Division No. 2, "Bandhkam Sankul" Civil Lines, Nagpur for the following works from the registered contractor who satisfy the qualifying criteria. The tender documents should be downloaded from the Government website <http://mahatenders.gov.in> The competent authority reserves the right to accept or reject any or all the tenders. Conditional tenders will not be accepted.

Sr. No.	Name of Work	Estimated Cost (Rupees in Lakhs)
1	2	3
1	Two years Repair & maintenance to Mohapa Dhapewada Palansawangi Khapa Badegaon Sironji Sindewani road (MDR-9) Km. 23/00 to 39/00 & 42/800 to 68/800 in Taluka Saoner Distt. Nagpur (5 th Call)	Rs.61,30,670/-

holders and users, the competition document states.

Only after the top three entries are finalised, will they (architects) be asked to submit their price bids and a final decision will be taken based on both design and pricing, Lohia said.

"In this way, we will get a number of concepts to choose from and finally, we will get a great design at the best price," he said.

The HITVADA 19-11-2017
(ENGLISH)

जाती जमातीचा दर्जा ठरविण्याचे निकष वेगवेगळे आहे. अनुसूचित जमाती अती दुर्गम भागात, दुःखाळीच्यात व जंगल भागात प्रामुख्याने वास्तव्यास असतात. भौगोलीक, सांस्कृतिक व भिन्न रुढी परंपरामुळे या जमातीस अनुच्छेद ३४२ प्रमाणे आरक्षण देण्यात आलेले आहे. अनुसूचित जमातीचे संरक्षणाची जबाबदारी संविधानाची अनुसूची ५ व ६ नुसार महामहाम राष्ट्रपती व राज्यपाल यांचेवर टाकण्यात आलेली आहे. आदिवासींचे संरक्षणार्थ ट्रायबल अँड वसोरी कॉउन्सील व पेसा कायदा हा मा.राज्यपालाच्या नियंत्रणात आहे. अनुसूचित जाती, इतर मागासवर्ग तसेच विशेष मागास प्रवर्गाकरीता संविधानात अशी कोणतीही घटनात्मक तरतूद नाही. असे असताना सामाजिक न्याय विभागाचे धर्तीवर अनुसूचित जमातीकरीता रक्त नाते संबंधातील व्यक्तींचे जात वैधता

रावसाहब दानव यांच्याही भूमिकेचा विविध आदिवासी संघटनांनी जाहिर निषेध नोंदविला आहे. सुधिर मुनगटीवार आदिवासी जिल्ह्याचे पालकमंत्री असून ते आदिवासी विरोधी भूमिका नेहमिच घेत असल्यामुळे ठरावात मुक समती दर्शविली आहे. त्यामुळे संपूर्ण आदिवासी समाजात असंतोषाचे वातावरण निर्माण झाले आहे. त्याच अशीच भूमिका राहिली तर त्यांना पुढील बिबडणुकीत याचे गंभीर परीणाम भोगावे लागतील. असा गर्भित इशारा सर्व आदिवासी संघटना देत आहे. अशी माहिती दि.१८ नोव्हेंबर २०१७ ला घेण्यात आलेल्या पत्रपरिषदेत देण्यात आले. या प्रसंगी राजेंद्र मारसकोल्हे, प्राचार्य शांताराम उईके, एम.एम.आय.एम. एन.झेड.कुमारे, प्रमोद बारिकर, विजय कुमारे, धीराज शेडमाके, शंकर मडावी, केशव पुराणीक आदी उपस्थित होते.

अत्याचार खून या कलमाखाली दोषी ठरविण्यात आले आहे तर आरोपी संतोष भवाळ व नितीन भैलुमे यांना संगनमत करून कट करणे व गुन्हासाठी प्रोत्साहीत करणे यासाठी दोषी ठरवले आहे. बाललैंगिक कायदानुसारही तिघांना दोषी ठरविण्यात आले आहे. खून व अत्याचाराच्या गुन्ह्यात फाशी व जन्मठेपेची तरतूद असून, कट रचणे व गुन्हासाठी प्रोत्साहित करणे यासाठी जन्मठेपेची तरतूद आहे. असे न्यायालयाने सांगितले.

