

**MCL**

Office of the Project Officer
Belpahar OCM, Lakhanpur Area
PO:Bandhbahal Colony
Dist:Jharsuguda(Odisha)-768211
Ph.(06645)-233403

Ref. No:MCL/LKPA/PO/BOCM/Env. /2023-24/ 2256

Date: 29/11/23

To

The Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change, Eastern Regional Office,
A/3, Chandrasekharpur, Bhubaneswar - 751023

Kind Attention:

Director (S),
Ministry of Environment, Forest and Climate Change, Eastern Regional Office,
A/3, Chandrasekharpur, Bhubaneswar-751023

Sub: Half yearly Environmental Clearance compliance report with respect to Belpahar Opencast Mine (9.0 MTPA), Lakhanpur Area, MCL for the period April 2023 - September 2023.

Ref: No-J-11015/189/2008-IA.II (M) Dated: 06.02.2023

Dear Sir,

Enclosed herewith, please find the Half yearly Environmental Clearance compliance report with respect to Belpahar Opencast Mine (9.0 MTPA), Lakhanpur Area, MCL for the period April 2023 - September 2023.

Encl: As above

Thanking you

Yours faithfully

Project Officer

202
Belpahar Opencast Mine
PROJECT OFFICER
BELPAHAR O.C.M
Lakhanpur Area, MCL


Copy to:

1. Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakanthanagar, Unit-VIII, Bhubaneswar, Odisha -751012.
2. Regional Officer, Odisha State Pollution Control Board, (Department of Forest & Environment, Govt. of Odisha) Plot No.-370 / 5971, At. -Babubagicha (Cox Colony), St. Mary Hospital Road, Post- Industrial Estate, Jharsuguda - 768203.
3. General Manager, Lakhanpur Area
4. General Manager (Env. & Forest), MCL HQ.
5. Area Environment Officer, Lakhanpur Area.
6. Office copy

COMPLIANCE REPORT OF ENVIRONMENT CLEARANCE – 9.0 MTPA

E.C. OBTAINED VIDE No. J-11015/189/2008-IA.II (M) Dated: 6th February, 2023.

(A) SPECIFIC CONDITIONS:

Sl. No.	Specific Conditions:	Compliances:														
i	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	<p>The maximum production limit of the Mine as prescribed in EC is 9.0 MTPA and the coal production is kept within 9.0 MTPA. The coal production figures of last years are tabulated below: -</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Production(T)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>7200010</td> </tr> <tr> <td>2019-20</td> <td>7510295</td> </tr> <tr> <td>2020-21</td> <td>7520005</td> </tr> <tr> <td>2021-22</td> <td>7248109</td> </tr> <tr> <td>2022-23</td> <td>7506201.74</td> </tr> <tr> <td>2023-24 (till 30.09.2023)</td> <td>3,131,213.83</td> </tr> </tbody> </table>	Year	Production(T)	2018-19	7200010	2019-20	7510295	2020-21	7520005	2021-22	7248109	2022-23	7506201.74	2023-24 (till 30.09.2023)	3,131,213.83
Year	Production(T)															
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2023-24 (till 30.09.2023)	3,131,213.83															
ii	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	The validity of the EC of Belpahar OCM is for the life of the mine i.e., 1 year as per EC- 9.0 MTPA obtained vide No. J-11015/189/2008-IA.II (M) Dt. 06 th Feb.2023.														
iii	The modification of the natural drainage of Lilari Nallah flowing through the ML by its proposed diversion shall be done so that it is realigned to its natural course at the mine boundary and ensure that the downstream users of the water from Lilari Nallah are not affected by the proposed diversion. Any embankment constructed along the Lilari Nallah shall be established by vegetation	<p>As per present approved mining plan of Belpahar OCM working, diversion of Lilari Nallah is not required. Further as per the approved mining plan of Integrated Lakhanpur-Belpahar-Lilari OCP (40 MTY) the diversion of Nallah is required after the year 2038-39 or later. Embankment has been provided against the Nallah and it has been vegetated and also surface water quality for upstream and downstream of the Nallah is conducted in half yearly basis and it is found in prescribed limits.</p>  <p align="center">Lilari Nallah's Embankments established with Vegetation and stone pitching</p>														



iv	No fly ash shall be dumped into the de-coaled void without feasibility studies on long term impacts on the aquifers and life systems and without prior approval of the Ministry.	No fly ash is being dumped into the de-coaled void. De-coaled voids are being backfilled by dumping of Overburden.																																																		
v	R&R for 657 PAFs shall be resettled within an agreed time-frame. R&R norms shall be not less that of the National R&R Policy.	<p>Odisha Rehabilitation and Resettlement policy,2006 and The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 are being followed which includes Employment, Cash compensation in lieu of employment, Plot, Cash compensation in lieu of plot, Annuity, House building assistance for the eligible persons as per policy. The status of the R&R is tabulated below:</p> <table border="1"> <thead> <tr> <th>Village</th> <th>No. Of displaced families</th> <th>Nos. Of Families Already Shifted</th> <th>Balance</th> <th>Employment provided</th> </tr> </thead> <tbody> <tr> <td>Chharla</td> <td>180</td> <td>180</td> <td>0</td> <td>264</td> </tr> <tr> <td>Darlipali</td> <td>182</td> <td>132</td> <td>48</td> <td>185</td> </tr> <tr> <td>Jurabaga</td> <td>27</td> <td>20</td> <td>7</td> <td>396</td> </tr> <tr> <td>Kirarama</td> <td>5</td> <td>1</td> <td>4</td> <td>70</td> </tr> <tr> <td>Kusuraloi</td> <td>1</td> <td>1</td> <td>0</td> <td>28</td> </tr> <tr> <td>Kheruabahal</td> <td>114</td> <td>79</td> <td>35</td> <td>68</td> </tr> <tr> <td>Jamkani</td> <td></td> <td></td> <td></td> <td>14</td> </tr> <tr> <td>Bandhbahal</td> <td></td> <td></td> <td></td> <td>31</td> </tr> <tr> <td>Total</td> <td>509</td> <td>413</td> <td>94</td> <td>1056</td> </tr> </tbody> </table>	Village	No. Of displaced families	Nos. Of Families Already Shifted	Balance	Employment provided	Chharla	180	180	0	264	Darlipali	182	132	48	185	Jurabaga	27	20	7	396	Kirarama	5	1	4	70	Kusuraloi	1	1	0	28	Kheruabahal	114	79	35	68	Jamkani				14	Bandhbahal				31	Total	509	413	94	1056
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vi	17 to 20 nos. of new piezometers covering IB Valley Coalfield shall be installed	<p>A total of 17 piezometers have been installed in IB Valley Coalfields, MCL for monitoring ground water level and two of them are under Belpahar Opencast Mine. The location of the piezometers are detailed below</p> <ol style="list-style-type: none"> 1. Piezometer No MIP 08; Village Kusuraloi, Inside the Premises of Prathamik Vidyalaya Latitude 21.01800 N Longitude 85.13027 E 2. Piezometer No MIP 07; In front of DAV school Bandhbahal, Inside colony substation Latitude 21.01800 N Longitude 85.13027 E 																																																		

The piezometer water quality and depth is studied at regular intervals and the latest report is enclosed as **Annexure - 8**.



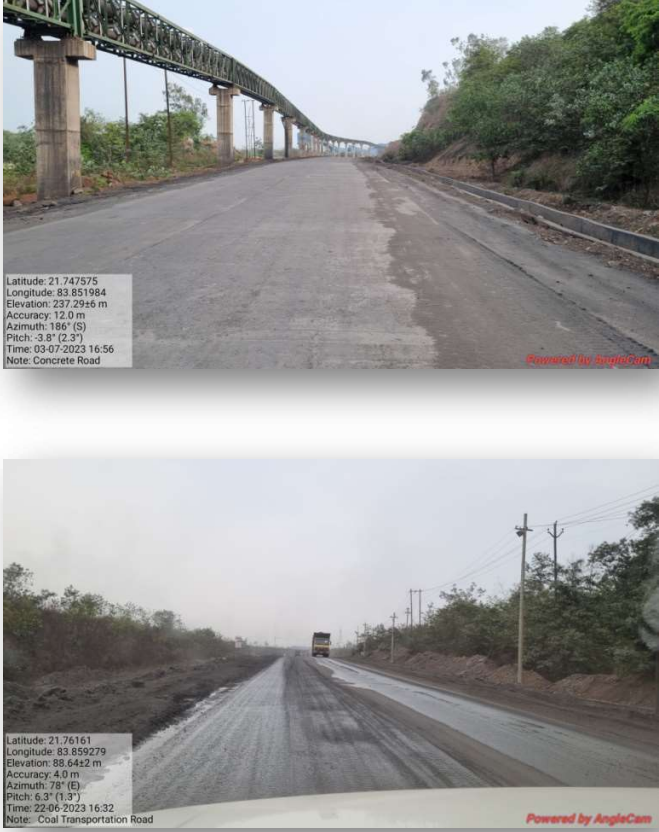
Digital Water Level Recorder Piezometer at DAV School, Bandhbahal




vii Dedicated Rail & Road corridor is provided for evacuation of coal as planned by MCL for strengthening and improving the Rail & Road infrastructure at IB Valley Coalfield be expedited.

Evacuation of coal is being carried out by Road and Rail. For rail dispatch BOCM Siding No. 6 is being used and coal is evacuated by road in trucks covered with tarpaulin. No public road is being obstructed within mining area for dispatch of coal.



		 <p style="text-align: center;">Dedicated Coal Transportation Concrete Roads</p>
viii	<p>Coal is transported from pit head to UTLS & BOCM-6 railway siding by tippers. The distance of coal transportation is 3-4 km. 75% of coal produced (4.5 Mt.) was transported by rail. The remaining coal 1.5 Mty was transported by road. And for incremental production 3.0 MTPA transportation of coal from the mine to consumers shall be 100% through Railway rakes.</p>	<p>BOCM Siding No. 6 is being used for transportation of coal from Belpahar OCM. During the year 2022-23, total production till the end of March 2023 was 7506201.74 te and more than 80 % of the total coal production was transported by rail mode. According to the condition, 7.5 Mt out of 9 Mt coal will be transported by rail which is nearly 80% of the total coal transportation.</p> <p><u>During the period April 2023 to September 2023</u></p> <p>Transportation by :-</p> <p>(a) Rail: 3914071.56 T=81.23% of total quantity</p> <p>(b) Road:904431.95 T = 18.77 % of total quantity</p> <p>Total Coal Transportation – 4818503.51 T</p>
ix	<p>The production shall be within the same Mining Lease area</p>	<p>Production is being carried out within the Mining Lease area (Mine Lease area is 1444.053 ha, out of which Excavated area is 568.39 ha) (As on 30.09.2023)</p> <p>i.e. Forest Land : 65.09 ha. 77.55</p> <p>Non Forest Land : 485.71 ha 490.84</p> <p>Total Excavated Area: 568.39 ha</p>
x	<p>The depth of the internal void shall be 35m from the ground level & should be adequate for fishery purpose.</p>	<p>Presently excavation of OB and concurrent backfilling in the voids is being carried out. It will be ensured to keep at 35m from the ground level at the time of mine closure, adequate for fishery purposes.</p>

		 <p style="text-align: center;">BOCM Quarry 2 mine void</p>
xi	All safety measures shall be taken as per CMR, 1957 & related Circulars.	Safety measures stipulated under CMR; 1957 as well as CMR; 2017 & related Circulars are being implemented during mining operation.
xii	The production shall be within the same Mining Lease area	<p>Production is being carried out within the Mining Lease area (Mine Lease area is 1444.053 ha, out of which Excavated area is 568.39 ha) (As on 30.09.2023)</p> <p>i.e. Forest Land : 65.09 ha. 77.55 Non Forest Land : 485.71 ha. 490.84 Total Excavated Area : 568.39 ha</p>
xiii	The OB shall be completely re-handled at the end of the mining and will be backfilled up to the ground level and covered with about a meter thick top soil and put to use. The land after mining shall be brought back for agriculture purpose.	<p>OB is used for backfilling of de-coaled area and concurrently covered with top soil for plantation.</p> <p>Present Status (as on 30.09.2023) of reclamation is mentioned below</p> <p>Excavated Area : 568.39 ha Backfilled Area : 432.50 ha. Technically reclaimed : 194.336 ha</p>

xiv



Garland drains be provided

Garland drains (1.5m x 1.5m) have been provided around the periphery of the mines. Further these drains are being cleaned at regular intervals.





Garland drains provided around the periphery of mine



<p>xv</p>	<p>Appropriate embankment shall be provided along the side of the river/Nallah flowing near or adjacent to the Mine.</p>	<p>A seasonal Lilari Nallah is flowing in the mine premises and it will not be disturbed during the mining operations. Embankment have been provided along the side of Lilari Nallah flowing adjacent to the mine and stabilized with vegetation.</p>  <p>Latitude: 21.777275 Longitude: 83.851145 Elevation: 145.19119 m Accuracy: 6.0 m Azimuth: 291° (W) Pitch: 0.5° (0.9°) Time: 22-06-2023 16:50 Note: Lilari Stream</p> <p style="text-align: right; color: red; font-size: small;">Covered by AnglerCam</p> <p style="text-align: center; color: blue; font-weight: bold;">Lilari Nallah's Embankments established with vegetation</p>  <p>Latitude: 21.777281 Longitude: 83.851196 Elevation: 201.5444 m Accuracy: 4.0 m Azimuth: 154° (SE) Pitch: 1.6° (0.7°) Time: 29-06-2023 16:50 Note: Lilari Stream</p> <p style="text-align: right; color: red; font-size: small;">Covered by AnglerCam</p>
<p>xvi</p>	<p>The CSR cost should be Rs.5 per tonnes of Coal produced which should be adjusted as per the annual inflation.</p>	<p>Project authorities are implementing the CSR guidelines as approved by the CIL/MoC, Govt. of India. CSR action plan of Lakhanpur Area for the year 2023-24 is given in Annexure – 1.</p>
<p>xvii</p>	<p>Everybody in the core area should be provided with mask for protection against fugitive dust emission</p>	<p>Everybody in the core area is provided with dust mask for protection against fugitive dust emission. 215 Nos. of dust masks have been Distributed among all the employees and both the Departmental & contractor workers of Belpahar OCM in the period of April 2023 to September 2023.</p>
<p>xviii</p>	<p>Dust mask to be provided to everyone working in the Mining area.</p>	<p>215 Nos. of dust masks have been Distributed among all the employees and both the Departmental & contractor workers of Belpahar OCM in the period of April 2023 to September 2023.</p>
<p>xix</p>	<p>The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.</p>	<p>Supervisory staff ensures that all working personnel in the core area are wearing dust masks. Regular inspections are carried out to ensure safety of all working personnel. A pit head safety committee has been constituted under guidance of Safety Officer for effective implementation of the system.</p>

xx	<p>People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.</p>	<p>People working in mine are undergoing Initial Medial Examination and then in every year 20% of total employees are Periodically medical examined so that within a five year interval all employees could be medically re-examined. Again, person those who have attended the age of 45 years and above are medically re-examined in every three years interval. In the period of April 2023 to September 2023, 69 Nos. of personnel have undergone PME & 70 number of personnel have undergone IME.</p>
xxi	<p>The mining area should be surrounded by green belt having thick closed thick canopy of the tree</p>	<p>The mining area is surrounded by Government Non-Forest land, tenancy land and Forest land. Plantation has been carried out in all the area under possession of the project. Further 31600 No's, of saplings have been planted in nearby villages of the project through DFO, Jharsuguda in the year 2022-23 and 42000 No's, of saplings have been planted in nearby villages of the project through DFO, Jharsuguda in the year 2023-24.</p> <p>Mining area Plantation has already been done in total 416.63 ha areas. (Ex. OB dump- 55.33 ha, Back filled area- 108.80 ha, Block plantation- 252.50 ha.). Further 24 Km of plantation has been done along road side. Plantation is being done by Chhattisgarh Rajya Van Vikas Nigam Ltd and Odisha Forest Development Corporation Limited at various sites. Density is kept at 2500 plants/ha. Further, greenbelt has been developed along the mine boundary.</p> <div data-bbox="703 1012 1460 1435" data-label="Image"> <p>Latitude: 21.747171 Longitude: 83.861312 Elevation: 234.79±13 m Accuracy: 8.0 m Azimuth: 346° (N) Pitch: 1.0° (1.1°) Time: 03-07-2023 16:41 Note: Plantation Near Magazine House</p> <p style="text-align: right; color: red; font-size: small;">Powered By AnglerCam</p> </div> <p style="text-align: center; color: blue; font-weight: bold;">Green belt developed near the magazine house</p>

