



MCL

Ref: MCL/LKPA/PO/BOCM/ENVT/21-22/605 (a)

Date : 29.05.2021

To,

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

Kind Attention:

Director (S)
MoEF, Eastern Zone
Chandrasekharpur,
Bhubaneswar-751023

Sub: Half yearly compliance report for the period October- 2020 to March- 2021 of EC No. J-11015/189/2008-IA.II (M), dtd.22.01.15 w.r.t Belpahar OpenCast Mine, Lakhanpur Area, MCL.

Sir,

Please find enclosed herewith the half yearly compliance report of EC no. J-11015/189/2008-IA.II (M), dtd.22.01.15 for the period October- 2020 to March- 2021 with respect to Belpahar OpenCast Mine, Lakhanpur Area, MCL on conditions given therein.

Thanking you

Encl: As above

Yours faithfully


27/5/21
Project Officer
Belpahar OpenCast Mine

Copy to:

- 1) Member Secretary, OSPCB, Paribesh Bhavan, Bhubaneswar.
- 2) Regional officer, SPCB Odisha, Plot No .370/ 5971, Cox Colony, Jharsuguda – 768203.
- 3) General Manager, Lakhanpur Area, MCL.
- 4) General Manager(Env. & Forest), MCL HQ.
- 5) Area Environment Officer, LKPA.
- 6) Nodal officer (Environment), BOCM.

COMPLIANCE REPORT OF ENVIRONMENT CLEARANCE - 9 MTPA

E.C. OBTAINED VIDE No. J-11015/189/2008-IA.II (M) Dated: 22nd January, 2015.

(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 MTPA and the coal production is kept within 9MTPA. The coal production of figures of last 5 years is tabulated below:-</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Production(T)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>8999996</td> </tr> <tr> <td>2017-18</td> <td>7052647</td> </tr> <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> </tbody> </table>	Year	Production(T)	2016-17	8999996	2017-18	7052647	2018-19	7200010	2019-20	7510295	2020-21	7520005
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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., 3 years as per EC- 9 MTPA obtained vide No. J-11015/189/2008-IA.II (M) Dt. 15 th Jan.2021.												
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	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 Lakhampur-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.												
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 as it an ongoing Mine. De-coaled voids are being backfilled by dumping of OB. No fly ash will be dumped into the de-coaled void of Belpahar COM without feasibility studies on long term impacts on the aquifers and life systems and without prior approval of the Ministry. Further there are no guidelines of dumping fly ash in the mine voids of Belpahar OCM as per its approved mining plan.												

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.</p> <table border="1" data-bbox="727 443 1493 920"> <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>Bandhbahal</td> <td>0</td> <td>0</td> <td>0</td> <td>31</td> </tr> <tr> <td>Chharla</td> <td>191</td> <td>191</td> <td>0</td> <td>264</td> </tr> <tr> <td>Darlipali</td> <td>193</td> <td>117</td> <td>76</td> <td>185</td> </tr> <tr> <td>Jamkani</td> <td>0</td> <td>0</td> <td>0</td> <td>14</td> </tr> <tr> <td>Jurabaga</td> <td>27</td> <td>20</td> <td>7</td> <td>392</td> </tr> <tr> <td>Kirarama</td> <td>5</td> <td>1</td> <td>4</td> <td>70</td> </tr> <tr> <td>Kusuraloi</td> <td>0</td> <td>0</td> <td>0</td> <td>28</td> </tr> <tr> <td>Kheruabahal</td> <td>115</td> <td>47</td> <td>68</td> <td>40</td> </tr> <tr> <td>Total</td> <td>531</td> <td>376</td> <td>155</td> <td>1024</td> </tr> </tbody> </table>	Village	No. Of displaced families	Nos. Of Families already Shifted	Balance	Employment provided	Bandhbahal	0	0	0	31	Chharla	191	191	0	264	Darlipali	193	117	76	185	Jamkani	0	0	0	14	Jurabaga	27	20	7	392	Kirarama	5	1	4	70	Kusuraloi	0	0	0	28	Kheruabahal	115	47	68	40	Total	531	376	155	1024
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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. Bandhbahal Colony (MIP-07)- location(21° 45'10.95"N and 83°52'6.03"E) 2. Kusuraloi Primary School(MIP-08)- location(21° 43'9.95"N and 83°50'3.69"E) <p>The piezometer water quality and depth is studied at regular intervals AND the latest report is enclosed as Annexure- 8</p>																																																		
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 for and coal is evacuated in road by trucks covered with tarpaulin. No public road is being obstructed within mining area for dispatch of coal.																																																		
viii	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>BOCM Siding No. 6 is being used for transportation of coal from Belpahar OCM. During the year 2020-21, 83.66% of coal 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 83.3% of the total coal transportation. The coal transportation data of BOCM satisfies this condition.</p> <p>During the period April- 2020 to March- 2021 Transportation by :- (a) Rail: 5010935.08Tes= 83.66% of total quantity (b) Road: 978389.02Tes = 16.34 % of total quantity</p>																																																		
ix	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 456.28 ha.) i.e. Forest Land : 43.986 ha. Non Forest Land : 412.294 ha. Total Excavated Area: 456.28 ha.</p>																																																		
x	The depth of the internal void shall be 35m from the ground level & should be adequate	Presently excavation of OB and concurrent backfilling in the voids is being carried out. It will be ensured to keep at 35m from the																																																		

	for fishery purpose.	ground level at the time of mine closure, adequate for fishery purposes.
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	Production is being carried out within the Mining Lease area (Mine Lease area is 1444.053 ha, out of which Excavated area is 456.28 ha.) i.e. Forest Land : 43.986 ha. Non Forest Land : 412.294 ha. Total Excavated Area: 456.28 ha.
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.	OB is used for backfilling of de-coaled area and concurrently covered with top soil for plantation. Present Status(as on 31.03.2021) Excavated Area : 456.28 ha. Backfilled Area : 384.59 ha. Technically reclaimed : 194.336 ha
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.
xv	Appropriate embankment shall be provided along the side of the river/Nallah flowing near or adjacent to the Mine.	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.
xvi	The CSR cost should be Rs.5 per tonnes of Coal produced which should be adjusted as per the annual inflation.	Project authorities are implementing the CSR guidelines as approved by the CIL/MoC, Govt. of India. CSR expenditure of Lakhanpur Area for the year 2020-21 is given in [ANNEXURE -1]
xvii	Everybody in the core area should be provided with mask for protection against fugitive dust emission	Everybody in the core area is provided with dust mask for protection against fugitive dust emission. Dusk masks provided during this period are 190 nos.
xviii	Dust mask to be provided to everyone working in the Mining area.	Dust mask being provided to everyone working in the Mining area (Dust mask provided in the period from October- 2020 to March - 2021 is 190 Nos.)
xix	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	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.
xx	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.	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 are attended at the age of 45 years and above are medically re-examined in every three years interval. In the period of October 2020 to March 2021 195 no's of personnel have undergone PME and 32 no's of personnel have undergone IME during this period.
xxi	The mining area should be surrounded by green belt having thick closed thick canopy of the tree	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 75000 No's, of saplings have been planted in nearby villages of the project through DFO, Jharsuguda. 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 Chattisgarh Rajya Van Vikas Nigam Ltd and Odisha Forest Development Corporation Limited at various sites. Density is kept at 2500 plants/ha.

xxii	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.	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 to withstand the peak water flow and prevent mine inundation.
Oxxiii	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.	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.
xxiv	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.	The project has already five earmarked external OB dumps of area 55.33 ha. Ultimate Slope of the dumps is kept below 28°C. 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/20-21/2455 Dated: 25.11.2020
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 m ³) 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
xxvi	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.	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 have been provided at the toe of the OB dumps to check runoff and siltation. Catch drains are regularly maintained departmentally.
xxvii	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.	CHP is currently not in operation and coal is extracted using two nos. of Surface Miners. During the year 2020-21, 95.46% coal is extracted using Surface Miner.