२१ नोव्हेंबरला नितीन भैलुमे, सुनावणीच्या (पान ७ वर)

Published in चंद्रपूर साप्ताहिक 19 Nov 2017



वेस्टर्न कोलफील्ड्स लिमिटेड

(कोल इंडिया लिमिटेड ची एक अनुषंगी कंपनी)



सूचना

वेस्टर्न कोलफील्ड्स लिमिटेडच्या चंद्रपूर क्षेत्रांतर्गत विस्तारीत दुर्गापुर डीप फेज-1। खुली कोलसा खान (उत्पादन क्षमता 3.00 मिलियन टन प्रति वर्ष व क्षेत्र 1622.50 हे.) साठी पर्यावरण व वन मंत्रालयाद्वारे पत्र क्रमांक J-11015/58/2008-IA/1 (M) दिनांक 10/11/2017 अनुसार पर्यावरण स्विकृती दिली आहे पर्यावरण स्विकृतीच्या पत्राची प्रत महाराष्ट्र प्रदूषण नियंत्रण मंडल यांच्या कडे उपलब्ध आहे आणि पर्यावरण, वन व जलवायु परिवर्तन मंत्रालयाच्या खाली दिलेल्या वेबसाईट वर पाहू शकता <http://environmentclearance.nic.in>

गडचिरोली एकाच वेळी प्रकाशित होणारे दैनिक

Chandrapur Samachar
(Marathi)
19-11-2017



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Annex.-(P)

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000060992

Submitted Date

29-09-2023

PART A

Company Information

Company Name

M/s. WESTERN COALFIELDS LIMITED, Durgapur
Opencast Mine

Application UAN number

MPCB-CONSENT-0000109836

Address

POST-DURGAPUR

Plot no

Document uploaded

Taluka

Chandrapur

Village

WCL-CHANDRAPUR AREA

Capital Investment (In lakhs)

41898.72

Scale

L.S.I

City

Chandrapur

Pincode

442404

Person Name

Gajendra Kolte

Designation

Mine Manager

Telephone Number

8275967528

Fax Number

0

Email

durgapurocwcl@gmail.com

Region

SRO-Chandrapur

Industry Category

Red

Industry Type

R35 Mining and ore beneficiation

Last Environmental statement submitted online

yes

Consent Number

MPCB-CONSENT-0000109836

Consent Issue Date

2022-11-09

Consent Valid Upto

2023-03-31

Establishment Year

1980

Date of last environment statement submitted

Sep 20 2022 12:00:00:000AM

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

Product Information

Product Name

Coal

Consent Quantity

3.00

Actual Quantity

1.725

UOM

MT/A

By-product Information

By Product Name

NA

Consent Quantity

0

Actual Quantity

0

UOM

CMD

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for

Consent Quantity in m3/day

Actual Quantity in m3/day

Process	550.00	550.00
Cooling	0.00	0.00
Domestic	1500.00	1500.00
All others	0.00	0.00
Total	2050.00	2050.00

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Daily Trade Effluent	2690	2050	CMD

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

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Coal (Kl/Tonne)	0.109	0.116	

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

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Explosives	2890000	4260871	Kg/Annum

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Diesel	0	5899944	Ltr/A

Part-C

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

[A] Water

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

[B] Air (Stack)

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

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
5.1 Used or spent oil	25.20	43.47	KL/A
5.2 Wastes or residues containing oil	2.90	3.99	Ton/Y
35.3 Chemical sludge from waste water treatment	22.73	9.83	Ton/Y

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	CMD

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Overburden	27397.26	37397.26	CMD

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
NA	0	0	CMD

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	CMD

Part-F

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

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
5.1 Used or spent oil	25.20	KL/A	Auction to CPCB Authorized recyclers
35.3 Chemical sludge from waste water treatment	22.73	Ton/Y	Disposed off via MEPL to CHWTSDF
5.2 Wastes or residues containing oil	2.90	Ton/Y	Disposed off via MEPL to CHWTSDF

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
Overburden	37397.26	CMD	OB Stacked as external dump

Part-G

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

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

Part-H

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Capital Expenditure	-	0

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Capital Investment	Air & Water Pollution Control Measures	65

Part-I

Any other particulars for improving the quality of the environment.