<p>xxii</p>	<p>The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.</p>	<p>A seasonal Lilari Nallah is flowing in the mine premises and it will not be disturbed during the mining operations. Embankment have been provided along the both side of Lilari Nallah flowing adjacent to the mine and stabilized with vegetation to withstand the peak water flow and prevent mine inundation.</p>  <p>Latitude: 21.777198 Longitude: 83.851008 Elevation: 198.8743 m Accuracy: 13.1 m Azimuth: 301 (NW) Pitch: 1.7 (0.82) Time: 22-06-2023 16:49 Note: Lilari Stream</p> <p>Lilari Nallah's Embankments established with Vegetation and stone pitching</p> 
<p>xxiii</p>	<p>There shall be no over flow of OB into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the Project.</p>	<p>OB is dumped within the mining lease of the project, so there shall be no overflow of OB into the agricultural fields. Plantation is carried out in the area between seasonal Lilari Nallah and the mining area.</p>

xxiv	<p>OB shall be stacked at five earmarked external OB dump site(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest & Climate Change and its concerned Regional office on early basis.</p>	<p>The project has already five earmarked external OB dumps of area 55.33 ha. Ultimate Slope of the dumps is kept below 28°. Monitoring of the dumps are carried out at regular intervals and management of reclaimed dump sites with vegetation has been completed and the vegetation have become self-sustaining. Compliance status of the same is being submitted to the Eastern Regional Office, MoEF Bhubaneswar. Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.</p> <div data-bbox="799 479 1366 1108" data-label="Image"> <p>The image consists of two photographs stacked vertically. The top photograph shows a dense forest of green trees on a slope. A small data box is overlaid on the bottom left of this photo, containing the following text: Latitude: 21.742437, Longitude: 83.855939, Altitude: 188.12417 m, Accuracy: 8.0 m, Azimuth: 353° (N), Pitch: 11.4° (1.0°), Time: 03-07-2023 16:45, Note: OB Dump. The bottom photograph shows a similar view of a forested slope, but with more prominent trees in the foreground. A similar data box is overlaid on the bottom left of this photo, containing the following text: Latitude: 21.742421, Longitude: 83.848898, Elevation: 245.4415 m, Accuracy: 4.0 m, Azimuth: 329° (NW), Pitch: 11.7° (5.6°), Time: 03-07-2023 16:54, Note: OB Plantation.</p> </div> <p style="text-align: center;">OB Dump Plantation</p>
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xxv

Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flow from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc., The drain shall be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.

Garland drains and sumps (2 nos., total sump Capacity is 22, 70,000 m³) of adequate capacity, keeping in view of sudden peak rainfall, has already been provided to retain the setting of the silt materials. The retention period for the water is also sufficient for siltation purpose. The water so collected are utilised in mining area for water sprinkling for dust suppression, green belt development etc. Catch drains are regularly de-silted and maintained every year.



Siltation Pond



Catch Drains

<p>xxvi</p>	<p>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check runoff and siltation shall be based on the rainfall data.</p>	<p>Progressive backfilling of OB is being carried out in the voids. Further step dumping with height of less than 30m is being carried out. Catch drains and retaining wall have been provided at the toe of the OB dumps to check runoff and siltation. Catch drains are regularly maintained departmentally.</p> <div data-bbox="799 477 1366 792" data-label="Image"> <p>Latitude: 21.742396 Longitude: 83.848994 Altitude: 173.0914 m Accuracy: 12.0 m Azimuth: 309° (NW) Pitch: 4.9° (2.5°) Time: 03-07-2023 16:53 Note: Retaining Wall</p> </div> <p data-bbox="887 792 1273 819" style="text-align: center;">Retaining walls at the toe of the dumps</p> <div data-bbox="655 819 1509 1099" data-label="Image"> </div>
<p>xxvii</p>	<p>Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads transfer points , etc.</p>	<p>CHP is currently not in operation and coal is extracted using two nos. of Surface Miners. During the year 2023-24 (till September 2023), 100% coal (3,131,213.83 T) is extracted using Surface Miner.</p>

xxviii

Drills shall be wet operated, Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.

All 7 nos. of drills at Belpahar OCM are wet operated and also provided with NVE dust extractor. All of the haul roads and coal transportation roads are of WBM and 4 no. of 28 KL mobile water tankers are in operation on the haul road/ coal transportation roads to control fugitive dust emission. Further 72 Nos. of fixed sprinklers are installed in CT roads. 02 Nos. of mobile truck mounted fog cannon of 40m radial throw has been commissioned. A mechanical road sweeper has been deployed in coal transportation roads and public transportation roads at regular intervals.




Mechanical Road Sweeper



Mobile Truck Mounted Fog Cannon



mobile water tanker

xxix	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	<p>Regular repairing of pot holes and tarring of roads used for mineral transportation is carried out on regular basis. Plantation consisting of native species was carried out all along the major approach roads.</p>  <p style="text-align: center;">Coal Transportation road and plantation along sides the road</p>																		
xxx	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	<p>Controlled blasting is done in BOCM as per permission order no. Lr.0101688/SE-2/Bhubaneswar Region/Perm/BBR-SA/CO-7/p-196(3)/2019/3/833 dt.17/06/2019. by use of Electronic detonator for initiation system of explosives in the short holes. Maximum no. of holes blasted with following parameters:---</p> <table border="1" data-bbox="639 819 1497 1115"> <thead> <tr> <th>Distance between blasting side & villages (meters)</th> <th>No. of holes</th> <th>Max. charge Par delay (kg)</th> </tr> </thead> <tbody> <tr> <td>100-150</td> <td>46</td> <td>25</td> </tr> <tr> <td>150-200</td> <td>20</td> <td>50</td> </tr> <tr> <td>200-250</td> <td>30</td> <td>50</td> </tr> <tr> <td>250-300</td> <td>40</td> <td>55</td> </tr> <tr> <td>300-500</td> <td>50</td> <td>55</td> </tr> </tbody> </table> <p>Blasting is conducted with muffling arrangement by sand bag on each hole.</p>	Distance between blasting side & villages (meters)	No. of holes	Max. charge Par delay (kg)	100-150	46	25	150-200	20	50	200-250	30	50	250-300	40	55	300-500	50	55
Distance between blasting side & villages (meters)	No. of holes	Max. charge Par delay (kg)																		
100-150	46	25																		
150-200	20	50																		
200-250	30	50																		
250-300	40	55																		
300-500	50	55																		

XXXI

A Progressive afforestation plan shall be implemented covering an area of 800.572 ha at the end of mining, which includes reclaimed External OB dump area (50.33 ha), Excavation area (448.94 ha), top soil dump (5 ha), road and infrastructure (76.502 ha), un-disturb area and green belt (10 ha) and in township located outside the lease by planting species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a-3 tier avenue plantation along the main approach roads to the mine.

Progressive Afforestation Plan is implemented

A. Plantation on OB Dump / Block etc

Sl No.	Location of Plantation	Area in Ha.	No. of Plantation
1	Back Filled Area	108.80	266750
2	Ext.OB Dump	55.33	138250
3	Block Plantation	252.50	375264
	Total	416.63	780264

B. Avenue Plantation 24.00 Km 38400nos.

Grand Total 818664 nos.

Density of the trees are 2500 plants per ha.



Greenbelt Development near the magazine house



Avenue Plantation

xxxii	<p>An estimated total 234.968 Mm³ of OB will be generated during the entire life of the mine. Out of which 19.00 Mm³ of OB will be dumped in five external OB Dumps an earmarked area covering 55.33 ha of land with height of 20 to 30 m. 215.968 Mm³ of will be of one internal OB dump in covering an area of Final Area 448.94 ha with height of 40m up to ground level. The maximum height of external OB dump for hard OB will not exceed 90m The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office yearly basis.</p>	<p>The OB excavated is being backfilled concurrently. In the period April 2023- Sep 2023 25.91 M Cum.M of OB has been excavated and backfilled. Till date 176.33Mm³ of OB has been excavated and it has been backfilled.</p> <p>Maximum height of external OB dumps is kept below 90m and slope is kept below 28°. Monitoring of the dumps are carried out at regular intervals and management of reclaimed dump sites with vegetation has been completed and the vegetation have become self-sustaining</p> <p>Compliance status is being send to Eastern Regional Office, MoEF&CC on half yearly basis. Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.</p>																														
xxxiii	<p>The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.</p>	<table border="1" data-bbox="639 1016 1490 1200"> <thead> <tr> <th colspan="4">Land Degraded / Excavated (Ha)</th> <th colspan="3">Land Reclaimed</th> </tr> <tr> <th rowspan="2">Forest</th> <th colspan="2">Non Forest</th> <th rowspan="2">Total</th> <th rowspan="2">Tech</th> <th rowspan="2">Bio (int)</th> <th rowspan="2">Bio (ext)</th> </tr> <tr> <th>Govt.</th> <th>Tenancy</th> </tr> </thead> <tbody> <tr> <td>65.09</td> <td>238.322</td> <td>247.388</td> <td>568.39</td> <td>194.336</td> <td>108.80</td> <td>55.33</td> </tr> <tr> <td>37.759</td> <td>243.042</td> <td>247.798</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>The plan for restoration has been detailed in the Mine Closure plan and work is being carried out simultaneously. Land is being used in productive and sustainable manner.</p>	Land Degraded / Excavated (Ha)				Land Reclaimed			Forest	Non Forest		Total	Tech	Bio (int)	Bio (ext)	Govt.	Tenancy	65.09	238.322	247.388	568.39	194.336	108.80	55.33	37.759	243.042	247.798				
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xxxiv	<p>Compensatory Ecological and Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.</p>	<p>Plantation is carried out on the OB dumps, so that Compensatory ecological and restoration is possible.</p> <table border="1" data-bbox="639 1379 1449 1599"> <thead> <tr> <th>Sl No.</th> <th>Location of Plantation</th> <th>Area in Ha.</th> <th>No. of Plantation</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Back Filled Area</td> <td>108.80</td> <td>266750</td> </tr> <tr> <td>2</td> <td>Ext.OB Dump</td> <td>55.33</td> <td>138250</td> </tr> <tr> <td>3</td> <td>Block Plantation</td> <td>252.50</td> <td>375264</td> </tr> <tr> <td></td> <td>Total</td> <td>416.63</td> <td>780264</td> </tr> </tbody> </table> <p>Further, Urban tree plantation is being carried out through State Forest Department, Odisha in nearby village areas surrounding the project, from 2017-18 to till date an area of 120.675ha (1,76,600 plants) has been planted.</p>	Sl No.	Location of Plantation	Area in Ha.	No. of Plantation	1	Back Filled Area	108.80	266750	2	Ext.OB Dump	55.33	138250	3	Block Plantation	252.50	375264		Total	416.63	780264										
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xxxv	<p>The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.</p>	<p>Mining is being carried out in sustainable Manner. No extra over burden dump are created.</p>																														
xxxvi	<p>No ground water shall be used for mining operations.</p>	<p>Ground water is not being used for mining operations. Strata water and surface water is being stored in Mine sump and the water stored in Mine sumps is being used for industrial purposes such as water sprinkling and fire fighting purposes</p>																														

xxxvii	<p>Of the total quarry area of 606.503 ha. The backfilled quarry area of 448.94 ha. shall be reclaimed with plantation and avoid of 157.563 ha. At a depth of 40m which is proposed to be converted in to water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.</p>	<p>Presently mining operations are under progress. 108.80 Ha. Backfilled has been planted with 266750 no of plants. Finally, a void of 157.563 ha at a depth of 40 meter will be maintained as water body with gently sloped and upper benches terraced and stabilisation with plantation / Afforestation by native plant species in consultation with the local DFO / Agriculture Department. Density of the trees is kept around 2500 plants per ha.</p> <p>The present mining area of Belpahar OCM falls under the proposed project i.e Integrated Lakhanpur-Belpahar-Lilari OCP (40 MTY) in which the existing area will be rehandled and backfilled for extraction of the bottom seams. The Environment clearance and forest clearance for the proposed project is under progress. The mine closure of the project shall be carried out as per the approved mining plan of Integrated Lakhanpur-Belpahar-Lilari OCP (40 MTY)</p>															
xxxviii	<p>Regular monitoring of groundwater level and quality shall be carried out by established a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (may),monsoon (august),post monsoon (November) and winter (January) seasons and for quantity in May.Data thus collected shall be submitted to the Ministry of environment, forest and climate changes and the central pollution control Board quarterly within one month of monitoring.</p>	<p>Regular monitoring of ground water level and quality is being carried out by CMPDI of existing wells. The monitoring for quality is being done four times a year in pre-monsoon (may), monsoon (august), Post monsoon (November) and winter (January) and data is submitted to MoEF&CC & SPCB, Odisha.</p> <p>Present data is :</p> <table border="1" data-bbox="639 981 1522 1200"> <thead> <tr> <th>Date of measurement</th> <th>Location</th> <th>Depth below GL (m)</th> </tr> </thead> <tbody> <tr> <td>24.05.2023</td> <td>Jurabaga Village Well</td> <td>4.52</td> </tr> <tr> <td>24.05.2023</td> <td>Ubuda Village Well</td> <td>4.98</td> </tr> <tr> <td>17.08.2023</td> <td>Jurabaga Village Well</td> <td>1.56</td> </tr> <tr> <td>17.08.2023</td> <td>Ubuda Village Well</td> <td>1.98</td> </tr> </tbody> </table> <p>Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.</p> <div data-bbox="639 1341 1062 1906" data-label="Image"> </div> <p style="text-align: center;">Well in Jurabaga village</p>	Date of measurement	Location	Depth below GL (m)	24.05.2023	Jurabaga Village Well	4.52	24.05.2023	Ubuda Village Well	4.98	17.08.2023	Jurabaga Village Well	1.56	17.08.2023	Ubuda Village Well	1.98
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xxxix	<p>The company shall put up artificial groundwater recharge measures for augmentation of groundwater resources. The project authorities shall meet water requirement of nearby village(s) in case the village well go dry due to dewatering of mine.</p>	<p>02 nos. of Rooftop Rainwater harvesting system is present at Project Office, and canteen of Belpahar OCM. Further the water stored in mine sumps acts as a natural ground water recharge measure. Project authorities are supplying drinking water to meet water requirement of the nearby villages such as Keraulbahal, Lechuapada, Darlipali, Jurabaga, Majhipada, Muchbahal, Baghmunda, Dasrupali, Gopipali and Salepali village.</p> <div data-bbox="655 477 1509 792" data-label="Image"> </div> <p data-bbox="783 792 1378 817" style="text-align: center;">Rooftop Rainwater harvesting system at PO Office, BOCM</p>
xl	<p>Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.</p>	<p>Sewage Treatment Plant (Capacity: 1.7 MLD) is in operation at Colony premises and ETP (Capacity: 0.2 MLD) at HEMM workshop is in operation.</p> <div data-bbox="799 925 1366 1245" data-label="Image"> </div> <p data-bbox="895 1245 1267 1270" style="text-align: center;">ETP at BOCM departmental workshop</p> <div data-bbox="643 1270 1493 1675" data-label="Image"> </div> <p data-bbox="895 1675 1267 1700" style="text-align: center;">STP at Belpahar Integrated Township</p>



xli	Beside carrying out regular periodic health check-up of their workers,10% of the workers identified from workforce engaged in active mining operation 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.	Periodically medical examination in every five years interval for all employees is mandatory. Person those who are attending 45 years / above are re-examined in every three years interval. <ul style="list-style-type: none"> • Medical re-examination: .69 people (From April 2023 to September 2023)
xlii	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL; or the national R&R Policy of the state government whichever is higher.	Odisha Rehabilitation and Resettlement policy,2006 is being followed which includes Employment, Cash compensation in lieu of employment, Plot, Cash compensation in lieu of plot, Annuity, House building assistance for the eligible persons as per policy. According the policy being the R&R norms are more than that of National R&R policy. Beside land compensation and employment, one rehabilitation colony has been developed with provision of drinking water, pond, wells, community club, school, road, drains, boundary wall and Cash compensation. The villages are acquired phase wise as the mine- working advances towards the villages. Fresh assessments of affected families, etc. are made before acquisition & It is being implemented as per the approved plan/guidelines of CIL and State Government. Present status has been already provided in Performa for Rehabilitation this half yearly report. [FORM- II]
xliii	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MoEF& CC and its concerned Regional office.	CMPDI procures satellite data from NRSC and prepares land use map of each opencast mine, thus a time series of land use maps are being generated. Report of 2021 based already submitted to MoEF&CC . The report has been uploaded in the following link at http://www.mahanadicoal.in/Environment/satelite_map.php and also enclosed as Annexure -7 Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.
xliv	A detailed Final Mine Closing Plan along with details of corpus fund shall be submitted to the Ministry of Environment, Forest & Climate Change within 6 months of grant of Environmental Clearance.	Mine Closure Plan has been approved by MCL Board. An amount of Rs. 1,64,46,90,523.00 is available in Escrow account of Belpahar OCM as on 31/03/2023. Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.