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 16 Nos. of fixed sprinklers are installed in CT roads. A mobile truck mounted fog cannon of 40m radial throw has been commissioned. Also 03 no.s of Fixed type Fog Cannon have been installed for dust suppression at Siding no.6 and 01 no.s of trolley mounted Fog cannon is deployed for dust suppression at Coal stockyard.																				
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.	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.																				
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.</p> <p>.Maximum no .of holes blasted with following parameters:---</p> <table border="1" data-bbox="727 880 1506 1155"> <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		
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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.	<p>Progressive afforestation Plan is implemented</p> <p>A. Plantation on OB Dump / Block etc</p> <table border="1" data-bbox="727 1299 1378 1518"> <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 colspan="2">Total</td> <td>416.63</td> <td>780264</td> </tr> </tbody> </table> <p>B. Avenue Plantation 24.00 Km 38400nos.</p> <p>Grand Total 818664 nos.</p> <p>Density of the trees are 2500 plants per ha.</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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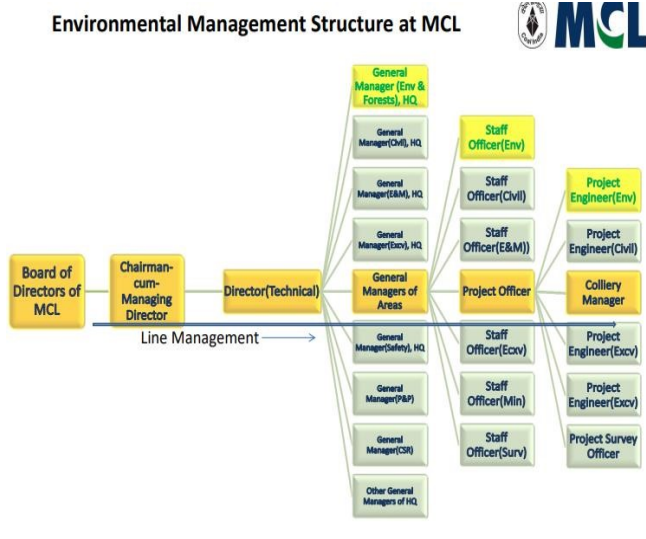
xxxii	An estimated total 234.968 Mm ³ of OB will be generated during the entire life of the mine. Out of which 19.00 Mm ³ of OB will be dumped in five external OB Dumps an earmarked area covering 55.33 ha of land with height of 20 to 30 m. 215.968 Mm ³ of will be of one internal OB dump in covering an 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>The OB excavated is being backfilled concurrently. Till date 168.864 Mm³ 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 status to Eastern Regional Office, MoEF on half yearly basis. Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/20-21/2455 Dated: 25.11.2020</p>																											
xxxiii	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	<table border="1" data-bbox="727 734 1541 887"> <thead> <tr> <th colspan="3">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>43.986</td> <td>228.063</td> <td>184.231</td> <td>456.28</td> <td>194.336</td> <td>108.80</td> <td>55.33</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	43.986	228.063	184.231	456.28	194.336	108.80	55.33
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xxxiv	Compensatory Ecological and Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	<p>Plantation is carried out on the OB dumps, so that Compensatory ecological and restoration is possible.</p> <table border="1" data-bbox="727 1099 1382 1312"> <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 colspan="2">Total</td> <td>416.63</td> <td>780264</td> </tr> </tbody> </table>						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	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	Mining is being carried out in sustainable Manner. No extra over burden dump are created.																											
xxxvi	No ground water shall be used for mining operations.	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 firefighting purposes																											
xxxvii	Of the total quarry area of 606.503 ha. The backfilled quarry area of 448.94 ha. shall be reclaimed with plantation and a void 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.	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.																											

xxxviii	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.	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 & CPCB. Present data is : <table border="1" data-bbox="727 338 1541 600"> <thead> <tr> <th>Date of measurement</th> <th>Location</th> <th>Depth below GL (m)</th> </tr> </thead> <tbody> <tr> <td>19.05.2020</td> <td>Chharla village well</td> <td>2.79</td> </tr> <tr> <td>19.02.2020</td> <td>Chharla village well</td> <td>2.84</td> </tr> <tr> <td>14.08.2020</td> <td>Chharla village well</td> <td>1.45</td> </tr> <tr> <td>09.12.2020</td> <td>Chharla village well</td> <td>6.90</td> </tr> <tr> <td>28.01.2021</td> <td>Chharla village well</td> <td>7.10</td> </tr> </tbody> </table> Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/20-21/2455 Dated: 25.11.2020	Date of measurement	Location	Depth below GL (m)	19.05.2020	Chharla village well	2.79	19.02.2020	Chharla village well	2.84	14.08.2020	Chharla village well	1.45	09.12.2020	Chharla village well	6.90	28.01.2021	Chharla village well	7.10
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xxxix	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.	02 no's 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.																		
xl	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	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.																		
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: 195 people (From October-2020 to March-2021) 																		
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 on yearly basis and prepares land use map of each open cast mine, thus a time series of land use maps are being generated on yearly basis. Report of 2019 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/20-21/2455 Dated: 25.11.2020
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. 1,521,580,499.00 is available in Escrow account of Belpahar OCM as on 31/03/2021 in the account number 365203800000322(Old) and 380-973(New). Previous compliance report was submitted vide no. MCL/LKPA/PO/BOCM/ENVT/20-21/2455 Dated: 25.11.2020
xlv	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.	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. For the year 2020-21 a tentative amount of 425.63 Lakhs has been spent for CSR works in Lakanpur area. The action plan for CSR activities for the year 2020-21 is attached as [Annexure-1] .
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	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, forest & climate change.	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.																		
ii	No change in the calendar plan of production quantum of mineral coal shall be made.	<p>No change in the calendar plan including quantum of mineral coal produced will be made.</p> <table border="1" data-bbox="890 421 1508 678"> <thead> <tr> <th>Year</th> <th>Production(T)</th> <th>EC Capacity (MTA)</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>8999996</td> <td>9</td> </tr> <tr> <td>2017-18</td> <td>7052647</td> <td>9</td> </tr> <tr> <td>2018-19</td> <td>7200010</td> <td>9</td> </tr> <tr> <td>2019-20</td> <td>7510295</td> <td>9</td> </tr> <tr> <td>2020-21</td> <td>7520005</td> <td>9</td> </tr> </tbody> </table>	Year	Production(T)	EC Capacity (MTA)	2016-17	8999996	9	2017-18	7052647	9	2018-19	7200010	9	2019-20	7510295	9	2020-21	7520005	9
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iii	Four ambient air quantity monitoring stations shall be established in the core zone as well as in the buffer zone PM _{2.5} , PM ₁₀ , SO ₂ and NO _x 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/2019-20/153 dated 31.01.2020 (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 (PM ₁₀ , PM _{2.5} , SO ₂ and NO _x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the ministry including its concerned Regional Office and to the State Pollution Control Board and the central 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 October-2020 to March-2021 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. No. of ear plugs/muffs provided in the period October-2020 to March-2021 is 90. 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 transporting the mineral shall be covered with tarpaulins and optimally loaded.	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 for transportation of coal are covered with tarpaulins and loaded to the optimum quantity only.																		

viii	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.	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.
ix	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	During the period October-2020 to March-2021, 190 protective respiratory devices were provided in addition to the existing ones. They are given adequate training and informed on use of protective respiratory devices.
x	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.	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. 195 nos of employees have been examined from October-2020 to March-2021.
xi	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a senior Executive, who will report directly to the head of the company.	<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	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.	Separate account will be maintained for environmental protection measures. Year wise expenditure is being reported to the OSPCB, Bhubaneswar and to the Regional Office, MoEF through Form V (Environmental Statement). The Environmental Expenditure during the year 2019-20 is 272.89 Lakhs.
xiii	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 .	Advertisement was made in two newspapers namely The New Indian Express & Dharitri (Odia daily) on Dt. 29.01.15 enclosed as [Annexure 6] .