Particulars

Attachments as required.

Name & Designation

Gajendra Kolte, Mine Manager, DOCM

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000060992

Submitted On:

29-09-2023



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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068



APRIL 2023

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

AN ISO 9001:2015 COMPANY

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/APRIL-23/34	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	

MANAGER OFFICE-SECTOR V CDOA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
14-04-23	15-04-23	258	150	51	23	13	Clear / Light Breeze
16-04-23	17-04-23	243	157	53	24	16	Cloudy / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	


DURGAPUR VILLAGE CDOA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
13-04-23	14-04-23	131	52	27	11	BDL	Clear / Light Breeze
28-04-23	29-04-23	143	67	30	BDL	BDL	Cloudy / Light Breeze
NAAQS, 2009		-	100	60	80	80	

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
14-04-23	15-04-23	277	157	56	25	17	Clear / Light Breeze
16-04-23	17-04-23	259	137	51	21	15	Clear / Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

FILTER PLANT DOC/POC COLONY CDOA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
14-04-23	15-04-23	167	56	23	13	BDL	Clear / Light Breeze
16-04-23	17-04-23	171	67	36	11	BDL	Cloudy / Light Breeze
NAAQS, 2009		-	100	60	80	80	



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

CHP CDGOF1				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	
FROM	TO	S	S	
16-04-23	17-04-23	428	278	Clear / Light Breeze

CHECK POST / AYYAPA MANDIR CDGOF2				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	
FROM	TO	S	S	
16-04-23	17-04-23	438	290	Clear / Light Breeze



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

MINE WATER DISCHARGE Q-II CDOW1				
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
14-04-23	7.02	22	32	BDL
29-04-23	3.16	26	28	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

MINE WATER DISCHARGE Q-V CDOW2				
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
14-04-23	3.12	46	60	BDL
29-04-23	3.18	50	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
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
14-04-23	6.25	30	36	BDL
29-04-23	7.65	30	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4		
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
14-04-23	46	12
29-04-23	52	14
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30



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

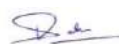
SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015
SAMPLING METHOD	LSOP 6

CHP:		CDON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
APRIL'23	13-04-23	64.5	63.7
APRIL'23	26-04-23	64.6	64.4
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY:		CDON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
APRIL'23	13-04-23	43.6	41.3
APRIL'23	26-04-23	43.7	42.2
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



Ashwin B Wasnik
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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423068



MAY 2023

Environment Laboratory
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JARIPATKA, NAGPUR, PIN – 440 014

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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TEST REPORT NO.	RIN/TR/MAY-23/34	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:		15-05-23 TO 16-06-23

MANAGER OFFICE-SECTOR V CDOA1						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
12-05-2023	13-05-2023	250	152	51	21	14
24-05-2023	25-05-2023	245	147	55	23	15
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120
ENVIRONMENT CONDITIONS (Sky/Wind)						

DURGAPUR VILLAGE CDOA2						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
12-05-2023	13-05-2023	140	63	31	BDL	10
24-05-2023	25-05-2023	135	57	29	10	BDL
NAAQS, 2009		-	100	60	80	80
ENVIRONMENT CONDITIONS (Sky/Wind)						

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
12-05-2023	13-05-2023	257	133	51	21	14
24-05-2023	25-05-2023	273	154	57	23	15
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120
ENVIRONMENT CONDITIONS (Sky/Wind)						

FILTER PLANT DOC/POC COLONY CDOA4						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
12-05-2023	13-05-2023	170	65	34	10	BDL
24-05-2023	25-05-2023	163	59	27	15	10
NAAQS, 2009		-	100	60	80	80
ENVIRONMENT CONDITIONS (Sky/Wind)						