xlvi	<p>The project authorities' shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.</p>	<p>Project authorities are constantly in touch with the Panchayats of local villages and administration to identify socio-economic and welfare measures. Such as- provision of drinking water, Construction of Schools & Hostels, deepening of existing ponds.</p> <p>The action plan for CSR activities for the year 2023-24 is attached as [Annexure-1].</p>
xlvi	<p>Corporate Environment Responsibility:</p> <p>(a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>(b) The Environment Policy shall prescribe for standard operating process/procedures to bring in to focus any infringements/deviation/violation of the Environmental or forest norms/conditions.</p> <p>(c)The hierarchical system or administrative Order of the Company to deal with Environmental issues and for ensuring compliance with the Environmental Clearance conditions shall be furnished.</p> <p>(d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</p>	<p>Company has an approved Environment policy named Corporate Environment Policy 2018 which states that “Coal India Limited(CIL) is committed to promote sustainable development by protecting the environment through integrated project planning & design, prevention / mitigation of pollution, conservation of natural resources, restoration of ecology & biodiversity, recycling/ proper disposal of wastes, addressing climate change and inclusive growth. It also aims to bringing awareness amongst its stakeholders for continual improvement in environmental performances following best practices.</p> <p style="text-align: center;">Environmental Management Structure at MCL</p>

(B) GENERAL CONDITIONS

i	<p>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, forest & climate change.</p>	<p>Shovel – Dumper combination for OB and Surface miners for coal extraction is being carried out. No change in Mining technology and scope of work from current one will be made without approval of Ministry of Environment, Forest & Climate Change.</p>
ii	<p>No change in the calendar plan of production quantum of mineral coal shall be made.</p>	<p>No change in the calendar plan including quantum of mineral coal produced will be made.</p>

		Year	Production(T)	EC Capacity (MTA)
		2017-18	7052647	9
		2018-19	7200010	9
		2019-20	7510295	9
		2020-21	7520005	9
		2021-22	7248108.98	9
		2022-23	7506201.74	9
		2023-24 (till 30.09.2023)	3,131,213.83	9
iii	Four ambient air quantity monitoring stations shall be established in the core zone as well as in the buffer zone PM2.5, PM10, SO2 and NOX monitoring. Location of the stations shall be decided based on the metrological data, topographical feature and environmentally and ecologically sensitive target in consultation with the State Pollution Control Board. Monitoring of heavy metal such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.	Four No's of air monitoring station viz. Near Magazine House, East of the mine, Near Central Workshop and South of the Mine have been established based on environmentally & ecologically sensitive location criteria in consultation with State Pollution Control Board after approval from SPCB, Jharsuguda vide L. No MCL/GM/LKPA/Envvt/2022-23/109 dated 17.02.2023 (Enclosed as Annexure 2(A)). SPM, SO ₂ , NO _x , PM ₁₀ and PM _{2.5} level in the ambient air are monitored. As suggested, monitoring of heavy metals such as As, Ni, Cd, Cr. is being done at least once in six months at locations fixed in consultation with SPCB, Jharsuguda.		
iv	Data on ambient air quality (PM10, PM2.5, SO2 and NOX) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the ministry including its concerned Regional Office and to the State Pollution Control Board and the central Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.	Ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) and heavy metals such as Arsenic, Nickel, Chromium and Cadmium are being monitored and the report is submitted to the Ministry including its concerned Regional Office and to the Odisha State Pollution Control Board. The report for the period from April 2023 to September 2023 has been attached in [ANNEXURE-2 & 3].		
v	Adequate measure shall be taken for control of noise level below 85 dBA in the work environment. Workers engaged in blasting and drilling operators, operation of HEMM, etc shall be provided with ear plugs/muffs.	Adequate measures are taken to control the noise level in the work environment. Ears plugs/ muffs are provided to the workers engaged in blasting, drilling and operation of HEMM. Noise level monitoring data is attached as [ANNEXURE-4].		
vi	Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	The effluent generated from the workshop is treated in ETP containing primary settling tank, oil and grease skimmer and secondary settling tank which is re-used for vehicle washing. Mine discharge is stored in mine sumps and it is re-used for dust suppression and plantation. The quality of effluent from outlet of ETP is monitored regularly and effluent monitoring report is attached as [ANNEXURE-5].		
vii	Vehicular emission shall be kept under control and regularly monitored. Vehicles used for	Vehicular emissions are kept under control and regularly monitored. A PUC certificate of the vehicles used for transportation of coal is regularly monitored. Vehicles used		

	<p>transporting the mineral shall be covered with tarpaulins and optimally loaded.</p>	<p>for transportation of coal are covered with tarpaulins and loaded to the optimum quantity only.</p> <div style="text-align: right;">Form 59</div> <p style="text-align: center;">[See rules 115 (2)]</p> <div style="border: 1px solid black; padding: 5px;"> <p>Pollution Under Control Certificate Authorised By Government of Odisha</p> <p>Date : 22/06/2023 Time : 23:15:09 PM Validity upto : 21/12/2023</p>  </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Certificate SL No. : OR02300300016016 Registration No. : OD23M8881 Date of Registration : 17/Mar/2022 Month & Year of Manufacturing : June-2020 Valid Mobile Number : *****988 Emission Norms : Bharat Stage III (CEV) Fuel : DIESEL PUC Code : OR0230030 GSTIN : 21ASLPS3656D1ZR Fees : Rs.118.00 (GST to be paid extra as applicable) MIL observation : No</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Vehicle Photo with Registration plate 60 mm x 30 mm</p>  </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>Sr. No.</th> <th>Pollutant (as applicable)</th> <th>Units (as applicable)</th> <th>Emission limits</th> <th>Measured Value (upto 2 decimal places)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td rowspan="2">Idling Emissions</td> <td>Carbon Monoxide (CO)</td> <td>percentage (%)</td> <td></td> <td></td> </tr> <tr> <td>Hydrocarbon, (THC/HC)</td> <td>ppm</td> <td></td> <td></td> </tr> <tr> <td rowspan="3">High idling emissions</td> <td>CO</td> <td>percentage (%)</td> <td></td> <td></td> </tr> <tr> <td>RPM</td> <td>RPM</td> <td>2500 ± 200</td> <td></td> </tr> <tr> <td>Lambda</td> <td>-</td> <td>1 ± 0.03</td> <td></td> </tr> <tr> <td>Smoke Density</td> <td>Light absorption coefficient</td> <td>1/metre</td> <td>2.45</td> <td>0.65</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">This PUC certificate is system generated through the national register of motor vehicles and does</p> <p style="text-align: center; color: blue; font-weight: bold;">PUC certificate of a coal transportation vehicle</p>	Sr. No.	Pollutant (as applicable)	Units (as applicable)	Emission limits	Measured Value (upto 2 decimal places)	1	2	3	4	5	Idling Emissions	Carbon Monoxide (CO)	percentage (%)			Hydrocarbon, (THC/HC)	ppm			High idling emissions	CO	percentage (%)			RPM	RPM	2500 ± 200		Lambda	-	1 ± 0.03		Smoke Density	Light absorption coefficient	1/metre	2.45	0.65
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viii	<p>Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.</p>	<p>Monitoring of environmental quality parameters such as Air, Water, and Noise is being carried out by CMPDIL which is a NABL accredited agency on fortnight/monthly/quarterly basis.</p>																																					
ix	<p>Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.</p>	<p>Each and every person provided with protective respiratory devices and all are adequately trained on safety and health aspects</p>																																					
x	<p>Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contraction due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.</p>	<p>The health of workers engaged in mining operation is being periodically examined once in five year to observe any contraction due to exposure to coal dust and if needed corrective measure are taken. Frequency of examination is reduced to 3 yrs. for those who are more than 45 yrs old. 69 nos of employees have been examined from April 2023 to September 2023.</p>																																					
xi	<p>A separate environmental management cell with suitable qualified personnel shall be set up under the control of a senior Executive, who will report directly to the head of the company.</p>	<p>Environment management cell has been established in project as well as area and head quarter level. At project level, Nodal Officer (Envt) is reporting to the Project Officer directly, Area Environment is heading the Area Environment Cell and reporting to the General Manager, Lakhanpur Area directly. At HQ. level, G.M.(Envt.) is heading the company's environment dept. and reporting to Director (T/ P&P)</p>																																					

		<p style="text-align: center;">Environmental Management Structure at MCL</p>
xii	<p>The funds earmarked for environmental protection measure shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional office.</p>	<p>Year wise expenditure is being reported to the OSPCB, Bhubaneswar and to the Regional Office, MoEF&CC through Form V (Environmental Statement). The Environmental Expenditure during the year 2022-23 is 530.055 Lakhs.</p>
xiii	<p>The project authorities shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance is available with the State Pollution control Board and also be seen at the website of the ministry of Environment, forests & Climate changes at http://envfor.nic.in.</p>	<p>Advertisement was made in two newspapers namely The New Indian Express & Dharitri (Odia daily) enclosed as [Annexure 6].</p>
xiv	<p>A copy of the environmental clearance letter shall be marked concern Panchayat / Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion / representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.</p>	<p>Copy of EC was sent to three local panchayat Sarpanch office namely Bandhbahal, Sarandamal and Kusraloi on 01.03.2015.(all three). Further, it has also been placed on M.C.L.'s website "www.mahanadicoal.in".</p>
xv	<p>A copy of the environmental clearance shall be also displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the regional Office, District Industry Sector and Collector's Office / Tehsildar's Office for 30 days.</p>	<p>Copy of the Environmental Clearance is being displayed on the website of Odisha State Pollution Control Board. The EC letter was displayed at the regional Office, District Industry Sector and Collector's Office / Tehsildar's Office for 30 days.</p>
xvi	<p>The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the Project authorities on their website and updated at least</p>	<p>The Environmental Clearance copy was uploaded on MCL website "www.mahanadicoal.in".</p> <p>Monitoring data of environmental quality parameters (air, water, noise) and critical Pollutant such as PM₁₀, PM_{2.5},</p>

	once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical Pollutant such as PM ₁₀ , PM _{2.5} , SO ₂ , and NO _x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in the corporate office and on company's website.	SO ₂ , and NO _x (ambient) and critical sectoral parameters is displayed at the entrance of Project Office of Belpahar Opencast Mine and on MCL website "www.mahanadicoal.in".
xvii	The Project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Officers of CPCB and the SPCB.	Half yearly Report for the period October 2022 to March 2023 was sent to Eastern Regional Office, MoEF&CC and Odisha State Pollution Control Board vide no. MCL/LKPA/PO/BOCM/ENVT/2022-23/556 Dated: 27.05.2023.
xviii	The Regional Office of this Ministry located in the region shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the Officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports	The project authorities are extending full co-operation to the officer(s) of Regional office and all necessary data/information/monitoring reports are provided to them, as desired.
xix	The environmental statement for each financial year ending 31 March in form – V is mandated to be submitted by the Project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF& CC by e-mail.	The environmental statement for the financial year ending 31 st March, 2023 in Form – V was submitted to Odisha State Pollution Control Board vide L.No: MCL/HQ/Env. & Forest/2023/872 dated 22.09.2023 and also uploaded on the MCL's website along with the status of compliance of EC conditions and sent to the Eastern Regional Office of the MoEF&CC by e-mail.

EC Obtained Vide No :J 11015/189/2008-IA.II(M) Dated: 06.02.2023

SPECIFIC CONDITIONS:

I	PP to comply the outcome of court cases no. ref. no. 2(C) CC NO-170 of 2013 as applicable.	Agreed.
II	PP shall submit the Mine Closure report to Ministry's IRO within six months and further quarterly progress shall also be submitted to IRO.	Quarterly mine closure report submitted to Ministry IRO vide no. MCL/LKPA/PO/BOCM/ENVT/2023/1933 Dated: 25.10.2023
III	PP shall obtain Certified Compliance Report from Ministry's IRO within six months of issue of this letter. Any non-compliance highlighted shall be completed before the Mine closure procedure.	A request for issuance of certified compliance has been Ministry IRO.

FORM -I			
MINISTRY OF ENVIRONMENT & FORESTS, REGIONAL OFFICE			
MONITORING PROFORMA PART-I (DATASHEET)			
1	Project type	:	Mining Industry
2	Name of the Project	:	Belpahar Opencast Mine
3	Clearance letter(s) OM No. & date	:	No. J-11015/189/2008-IA.II (M), Dt. 6th Feb.2023.
4	a Location District	:	Jharsuguda
	State	:	Odisha
	b Latitude	:	21°42'20" to 21°47'00"
	b Longitude	:	83°49'35" to 83°53'00"E
5	a Address of concerned Project Chief Engineer	:	Office of the Project Officer Belpahar OCM, Lakhanpur Area PO:Bandhbahal Colony Dist:Jharsuguda(Odisha)-768211 Ph.(06645)-233403
	b Address of Executive Project Engineer/Manager	:	-do-
6	a Salient features of Project	:	Mineable reserve 11 .63MT (as on 01.04.2023)
			Target output 9 MTPA
			Average stripping ratio 1.95
			Project life 1 years (As per EC)
	b Details of the Environmental Management Plans		
		a	Pre-mining Env't. Scenario
		b	Env't. Impact analysis
		c	Pollution control measures i.e. provision of dust prevention & suppression , arrangement of water pollution control measures, PST, Oil and Grease Skimmer, SST, Backfilling, Tech, Bio-Reclamation
		d	Env't. Monitoring etc.
7	Breakup of the Project area		
	a Submergence area (Forest and Non-Forest)		No submergence area
		a	Forest 123.220 ha
		b	Non-forest 1320.833 ha
	b Others(Private Land)		59.63 ha
8	Project Displaced Families	a	SC 128
		b	ST/ Adivasi's 267
		c	Other 114
			Total 509
9	Financial Details		

	a	Project cost as originally planned and subsequently revised estimates and the years of price reference			Rs.307.63 crs
	b	Allocation made for environmental management plans, with item wise & year wise breakup			-
	c	Benefit cost ratio/ Internal rate of return and the year of assessment			-
	d	Weather 9(c) includes the cost of Environmental Management Plan so far			Yes
	e	Expenditure on environmental management			During 2022-23 ₹530.055 Lakhs.
	f	Actual expenditure incurred on the Environmental Management plans so far			-
10		Forest requirements			
	a	The status of approval of diversion of forest land for non-forestry use	103.52 ha : 8-104/91FC dt.02.06.2000 19.70 ha: 80-104/91FC dt.16.09.2014		
	b	The status of compensatory afforestation.	Money deposited with State Forest department		
	c	The status of tree felling	Tree felling is being done through OFDC Ltd. With permission of State forest dept. as per progress of the project.		
11		Comments on the viability and sustainability of Compensatory afforestation programme in the light of actual fields experience so far.	Satisfactory.		
12		Status of construction			
	a	Date of commencement(actual and/or planned)	11.09.1983		
	b	Date of completion (actual and/or planned)	2023-24		
		Present status of the Project	Running as planned.		
13		Reason for the delay if the Project is yet to start.			Not Applicable