	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.	Copy of EC was sent to three local panchayat's Sarpanch office namely Bandhbahal, Sarandamal and Kusraloi on 1.3.15.(all three). Further, it has also been placed on M.C.L.'s website "www.mahanadicoal.in".
xv	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.	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.
xvi	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the Project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical Pollutant such as PM 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.	The Environmental Clearance copy was uploaded on MCL website "mahanadicoal.in". Monitoring data of environmental quality parameters (air, water, noise) and critical Pollutant such as PM ₁₀ , PM _{2.5} , 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 "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 April-2020 to September-2020 was sent to Eastern Regional Office, MoEF and Odisha State Pollution Control Board vide letter no: MCL/LKPA/PO/BOCM/ENVT/20-21/2455 Dated: 25.11.2020
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, 2020 in Form - V was submitted to Odisha State Pollution Control Board vide L.No: MCL/HQ/Env. & Forest/2020/157 dated 28.09.2020 and also uploaded on the MCL's website "mahanadicoal.in" along with the status of compliance of EC conditions and sent to the Eastern Regional Office of the MoEF&CC by e-mail.


 Project Officer
 Belpahar OpenCast Mine
 27/5/21

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. 15th Jan.2021.		
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	26.40 MT (as on 01.04.2020)	
		Target output	9 MTPA	
		Average stripping ratio	1.95	
		Project life	3 years	
	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	131
		b	ST/ Adivasees	281
		c	Other	119
			Total	531
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 2019-20 ₹272.89 Lakh
	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)	2022-23
		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	: 05 (Five)		
2	Families affected and displaced	: 531 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	: 8.07 crores(CC in lieu of Plot+ HBA+ Incentive)		
B	Amount paid/ used	: 4.7 crores		
5	Employment details-			
A	Total employment to be provided	: 280 nos#		
B	Employment given so far	: 1024 nos		
	Name of the village	Employment provided (nos)	under consideration	
	Bandhbahal	31	0	
	Chharla	263	2	
	Darlipali	185	12	
	Jamkani	14	0	
	Jurabaga	392	0	
	Kirarama	70	0	
	Kusuraloi	28	0	
	Kherualbahal	40	1	
	Total	1024	15	
6	Rehabilitation & Resettlement details		Rehabilitation Site + Cash Compensation+ Annuity	
A	No. of families rehabilitated			
	i) Name of site	: Khadam-I & Khadam-II		
	ii) Families Rehabilitated	: (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	191	191	0
	Darlipali	193	117	76
	Jurabaga	27	20	7
	Kirarama	5	1	4
	Kerualbahal	115	47	68
	Total	531	376	155
B	Family yet to be Rehabilitated			
	i) Name of the site	: 1. Khadam-I 2. Khadam -II		
	ii) Nos. of family	: 531 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	e	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	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Commercial crops</th> <th style="width: 15%;">Agricultural Crops</th> <th style="width: 15%;">Road side plantation</th> <th style="width: 15%;">Natural vegetation</th> <th style="width: 15%;">Scrubland species</th> </tr> </thead> <tbody> <tr> <td>Baigana</td> <td>Mung</td> <td>Sirisha</td> <td>Kendu</td> <td>Apamaranga</td> </tr> <tr> <td>Miricha</td> <td>Biri</td> <td>Gamhari</td> <td>Bheru</td> <td>Bhuin Nimba</td> </tr> <tr> <td>Kakudi</td> <td>Kolatha</td> <td>Jamun</td> <td>Jamu</td> <td>Khadika</td> </tr> <tr> <td>Kakharu</td> <td>Badam</td> <td>Karanja</td> <td>Sal</td> <td>Mutha</td> </tr> <tr> <td>Simba</td> <td>Piaja</td> <td>Gohira</td> <td>Dhaura</td> <td>Talamuli</td> </tr> <tr> <td>Kadali</td> <td>Rasuna</td> <td>Babul</td> <td>Kurei</td> <td>Dauria</td> </tr> <tr> <td>Bhendi</td> <td>Sorisha</td> <td>Patash</td> <td>Khajuri</td> <td>Bajramuli</td> </tr> <tr> <td>Khira</td> <td>Makka</td> <td>Peepal</td> <td>Chara</td> <td>Bana Kolatha</td> </tr> <tr> <td>Mula</td> <td>Sugarcane</td> <td>Mango</td> <td>Kuruda</td> <td>Marda</td> </tr> <tr> <td>Lemon, etc.</td> <td></td> <td>Bara,etc.</td> <td>Sunari, etc.</td> <td>Langulia, etc.</td> </tr> </tbody> </table>	Commercial crops	Agricultural Crops	Road side plantation	Natural vegetation	Scrubland species	Baigana	Mung	Sirisha	Kendu	Apamaranga	Miricha	Biri	Gamhari	Bheru	Bhuin Nimba	Kakudi	Kolatha	Jamun	Jamu	Khadika	Kakharu	Badam	Karanja	Sal	Mutha	Simba	Piaja	Gohira	Dhaura	Talamuli	Kadali	Rasuna	Babul	Kurei	Dauria	Bhendi	Sorisha	Patash	Khajuri	Bajramuli	Khira	Makka	Peepal	Chara	Bana Kolatha	Mula	Sugarcane	Mango	Kuruda	Marda	Lemon, etc.		Bara,etc.	Sunari, etc.	Langulia, etc.
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Simba	Piaja	Gohira	Dhaura	Talamuli																																																						
Kadali	Rasuna	Babul	Kurei	Dauria																																																						
Bhendi	Sorisha	Patash	Khajuri	Bajramuli																																																						
Khira	Makka	Peepal	Chara	Bana Kolatha																																																						
Mula	Sugarcane	Mango	Kuruda	Marda																																																						
Lemon, etc.		Bara,etc.	Sunari, etc.	Langulia, etc.																																																						
	a)	Species (Trees/Shrubs/Grasses/Climbers)	:																																																							
	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) Total area available for plantation in each category : Backfilled area of 74.691 Ha is available only out of the 5 categories

i) Green Belt	ii) Dumps	iii) Back filled area	iv) Road sides	v) Block plantation
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

b) Plantation details (category wise & Methodology)

Year of plantation	Species planted	Spacing	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(ONGOING)	140.55(maintenance till 3rd)
4	2015-16	17,49,920.00(ONGOING)	116.67(maintenance till 2nd)
5	2017-18	5,88,960.00(ONGOING)	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: 27.05.2021