Analysed by

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

MINE WATER DISCHARGE Q-II CDOW1				
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
13-05-2023	6.47	28	36	BDL
24-05-2023	7.12	32	24	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

MINE WATER DISCHARGE Q-V CDOW2				
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
13-05-2023	3.01	36	52	BDL
24-05-2023	8.17	44	56	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
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
14-05-2023	8.57	38	44	BDL
24-05-2023	8.27	34	48	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4		
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
14-05-2023	58	10.4
24-05-2023	48	14.4
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30



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

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

CHP: CDON1		NOISE LEVEL IN dB(A)	
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	13-05-2023	67.8	66.7
MAY'23	27-05-2023	66.6	65.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY: CDON2		NOISE LEVEL IN dB(A)	
MONTH	DATE OF SAMPLE COLLECTION	DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
MAY'23	13-05-2023	43.7	42.6
MAY'23	27-05-2023	43.5	42.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



Ashwin B Wasnik
Reviewed by



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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.


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JUNE 2023

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AN ISO 9001:2015 COMPANY

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/JUNE-23/34	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:		17-06-23 TO 15-07-23

MANAGER OFFICE-SECTOR V CDOA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
08-06-23	09-06-23	248	141	47	22	16	Clear / Calm
29-06-23	30-06-23	247	143	57	21	13	Cloudy / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

DURGAPUR VILLAGE CDOA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
07-06-23	08-06-23	140	60	27	BDL	11	Clear / Calm
08-06-23	09-06-23	133	42	31	10	BDL	Clear / Calm
13-06-23	14-06-23	147	52	39	13	11	Clear / Calm
14-06-23	15-06-23	139	47	38	12	BDL	Clear / Calm
20-06-23	21-06-23	132	50	30	10	BDL	Clear / Calm
21-06-23	22-06-23	127	43	28	12	10	Clear / Calm
27-06-23	28-06-23	140	47	31	14	12	Cloudy / Calm
28-06-23	29-06-23	137	41	33	11	BDL	Cloudy / Calm
NAAQS, 2009		-	100	60	80	80	

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
07-06-23	08-06-23	253	130	51	20	14	Clear / Calm
29-06-23	30-06-23	266	151	52	24	15	Cloudy / Calm
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

FILTER PLANT DOC/POC COLONY CDOA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
07-06-23	08-06-23	167	61	33	10	BDL	Clear / Calm
08-06-23	09-06-23	161	55	37	13	10	Clear / Calm
13-06-23	14-06-23	155	50	41	12	10	Clear / Calm
14-06-23	15-06-23	170	56	40	14	12	Clear / Calm
20-06-23	21-06-23	131	52	31	13	BDL	Clear / Calm
21-06-23	22-06-23	158	45	36	14	12	Clear / Calm
27-06-23	28-06-23	164	48	39	12	BDL	Cloudy / Calm
28-06-23	29-06-23	169	50	43	13	10	Cloudy / Calm
NAAQS, 2009		-	100	60	80	80	



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

MINE WATER DISCHARGE Q-II CDOW1				
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
14-06-23	5.68	24	28	BDL
28-06-23	3.56	28	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

MINE WATER DISCHARGE Q-V CDOW2				
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
14-06-23	7.24	40	52	BDL
28-06-23	5.66	46	56	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
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
14-06-23	8.08	30	40	BDL
28-06-23	8.00	36	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4		
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
14-06-23	46	10.6
28-06-23	40	10.6
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30



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NOISE LEVEL MONITORING DATA

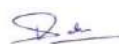
SAMPLE DESCRIPTION	NOISE SAMPLE
Test Required	CPCB PROTOCOL FOR AMBIENT NOISE MEASUREMENT, JUNE-2015
SAMPLING METHOD	LSOP 6

CHP:		CDON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
JUNE'23	13-06-23	66.7	65.6
JUNE'23	19-06-23	67.7	66.6
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY:		CDON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
JUNE'23	13-06-23	43.6	42.5
JUNE'23	19-06-23	43.8	42.5
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




JULY 2023



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

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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7102
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TEST REPORT NO.	RIN/TR/JULY-23/34	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