FORM-II
PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION

1	No. of villages affected	: 06 (Six)		
2	Families affected and displaced	: 509 nos. Displaced		
3	Compensation Package offered per family	: Besides land compensation and employment, two rehabilitation sites have been developed with provision of drinking water, ponds, wells, community club, puja mandap, roads, drains, school, boundary wall, street light and dispensary.		
4	Budget estimate for Rehabilitation			
A	Total outlay	: 18.30 crores(CC in lieu of Plot+ HBA+ Incentive)		
B	Amount paid/ used	: 13.33crores		
5	Employment details-			
	Name of the village	Employment provided (nos)	under consideration	
	Bandhbahal	31		
	Chharla	264		
	Darlipali	185		
	Jamkani	14		
	Jurabaga	396		
	Kirarama	70		
	Kusuraloi	28		
	Kherualbahal	68		
	Total	1056		
6	Rehabilitation & Resettlement details		Resettlement Site + Cash Compensation+ Annuity	
A	No. of families rehabilitated			
	i) Name of site	: Khadam-I & Khadam-II		
	ii) Families Resettled	: (Including own choice cash compensation taken in lieu of Plot at rehab. Site)		
	Name of the Village	No of displaced families	Nos of families already shifted	Balance
	Chharla	180	180	0
	Darlipali	182	132	48
	Jurabaga	27	20	7
	Kirarama	5	1	4
	Kerualbahal	114	1	0
	Kusuraloi	1	79	35
	Total	509	413	94
B	Family yet to be Rehabilitated			
	i) Name of the site	: 1. Khadam-I	3. Negipalli	
		2. Khadam -II		
	ii) Nos. of family	: 94 nos.#		
7	Any other information		-	

FORM –III
MINISTRY OF ENVIRONMENT & FORESTS
EASTERN REGIONAL OFFICE
A/3, CHANDRASEKHARPUR, BHUBNESWAR-751023 (ODISHA)

**FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT/ PLANTATION UNDER F(c)
ACT 1980 AND EP ACT 1986**

1	a)	Name of the organization	:	BELPAHAR OPENCAST PROJECT, 9 MTY					
	b)	Envt./Forest clearance order Nos	:	EC No J-11015/189/2008-IA.II(M) FC No. 8-104/1991-FC(Vol-I)					
2		Location,Block/Sub.Div./Dist/State	:	Ib Valley Coalfields, Tehsil Banaharpali, District Jharsuguda,Odisha					
3		Address of communication	:	Office of the Project Officer, Belpahar OCM, Lakhanpur Area, PO: Bandhbahal Colony, Jharsuguda, Odisha-768211, Ph- (06645)-233403					
4		Existing vegetation in the area/region							
	a)	Species (Trees/Shrubs/Grasses/Climbers)	:						
				Commerci al crops	Agricult ural Crops	Road side plantation	Natur al veget ation	Scrubla nd species	
				Baigana	Mung	Sirisha	Kend u	Apamara nga	
				Miricha	Biri	Gamhari	Bheru	Bhuin Nimba	
				Kakudi	Kolatha	Jamun	Jamu	Khadika	
				Kakharu	Badam	Karanja	Sal	Mutha	
				Simba	Piaja	Gohira	Dhaur a	Talamuli	
				Kadali	Rasuna	Babul	Kurei	Dauria	
				Bhendi	Sorisha	Patash	Khaju ri	Bajramul i	
				Khira	Makka	Peepal	Chara	Bana Kolatha	
				Mula	Sugarca ne	Mango	Kurud a	Marda	
				Lemon, etc.		Bara,etc.	Sunari , etc.	Langulia, etc.	
	b)	Major prevelant species of each type	:	Cashew,Neem,Sal, Karanja, Babul, Jamun, Mango etc. are the most prevalent species in the project area.					
5		Land coverage by the Project							
	a)	Total area under Project	:	1503.683 Ha					
	b)	Area covered for basic infrastructure (Roads/Buildings/Factory etc.)	:	382.51 Ha					
6		Details about Natural vegetation							
	a)	Name & number of tree/species felled	:	As per the data available at the Project Level, record of felling of trees (in Nos.): 864(2015), 690(2013), 52(2012), 210(2011)					

	b)	Name & number of plant species still available in the area	:	Data not available for number of species available in the area. The major species as per EMP are mentioned above in 4 (a).				
	c)	By protecting the area will indigenous	:	Proper plantation measures must be taken in order for indigenous stock to come up.				
7		Plantation required to be carried out as per						
	a)	Condition of Environment clearance in Nos./ha.	:	2500 Nos./ha				
	b)	Condition of Forest (c) Clearance in Nos./ha.	:	not mentioned				
	c)	Voluntarily in Nos./ha	:	2500 Nos./ha				
8		Details about Plantation						
	a)	<p>Total area available for plantation in each category : Backfilled area of 74.691 Ha is available only out of the 5 categories</p> <p>i) Green Belt ii) Dumps iii) Back filled area iv) Road sides v) Block plantation</p> <hr/> <p>Plantation done in the buffer zone around office buildings as well as External OB dumps 355.14 ha of internal OB dumps will be grass carpeted 108.80 ha of the total backfilled area of 183.419 ha has been biologically reclaimed Includes the avenue plantation done along colony road side- Total length of 24 km planted with 38,400 saplings along colony road Total area of 252.50 ha has been planted with 375264 saplings with no additional area left</p> <hr/>						
	b)	Plantation details (category wise & Methodology)						
		Year of plantation	Species planted	Spacining	Height attained	Total area covered	Area still available	
		1991-2018	Casia Simla, karanja, amla, sisoo, ganga imli, ber, sirus, cashew, guava, peltafarm, neem, parkinsonia, kathal, mengium, jamun, sita fruits, krishnchuda,	2 m x 2m	Minimum 3-4 feet at the end of 5 years when the Agency hand over the plants	416.63 Ha	74.619 Ha area out of the presently backfilled	
	c)	Survival % of plantation	:	More than 80%				
	d)	Total plantation	:	818664				
9		Agency carrying out plantation & maintenance	:	OFDC & Chhattisgarh Rajya Van Vikas Nigam Ltd.				
		Financial details (year wise and item wise)						
		Sl.No.	Year	Expenditure made (in Rs.)	Average cost each surviving plants in Rs. (Plantation scheme valid for three years)			

	1	2010-11	12,07,948.00(COMPLETE)	120.80(final)	
	2	2011-12	43,39,122.00(COMPLETE)	197.23(final)	
	3	2014-15	21,08,244.00(COMPLETE)	140.55(maintenance till 3rd)	
	4	2015-16	17,49,920.00(COMPLETE)	116.67(maintenance till 2nd)	
	5	2017-18	5,88,960.00(COMPLETE)	39.26(only plantation cost yet)	
	6	2018-19	2,94,490.00	39.26	
10	Inspection of plantation field experts and their comments and follow up action		:	Inspected by DFO, Sambalpur & D.M. Chhattisgarh Rajya Van Vikas Nigam Ltd. Survival was found more than 80%	
11	Remarks/ any other information		NIL		

Date -

2/2

[Signature]
25/11/23

Project Officer
Belpahar Opencast Mine

**PROJECT OFFICER
BELPAHAR O.C.M
Lakhanpur Area, MCL**

Tentative action for CSR activities in Lakhanpur Area for the year 2023-24 (Annexure –I)

S. No.	Work description	Value (Approx.)
1	Construction of Guard wall at Mauliberna Basti, Lakhanpur GP.	40.00
2	Construction of Fabricated G.I. Sheet Shed at Junian Sahara Pada, Lakhanpur GP.	25.00
3	Construction of Fabricated G.I. Sheet Shed in front of Jagannath Mandir at Lakhanpur village, Lakhanpur GP.	54.26
4	Construction of Drain with Slab at Lakhanpur Basti, Lakhanpur GP.	80.66
5	Construction of New Bus Stand at Jagannath Chowk, Lakhanpur village, Lakhanpur GP.	31.92
6	Construction of a R.O water filtration center with freezer (Amruta Dhara) for drinking purpose at Beheraguda Chowk, Lakhanpur GP.	70.00
7	One permanent stage with a community center (green rooms) at Maa Samalai Mahotsav Ground, Lakhanpur GP.	16.09
8	Construction of guard wall with bathing steps at Bagdiya nala near Jugal Kalo house, Beheraguda, Lakhanpur GP.	42.17
9	Completion of concrete road from PMGSY road to colony pada, Lakhanpur GP.	75.00
10	Construction of guard wall at Bagdiya nala near Lakapati Biswal house, Mauliberna, Lakhanpur GP.	45.00
11	Construction of bathing steps at Bagdiya nala, Beheraguda, Lakhanpur GP.	18.00
12	Construction of concrete road at Kumurapada from Goura Naik house to the end of village Bandipahar, Lakhanpur GP.	85.00
13	Electrification with 10 (Ten) nos. of solar lights for Ashok Chakra Club, Lakhanpur.	8.00
14	Construction of dug-well and supply of water to Bhejikud Talpada with solar system, Pipilikani GP.	15.00
15	Digging of deep bore well and supply of water to village Bhejikud upar pada, Bhejikud PUPS and Sabarpada two nos. with solar system, Pipilikani GP.	25.00
16	Digging of deep bore well and supply of water to village Padapali with solar system, Pipilikani GP.	15.00
17	Excavation of Sarandamal-Talibahal Kanta including stone patching, construction of 6 nos. of bathing ghats, sitting arrangement for elderly people and jogging track across the Kanta.	70.00
18	Repairing and constructing the black topping road at Kirarama village, Sarandamal GP.	95.00
19	Renovation of pond near 'Siba Mandir' at Kirarama village, Sarandamal GP.	57.35
20	Construction of a Cultural Facility Centre at Kirarama for protecting, practicing & promoting indigenous art & culture.	30.00
21	Improvement of road from Sarat Padhan house to old Bhejikud via Padapali Bandha, Pipilikani GP.	50.00
22	Following works at the Govt. U.P. School, Kirarama -	95.00
	Construction of five classrooms by dismantling/demolishing existing damaged classrooms in old school building.	
	Construction of Kitchen in the existing school building.	
	Installation/construction of outdoor playground equipments for student.	
	Hand wash basin with multi-tap for students and teachers.	
	One toilet for girls and one toilet for boys.	
23	Supply and installation of a RO water filter, one computer set, one printer and six ceiling fans at Govt. U.P. School, Kirarama.	1.00
24	Supply of two almirah, five tables and twenty chairs at Govt. U.P. School, Kirarama.	0.50
25	Renovation of Kainsbahal Upar Muda (pond) with 2 nos. of Bathing Steps & changing room, Dalgaon GP.	30.00
26	Renovation of Basupali Upar Muda (pond) with 2 nos. of Bathing Steps & changing room, Dalgaon GP.	30.00
27	Construction of a community centre at Negipali Muslim pada, Dalgaon GP.	40.00
28	Construction of CC road at Cherkanta Raudia pada, Dalgaon GP.	50.00
29	Completion of CC road at Khapsimuda, Dalgaon GP.	50.00
30	Renovation of pond with sludge cleaning and construction of four nos. bathing ghats at Jurabaga Kanta.	40.00
31	Renovation of Tali bandha and construction of four nos. bathing ghats at Jurabaga.	40.00
32	Construction of BM road from Muchhabahal Chowkh to Luhurapada road at Jurabaga. (2 km approx.)	60.00
33	Cleaning, Renovation and bolder pitching of Bada Kanta, Gumadera, Belpahar.	60.00
34	Cleaning, Renovation and bolder pitching of Samada Kanta, Belpahar.	50.00
35	Construction of class room at Govt. School, Jamkani, Belpahar.	20.00

36	Construction of dining shed at Samada Primary School, Belpahar.	5.00
37	Construction of Community Toilet at Udajahapadia, Gumadera, Belpahar.	10.00
38	Construction of Community Toilet at Jhandapada, Gumadera, Belpahar.	10.00
39	Construction of Community Toilet at Gwalapada, W.No.8, Belpahar.	10.00
40	Construction of Community Toilet at Gwalapada, W.No.13, Belpahar.	10.00
41	Construction of Community Toilet at Mahijore, Belpahar.	10.00
42	Construction of Community Toilet at Mahijore Uparpada (Turipada), Belpahar.	10.00
43	Construction of Community Toilet at Dhauramunda, Belpahar.	10.00
44	Construction of toilets (latrine and urinal) separate for boys & girls. Construction of boundary wall at Anchalik High School, Khairkuni.	50.00
45	Supply of 100 pair desk & bench at Anchalik High School, Khairkuni.	5.00
46	Supply and installation of water filter at Anchalik High School.	2.00
47	Construction of boundary wall at Govt. Primary School, Sarandamal.	40.00
48	Adoption of Bandhabahal village and development of it as a model village .	500.00
49	Supply and installation of water filter at Govt. Primary School, Bandhabahal.	2.00
50	Construction of a Ladies Hostel at Mahima Higher Secondary School, Mahimapuram, Panchgaon.	35.00
51	Construction of a G.P. level Kalyan Mandap with attach latrine, bathroom, kitchen and boundary wall at Adhapada of Kushraloi GP.	50.00
52	Construction of CC road at pada no.3 of Adhapada, Kushraloi.	30.00
53	Construction of CC road at pada no.4 of Adhapada, Kushraloi.	30.00
54	Construction of CC road from Samlei Mandir to Telenpali Chowkh, Kushraloi.	30.00
55	Installation of Street Light with solar system at Jamuna & Balikuduli, Kushraloi.	10.00
56	Installation of Street Light with solar system at Adhapada village, Kushraloi.	10.00
57	Installation of 6 Street Light with solar system at Kushraloi basti.	10.00
58	Construction of rest shed at J.L High School, Adhapada.	5.00
59	Renovation of Remanda Talibandha (pond).	30.00
60	Renovation of Sadera Talibandha (pond), Remanda GP.	30.00
61	Construction of Angan Wadi Centre at Kultapara, Remanda.	15.00
62	Construction of C.C road from Ainlajharan Bijay House to Shib Temple, Remanda.	25.00
63	Repairing of class rooms of existing Government Primary School of Jamuna village of Kushraloi GP under CSR of Lakhanpur Area (Lakhanpur OCP) of MCL.	25.00
64	Construction of rest room at Playground of Jamuna village of Kushraloi GP under CSR of Lakhanpur Area (Lakhanpur OCP) of MCL.	20.00
65	Repairing of existing wells of Jamuna village of Kushraloi GP under CSR of Lakhanpur Area (Lakhanpur OCP) of MCL.	15.00
66	Development of road to Dugripada near pond of Jamuna village of Kushraloi GP under CSR of Lakhanpur Area (Lakhanpur OCP) of MCL.	20.00
67	Construction of Kalyan Mandap at Naikpada, Kanaktora.	30.00
68	Construction of CC road (400 mtr.) from Kanaktora basti to Nadi ghat.	5.00
69	Construction of Kalyan Mandap at Dayadera, Jhargaon, Kanaktora.	30.00
70	Reducing school dropout in Lakhanpur block, Jharsugda through activity based learning (a 2 years project)	23.00
71	Improvement (construction of BM road) of Grindola main road (B.R.O) to Munda Pada (Colony Pada) road (approx. 3 km), Banjari GP.	90.00
72	Construction of drain from Grindola football field to Luhurapada (approx.1.5 km), Banjari GP.	25.00
73	Renovation of Kadelkanta at Grindola, Banjari GP.	20.00
74	Construction of a Kalyan Mandap at Chaunrimahul, Banjari GP.	30.00
75	Construction of a Kalyan Mandap at Grindola, Banjari GP.	30.00
76	Deposit of Rs.98,00,000/- for development of six Govt. High Schools of Jharsuguda on depository basis to the District Mo-School Abhiyan Parichalana Sangathan fund under CSR of Lakhanpur Area.	98.00
77	Conducting Swachhata Pakhwada, Swachhata Hi Seva in 2023.	2.00
78	Community development and welfare works for the poor, vulnareable, weaker section, destitute, disadvantaged group of people by Mahila Mandal, Lakhanpur Area.	2.00
79	Health camps.	2.00
Total		2965.95

ମହାନଦୀ କୋଲଫିଲ୍ଡ୍ସ ଲିମିଟେଡ୍
 महानदी कोलफील्ड्स लिमिटेड
Mahanadi Coalfields Limited
 (A subsidiary of coal India Limited)

OFFICE OF THE GENERAL MANAGER,
 LAKHANPUR AREA,
 P.O. - Bandhabahal.
 Dist: Jharsuguda (ORISSA)
 PIN: 768211
 Phone: 06645-233528, FAX:- 06645-233353
 Email: lkparea_mcl@rediffmail.com



MCL

Ref: MCL/GM/LKPA/Env/2022-23/ 109

Date: 17.02.2023

To

The Regional Officer,
 State Pollution Control Board,
 COX Colony, Jharsuguda

Sub: Requesting for approval for Routine Environmental Monitoring Stations for the mines of Lakhanpur Area, MCL for the F.Y. 2023-24