27/5/21
Signature of Incharge

Annexure- I		
CSR Expenditure of Lakhanpur Area during the year 2020-21 (Lakhs)		
S.No.	Description of work	Expenditure (Rs. in lakhs)
1	Development of basic infrastructure Negipali site for resettlement of poor Sukhbasi families of affected villages of Lakhanpur Area	76.45
2	Supply of drinking water to village Tingismal at LKP OCP under LKPA (AP-5)	4.74
3	Supply of drinking water to villages Luhurapada & Sahajbahal at LKP OCP under LKPA (AP-3)	3.88
4	Supply of drinking water to village Ubuda at LKP OCP under LKPA (AP-4)	4.02
5	Construction of cc Road Andhapara(Pada no 1) at Kushraloi Gram Panchayat	5.00
6	Constn. Of new building along with rep. of existing building & water supply to PUPS at Bandhabahal.	0.70
7	Construction of community centre at Kudaloi village of Kudaloi GP.	16.54
8	CONSTN. OF KALYAN MANDAP AT BASUPALI VILLAGE OF DALGOAN GP	-2.89
9	Supply of drinking water to Tingismal village	0.00
10	Supply of drinking water by 8kl capacity water tanker to village Tingismal at LKP OCP	0.89
11	Supply of drinking water to different villages of of Lakhanpur Area ph-II	0.00
12	Supply of drinking water by 8kl capacity water tanker to village Ubda at LKP OCP	1.44
13	Supply of drinking water by 8kl capacity water tanker to village Karlajori and Khaliapali at LKP OCP	1.77
14	Supply of drinking water by 8kl capacity water tanker to village Luharpada and Sahajbahal at LKP OCP	1.58
15	Supply of drinking water to village Kherualbahal & Lechipada under CSR	0.80
16	Supply of drinking water to village Darlipali under CSR	0.49
17	Improvement of Dalgaon Kanta(Pond) & constn of bathing steps.	9.84
18	Construction of Boundry wall of Kalyan Mandap and CC Road near Filter plant at Bandbahal Gram Panchayat	12.90
19	Supply of drinking water to diffrent village at BIT	-0.83
20	Supply of drinking water to Darlipali village under BOCM (AP-1)	4.80
21	Supply of drinking water to village Karlajori & Khaliapali at LKP OCP under LKPA (AP-2)	4.67
22	Supply of drinking water to villages Sunari, Remanda, Tilia, Phatapali, Negipali, Badmal, Kansbahal, Senhamal, Cherketa (Phase-II) under BIT for 60 days (SP-2)	9.96
23	Supply of drinking water to villages Jurabaga, Majhipada and Muchabahal under BOCM for 90 days (SP-8)	4.18
24	Supply of drinking water to villages Baghamunda, Dasrupali, Dasrupali (Mundapada), Gopipali and Salepali under BOCM for 90 days (SP-7)	7.01
25	Improvement of Padapali Kanta with new bathing Ghat near Bejikud at BOCM	0.00
26	Errection of new 11kv & 440 vt power supply for resetelment of sukbasia families affected village under CSR	19.41
27	Supply of drinking water by water tanker at Belpahar N.A.C.(lead 8 Km) by 5 KL capacity water tanker at BIT.	0.08
28	Constn. Of urinal, toilet and bathroom for Majhipada School under Bandhabahal G.P	0.00
29	Supply of drinking water to villages Belpahar NAC, Lakhanpur Block, Jagdalpur (Phase – III) under BIT for 60 days (SP-3)	4.76
30	Supply of drinking water to villages Gopipali, Talibahal, Limtalipada, Khaliamunda (Phase – IV) under BIT for 60 days (SP-4)	5.68
31	Providing display board for CSR works	-0.06
32	Improvement of Snehmal Kanta (pond) and construction of bathing steps under Dalgaon G.P.	10.23
33	Construction of boundary wall with gate at Manoj Padhee High School, Sarandamal village.	15.23
34	Supply of drinking water to village old Khairkuni, new Khairkuni, Chuchapada,Jaybidia & Changapada in LKP OCP CSR	5.02
35	Construction of Kalyan Mandap at Banjari in Banjari Gram Panchayat	17.49
36	Construction of Kalyan Mandap at Bartap in Banjari Gram Panchayat	17.59
37	Construction of Kalyan Mandap at Jaybudia in Banjari Gram Panchayat	17.40
38	Excavation of new pond at Banjimunda under Lakhanpur OCP of LKPA	-0.79
39	Supply of drinking water by 8kl capacity water tanker to village Kudaloi, Chingiriguda, Bichupada,Gangapada,Dahaldera,Bholamal,Thakurpada,Bazarpada at LKP OCP	0.00
40	Supply of drinking water to villages Kudaloi, Chingriguda, Bichhuapada, Gangapada, Dahaldera, Bholamal, Thakthakipada and Bazarpada at LKP OCP under LKPA (SP-6)	7.38
41	Supply of drinking water to villages Bejibandh, Piplikani, Satlang, Batlang , Vejikudh, Padapali, Old Vejikudh, Phata, Karpabahal, Dhubentipi, Baragada, Khapsimunda, Khamardihi, Khadam, Kirarama (Phase-I) under BIT for 60 days. (Summer Package-1)	10.64
42	Construction of CC Road at Jamuna at Kushraloi Gram Panchayat	6.91
43	Supply of drinking water to different villages by 8kl capacity water tank at BIT(Under csr)	0.00
44	Supply of drinking water by water tanker at Limtalia pada and Khaliamunda (lead 8 Km) by 5 KL capacity water tanke at BIT/LKPA.	0.02
45	Supply of drinking water by water tanker at Gopipali (lead 15 Km)	0.06
46	Supply of drinking water by water tanker at Phata village (lead 4 Km) by 5 KL capacity water tanker at BIT.	0.04
47	Development of Talbern kanta (pond) at Carpali of Rampela under CSR	0.00
48	Constn. Of bathing ghat steps at Bichupada village pond	0.00
49	Constn. Of bathing ghat at village Kudaloi	0.00