MANAGER OFFICE-SECTOR V CDOA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
06.07.2023	07.07.2023	242	140	52	23	17	Clear sky/Calm
20.07.2023	21.07.2023	230	132	49	20	11	Rainy sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

DURGAPUR VILLAGE CDOA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
04.07.2023	05.07.2023	58	24	8	10		Rainy sky/Light Breeze
05.07.2023	06.07.2023	62	28	11	BDL		Clear sky/Calm
11.07.2023	12.07.2023	60	27	9	BDL		Cloudy sky/Light Breeze
12.07.2023	13.07.2023	56	23	12	13		Rainy sky/Light Breeze
18.07.2023	19.07.2023	53	21	10	BDL		Rainy sky/Light Breeze
19.07.2023	20.07.2023	43	20	13	11		Rainy sky/Light Breeze
25.07.2023	26.07.2023	48	23	15	10		Rainy sky/Light Breeze
26.07.2023	27.07.2023	40	19	12	13		Rainy sky/Moderate Breeze
NAAQS, 2009		100	60	80	80		

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
FROM	TO	5	5	2	6	10	
06.07.2023	07.07.2023	256	153	55	25	19	Clear sky/Calm
20.07.2023	21.07.2023	241	143	50	22	14	Rainy sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

FILTER PLANT DOC/POC COLONY CDOA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				ENVIRONMENT CONDITIONS (Sky/Wind)	
		PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
FROM	TO	5	2	6	10		
04.07.2023	05.07.2023	56	26	11	12		Rainy sky/Light Breeze
05.07.2023	06.07.2023	60	31	10	BDL		Clear sky/Calm
11.07.2023	12.07.2023	68	36	11	11		Cloudy sky/Light Breeze
12.07.2023	13.07.2023	65	33	12	BDL		Cloudy sky/Light Breeze
18.07.2023	19.07.2023	58	27	16	BDL		Rainy sky/Light Breeze
19.07.2023	20.07.2023	52	25	13	13		Rainy sky/Light Breeze
25.07.2023	26.07.2023	48	23	15	10		Rainy sky/Light Breeze
26.07.2023	27.07.2023	45	21	12	BDL		Rainy sky/Moderate Breeze
NAAQS, 2009		100	60	80	80		



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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	

CHP CDGOF1				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m³)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	
FROM	TO	5	5	
18-07-2023	19-07-2023	415	256	Rainy / Light Breeze

CHECK POST / AYYAPA MANDIR CDGOF2				
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in µg/m³)		ENVIRONMENT CONDITIONS (Sky/Wind)
		SPM	PM ₁₀	
FROM	TO	5	5	
18-07-2023	19-07-2023	401	242	Rainy / Light Breeze



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

MINE WATER DISCHARGE Q-II CDOW1				
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
09.07.2023	6.45	20	24	BDL
19.07.2023	5.98	18	20	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

MINE WATER DISCHARGE Q-V CDOW2				
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
09.07.2023	5.92	53	44	BDL
19.07.2023	5.46	45	36	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
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
09.07.2023	7.45	38	36	BDL
19.07.2023	7.16	32	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4		
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
09.07.2023	34	10.2
19.07.2023	41	10.8
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30



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NOISE LEVEL MONITORING DATA

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

CHP:		CDON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	07-07-2023	60.7	59.8
JULY'23	22-07-2023	60.8	58.9
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY:		CDON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
		DAY TIME	NIGHT TIME
	DETECTION LIMIT	20	20
JULY'23	07-07-2023	43.6	42.7
JULY'23	22-07-2023	43.6	42.9
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.