Dear Sir,

As per the stipulated conditions in Environmental Clearance, Consent to Establish and Consent to Operate of Mines of Lakhanpur Area, MCL (Lakhanpur OCP, Belpahar OCM and Lilari OCP), the Routine Environmental Monitoring Stations location must be consulted with State Pollution Control Board. In this regard, the location and coordinates for Routine Environmental Monitoring Stations for the year 2023-24 of Lakhanpur Area mines are mentioned below:

Air and Noise Monitoring stations			
Sl.No.	Project	Name of Station	Co-ordinates
1	Lakhanpur Opencast Project	Near Lilari Nallah pump house	21.777147° N 83.850411° E
2	Lakhanpur Opencast Project	South of Quarry 6	21.730747° N 83.830168° E
3	Lakhanpur Opencast Project	South west of Quarry 5	21.732742° N 83.791011° E
4	Lakhanpur Opencast Project	Near Quarry 3	21.765694° N 83.813028° E
5	Belpahar Opencast Mine	Near magazine house	21.746669° N 83.858742° E
6	Belpahar Opencast Mine	Near Central Workshop	21.773982° N 83.872821° E
7	Belpahar Opencast Mine	South of the Mine	21.709160° N 83.846757° E
8	Belpahar Opencast Mine	East of the Mine	21.724506° N 83.867225° E
9	Lilari Opencast Project	Near Lilari Magazine House	21.785989° N 83.854048° E

Heavy metal Monitoring stations			
Sl.No.	Project	Name of Station	Co-ordinates
1	Lakhanpur Opencast Project	South of Quarry 6	21.732742° N 83.791011° E
2	Lakhanpur Opencast Project	Near Lilari Nallah pump house	21.777147° N 83.850411° E
3	Belpahar Opencast Mine	Near magazine house	21.746669° N 83.858742° E
4	Belpahar Opencast Mine	Near Central Workshop	21.773982° N 83.872821° E
5	Lilari Opencast Project	Near Lilari Magazine House	21.785989° N 83.854048° E

Effluent quality Monitoring stations		
Sl.No.	Project	Name of Station
1	Lakhanpur Opencast Project	Effluent Treatment Plant
		Mine sump water
		Mine water Discharge Treatment Plant
2.	Belpahar Opencast Mine	Effluent Treatment Plant
		Mine sump water
		Mine water Discharge Treatment Plant
		Sewage Treatment Plant
		ECO Tank
3.	Lilari Opencast Project	Mine sump water

Drinking water quality Monitoring stations		
Sl.No.	Project	Name of Station
1	Lakhanpur Opencast Project	Lakhanpur OCP project office
2.	Belpahar Opencast Mine	IWSS outlet

Piezometer locations		
Sl.No.	Project	Name of Station
1	Lakhanpur Opencast Project	MIP 09 – State Horticulture office MIP 10 – Daheldera school
2.	Belpahar Opencast Mine	MIP 07- DAV school, Bandhbahal MIP 08- Kusaraloi School
3.	Lilari Opencast Project	MIP 06 -Lilari PO office

Surface water monitoring locations		
Sl.No.	Project	Name of Station
1.	Lakhanpur Opencast Project and Belpahar Opencast Mine	Pulijore Stream near Tingismal Village (u/s of Lakhanpur OCP)
		Pulijore stream near Darlipali Village before confluence to Lilari nallah (d/s of Lakhanpur OCP)
		Lilari Nallah near Kudaloi village (u/s of Lakhanpur OCP)
		Lilari Nallah near project office at Lilari bridge (d/s of Lakhanpur OCP)
2	Lakhanpur Opencast Project	Karlajori Pond
3	Belpahar Opencast Mine	Adhapada Village

Well water level monitoring locations		
Sl.No.	Project	Name of Station
1	Lakhanpur Opencast Project	Khairkuni Village well Kansar Village well
2.	Belpahar Opencast Mine	Jurabaga Village Well Ubuda Village Well

Submitted for your kind consideration and approval

Yours faithfully,

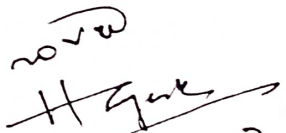

17/1/23
Project Officer
Lakhanpur OCP



17/1/23
Project Officer
Belpahar OCM


17/01/23
Project Manager
Lilari OCP

Copy to:

1. General Manager, Lakhanpur Area
2. General Manager (Envt), MCL HQ.
3. Area Environment Officer, Lakhanpur Area
4. Nodal Officer (Envt), LKPOCP/BOCM
5. Manager, Lilari OCP
6. Office copy.


01-02-23
Regional Officer
State Pollution Control Board
HARSHUGUDA


GM

AMBIENT AIR QUALITY DATA 2023-2024

PROJECT: BELPAHAR OCM, LAKHANPUR AREA, MCL.


(Concentration in $\mu\text{g}/\text{Cu.M.}$)

Station	Near magazine house					South of mine					East of mine					Near central workshop				
Date of Sampling	PM _{2.5}	PM ₁₀	SO ₂	Nox	SPM	PM _{2.5}	PM ₁₀	SO ₂	Nox	SPM	PM _{2.5}	PM ₁₀	SO ₂	Nox	SPM	PM _{2.5}	PM ₁₀	SO ₂	Nox	SPM
03.04.23	-	-	-	-	-	23	64	11.9 3	15.33	140	28	75	14.64	20.19	155	-	-	-	-	-
04.04.23	-	-	-	-	-	21	62	17.6 2	16.06	136	25	68	17.91	15.93	146	-	-	-	-	-
07.04.23	46	97	12.11	14.85	202	-	-	-	-	-	-	-	-	-	-	44	94	16.2 0	19.7 7	196
10.04.23	-	-	-	-	-	29	77	15.3 4	20.34	157	22	62	13.90	21.85	137	-	-	-	-	-
17.04.23	-	-	-	-	-	21	60	22.1 4	25.63	136	29	76	11.76	16.41	157	-	-	-	-	-
18.04.23	-	-	-	-	-	27	72	18.7 4	18.32	154	23	62	15.86	21.85	142	-	-	-	-	-
22.04.23	40	92	17.66	14.68	186	-	-	-	-	-	-	-	-	-	-	36	87	17.4 4	14.7 3	177
24.04.23	-	-	-	-	-	24	64	17.4 5	19.98	144	30	81	17.32	20.15	161	-	-	-	-	-
25.04.23	-	-	-	-	-	26	68	14.7 3	17.91	149	25	67	15.97	23.91	146	-	-	-	-	-
11.04.23	-	-	-	-	-	26	70	11.6 9	15.34	150	24	66	12.54	17.66	143	-	-	-	-	-
02.05.23	-	-	-	-	-	29	75	13.5 6	17.85	157	32	80	16.52	18.73	163	-	-	-	-	-
03.05.23	-	-	-	-	-	24	62	12.4 5	19.58	143	26	68	14.95	16.58	149	-	-	-	-	-
08.05.23	-	-	-	-	-	22	58	11.7 4	16.57	138	24	62	16.83	19.54	144	-	-	-	-	-
09.05.23	-	-	-	-	-	26	68	16.3 1	12.85	149	30	78	10.52	14.36	161	-	-	-	-	-
16.05.23	-	-	-	-	-	21	58	15.2 1	16.23	138	31	80	19.44	15.57	163	-	-	-	-	-

17.05.23	-	-	-	-	-	27	71	16.3 2	17.27	154	22	60	16.64	22.08	139	-	-	-	-	-
13.05.23	41	92	11.52	15.64	187	-	-	-	-	-	-	-	-	-	-	38	87	10.5 9	15.4 5	182
22.05.23	-	-	-	-	-	22	59	15.5 4	18.66	140	26	68	11.72	11.68	150	-	-	-	-	-
23.05.23	-	-	-	-	-	25	65	19.7 8	19.53	146	28	73	13.57	15.63	156	-	-	-	-	-
27.05.23	39	87	19.91	18.77	184	-	-	-	-	-	-	-	-	-	-	42	91	14.8 7	19.2 7	190
05.06.23	-	-	-	-	-	34	83	19.2 4	20.12	168	29	72	20.28	13.76	158	-	-	-	-	-
06.06.23	-	-	-	-	-	28	74	18.6 0	19.35	193	31	79	22.74	19.36	162	-	-	-	-	-
07.06.23	45	94	17.32	13.84	198	-	-	-	-	-	-	-	-	-	-	38	97	18.8 6	20.4 8	178
14.06.23	-	-	-	-	-	26	68	18.6 6	16.56	156	32	82	18.24	12..78	166	-	-	-	-	-
15.06.23	-	-	-	-	-	22	60	14.2 0	19.7	150	27	71	19.31	15.53	154	-	-	-	-	-
17.06.23	42	91	10.57	16.75	190	-	-	-	-	-	-	-	-	-	-	40	89	17.6 6	19.9 8	186
21.06.23	-	-	-	-	-	24	62	13.5 9	14.38	143	27	70	19.94	19.56	153	-	-	-	-	-
22.06.23	-	-	-	-	-	26	69	10.3 2	18.46	146	30	80	15.10	20.12	161	-	-	-	-	-
27.06.23	-	-	-	-	-	28	74	22.6 7	12.93	156	32	82	19.42	11.25	164	-	-	-	-	-
28.06.23	-	-	-	-	-	22	60	16.5 0	13.78	137	29	75	14.44	20.91	159	-	-	-	-	-
03.07.23	-	-	-	-	-	31	82	17.5 6	18.18	163	32	81	18.11	24.28	163	-	-	-	-	-
04.07.23	-	-	-	-	-	29	77	21.0 4	17.08	157	25	67	24.40	16.49	146	-	-	-	-	-
08.07.23	43	94	11.12	16.71	194	-	-	-	-	-	-	-	-	-	-	37	88	13.2 8	17.5 6	178
10.07.23	-	-	-	-	-	28	74	15.2 6	21.99	155	27	72	13.86	25.76	153	-	-	-	-	-
11.07.23	-	-	-	-	-	26	68	22.2	18.03	150	31	82	22.52	20.10	162	-	-	-	-	-

								9												
17.07.23	-	-	-	-	-	29	78	15.1 6	18.13	157	29	79	10.36	11.28	157	-	-	-	-	-
18.07.23	-	-	-	-	-	27	71	17.0 6	14.02	153	25	66	18.18	17.26	151	-	-	-	-	-
24.07.23	-	-	-	-	-	30	82	14.7 9	18.80	161	24	62	15.16	19.13	143	-	-	-	-	-
25.07.23	-	-	-	-	-	26	69	14.3 3	11.87	150	27	72	14.05	11.08	154	-	-	-	-	-
28.07.23	37	88	21.59	18.51	178	-	-	-	-	-	-	-	-	-	-	33	85	10.8 5	12.5 3	163
29.07.23	-	-	-	-	-	22	60	15.1 2	17.01	138	30	82	12.46	13.57	162	-	-	-	-	-
31.07.23	-	-	-	-	-	32	68	15.2 7	18.17	132	27	71	14.04	12.17	153	-	-	-	-	-
01..08.23	-	-	-	-	-	27	71	16.9 5	18.18	152	26	68	13.58	20.39	150	-	-	-	-	-
02.08.23	-	-	-	-	-	22	59	15.9 2	22.20	138	28	73	10.37	10.08	155	-	-	-	-	-
07.08.23	-	-	-	-	-	25	65	20.1 4	17.41	146	38	86	14.52	20.81	182	-	-	-	-	-
08.08.23	-	-	-	-	-	31	80	12.5 8	17.17	162	42	90	15.82	15.54	192	-	-	-	-	-
09.08.23	42	91	24.10	13.92	190	-	-	-	-	-	-	-	-	-	-	21	58	14.8 8	18.3 5	136
16.08.23	-	-	-	-	-	31	83	13.6 9	17.58	163	27	72	13.52	19.52	152	-	-	-	-	-
17.08.23	-	-	-	-	-	29	77	10.5 8	13.75	157	24	64	11.58	14.58	143	-	-	-	-	-
22.08.23	36	88	13.24	17.58	176	-	-	-	-	-	-	-	-	-	-	40	91	10.5 2	14.5 8	185
23.08.23	-	-	-	-	-	36	87	15.3 5	10.52	174	26	68	17.58	16.58	150	-	-	-	-	-
24.08.23	-	-	-	-	-	61	23	17.5 8	16.58	140	28	73	16.58	14.52	155	-	-	-	-	-
01.09.23						27	87	16.1 1	22.11	151	23	62	14.39	16.84	142					
02.09.23						24	62	10.8 7	21.99	143	21	60	16.28	21.39	136					

07.09.23	35	86	14.95	18.94	170											34	83	13.4 5	20.6 2	167
08.09.23						25	66	21.6 6	24.01	147	30	79	15.85	15.35	160					
09.09.23						28	75	16.2 2	23.12	156	33	82	15.93	21.87	166					
18.09.23						31	82	20.1 3	20.90	162	32	81	10.05	17.48	164					
19.09.23						29	77	29.7 0	13.44	158	25	67	12.68	14.48	145					
25.09.23						28	74	21.2 9	16.16	156	27	72	13.09	11.61	153					
26.09.23						26	68	18.7 8	18.80	149	31	82	14.14	16.88	163					
23.09.23	43	94	14.23	26.76	192											39	92	12.2 6	16.5 6	183
MoEF Standard	60	300	120	120	600	60	300	120	120	600	60	300	120	120	600	60	300	120	120	600

 cmpdi <i>A Mini Ratna Company</i>		AMBIENT AIR QUALITY DATA (NAAQS PARAMETER) Area: Lakhanpur				
Project	Belpahar OCP					
Monitoring Station	East of the Mine					
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)
03-Apr-2023	<20.0	6.23	<0.1	<1.0	<1.0	0.1
04-Apr-2023	<20.0	8.15	<0.1	<1.0	<1.0	0.1
10-Apr-2023	<20.0	7.56	<0.1	<1.0	<1.0	0.2
11-Apr-2023	<20.0	8.11	<0.1	<1.0	<1.0	0.3
17-Apr-2023	<20.0	6.89	<0.1	<1.0	<1.0	0.2
18-Apr-2023	<20.0	5.81	<0.1	<1.0	<1.0	0.1
24-Apr-2023	<20.0	6.39	<0.1	<1.0	<1.0	0.2
25-Apr-2023	<20.0	6.58	<0.1	<1.0	<1.0	0.3
Standard	400(24hours)	180(hour)	1.0(24h ours)	6.0(Annual)	20(Annual)	04(1hours)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP					
Monitoring Station	South of the Mine					
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)
03-Apr-2023	<20.0	6.06	<0.1	<1.0	<1.0	0.3
04-Apr-2023	<20.0	7.15	<0.1	<1.0	<1.0	0.2
10-Apr-2023	<20.0	4.88	<0.1	<1.0	<1.0	0.1
11-Apr-2023	<20.0	5.15	<0.1	<1.0	<1.0	0.2
17-Apr-2023	<20.0	7.36	<0.1	<1.0	<1.0	0.2
18-Apr-2023	<20.0	4.23	<0.1	<1.0	<1.0	0.1
24-Apr-2023	<20.0	5.15	<0.1	<1.0	<1.0	0.5
25-Apr-2023	<20.0	6.36	<0.1	<1.0	<1.0	0.2
Standard	400(24hours)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	04(1hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP
Monitoring Station	Near Central Workshop
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Apr-2023	0.3
22-Apr-2023	0.4
Standard	04(1 Hours)

Project	Belpahar OCP
Monitoring Station	Near Magazine House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Apr-2023	0.1
22-Apr-2023	0.2
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Quarry 3
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Apr-2023	0.4
22-Apr-2023	0.3
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Lilari Nallah Pump House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Apr-2023	0.2
22-Apr-2023	0.3
Standard	04(1 Hours)

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**cmpdi***A Mini Ratna Company***AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)****Area: Lakhanpur**

Project	Belpahar OCP					
Monitoring Station	East of the Mine					
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)
23-May-23	<20.0	5.21	<0.1	<1.0	<1.0	0.1
22-May-23	<20.0	6.31	<0.1	<1.0	<1.0	0.1
17-May-23	<20.0	6.12	<0.1	<1.0	<1.0	0.3
16-May-23	<20.0	7.15	<0.1	<1.0	<1.0	0.2
09-May-23	<20.0	5.01	<0.1	<1.0	<1.0	0.2
08-May-23	<20.0	4.69	<0.1	<1.0	<1.0	0.1
03-May-23	<20.0	4.21	<0.1	<1.0	<1.0	0.3
02-May-23	<20.0	6.14	<0.1	<1.0	<1.0	0.1
Standard	400 (24hours)	180 (hour)	1.0 (24hour s)	6.0 (Annual)	20 Annual)	04 (1hours)