50	Constn. Of 02 nos bathing ghat at village Karlajori	0.00
51	Constn. Of bathing ghat at village Balundu	0.00
52	Constn. Of 2 nos bathing ghat at Ramplela village	0.00
53	Procurement & distribution of necessary materials to the needy poor & senior citizens by Mahila Mandal of LKPA.	-1.20
54	Constn. Of community mandap at Mandirpada in village PHATTA UNDER Sarandamal GP at BOCM	-0.19
55	Supply of drinking water by water tanker at Karpabahal, Dhubentipi, and Baragada (Lead 2-4 Km) by 05 KL capacity water tanker at BIT/LKPA.	0.05
56	Supply of drinking water by water tanker at Negipali, Badimal, Kansbahal, Senhamal and Cherkata under Doalgoan Panchayat (lead 11 KM) by 12 KL Capacity water tanker at BIT.	0.01
57	Supply of drinking water by water tanker at Lakhanplur Block (lead 15 Km) by 12 KL Capacity water tanker at BIT/LKPA.	0.01
58	Supply of drinking water by water tanker at Sunari G.P. (lead 20 Km) by 12 KL Capacity water tanker at BIT.	0.03
59	Renovation of Thebra Muternali kata/pond under Bhokhol G.P of Lakhanpur Area	-5.71
60	Construction of concrete road from Talipada to Goudapada connecting main road with drain system on both side of road.	47.93
61	Improvement of Bejibandha Kanta(pond) & constn of new bathing ghat under Pipilikani of BOCM	-0.28
62	Completion of Drain at Shanti nagar at Bandhbahal Gram Panchayat	11.71
63	MAKING OF WATER SUPPLY ARRANGEMENT NEARLY CONSTRUCTED TOILETS UNDER SWACHHA ABHIJAN UNDER LKP OCP	0.00
64	P&M WATER SUPPLY ARRANGEMENT FOR 29 NOS TOILETS UNDER SWACHHA ABHIJAN UNDER BOCM	0.77
65	Supply of drinking water to villages under CSR	0.00
66	Supply of drinking water to villages Kherulbahal and Lechuapada under BOCM for 1 year (AP-1)	7.72
67	Supply of health materials for COVID-19	2.31
68	Supply of IR Thermometer for COVID-19	0.14
69	Payment of honorarium to staff Nurse (Contractual) for COVID-19	0.26
70	Payment of honorarium for the period 28.09.20 - 27.10.20 to contractual staff nurse	0.29
71	Payment of honorarium for the period 28.10.2020 - 26.11.2020	0.30
72	Supply of Refrigerator for COVID-19	0.21
73	Supply of health materials for COVID-19	0.11
74	Supply of health materials for COVID-19	0.11
75	Supply of Mask during COVID-19	0.12
76	Payment of honorarium to staff Nurse (Contractual) for COVID-19	0.26
77	Payment Honorarium to Staff Nurse (Contractual) for COVID-19	0.26
78	Payment of honorarium for the period 28.09.20 - 27.10.20 to contractual staff nurse	0.30
79	Payment of honorarium for the period 28.10.2020 - 26.11.2020	0.28
80	Supply of Dade body bag for COVID-19	0.15
81	Supply of material for covid care centre	0.23
82	Procurement of cleaning material for COVID-19 at Hospital	2.33
83	Supply of health materials for COVID-19	1.13
84	Supply of health materials for CIVID-19	3.67
85	Supply of water cooler cum purifier for Lakhanpur Area under CSR	1.73
86	Payment of honorarium to Staff Nurse(Contractual) for COVID-19	0.13
87	Payment of honorarium for the period 28.09.20 - 27.10.20	0.30
88	Payment of honorarium for the period 28.10.2020 - 26.11.2020	0.30
89	Purchase of health material for COVID-19	0.17
90	Procurement of health materials for COVID-19 under CSR	4.07
91	Procurement of health materials for COVID-19 under CSR	18.31
92	Procurement of health materials for CIVID-19 under CSR	0.74
93	Procurement of health materials for CIOVID-19 under CSR	2.25
94	Supply of cotton mask during COVID-19 at LKPA under CSR	2.52
95	Supply of furniture fo COVID-19	1.08
96	Payment of Honorarium to Staff Nurse engaged in Covid care Centre	0.26
97	Procurement of N-95 Mask	0.89
98	Supply of health materials for COVID-19	4.16
99	Supply of health material FOR covid-19	3.82
100	Supply of health materials for COVID-19	2.47
101	Purchase of health material for COVID-19	0.05
102	Payment towards refilling of oxygen cylinder for COVID Health Care Centre	0.06
103	Supply of health material for distribution to senior citizen under CSR	1.20
104	Purchase of health material for CIVID-19	0.07
105	Supply of IV stand SS for COVID-19 Health Centre	0.54
106	Purchase of health materials for COVID-19	2.09
107	Supply of Face shield for COVID-19	0.11
TOTAL		425.63

AMBIENT AIR QUALITY DATA

ANNEXURE -2

PROJECT: BELPAHAR OCM, LAKHANPUR AREA, MCL.

(Concentration in µg/cu.m.)

Station	Near magazine house					East of mine					South 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
02.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	85	11.56	12.68	143
03.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	94	12.42	12.88	170
09.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	91	14.89	13.82	164
10.06.20	18	57	12.11	11.10	80	-	-	-	-	-	-	-	-	-	-	21	89	13.89	13.56	171
15.06.20	-	-	-	-	-	48	64	10.08	13.18	78	26	70	14.81	11.21	104	-	-	-	--	-
17.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	82	9.86	15.07	110
18.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	42	15.59	20.43	76
23.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	44	14.85	18.78	61
24.06.20	21	81	13.46	19.11	112	-	-	-	-	-	-	-	-	-	-	24	63	8.64	11.74	85
29.06.20	-	-	-	-	-	37	83	9.60	11.74	102	29	52	11.39	13.24	68	-	-	-	-	-
30.06.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	67	6	7.45	109
09.07.20	13	54	7.03	15.16	79	-	-	-	-	-	-	-	-	-	-	--	-	-	-	-
13.07.20	-	-	-	-	-	22	69	13.31	17.01	102	18	75	12.12	18.7	153	-	-	-	-	-
23.07.20	21	52	8.16	14.12	75	-	-	-	--	-	-	-	-	-	-	-	-	-	-	-
29.07.20	-	-	-	-	-	44	192	12.17	18.32	265	22	69	8.75	20.13	98	-	-	-	-	-
01.07.20	-	-	-	--	-	-	-	-	-	-	-	-	-	-	-	32	73	6.63	13.46	115
08.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	58	8.80	14.46	85
09.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	49	9.45	16.31	89
14.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	54	8.45	13.25	88
15.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	79	10.57	14.59	120
22.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	48	15.31	26.13	62
23.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	62	9.15	16.40	96
29.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	88	10.66	14.82	135
30.07.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	70	8.06	16.92	121
02.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	64	8.34	19.80	110
03.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	61	8.10	21.09	89
11.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	78	8.57	13.36	138
12.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	85	9.33	12.29	134
18.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	89	11.70	12.60	128
19.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	83	8.37	13.79	121
25.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	62	8.06	13.98	99
26.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	52	10.04	15.49	86
31.08.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	57	9.17	20.67	96
08.08.20	19	80	11.17	24.67	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.08.20	-	-	-	-	-	24	63	11.77	18.57	142	18	61	13.48	25.34	109	-	-	-	-	-

07.12.20	-	-	-	-	-	53	145	13.91	30.24	262	66	168	9.38	24.17	265	-	-	-	-	-
19.12.20	-	-	-	-	-	62	171	14.98	34.69	249	69	184	12.60	24.82	297	-	-	-	-	-
02.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	93	11.19	26.05	182
03..12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	86	12.96	23.49	165
08.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	94	10.99	21.93	176
09.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	87	14.60	20.44	189
15.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	87	16.32	22.61	157
16.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	92	14.23	25.23	169
21.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	94	18.80	27.53	180
22.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	84	11.91	25.94	153
30.12.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	87	20.10	27.78	141
01.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	81	16.54	32.09	149
06.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	84	16.09	35.48	154
13.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	88	17.13	28.44	225
14.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	80	15.41	20.75	189
19.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	82	15.20	27.93	179
20.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	93	18.02	24.10	217
28.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	86	11.48	17.20	196
29.1.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	93	14.78	24.79	217
30.1.21	57	175	18.46	36.25	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02.2.21	-	-	-	-	-	55	158	16.21	26.43	276	61	169	13.23	30.12	321	-	-	-	-	-
08.2.21	-	-	-	-	-	-	-	-	-	-	58	141	21.50	34.39	264	-	-	-	-	-
12.2.21	63	227	17.14	29.51	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.2.21	-	-	-	-	-	63	182	16.35	31.12	296	-	-	-	-	-	-	-	-	-	-
03.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	78	11.27	33.62	130
04.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	83	16.94	25.83	148
10.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	92	18.02	36.15	162
11.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	90	17.65	30.34	197
16.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	87	18.71	19.61	146
17.2.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	84	12.77	26.42	181
02.3.21	-	-	-	-	-	55	248	17.37	40.42	368	-	-	-	-	-	-	-	-	-	-
12.3.21	-	-	-	-	-	54	193	22.09	26.16	318	60	158	21.14	23.97	276	-	-	-	-	-
16.3.21	46	132	18.97	38.68	263	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	77	13.58	31.00	166
04.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	83	18.91	29.49	182
09.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	86	26.48	34.53	197
10.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	91	18.75	23.92	187
17.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	88	10.77	16.48	212
18.3.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	84	18.58	21.49	179
MoEF Standard	60	300	120	120	600	60	300	120	120	600	60	300	120	120	600	60	300	120	120	600