JOB NO. 4094423068




AUGUST 2023



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Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	
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TEST REPORT NO.	RIN/TR/AUGUST-23/34	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

MANAGER OFFICE-SECTOR V CDOA1							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
03.08.2023	04.08.2023	248	146	50	25	19	Cloudy sky/Light Breeze
29.08.2023	30.08.2023	239	135	46	22	12	Clear sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

DURGAPUR VILLAGE CDOA2							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
01.08.2023	02.08.2023	79	30	17	12		Cloudy sky/Light Breeze
02.08.2023	03.08.2023	66	21	11	BDL		Rainy sky/Light Breeze
08.08.2023	09.08.2023	75	26	15	10		Clear sky/Light Breeze
09.08.2023	10.08.2023	72	24	16	11		Clear sky/Light Breeze
16.08.2023	17.08.2023	68	22	10	12		Rainy sky/Light Breeze
17.08.2023	18.08.2023	63	20	8	BDL		Rainy sky/Light Breeze
22.08.2023	23.08.2023	76	28	19	11		Cloudy sky/Light Breeze
23.08.2023	24.08.2023	80	31	21	15		Cloudy sky/Light Breeze
29.08.2023	30.08.2023	75	26	16	13		Clear sky/Light Breeze
30.08.2023	31.08.2023	72	23	14	10		Clear sky/Light Breeze
NAAQS, 2009		100	60	80	80		

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
03.08.2023	04.08.2023	265	162	56	24	19	Cloudy sky/Light Breeze
29.08.2023	30.08.2023	250	150	52	26	15	Clear sky/Light Breeze
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120	

FILTER PLANT DOC/POC COLONY CDOA4							
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)					ENVIRONMENT CONDITIONS (Sky/Wind)
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂		
01.08.2023	02.08.2023	84	34	20	14		Cloudy sky/Light Breeze
02.08.2023	03.08.2023	69	22	14	BDL		Rainy sky/Light Breeze
08.08.2023	09.08.2023	80	30	17	12		Clear sky/Light Breeze
09.08.2023	10.08.2023	77	32	18	13		Clear sky/Light Breeze
16.08.2023	17.08.2023	74	24	13	10		Rainy sky/Light Breeze
17.08.2023	18.08.2023	69	23	11	BDL		Rainy sky/Light Breeze
22.08.2023	23.08.2023	82	33	20	13		Cloudy sky/Light Breeze
23.08.2023	24.08.2023	85	35	24	16		Cloudy sky/Light Breeze
29.08.2023	30.08.2023	80	31	18	15		Clear sky/Light Breeze
30.08.2023	31.08.2023	78	26	16	12		Clear sky/Light Breeze
NAAQS, 2009		100	60	80	80		



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

MINE WATER DISCHARGE Q-II CDOW1				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03.08.2023	6.56	19	28	BDL
30.08.2023	6.63	17	24	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

MINE WATER DISCHARGE Q-V CDOW2				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03.08.2023	5.04	46	48	BDL
30.08.2023	5.23	41	44	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	pH	TSS (in mg/l)	COD(in mg/l)	O & G(in mg/l)
DETECTION LIMIT	2	10	4	2
03.08.2023	7.29	25	28	BDL
30.08.2023	7.56	29	32	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4				
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS			
	TSS (in mg/l)		BOD(in mg/l)	
DETECTION LIMIT	10		2	
03.08.2023	26		9.6	
30.08.2023	32		10.2	
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100		30	



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

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

CHP:		CDON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
AUG'23	08-08-2023	59.6	58.7
AUG'23	26-08-2023	60.4	59.3
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY:		CDON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
AUG'23	08-08-2023	42.7	41.8
AUG'23	26-08-2023	41.6	40.7
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



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ENVIRONMENTAL MONITORING REPORT

DURGAPUR OC

CHANDRAPUR AREA

WESTERN COALFIELDS LTD.