Project	Belpahar OCP					
Monitoring Station	South of the Mine					
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)
23-May-23	<20.0	6.34	<0.1	<1.0	<1.0	0.3
22-May-23	<20.0	6.12	<0.1	<1.0	<1.0	0.2
17-May-23	<20.0	6.45	<0.1	<1.0	<1.0	0.2
16-May-23	<20.0	5.12	<0.1	<1.0	<1.0	0.3
09-May-23	<20.0	7.16	<0.1	<1.0	<1.0	0.1
08-May-23	<20.0	5.78	<0.1	<1.0	<1.0	0.2
03-May-23	<20.0	5.54	<0.1	<1.0	<1.0	0.1
02-May-23	<20.0	5.55	<0.1	<1.0	<1.0	0.2
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 Annual)	04 (1hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)


Area: Lakhapur


<i>Project</i>	Belpahar OCP
<i>Monitoring Station</i>	Near Central Workshop
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
27-May-23	0.2
13-May-23	0.1
Standard	04(1 Hours)

<i>Project</i>	Belpahar OCP
<i>Monitoring Station</i>	Near Magazine House
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
27-May-23	0.3
13-May-23	0.2
Standard	04(1 Hours)

<i>Project</i>	Lakhapur OCP
<i>Monitoring Station</i>	Near Quarry 3
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
27-May-23	0.2
13-May-23	0.1
Standard	04(1 Hours)

<i>Project</i>	Lakhapur OCP
<i>Monitoring Station</i>	Near Lilari Nallah Pump House
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
27-May-23	0.3
13-May-23	0.1
Standard	04(1 Hours)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	South of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
05-June-2023	<20.0	7.01	<0.1	<1.0	<1.0	0.20	BQL(Q L=0.5)	BQL(Q L=2.5)
06-June-2023	<20.0	8.12	<0.1	<1.0	<1.0	0.23	BQL(Q L=0.5)	BQL(Q L=2.5)
14-June-2023	<20.0	3.92	<0.1	<1.0	<1.0	0.61	BQL(Q L=0.5)	BQL(Q L=2.5)
15-June-2023	<20.0	4.23	<0.1	<1.0	<1.0	0.39	BQL(Q L=0.5)	BQL(Q L=2.5)
21-June-2023	<20.0	6.15	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.5)	BQL(Q L=2.5)
22-June-2023	<20.0	6.86	<0.1	<1.0	<1.0	0.08	BQL(Q L=0.5)	BQL(Q L=2.5)
27-June-2023	<20.0	5.15	<0.1	<1.0	<1.0	0.03	BQL(Q L=0.5)	BQL(Q L=2.5)
28-June-2023	<20.0	6.23	<0.1	<1.0	<1.0	0.02	BQL(Q L=0.5)	BQL(Q L=2.5)
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	East of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
05-June-2023	<20.0	6.15	<0.1	<1.0	<1.0	0.25	BQL(QL=0.5)	BQL(QL=2.5)
06-June-2023	<20.0	5.62	<0.1	<1.0	<1.0	0.29	BQL(QL=0.5)	BQL(QL=2.5)
14-June-2023	<20.0	5.81	<0.1	<1.0	<1.0	0.32	BQL(QL=0.5)	BQL(QL=2.5)
15-June-2023	<20.0	5.43	<0.1	<1.0	<1.0	0.4	BQL(QL=0.5)	BQL(QL=2.5)
21-June-2023	<20.0	5.81	<0.1	<1.0	<1.0	0.28	BQL(QL=0.5)	BQL(QL=2.5)
22-June-2023	<20.0	6.36	<0.1	<1.0	<1.0	0.27	BQL(QL=0.5)	BQL(QL=2.5)
27-June-2023	<20.0	7.23	<0.1	<1.0	<1.0	0.24	BQL(QL=0.5)	BQL(QL=2.5)
28-June-2023	<20.0	4.56	<0.1	<1.0	<1.0	0.32	BQL(QL=0.5)	BQL(QL=2.5)
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP
Monitoring Station	Near Central Workshop
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Jun-2023	0.7
17-Jun-2023	0.6
Standard	04(1 Hours)

Project	Belpahar OCP
Monitoring Station	Near Magazine House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Jun-2023	0.4
17-Jun-2023	0.5
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Quarry 3
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Jun-2023	0.3
17-Jun-2023	0.3
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Lilari Nallah Pump House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Jun-2023	0.6
17-Jun-2023	0.4
Standard	04(1 Hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP				
Monitoring Station	Near Magazine House				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(µg/m ³)
07-Jun-2023/734	<1.0	<1.0	<1.0	<0.1	<0.1
17-Jun-2023/900	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Project	Belpahar OCP				
Monitoring Station	Near Central Workshop				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(µg/m ³)
07-Jun-2023/735	<1.0	<1.0	<1.0	<0.1	<0.1
17-Jun-2023/901	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0 (Annual)	20 (Annual)	-	-	

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	South of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-July-2023	<20.0	6.14	<0.1	<1.0	<1.0	0.20	BQL(Q L=0.7)	BDL
04-July-2023	<20.0	7.12	<0.1	<1.0	<1.0	0.23	BQL(Q L=0.7)	BDL
10-July-2023	<20.0	5.35	<0.1	<1.0	<1.0	0.61	BQL(Q L=0.7)	BDL
11-July-2023	<20.0	4.56	<0.1	<1.0	<1.0	0.39	BQL(Q L=0.7)	BDL
17-July-2023	<20.0	6.48	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
18-July-2023	<20.0	4.09	<0.1	<1.0	<1.0	0.08	BQL(Q L=0.7)	BDL
24-July-2023	<20.0	4.67	<0.1	<1.0	<1.0	0.03	BQL(Q L=0.7)	BDL
25-July-2023	<20.0	5.84	<0.1	<1.0	<1.0	0.02	BQL(Q L=0.7)	BDL
29-July-2023	<20.0	5.67	<0.1	<1.0	<1.0	0.04	BQL(Q L=0.7)	BDL
31-July-2023	<20.0	5.57	<0.1	<1.0	<1.0	0.09	BQL(Q L=0.7)	BDL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	East of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-July-2023	<20.0	5.47	<0.1	<1.0	<1.0	0.25	BQL(Q L=0.7)	BDL
04-July-2023	<20.0	7.63	<0.1	<1.0	<1.0	0.29	BQL(Q L=0.7)	BDL
10-July-2023	<20.0	6.30	<0.1	<1.0	<1.0	0.32	BQL(Q L=0.7)	BDL
11-July-2023	<20.0	4.25	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BDL
17-July-2023	<20.0	6.37	<0.1	<1.0	<1.0	0.28	BQL(Q L=0.7)	BDL
18-July-2023	<20.0	4.68	<0.1	<1.0	<1.0	0.27	BQL(Q L=0.7)	BDL
24-July-2023	<20.0	7.08	<0.1	<1.0	<1.0	0.24	BQL(Q L=0.7)	BDL
25-July-2023	<20.0	5.04	<0.1	<1.0	<1.0	0.32	BQL(Q L=0.7)	BDL
29-July-2023	<20.0	6.06	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BDL
31-July-2023	<20.0	4.64	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BDL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP
Monitoring Station	Near Central Workshop
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-July-2023	0.4
28-July-2023	0.5
Standard	04(1 Hours)

Project	Belpahar OCP
Monitoring Station	Near Magazine House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-July-2023	0.5
28-July-2023	0.5
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Quarry 3
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-July-2023	0.4
28-July-2023	0.3
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Lilari Nallah Pump House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-July-2023	0.4
21-July-2023	0.3
Standard	04(1 Hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

<i>Project</i>	Belpahar OCP
<i>Monitoring Station</i>	Near Central Workshop
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
09-Aug-2023	0.2
22-Aug-2023	0.3
Standard	04(1 Hours)

<i>Project</i>	Belpahar OCP
<i>Monitoring Station</i>	Near Magazine House
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
09-Aug-2023	0.4
22-Aug-2023	0.2
Standard	04(1 Hours)

<i>Project</i>	Lakhanpur OCP
<i>Monitoring Station</i>	Near Quarry 3
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
09-Aug-2023	0.6
21-Aug-2023	0.3
Standard	04(1 Hours)

<i>Project</i>	Lakhanpur OCP
<i>Monitoring Station</i>	Near Lilari Nallah Pump House
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
09-Aug-2023	0.2
21-Aug-2023	0.3
Standard	04(1 Hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	East of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Aug-2023	<20.0	5.17	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BDL
02-Aug-2023	<20.0	6.33	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BDL
07-Aug-2023	<20.0	5.49	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BDL
08-Aug-2023	<20.0	6.31	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BDL
16-Aug-2023	<20.0	5.78	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
17-Aug-2023	<20.0	6.13	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
23-Aug-2023	<20.0	5.57	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BDL
24-Aug-2023	<20.0	4.28	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BDL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	South of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Aug-2023	<20.0	7.14	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BDL
02-Aug-2023	<20.0	5.47	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BDL
07-Aug-2023	<20.0	7.84	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BDL
08-Aug-2023	<20.0	6.33	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
16-Aug-2023	<20.0	5.44	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BDL
17-Aug-2023	<20.0	6.30	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BDL
23-Aug-2023	<20.0	7.54	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BDL
24-Aug-2023	<20.0	7.11	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BDL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	South of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Sep-2023	<20.0	4.98	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
02-Sep-2023	<20.0	5.64	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
08-Sep-2023	<20.0	7.54	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BDL
09-Sep-2023	<20.0	6.34	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BDL
18-Sep-2023	<20.0	5.85	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
19-Sep-2023	<20.0	4.69	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
25-Sep-2023	<20.0	7.26	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
26-Sep-2023	<20.0	5.38	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BDL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1h ours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP							
Monitoring Station	East of the Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Sep-2023	<20.0	5.45	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BQL
02-Sep-2023	<20.0	6.34	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
08-Sep-2023	<20.0	5.21	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BQL
09-Sep-2023	<20.0	4.63	<0.1	<1.0	<1.0	0.2	BQL(Q L=0.7)	BQL
18-Sep-2023	<20.0	5.87	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
19-Sep-2023	<20.0	7.02	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BQL
25-Sep-2023	<20.0	5.63	<0.1	<1.0	<1.0	0.1	BQL(Q L=0.7)	BQL
26-Sep-2023	<20.0	4.98	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP
Monitoring Station	Near Central Workshop
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Sep-2023	0.4
23-Sep-2023	0.3
Standard	04(1 Hours)

Project	Belpahar OCP
Monitoring Station	Near Magazine House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Sep-2023	0.2
23-Sep-2023	0.3
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Quarry 3
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Sep-2023	0.1
23-Sep-2023	0.3
Standard	04(1 Hours)

Project	Lakhanpur OCP
Monitoring Station	Near Lilari Nallah Pump House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Sep-2023	0.2
23-Sep-2023	0.2
Standard	04(1 Hours)

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NOISE LEVEL MONITORING DATA**PROJECT: BELPAHAR OCM, LAKHANPUR AREA.**

DATE OF SAMPLING	STATION	Noise Level Measurement in dB(A)	
		DAY	NIGHT
06.04.23	Near Central Workshop	69.5	65.7
	Near Magazine House	64.3	60.6
	South of the Mine	62.1	58.3
	East of the Mine	64.3	60.6
20.04.23	East of the Mine	64.7	61.5
	South of the Mine	65.6	63.9
	Near Central Workshop	70.3	67.4
	Near Magazine House	67.5	64.6
10.05.23	Near Central Workshop	64.6	59.2
	Near Magazine House	66.2	63.8
	South of the Mine	62.4	57.6
	East of the Mine	65.8	60.2
18.05.23	Near Central Workshop	69.4	65.4
	Near magazine House	67.7	64.1
	South of the mine	60.8	59.3
	East of the Mine	64.2	60.5
13.06.23	East of the mine	65.5	59.8
	South of the mine	63.7	60.4
	Near Magazine House	64.1	60.3
	Near Central Workshop	70.6	65.9
29.06.23	Near Central Workshop	69.7	65.7
	Near Magazine House	66.4	62.3
	South of the mine	62.1	59.3
	East of the mine	65.7	62.9
11.08.23	East of the mine	53.1	44.7
	Near Central Workshop	62.6	55.2
	South of the Mine	49.2	41.8
	Near Magazine House	64.4	62.2
25.08.23	Near Magazine House	64.3	62.8
	Near Central Workshop	62.8	59.2
	South of the mine	44.2	36.9
	East of the Mine	52.6	38.8
13.07.23	East of the Mine	54.1	43.1
	South of the Mine	51.4	42.6
	Near Central Workshop	61.8	57.2
	Near Magazine House	60.3	59.4
27.07.23	East of the Mine	52.7	38.3
	Near Central Workshop	70.3	67.4
	South of the Mine	45.8	42.9
	Near Magazine House	64.5	62.1
12.09.23	Near Central Workshop	70.8	66.4
	South of the Mine	53.1	44.9
	Near Magazine House	68.2	65.3
	East of the Mine	52.7	41.7
21.09.23	Near Magazine House	69.3	65.2
	East of the Mine	45.8	43.7
	South of the Mine	53.7	40.9
	Near Central Workshop	70.9	66.8
	Near Central Workshop		
	South of the Mine		

Annexure-5

EFFLUENT QUALITY DATA Apr 2023- Sep 2023

PROJECT: BELPAHAR OCM, LAKHANPUR AREA.

(All dimensions are in mg/l unless otherwise stated except pH)

Date of Sampling	Sampling Station	pH	OG	TSS	COD	BOD	Remarks
11.04.23	STP Inlet	7.76		28		<2	6.9
	Outlet of ETP	7.54	<4.0	26	12	-	-
	Inlet of ETP	7.33	<4.0	38	20	-	-
	Clear Water Tank of Sewage Treatment Plant	7.91	-	18	-	<2	1.1
27.04.23	Clear Water Tank of Sewage Treatment Plant	7.97	-	28	-	<2	1.1
	Outlet of ETP	7.71	<4.0	34	20	-	-
10.05.23	Clear Water Tank of Sewage Treatment Plant	6.67		30		<2	1.1MPNFC/100ml
	Outlet of ETP	6.52	<4.0	32	36	-	-
24.05.23	Clear Water Tank of Sewage Treatment Plant	6.79		36		<2	1.8 MPN FC/100ml
	Outlet of ETP	6.73	<4.0	40	40	-	-
13.06.23	Inlet of MDTP	7.08	<4.0	24	20	-	-
	Mine Sump Water	6.94	<4.0	40	32	-	-
	Clear Water Tank of MDTP	7.16	<4.0	20	18	-	-
	ECO Tank	6.67	<4.0	26	20		
	Outlet of ETP	6.38	<4.0	30	24	-	-
	Clear Water Tank of Sewage Treatment Plant	6.91	-	34	-	<2	24
29.06.23	Clear Water Tank of Sewage Treatment Plant	6.86	-	44	-	<2	21
	Outlet of ETP	6.94	<4.0	54	36	-	-
11.08.23	Outlet of ETP	7.25	<4.0	68	48	-	-

	Clear Water Tank of Sewage Treatment Plant	7.09	-	46	-	<2	40
25.08.23	Clear Water Tank of Sewage Treatment Plant	7.19	-	36	-	<2	33
	Outlet of ETP	7.07	<4.0	54	32	-	-
13.07.23	STP Inlet	7.74	-	52	-	<2	MPN/100 33
	Clear Water Tank of Sewage Treatment Plant	7.95	-	58	-	<2	MPN/100 24
	Outlet of ETP	7.29	<4.0	56	32	-	-
	Inlet of ETP	6.94	<4.0	64	40	-	-
20.07.23	Outlet of ETP	7.16	<4.0	18	24	-	-
	Clear Water Tank of Sewage Treatment Plant	6.85	-	22	-	<2	
12.09.23	Clear Water Tank of MDTP	7.16	<4.0	36	20	-	-
	Inlet of MDTP	6.86	<4.0	54	36	-	--
	Mine Sump Water	6.93	<4.0	48	28	-	-
	ECO Tank	6.84	<4.0	46	36	-	-
	Outlet of ETP	7.38	<4.0	34	32		
	Clear Water Tank of Sewage Treatment Plant	7.31	-	30	<2	-	MPN/100ml 39
21.09.23	Clear Water Tank of Sewage Treatment Plant	6.94	-	36	-	-	MPN/100 33
	Outlet of ETP	6.78	<4.0	48	40	-	-