ମହାନଦୀ କୋଲଫିଲ୍ଡସ ଲିମିଟେଡ
 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/2019-20/ 153

Date: 31.01.2020

To

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

Sub: Requesting for approval for Routine Environmental Monitoring Stations for Lakhanpur Area for the year 2020-21.

Dear Sir,

As per the stipulated conditions of Environmental Clearance, Consent to Establish and Consent to Operate of Mines of Lakhanpur Area (Lakhanpur OCP, Belpahar OCM and Lilari OCP) the locations of Routine Environmental Monitoring Stations must be consulted with State Pollution Control Board. In this regard the location and coordinates for Routine Environmental Monitoring Stations for the year 2020-21 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°46'37.73"N 83°51'01.48"E
2	Lakhanpur Opencast Project	South west of Quarry 6	21°43'57.87"N 83°47'27.64"E
3	Lakhanpur Opencast Project	West of Quarry 3	21°46'27.25"N 83°47'14.86"E
4	Lakhanpur Opencast Project	Near Quarry 3.	21°45'56.50"N 83°48'46.90"E
5	Belpahar Opencast Mine	Near Magazine House	21°44'48.01"N 83°51'31.47"E
6	Belpahar Opencast Mine	Near Central Workshop	21°46'17.45"N 83°52'21.90"E
7	Belpahar Opencast Mine	South of the Mine	21°43'12.08"N 83°48'53.02"E
8	Belpahar Opencast Mine	East of the Mine	21°43'28.22"N 83°52'2.01"E
9	Lilari Opencast Project	Near Lilari Magazine House	21°47'09.56"N 83°51'14.57"E

Heavy Metal Monitoring stations			
Sl.No.	Project	Name of Station	Co-ordinates
1	Lakhanpur Opencast Project	Near Lilari Nallah Pump house	21°46'37.73"N 83°51'1.48"E
2	Lakhanpur Opencast Project	South west of Quarry 6	21°43'57.87"N 83°47'27.64"E
3	Belpahar Opencast Mine	Near Magazine House	21°44'48.01"N 83°51'31.47"E
4	Belpahar Opencast Mine	East of the Mine	21°43'28.22"N 83°52'2.01"E
5	Lilari Opencast Project	Near Lilari Magazine House	21°47'09.56"N 83°51'14.57"E

Effluent quality Monitoring station		
S.No	Project	Name of Station
1.	Lakhanpur Opencast Project	Effluent Treatment Plant
		Mine sump water
		Clear water tank of Secondary Sedimentation Tank
2.	Belpahar Opencast Mine	Effluent Treatment Plant
		Mine sump water
		ECO Tank
		Clear water tank of Sewage Treatment Plant
3.	Lilari Opencast Project	Mine sump water

Drinking Water Monitoring locations		
S.No	Project	Location
1.	Lakhanpur Opencast Project	Lakhanpur OCP Canteen Tap water
2.	Belpahar Opencast Mine	IWSS outlet
3	Lilari Opencast Project	Jurabaga Village well water

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


Surface Water Monitoring locations	
Lakhanpur Opencast Project	Pulijhor stream near Tingismal Village as u/s of Lakhanpur OCP
	Pulijhor stream near Darlipalil Village before confluence to Lilari nallah as d/s of Lakhanpur OCP
	Lilari nallah near kudaloi village as u/s of Lakhanpur OCP
	Lilari nallah near project office lilari bridge village as d/s of Lakhanpur OCP

Well level monitoring locations		
S.No	Project	Location
1.	Lakhanpur Opencast Project	Darlipali village well Ubuda village well Khairkuni village well
2.	Belpahar Opencast Mine	Chharla village well

Submitted for your kind consideration and approval

Yours Faithfully


Project Officer
Lakhanpur OCP
3/2/2020


Project Officer
Belpahar OCM
03/02/2020


Manager
Lilari OCP
3/2/2020

Copy to:

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

Approved
V. Mallick
Regional Officer
State Pollution Control Board
JHARSUGUDA



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Annexure -3

AMBIENT AIR QUALITY DATA (HEAVY METALS)

Area: Lakhnampur

Project	Belpahar OCP		
Monitoring Station	Near Central Workshop		
Date of sampling	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
02-Jun-20	<0.1	<1.0	<1.0
03-Jun-20	<0.1	<1.0	<1.0
09-Jun-20	<0.1	<1.0	<1.0
10-Jun-20	<0.1	<1.0	<1.0
17-Jun-20	<0.1	<1.0	<1.0
18-Jun-20	<0.1	<1.0	<1.0
23-Jun-20	<0.1	<1.0	<1.0
24-Jun-20	<0.1	<1.0	<1.0
30-Jun-20	<0.1	<1.0	<1.0
Standard	1.0(24hours)	6.0(Annual)	20(Annual)

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AMBIENT AIR QUALITY DATA (HEAVY METALS)

Area: Lakhanpur

Project	Belpahar OCP		
Monitoring Station	Near Central Workshop		
Date of sampling	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
01-Jul-20	<0.1	<1.0	<1.0
02-Jul-20	Strike		
08-Jul-20	<0.1	<1.0	<1.0
09-Jul-20	<0.1	<1.0	<1.0
14-Jul-20	<0.1	<1.0	<1.0
15-Jul-20	<0.1	<1.0	<1.0
22-Jul-20	<0.1	<1.0	<1.0
23-Jul-20	<0.1	<1.0	<1.0
29-Jul-20	<0.1	<1.0	<1.0
30-Jul-20	<0.1	<1.0	<1.0
Standard	1.0(24hours)	6.0(Annual)	20(Annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
02-Aug-20	3.71	<0.1	<1.0	<1.0
03-Aug-20	3.14	<0.1	<1.0	<1.0
11-Aug-20	3.86	<0.1	<1.0	<1.0
12-Aug-20	3.43	<0.1	<1.0	<1.0
18-Aug-20	<0.1	<0.1	<1.0	<1.0
19-Aug-20	<0.1	<0.1	<1.0	<1.0
25-Aug-20	0.53	<0.1	<1.0	<1.0
26-Aug-20	<0.1	<0.1	<1.0	<1.0
31-Aug-20	0.48	<0.1	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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S. S. S. S.