JOB NO. 4094423068



SEPTEMBER 2023

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

AN ISO 9001:2015 COMPANY

Environment Laboratory CMPDI RI-IV, NAGPUR	Test Report	 TC-7182
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TEST REPORT NO.	RIN/TR/SEPT-23/34	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 : LOP 4	PERIOD OF PERFORMANCE OF LAB ACTIVITIES:	15-09-23 TO 15-10-23	

MANAGER OFFICE-SECTOR V CDOA1						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
14.09.2023	15.09.2023	241	142	48	20	10
28.09.2023	29.09.2023	276	164	55	27	17
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120
		ENVIRONMENT CONDITIONS (Sky/Wind)				


DURGAPUR VILLAGE CDOA2						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
05.09.2023	06.09.2023	74	25	17	12	Rainy sky/Light Breeze
06.09.2023	07.09.2023	72	23	14	10	Rainy sky/Light Breeze
12.09.2023	13.09.2023	69	20	10	BDL	Rainy sky/Light Breeze
13.09.2023	14.09.2023	65	19	12	BDL	Rainy sky/Light Breeze
19.09.2023	20.09.2023	80	30	22	16	Cloudy sky/Calm
20.09.2023	21.09.2023	73	27	13	BDL	Rainy sky/Calm
26.09.2023	27.09.2023	68	21	11	10	Rainy sky/Calm
27.09.2023	28.09.2023	76	29	16	14	Clear sky/Calm
NAAQS, 2009		100	60	80	80	

MANAGER OFFICE Q-IV CDOA3(Durgapur OC)						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	SPM	PM ₁₀	PM _{2.5}	NO ₂	SO ₂
14.09.2023	15.09.2023	254	151	51	21	12
28.09.2023	29.09.2023	280	173	58	29	19
STANDARDS FOR COAL MINE, GSR 742(E), dt. 25 TH September 2000		600	300	-	120	120
		ENVIRONMENT CONDITIONS (Sky/Wind)				

FILTER PLANT DOC/POC COLONY CDOA4						
DATE(dd:mm:yy) OF SAMPLING		PARAMETERS (24 hourly values in $\mu\text{g}/\text{m}^3$)				
FROM	TO	PM ₁₀	PM _{2.5}	NO ₂	SO ₂	
05.09.2023	06.09.2023	76	27	19	13	Rainy sky/Light Breeze
06.09.2023	07.09.2023	71	25	17	11	Rainy sky/Light Breeze
12.09.2023	13.09.2023	67	21	10	BDL	Rainy sky/Light Breeze
13.09.2023	14.09.2023	63	20	13	10	Rainy sky/Light Breeze
19.09.2023	20.09.2023	84	32	25	17	Cloudy sky/Calm
20.09.2023	21.09.2023	69	26	11	BDL	Rainy sky/Calm
26.09.2023	27.09.2023	61	22	18	12	Rainy sky/Calm
27.09.2023	28.09.2023	78	28	21	16	Clear sky/Calm
NAAQS, 2009		100	60	80	80	



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

MINE WATER DISCHARGE Q-II CDOW1				
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
14.09.2023	7.25	23	24	BDL
28.09.2023	6.84	20	20	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10


MINE WATER DISCHARGE Q-V CDOW2				
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
14.09.2023	6.75	47	36	BDL
28.09.2023	6.51	41	40	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

ETP(WORKSHOP): CDOW3				
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
13.09.2023	8.15	21	20	BDL
28.09.2023	7.69	26	28	BDL
STANDARDS FOR COAL MINE, GSR 742E, dt. 25/09/2000	5.5 - 9.0	100	250	10

STP(DOMESTIC EFFLUENT): CDOW4		
DATE OF SAMPLE COLLECTION	ANALYSIS RESULTS	
	TSS (in mg/l)	BOD(in mg/l)
DETECTION LIMIT	10	2
13.09.2023	35	10.8
28.09.2023	30	8.4
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS GSR 801E EPA 1993	100	30



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

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

CHP:		CDON1	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
		20	20
SEPT'23	09-09-23	59.9	58.8
SEPT'23	25-09-23	58.8	59.9
NOISE POLLUTION (REGULATION AND CONTROL) RULES		75	70

DURGAPUR COLONY:		CDON2	
MONTH	DATE OF SAMPLE COLLECTION	NOISE LEVEL IN dB(A)	
	DETECTION LIMIT	DAY TIME	NIGHT TIME
		20	20
SEPT'23	09-09-23	43.8	42.7
SEPT'23	25-09-23	42.7	41.8
NOISE POLLUTION (REGULATION AND CONTROL) RULES		55	45



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