Dharitri Sambalpur 20.10.15

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MAHANADI COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)

Plot No. 4449, BURLA 766026, DIST. SAMBALPUR, ODISHA
Phone: 0663-2542481 to 489 Website: <http://www.mcl.gov.in>

Public notice of all the concerned that Beikhar OC Expansion of Beikhar Area of Mahanadi Coalfields Limited has been granted Environment Clearance vide letter no. J-11015/189/2008-2009 dated 22/01/2015 of the Ministry of Environment, Forests & Climate Change for Expansion in production capacity to 9.0 Mtp. A copy of the said letter is available with State Pollution Control Board, Bhubaneswar. The same can be seen at the website of the Ministry of Environment, Forests & Climate Change at <http://envfor.nic.in> R- 4613

GOVERNMENT OF ODISHA

OFFICE OF THE SUPERINTENDING ENGINEER
RURAL WORKS CIRCLE, BERNAMPUR

For Bidding: 2004@evanoc.com Te/FAX: 0660-2404287
Engineering School, near Income Tax Office, Bernampur, Gensim Post, 760016
Phone: 770 // RY/OC/BAM // Dated: 20.01.2015
The Bid Identification No. Online Tender/25-2014-15/BPR
In unavoidable circumstances, the date & time of last date of availability of tender specification, opening of technical bid and financial bid may be changed. Bid Identification No. Online Tender/25-2014-15/BPR

ESTIMATION	11.01.2015 at 11.00 AM
TECHNICAL BID	11.01.2015 at 11.00 AM
FINANCIAL BID	07.02.2015 at 11.00 AM
TECHNICAL BID	24.01.2015 at 2.00 PM
FINANCIAL BID	18.02.2015 at 11.00 AM
TECHNICAL BID	11.01.2015 at 11.00 AM
FINANCIAL BID	24.01.2015 at 11.00 AM
TECHNICAL BID	07.02.2015 at 11.00 AM

Remarks: unchanged
Sd/- Superintending Engineer, R.W. Circle, Bernampur

GOVERNMENT OF ODISHA
DEPARTMENT OF WATER RESOURCES
INVITATION FOR BIDS (IFB)

Procurement Notice-4/2014-2015
IDENTIFICATION NO. SAL-BDK 08-P1 OF 2014-15

The Executive Engineer, Salandi Canal Division, Bhadrak (acting as Officer) on behalf of Governor of Odisha invites applications to be received in online mode only for the work mentioned above. The contractor

- SUPERINTENDING ENGINEER**
1. Estimate No.
 2. Name of the work
 3. Location of the work
 4. Class of the work
 5. Period of the work
 7. Cost of the work

Public Health Division
Phone / FAX - 0674

Invitation for Bid No.
No. 6949
for the supply of Engineering...

2. The contractor shall be responsible for the supply of the material...

Fertiliser Black Market

1988 for preventing hoarding, black marketing and diversion of subsidised fertilisers for industrial and non-agricultural purposes. In a recent communication, Union Chemical and Fertiliser Secretary JK Mohapatra requested Chief Secretary of Andhra Pradesh to curb the diversion of fertilisers such as urea for industrial use and prevent their black marketing and smuggling.

When there are complaints of diversion of subsidised fertilisers for industrial and non-agricultural uses. Diversion of subsidised fertilisers may curtail supplies for bonafide agricultural uses thereby adversely affecting our agricultural productivity," Mohapatra stated in the letter.

With the demand for fertilisers steadily increasing, it is the responsibility of the Government to ensure that the subsidised urea reaches the farmers for augmenting agricultural production," he said.

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SOUTHERN RAILWAY WAY RECRUITMENT CELL

Cherian Crescent Road, Egmore, Chennai - 600032

Attention: Applicants

Employment Notice No.RRC 01/2014
Recruitment against Cultural Quota -

No. RRC 01/2014 was published in the notification dated 27.12.2014 - 02.01.2015 to fill vacancies in Pay Band - 1 of 5,200 - 20,200 P.M. in Southern Railway.

Minimum Educational Qualification for Categories (Posts with Grade Pay Board's letter No.E(ING)II/2012/RR-4. Para 3.2 of the Employment Notice may

(age) or its equivalent examination with marks in the aggregate. Minimum marks in the aggregate is not applicable in vicemen."

However, the closing date (for all parts of the notification) of applications is further extended upto

as per the Employment Notification remain

receipt of Applications 29.01.2015

Cherian Crescent Road, Egmore, Chennai - 600032

INSTITUTE OF PHYSICS

(An Autonomous Research Institute of Dept. of Atomic Energy, Govt. of India)
Bachchanalya Marg, PO-Secrils School, Bhubaneswar-751005

**CORRIGENDUM TO
ADVERTISEMENT NO. IOP/Rec/1/03.02/2014**

No Age relaxation is allowed to be granted. Candidates who have applied for the post of Assistant (Ordinary) under UR category. The inadvertence caused is regretted.

MAHANADI COALFIELDS LIMITED

(A Subsidiary of Coal India Limited)
JAGDITI VISHVA, BUREAU-06000, DIST-SAMBALPUR, ORISSA
Tel: (0674) 2502-262461 to 266, Website: <http://www.mcl.co.in>

This is for the kind notice of all the concerned that Beopahar CC Expansion Project at Lathampur Area of Mahanadi Coalfields Limited has been accorded Environment Clearance vide letter no. J-11/15/189/2008-MUMM; dt: 22/01/2016 of the Ministry of Environment, Forests & Climate Change for Expansion in production capacity to 9.0 Mtpa. A copy of the clearance letter is available with State Pollution Control Board and may also be seen at the website of the Ministry of Environment, Forests and Climate Change at <http://www.moc.nic.in>

EAST COAST RAILWAY

PUBLIC NOTICE FOR CLOSURE OF UNMANNED LEVEL CROSSINGS

THE UNDER MENTIONED UNMANNED LEVEL CROSSINGS OF THE EAST COAST ROAD DIVISION HAVE BEEN PROPOSED FOR CLOSURE DUE TO THE INTRODUCTION OF TRAIN VEHICLE UNITS (TVU). COLLECTOR & DISTRICT MAGISTRATE OUTBACK HAS PERMITTED FOR THE CLOSURE OF SAID LEVEL CROSSINGS VIDE LETTER NO. 188/JMDL DATE 17.01.2016. HENCE THE USE OF THE INDICATED LEVEL CROSSINGS FOR PUBLIC IS TO BE DISCONTINUED WITH IMMEDIATE EFFECT.

Sl. No.	Route	Station Station	LC No.	PKM Km	Class of gate
1	D-Pr	Qurup-Pale-Machapur	CT-24	4102.4	C Class (UM)
2	D-Pr	Qurup-Pale-Machapur	CT-24	4102.4	C Class (UM)

This is for the information of all concerned.
Districton Engineer (Control), Khurda Road
27.01.2016

State Bank of India

For Kind Attention of Our Esteemed Customers

Linking of Aadhaar Number to Bank Account for Digital Banking

Our customers are requested to link Aadhaar Number to their Bank Account through ATM/Online Banking.

ATM: Customers may insert their ATM Card in any SBI ATM, press on the link "Registration" and make use of the link "Aadhaar Registration" for linking Aadhaar number to their account.

Online Banking: Customers may open their SBI Online Banking Account and make use of the link "Link your Aadhaar Number" available on the left hand side of the landing page of the online banking screen for linking Aadhaar Number to their account.

Customers may also visit any SBI Branch and get the Aadhaar Number linked.

Customers are also requested to register their current account with Aadhaar Number at their Branch.

For more information, please visit www.sbi.co.in

Managing Director & G.E.

Handwritten signature and date: 29.01.15

Land Restoration / Reclamation Monitoring of more than 5 million cu.m (Coal+OB) Capacity Opencast Coal Mines of Mahanadi Coalfields Limited based on Satellite Data of the Year 2020



Submitted to
Mahanadi 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 Mahanadi
Coalfields Limited based on Satellite Data of the Year 2020**

March 2021



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

Table 1: Project wise Land Reclamation Status in Opencast Projects of MCL based on Satellite Data of the year 2020																			(Area in Sq.km.)		
Sl. No.	Project	Total Leasehold Area 2019	Total Leasehold Area 2020	Technical Reclamation		Plantation						Area Under Active Mining	Total Excavated Area	Total Area Under Plantation (%Green Cover Generated in Leasehold)		Total Area Under Reclamation					
				Area under Backfilling		Biological Reclamation		Other Plantation						2019	2020	2019	2020	2019	2020		
						Plantation on Excavated/Backfilled Area		Plantation on External Over Burden Dump	Social Forestry, Avenue Plantation Etc.												
1	2	3	4	5		6		7				8		9		10(=5+6+9)		11(=6+7+8)		12(=5+6)	
				2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
1	Ananta	14.20	14.20	2.35	2.40	1.02	1.05	0.11	0.10	0.23	0.22	1.18	1.45	4.55	4.90	1.36	1.37	3.37	3.45		
				51.65%	48.98%	22.42%	21.43%					25.93%	29.59%			9.58%	9.65%	74.07%	70.41%		
2	Balram	10.21	13.09	2.52	2.80	1.03	1.06	0.23	0.22	0.20	0.35	0.95	1.03	4.50	4.89	1.46	1.63	3.55	3.86		
				56.00%	57.26%	22.89%	21.68%					21.11%	21.06%			14.30%	12.45%	78.89%	78.94%		
3	Lingaraj	7.26	7.26	1.44	1.70	0.15	0.15	0.32	0.32	0.34	0.33	2.27	2.19	3.86	4.04	0.81	0.80	1.59	1.85		
				37.31%	42.08%	3.89%	3.71%					58.81%	54.21%			11.16%	11.02%	41.19%	45.79%		
4	Bharatpur	9.95	9.27	2.57	2.63	1.65	1.66	0.45	0.45	0.17	0.16	1.65	1.66	5.87	5.95	2.27	2.27	4.22	4.29		
				43.78%	44.20%	28.11%	27.90%					28.11%	27.90%			22.81%	24.49%	71.89%	72.10%		
5	Bhubaneswari	7.33	6.58	1.81	1.86	0.01	0.01	0.00	0.00	0.24	0.15	1.82	1.77	3.64	3.64	0.25	0.16	1.82	1.87		
				49.73%	51.10%	0.27%	0.27%					50.00%	48.63%			3.41%	2.43%	50.00%	51.37%		
6	Jagannath	5.54	5.54	0.76	0.84	1.79	1.79	0.00	0.00	0.17	0.17	1.01	0.97	3.56	3.60	1.96	1.96	2.55	2.63		
				21.35%	23.33%	50.28%	49.72%					28.37%	26.94%			35.38%	35.38%	71.63%	73.06%		
7	Hingula	15.75	15.75	1.33	1.48	0.06	0.07	0.21	0.21	0.28	0.28	1.75	2.02	3.14	3.57	0.55	0.56	1.39	1.55		
				42.36%	41.46%	1.91%	1.96%					55.73%	56.58%			3.49%	3.56%	44.27%	43.42%		
8	Belpahar	14.44	14.44	1.79	2.36	0.91	0.90	0.57	0.57	0.52	0.52	1.67	1.33	4.37	4.59	2.00	1.99	2.70	3.26		
				40.96%	51.42%	20.82%	19.61%					38.22%	28.98%			13.85%	13.78%	61.78%	71.02%		
9	Lakhanpur	22.40	22.40	4.12	4.32	0.80	0.83	0.59	0.59	0.45	0.44	2.51	2.99	7.43	8.14	1.84	1.86	4.92	5.15		
				55.45%	53.07%	10.77%	10.20%					33.78%	36.73%			8.21%	8.30%	66.22%	63.27%		
10	Samleswari	7.13	13.35	2.90	2.94	0.68	0.70	0.48	0.49	0.16	0.50	1.26	1.27	4.84	4.91	1.32	1.69	3.58	3.64		
				59.92%	59.88%	14.05%	14.26%					26.03%	25.87%			18.51%	12.66%	73.97%	74.13%		
11	Lajkura	4.68	7.21	1.15	1.20	0.16	0.15	0.22	0.23	0.06	0.16	0.84	0.89	2.15	2.24	0.44	0.54	1.31	1.35		
				53.49%	53.57%	7.44%	6.70%					39.07%	39.73%			9.40%	7.49%	60.93%	60.27%		
12	Siarnal	22.90	22.90	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00		
				0.00%	0.00%	0.00%	0.00%					0.00%	0.00%			2.45%	2.45%	-	-		
13	Basundhara W Extn.	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00		
				0.00%	0.00%	0.00%	0.00%					0.00%	0.00%			0.93%	0.93%	-	-		
	Total (A)	145.02	155.22	22.74	24.53	8.26	8.37	3.18	3.18	3.41	3.87	16.91	17.57	47.91	50.47	14.85	15.42	31.00	32.90		
				47.46%	48.60%	17.24%	16.58%					35.30%	34.81%			10.24%	9.93%	64.70%	65.19%		
		2018	2020	2018	2020	2018	2020	2018	2020	2018	2020	2018	2020	2018	2020	2018	2020	2018	2020		
14	Garjanbahal	6.54	6.54	0.00	0.03	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.47	0.00	0.50	0.02	0.02	0.00	0.03		
				0.00%	6.00%	0.00%	0.00%					0.00%	94.00%			0.31%	0.31%	0.00%	6.00%		
	Total (B) (MCL)	151.56	161.76	22.74	24.56	8.26	8.37	3.18	3.18	3.43	3.89	16.91	18.04	47.91	50.97	14.87	15.44	31.00	32.93		
				47.46%	48.19%	17.24%	16.42%					35.30%	35.39%			9.81%	9.55%	64.70%	64.61%		

(% is calculated with respect to excavated area as applicable)

Note: In reference to the above Table-1, different parameters are classified as follows:

- Area under **Biological Reclamation** includes Area under Plantation done on Backfilled Area only.
- Area under **Technical Reclamation** includes Area under Barren Backfilling only.
- Area under **Active Mining** includes Coal Quarry, Advance Quarry Site, Quarry Filled with Water, if any. Areas under coal dump have been excluded from Active Mining in this table.
- Social Forestry and Plantation on External OB Dumps are not included in Biological Reclamation and are put under separate categories as shown in the Table above.
- (%) calculated in the above Table is in respect to Total Excavated Area except for "Total Area under Plantation" where % is in terms of "Leasehold Area"
- The leasehold boundaries of Balram, Bharatpur, Bhubaneswari, Samleswari and Lajkura project have been modified as per latest EC
- Garjanbahal OC, having the capacity > 5 mcm (Coal+OB), is included for annual satellite monitoring.