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
01-Sep-20	3.12	<0.1	<1.0	<1.0
07-Sep-20	3.42	<0.1	<1.0	<1.0
08-Sep-20	3.86	<0.1	<1.0	<1.0
15-Sep-20	6.12	<0.1	<1.0	<1.0
16-Sep-20	5.96	<0.1	<1.0	<1.0
21-Sep-20	5.84	<0.1	<1.0	<1.0
22-Sep-20	6.01	<0.1	<1.0	<1.0
29-Sep-20	6.42	<0.1	<1.0	<1.0
30-Sep-20	5.32	<0.1	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
04-Nov-2020	2.52	<0.1	<1.0	<1.0
05-Nov-2020	2.48	<0.1	<1.0	<1.0
10-Nov-2020	2.68	<0.1	<1.0	<1.0
11-Nov-2020	2.54	<0.1	<1.0	<1.0
18-Nov-2020	4.82	<0.1	<1.0	<1.0
19-Nov-2020	4.96	<0.1	<1.0	<1.0
24-Nov-2020	4.88	<0.1	<1.0	<1.0
25-Nov-2020	5.01	<0.1	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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Q. I. C.
**Q. I. C.
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 cmpdi <i>A Mini Ratna Company</i>	AMBIENT AIR QUALITY DATA (NAAQS PARAMETER) Area: Lakhanpur			
Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)
02-Dec-2020	2.88	—	<1.0	<1.0
03-Dec-2020	2.89	—	<1.0	<1.0
08-Dec-2020	2.72	—	<1.0	<1.0
09-Dec-2020	2.94	—	<1.0	<1.0
15-Dec-2020	2.54	—	<1.0	<1.0
16-Dec-2020	2.59	—	<1.0	<1.0
21-Dec-2020	2.60	—	<1.0	<1.0
22-Dec-2020	2.55	—	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur


Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)
28-Jan-2021	3.78	<0.1	<1.0	<1.0
29-Jan-2021	3.69	<0.1	<1.0	<1.0
03-Feb-2021	3.70	<0.1	<1.0	<1.0
04-Feb-2021	3.66	<0.1	<1.0	<1.0
10-Feb-2021	2.89	<0.1	<1.0	<1.0
11-Feb-2021	2.87	<0.1	<1.0	<1.0
16-Feb-2021	2.76	<0.1	<1.0	<1.0
17-Feb-2021	2.80	<0.1	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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 <p>cmpdi A Mini Ratna Company</p>	AMBIENT AIR QUALITY DATA (NAAQS PARAMETER) Area: Lakhapur			
Project	Belpahar OCP			
Monitoring Station	Near Central Workshop			
Date of sampling	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)
24-Feb-2021	4.18	<0.1	<1.0	<1.0
25-Feb-2021	4.10	<0.1	<1.0	<1.0
03-Mar-2021	4.05	<0.1	<1.0	<1.0
04-Mar-2021	4.20	<0.1	<1.0	<1.0
09-Mar-2021	2.87	<0.1	<1.0	<1.0
10-Mar-2021	2.80	<0.1	<1.0	<1.0
17-Mar-2021	2.78	<0.1	<1.0	<1.0
18-Mar-2021	2.68	<0.1	<1.0	<1.0
Standard	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)

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

DATE OF SAMPLING	STATION	Noise Level Measurement in dB(A)	
		DAY	NIGHT
25.04.2020	Near central workshop	68.7	65.8
	East of the mine	66.8	61.5
	South of the mine	65.7	63.4
	Near magazine house	67.4	64.9
13.05..2020	Near central workshop	68.9	66.7
	East of the mine	64.8	61.4
	South of the mine	66.2	64.5
	Near magazine house	-	-
27.05.2020	Near central workshop	70.8	65.4
	East of the mine	62.5	60.7
	South of the mine	66.7	59.3
	Near magazine house	64.4	60.1
10.06.2020	Near central workshop	70.2	68.4
	East of the mine	64.9	58.7
	South of the mine	62.5	58.1
	Near magazine house	65.7	60.4
24.06.2020	Near central workshop	68.7	63.4
	East of the mine	65.9	60.2
	South of the mine	61.8	58.6
	Near magazine house	65.3	61.9
11.07.2020	East of the mine	67.5	64.3
	South of the mine	63.2	60.7
	Near magazine house	66.8	64.5
	Near central workshop	66.2	61.7
29.07.2020	East of the mine	64.8	62.5
	South of the mine	65.5	63.2
	Near magazine house	64.2	64.2
	Near central workshop	66.6	62.4
11.08.2020	East of the mine	63.9	57.4
	South of the mine	62.7	60.3
	Near magazine house	60.4	57.1
	Near central workshop	65.3	62.7
26.08.2020	East of the mine	62.2	58.4
	South of the mine	64.9	62.5
	Near magazine house	62.1	59.1
	Near central workshop	64.9	61.7
12.09.2020	East of the mine	63.9	60.4
	South of the mine	66.7	64.5
	Near magazine house	63.8	58.3
	Near central workshop	66.8	63.2
26.09.2020	East of the mine	65.8	62.1
	South of the mine	62.9	58.3
	Near magazine house	64.6	60.1
	Near central workshop	66.9	63.2
10.10.2020	East of the mine	66.7	63.9
	South of the mine	64.6	62.3
	Near magazine house	62.5	60.2
	Near central workshop	68.3	63.4
29.10.2020	East of the mine	66.5	63.9
	South of the mine	64.9	61.4
	Near magazine house	65.7	62.1
	Near central workshop	67.8	63.4
13.11.2020	East of the mine	64.6	63.9
	South of the mine	68.6	62.2
	Near magazine house	66.7	63.9
	Near central workshop	67.4	62.8
27.11.2020	East of the mine	63.5	59.4
	South of the mine	65.8	63.2
	Near magazine house	64.2	61.5

	Near central workshop	66.7	63.9
10.12.20	East of the mine	64.7	62.1
	South of the mine	66.6	64.9
	Near magazine house	63.6	59.4
	Near central workshop	65.3	63.2
23.12.20	Near central workshop	67.8	64.2
	East of the mine	65.9	63.9
	South of the mine	63.8	62.1
	Near magazine house	64.9	62.7
05.1.21	Near central workshop	64.6	62.1
	East of the mine	63.2	60.5
	South of the mine	64.9	63.2
	Near magazine house	66.9	63.2
19.1.21	Near central workshop	67.6	63.6
	East of the mine	65.7	62.3
	South of the mine	63.2	61.2
	Near magazine house	66.9	62.3
05.2.21	Near Central Workshop	64.6	63.9
	East of the Mine	65.7	62.3
	South of the Mine	63.2	60.5
	Near Magazine House	66.6	64.7
18.2.21	Near Central Workshop	66.8	63.5
	East of the mine	63.2	58.6
	South of the Mine	66.9	64.7
	Near Magazine House	64.6	62.9
03-3-21	East of the Mine	65.9	62.7
	South of the Mine	67.8	63.2
	Near Magazine House	66.3	64.8
	Near Central Workshop	68.3	65.7
18.3.21	Near Central Workshop	64.8	61.8
	Near Magazine House	68.3	64.6
	South of the Mine	64.7	62.1
	East of the Mine	66.5	63.2