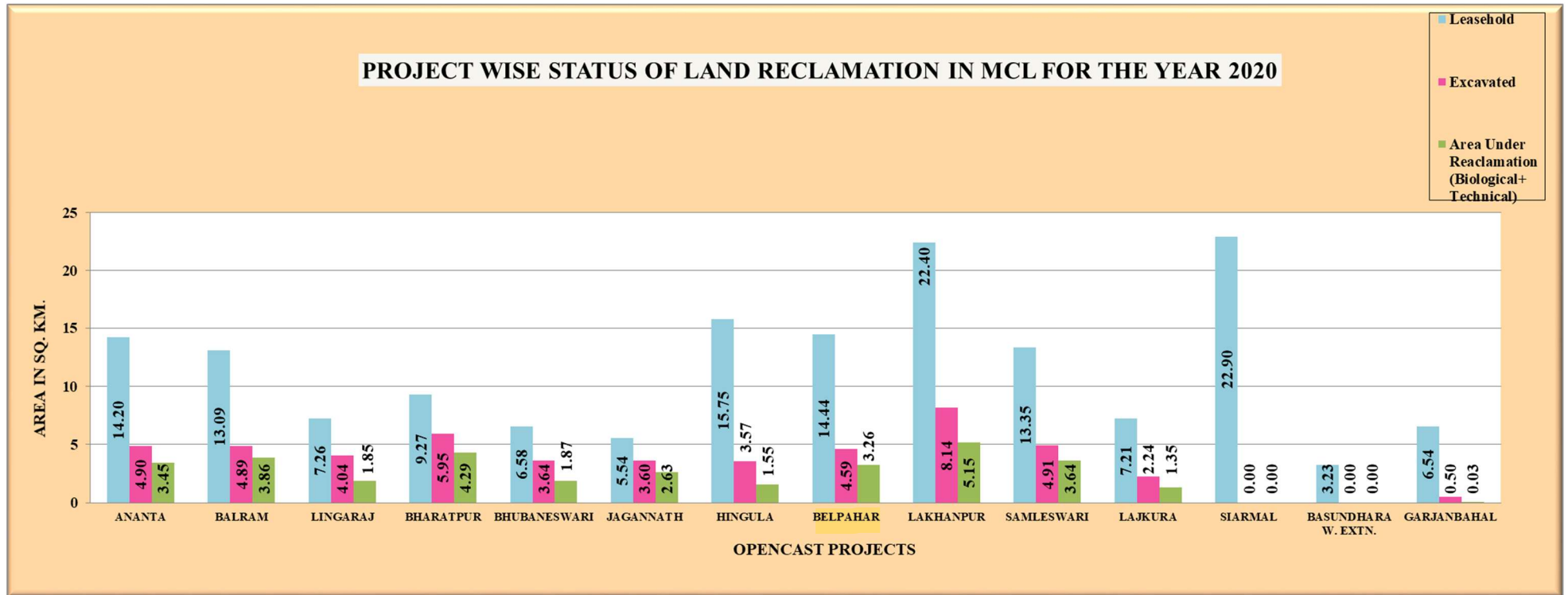


Fig.1: Land reclamation status in OC projects of MCL for the year 2020

Table 2.2: STATUS OF LAND RESTORATION / RECLAMATION IN MAHANADI COALFIELDS LIMITED BASED ON SATELLITE DATA OF THE YEAR 2020

		(Area in Sq. Kms.)																	
		BELPAHAR		LAKHANPUR		SAMLESWARI		LAJKURA		SIARMAL		BASUNDHARA W EXTN		GARJANBAHAL		TOTAL		ALL TOTAL	
		Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
FORESTS	Dense Forest	0.00	0.00	1.48	6.61	0.21	1.57	0.79	10.96	0.00	0.00	0.00	0.00	0.51	7.79	2.99	3.32	5.19	3.21
	Open Forest	0.91	6.30	2.45	10.94	0.56	4.19	0.74	10.26	0.85	3.71	0.79	24.46	0.75	11.46	7.05	7.83	10.90	6.74
	Total Forest (A)	0.91	6.30	3.93	17.54	0.77	5.77	1.53	21.22	0.85	3.71	0.79	24.46	1.26	19.25	10.04	11.15	16.09	9.95
SCRUBS	Scrubs (B)	3.46	23.96	2.78	12.41	2.61	19.55	1.05	14.56	7.27	31.75	1.36	42.11	1.18	18.03	19.71	21.88	29.66	18.34
PLANTATION	Social Forestry	0.52	3.60	0.44	1.96	0.50	3.74	0.16	2.22	0.56	2.45	0.03	0.93	0.02	0.31	2.23	2.48	3.89	2.40
	Plantation on External OB Dump	0.57	3.95	0.59	2.63	0.49	3.67	0.23	3.19	0.00	0.00	0.00	0.00	0.00	0.00	1.88	2.09	3.18	1.97
	Plantation on Backfill/Excavated Area(Biological Reclamation)	0.90	6.23	0.83	3.71	0.70	5.24	0.15	2.08	0.00	0.00	0.00	0.00	0.00	0.00	2.58	2.86	8.37	5.17
	Total Plantation (Green Cover) (C)	1.99	13.78	1.86	8.30	1.69	12.66	0.54	7.49	0.56	2.45	0.03	0.93	0.02	0.31	6.69	7.43	15.44	9.55
Total Vegetation (A+B+C)		6.36	44.04	8.57	38.26	5.07	37.97	3.12	43.27	8.68	37.90	2.18	67.49	2.46	37.59	36.44	40.45	61.20	37.83
ACTIVE MINING	Coal Dump	0.11	0.76	0.14	0.63	0.19	1.42	0.07	0.97	0.00	0.00	0.00	0.00	0.22	3.36	0.73	0.81	1.87	1.16
	Coal Quarry	0.99	6.86	2.32	10.36	0.81	6.07	0.75	10.40	0.00	0.00	0.00	0.00	0.36	5.50	5.23	5.81	11.96	7.39
	Advance Quarry Site	0.09	0.62	0.38	1.70	0.14	1.05	0.10	1.39	0.00	0.00	0.00	0.00	0.11	1.68	0.82	0.91	1.73	1.07
	Quarry Filled with Water	0.25	1.73	0.29	1.29	0.32	2.40	0.04	0.55	0.00	0.00	0.00	0.00	0.004	0.07	0.90	1.00	4.35	2.69
	Total Area under Active Mining	1.33	9.21	2.99	13.35	1.27	9.51	0.89	12.34	0.00	0.00	0.00	0.00	0.47	7.25	6.95	7.72	18.04	11.16
MINE OPERATION	Barren OB dump	0.13	0.90	0.02	0.09	0.07	0.52	0.13	1.80	0.00	0.00	0.00	0.00	0.30	4.58	0.65	0.72	2.40	1.48
	Area Under Backfilling(Technical Reclamation)	2.36	16.34	4.32	19.29	2.94	22.02	1.20	16.64	0.00	0.00	0.00	0.00	0.03	0.46	10.85	12.05	24.56	15.18
	Total Area under Mine Operation	3.93	27.22	7.47	33.35	4.47	33.48	2.29	31.76	0.00	0.00	0.00	0.00	1.02	15.65	19.18	20.49	46.87	28.98
WASTELANDS	Waste Lands	2.70	18.70	1.71	7.63	2.02	15.13	0.95	13.18	1.86	8.12	0.62	19.20	0.49	7.49	10.35	11.49	17.58	10.87
	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	0.17	0.11
	Total Wastelands	2.70	18.70	1.71	7.63	2.02	15.13	0.95	13.18	1.86	8.12	0.62	19.20	0.49	7.49	10.35	11.49	17.75	10.97
WATER	Reservoir, nallah, ponds etc.	0.25	1.73	0.28	1.25	0.17	1.27	0.07	0.97	0.22	0.96	0.03	0.93	0.06	0.92	1.08	1.20	2.03	1.25
	Total Waterbodies	0.25	1.73	0.28	1.25	0.17	1.27	0.07	0.97	0.22	0.96	0.03	0.93	0.06	0.92	1.08	1.2	2.03	1.25
AGRICULTURE	Crop Lands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91	8.34	0.00	0.00	0.00	0.00	1.91	2.12	1.91	1.18
	Fallow Lands	0.63	4.36	4.01	17.90	1.20	8.99	0.55	7.63	9.52	41.57	0.38	11.76	2.30	35.14	18.59	20.64	27.47	16.98
	Total Agriculture	0.63	4.36	4.01	17.90	1.20	8.99	0.55	7.63	11.43	49.91	0.38	11.76	2.30	35.14	20.50	22.76	29.38	18.16
SETTLEMENTS	Urban Settlement	0.02	0.14	0.00	0.00	0.003	0.02	0.08	1.11	0.02	0.09	0.00	0.00	0.00	0.00	0.12	0.14	0.17	0.11
	Rural Settlement	0.17	1.18	0.14	0.63	0.21	1.57	0.03	0.42	0.69	3.01	0.02	0.62	0.07	1.07	1.33	1.48	2.19	1.35
	Industrial Settlement	0.38	2.63	0.22	0.98	0.21	1.57	0.12	1.66	0.00	0.00	0.00	0.00	0.14	2.14	1.07	1.19	2.18	1.35
	Total Settlements	0.57	3.95	0.36	1.61	0.42	3.17	0.23	3.19	0.71	3.10	0.02	0.62	0.21	3.21	2.52	2.80	4.54	2.81
GRAND TOTAL		14.44	100.00	22.40	100.00	13.35	100.00	7.21	100.00	22.90	100.00	3.23	100.00	6.54	100.00	90.08	100.00	161.76	100.00



Classes		Colour	Area	
Level-I	Level-II		Area (Km ²)	% of Total
Forest	Open Forest(A)		0.91	6.30
Scrubs	Scrubs (B)		3.46	23.96
Plantation	Social Forestry		0.52	3.60
	Plantation on Backfill		0.90	6.23
	Plantation on OB Dump		0.57	3.95
	Total Plantation (C)		1.99	13.78
Total Vegetation(A+B+C)			6.36	44.04
Agriculture	Agriculture Land		0.63	4.36
Waste Land	Waste Land		2.70	18.70
Mining Area	Coal Quarry		0.99	6.86
	Barren OB Dump		0.13	0.90
	Area Under Backfilling		2.36	16.34
	Water Filled Quarry		0.25	1.73
	Coal Dump		0.11	0.76
	Advance Quarry Site		0.09	0.62
	Total Mining Area		3.93	27.22
Settlements	Rural Settlement		0.17	1.18
	Urban Settlement		0.02	0.14
	Industrial Settlement		0.38	2.63
Total Settlement Area			0.57	3.95
Water Body	River, Ponds		0.25	1.73
Total			14.44	100.00

Customer		Mahanadi Coalfields Limited			
Title		Land Reclamation Monitoring of OC Projects			Job No. 561410027
Subject Land Reclamation Status of Belpahar OCP based on Satellite Data (R2A/L-IV) of the year 2020	Activity	Name	Designation	Signature	Date
	Prepared	A. Biswas	Mgr.(Geology)	<i>ABiswas</i>	
	Checked	T. Mondal	CM (RSC)	<i>Tmondal</i>	
	Approved	R. Kumar	GM(Geomatics)	<i>Rkumar</i>	
Scale: 0 0.5 1 2 Km		Sheet 1			
Drg No. HQ REM 07 A4 20 08		Rev No.0			

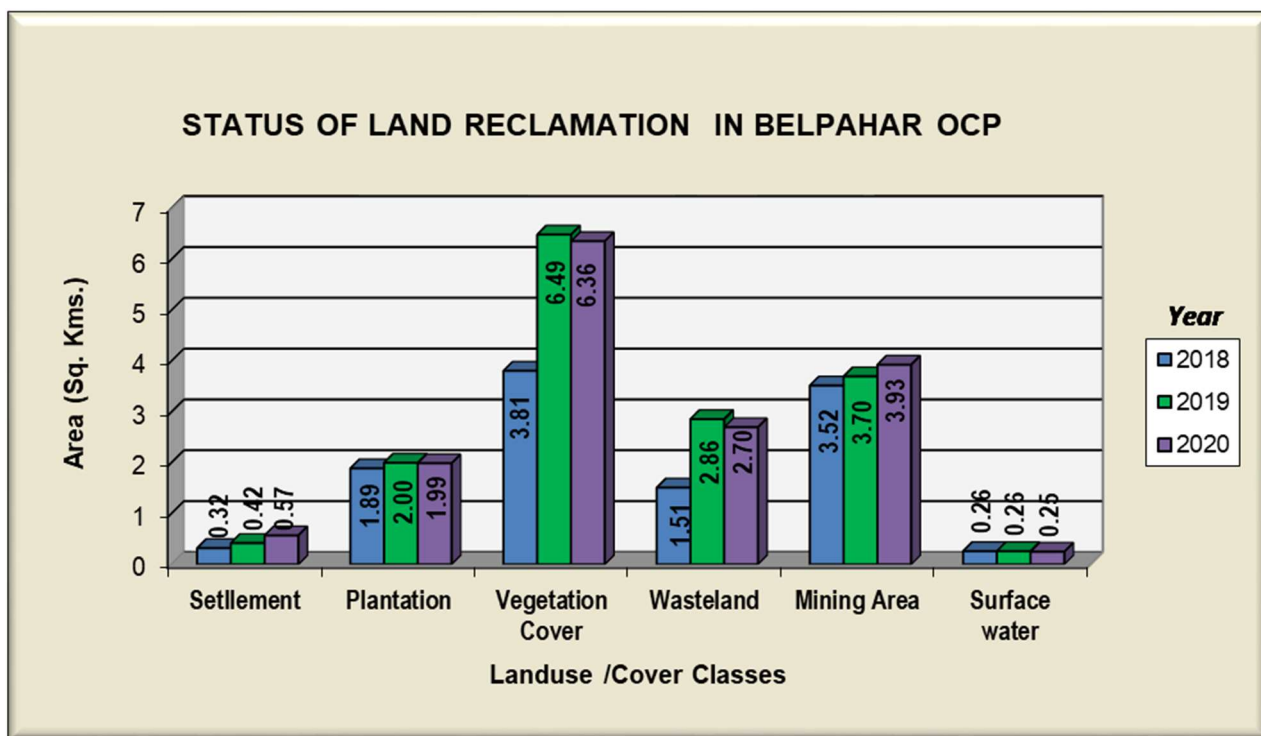


Figure 10

**cmpdi***A Mineral Resources Company*

Test Report

GROUND WATER LEVEL MONITORING DATA

Area:

Lakhanpur

Project:

Belpahar OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
5/29/2023	Piezometer No MIP 08; Village Kusraloi, Inside the Premises of PrathamikVidyalaya Latitude 21.01800 N Longitude 85.13027 E	8.0
5/29/2023	Piezometer No MIP 07; Infront of DAV school Bandbahal, Inside colonysubstationLatitude 21.01800 N Longitude 85.13027 E	4.0

Project:

Lakhanpur OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
5/29/2023	Piezometer No MIP 10; Village Dahaldera; Inside the Premises of UP School. Latitude 21 ° 46 '51" N Longitude 83 ° 48'47" E	17.10
5/31/2023	Piezometer No MIP 09; Village Junion; Inside the Premises of State GovtHorticulture InstituteLatitude 21°45'49" N Longitude 83°47'42" E.	10.20

Project:

Lilari OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
5/29/2023	Piezometer No MIP 06; Infront of Lilari Mines Project Office. Latitude 21.77826 N Longitude 85.8580 E	38.10


 Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR


 O. I. C.
 Env. Lab
 CMPDI, RI-VII
 Bhubaneswar



cmpdi

Mini Ratna Company

Piezometer Water Quality Data: Lakhanpur Area

Project / OCP	Belpahar OCP		Indian Drinking Standards (IS-10500):2012	
	Piezometer No. MIP 07, GW level and quality (May) Infront of DAV School Bandhbahal inside colony substation	Piezometer No. MIP 08, GW level and quality (May) Village Kushraloi inside premises of prathamik vidyalaya		
Monitoring Station				
Date of Sampling	29-May-23	29-May-23	Acceptable	Permissible
Colour(Hazen)	3	2	5	15
pH	7.73	6.69	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	169.5	98.1	200	600
Total Hardness (Ca CO ₃)(mg/L)	145.17	32.26	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	5.95	5.95	250	1000
Total Dissolve Solid(mg/L)	224	146	500	2000
Calcium(mg/L)	35.55	8.08	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.12	0.1	0.3
Sulphate(mg/L)	1.78	0.63	200	400
Nitrate(mg/L)	<2.0	<2.0	45	No relaxation
Fluoride(mg/L)	0.39	0.4	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	0.25	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
MPN (Index/100ml)	BDL	BDL	-	-
Residual Free Chlorine (mg/L)	<0.2	<0.2	0.2	1
Phenolics (mg/L)	<0.001	<0.001	0.001	0.002
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation

Jasmati
Authorized Signatory
CMPDI LAB 3
Bhubaneswar

[Signature]
O. I. C.
Env. Lab
CMPDI, RI-VII
Bhubaneswar



cmpdi

A Miniratna Company

Test Report

GROUND WATER LEVEL MONITORING DATA

Area:

Lakhanpur

Project:

Belpahar OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
8/17/2023	Piezometer No MIP 07; Infront of DAV school Bandbahal, Inside colony substation Latitude 21.01800 N Longitude 85.13027 E	Online Monitoring
8/17/2023	Piezometer No MIP 08; Village Kusraloi, Inside the Premises of Prathamik Vidyalaya Latitude 21.01800 N Longitude 85.13027 E	6.00

Project:

Lakhanpur OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
8/17/2023	Piezometer No MIP 09; Village Junion; Inside the Premises of State Govt Horticulture Institute Latitude 21°45'49" N Longitude 83°47'42" E.	Pump fitted
8/17/2023	Piezometer No MIP 10; Village Dahaldera; Inside the Premises of UP School. Latitude 21 ° 46 '51" N Longitude 83 ° 48'47" E	14.00

Project:

Lilari OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
8/17/2023	Piezometer No MIP 06; Infront of Lilari Mines Project Office. Latitude 21.77826 N Longitude 85.8580 E	20.46

Signature
Authorized Signatory
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