EFFLUENT QUALITY DATA

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
13.07.2020	Clear water Tank of Sewage treatment plant	-	-	-	-	-
	Outlet ETP	-	-	-	-	-
	ECO tank	7.28	<4.0	28	20	-
	Mine Sump Water	6.92	<4.0	24	16	-
	Inlet of ETP	-	-	-	-	-
29.07.2020	Clear water Tank of Sewage treatment plant	7.26	-	28	-	<2.0
	Outlet ETP	-	-	-	-	-
	ECO tank	7.42	<4.0	36	28	-
	Mine Sump Water	7.01	<4.0	32	24	-
	Inlet of ETP	-	-	-	-	-
14.08.2020	Clear water Tank of Sewage treatment plant	-	-	-	-	-
	Outlet ETP	-	-	-	-	-
	ECO tank	6.70	<4.0	48	36	-
	Mine Sump Water	6.05	<4.0	28	24	-
	Inlet of ETP	-	-	-	-	-
12.09.2020	Clear water Tank of Sewage treatment plant	6.93	-	44	-	<2.0
	Outlet ETP	-	-	-	-	-
	ECO tank	6.68	<4.0	40	28	-
	Mine Sump Water	6.33	<4.0	24	12	-
	Inlet of ETP	-	-	-	-	-
13.10.2020	Clear water Tank of Sewage treatment plant	4.99	-	28	-	<2.0
	Outlet ETP	7.15	<4.0	44	32	-
	ECO tank	7.72	<4.0	48	40	-
	Mine Sump Water	7.34	<4.0	54	28	-
	Inlet of ETP	7.00	<4.0	64	40	-
30.10.2020	Clear water Tank of Sewage treatment plant	-	-	-	-	-
	Outlet ETP	-	-	-	-	-
	ECO tank	6.03	<4.0	34	16	-
	Mine Sump Water	5.98	<4.0	28	16	-
	Inlet of ETP	-	-	-	-	-
13.11.2020	Clear water Tank of Sewage treatment plant	7.18	-	48	-	<2.0
	Outlet ETP	-	-	-	-	-
	ECO tank	6.47	<4.0	30	16	-
	Mine Sump Water	6.32	<4.0	24	12	-
	Inlet of ETP	6.67	<4.0	54	68	-
28.11.2020	Clear water Tank of Sewage treatment plant	7.71	-	56	-	<2.0
	Outlet ETP	-	-	-	-	-
	ECO tank	7.52	<4.0	34	24	-
	Mine Sump Water	7.80	<4.0	28	20	-
	Inlet of ETP	-	-	-	-	-
10.12.2020	Clear water Tank of Sewage treatment plant	7.56	-	38	-	<2.0
	ECO tank	7.52	<4.0	32	20	-
	Mine Sump water	8.14	<4.0	22	12	-

25.12.2020	Clear water Tank of Sewage treatment plant	7.26	-	30	-	<2.0
	ECO tank	7.39	<4.0	20	12	-
	Mine Sump water	7.87	<4.0	72	80	-
13.1.2021	Clear water Tank of Sewage treatment plant	7.24	-	22	-	<2.0
	ECO tank	6.53	<4.0	20	52	-
	Mine Sump Water	6.85	<4.0	24	64	-
	Outlet of ETP	6.86	<4.0	18	32	-
	Inlet of ETP	6.82	<4.0	22	36	-
28.1.2021	Clear water Tank of Sewage treatment plant	7.01	-	26	-	<2.0
	ECO tank	6.42	<4.0	22	48	-
	Mine Sump Water	7.25	<4.0	24	36	-
13.2.2021	Clear water Tank of Sewage treatment plant	5.74	-	26	-	<2.0
	ECO tank	5.50	<4.0	28	44	-
	Mine Sump Water	7.51	<4.0	34	60	-
	Inlet ETP	7.43	<4.0	20	36	-
20.02.2021	Clear water Tank of Sewage treatment plant	5.89	-	26	-	<2.0
	ECO tank	6.69	<4.0	26	44	-
	Mine Sump Water	6.56	<4.0	48	104	-

ରାଜ୍ୟ ଭବନାଚଳିତ
ସମ୍ପାଦକ ପ୍ରଭାତ ପ୍ରକାଶ

ରୁକ୍ଷ ଭିକ୍ଷଣ
ଅଧିକାର ମଞ୍ଚ ଗଠିତ

ସରକାରୀ ମୋଟର

ବିଭାଗୀୟ ସମ୍ପଦ (ବିଭାଗୀୟ)
ପଦାଧିକାରୀଙ୍କ ଦ୍ୱାରା ପୂରଣ କରାଯିବ।

ସମ୍ପାଦକଙ୍କ ଦ୍ୱାରା ପୂରଣ କରାଯିବ।

MAHANADI COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
JAGRUTI VIHAR, BURLA-768020, DIST-SAMBALPUR, ODISHA
Tel: (EPABX) 0663-2542461 to 469, Website: <http://www.mcl.gov.in>

This is for the kind notice of all the concerned that Belpahar OC Expansion Project at Lakhanpur Area of Mahanadi Coalfields Limited has been accorded Environment Clearance vide letter no. J-11015/189/2008-IA.11(M); dt: 22/01/2015 of the Ministry of Environment, Forests & Climate Change for Expansion in production capacity to 9.0 Mty. 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://envfor.nic.in>. R- 4613

GOVERNMENT OF ODISHA
OFFICE OF THE SUPERINTENDING ENGINEER
RURAL WORKS CIRCLE, BERHAMPUR
E-Mail - serwbpr2004@yahoo.com Tel/FAX - 0680-2404287
AT - Ambapua, Po - Engineering School, Near Income Tax Office, Berhampur, Ganjam, Pin- 760010
No E-Tender // 270 // RWC// BAM // Dated 20 01 2015
Corrigendum to Bid Identification No. Online Tender/25-2014-15/BPR
No 1645-O - Due to unavoidable circumstances, the date & time of last date of availability of tender, seeking tender clarification, opening of technical bid and financial bid may be read as follows in the Bid Identification No. Online Tender/25-2014-15/BPR

1	Last date of availability of tender	::	11.02.2015 at 3.00 P.M. instead of 27.01.2015 at 3.00 P.M.
2	Last Date & Time of seeking tender clarification	::	07.02.2015 at 2.00 P.M. instead of 24.01.2015 at 2.00 P.M.
3	Date & time of opening of Technical Bid	::	16.02.2015 at 12.00 Noon instead of 31.01.2015 at 12.00 Noon.
4	Date & time of opening of Financial Bid	::	24.02.2015 at 11.00 A.M. instead of 07.02.2015 at 11.00 A.M.

All other contents will remain unchanged
25071/11/0024/1415 Sd/- Superintending Engineer, R.W. Circle, Berhampur

No.: 790-A **GOVERNMENT OF ODISHA**
DEPARTMENT OF WATER RESOURCES
INVITATION FOR BIDS (IFB)
"e" Procurement Notice-4/2014-2015
BID IDENTIFICATION NO.SAL-BDK-08-P1 OF 2014-15

1 The Executive Engineer, Salandi Canal Division, Bhadrak (Procurement Officer) on behalf of Governor of Odisha invites percentage rate bid to be received in online mode only for the construction of works from eligible Class of Contractors

SUPERINTENDING ENGINEER
No.1648-O:- "e"-Procurement Notice, On

- Name of the Work :- Construction of
- Total No. of works :- PMGSY (Balakrishna) PMGSY Mission
- Estimated cost :- Varies from Rs
- Class of contractor :- Super Class R & Super Class Class and Spe Class & "A" Class
- Period of completion :- Nine to Fifteen
- Cost of tender paper :- Rs. 10,500/- (Rupees Ten Thousand Five Hundred Only) Payable at BPR

6. Other details

Procurement Officer	Bid Identification No.
S E Rural Works Circle, Sundargarh	PMGSY/RWSESNG-03 of 2014-15

Further details can be seen from the website www.wpr.odisha.gov.in Corrigendum if any, will be seen in this Web-Site 25133/11/0027/1415

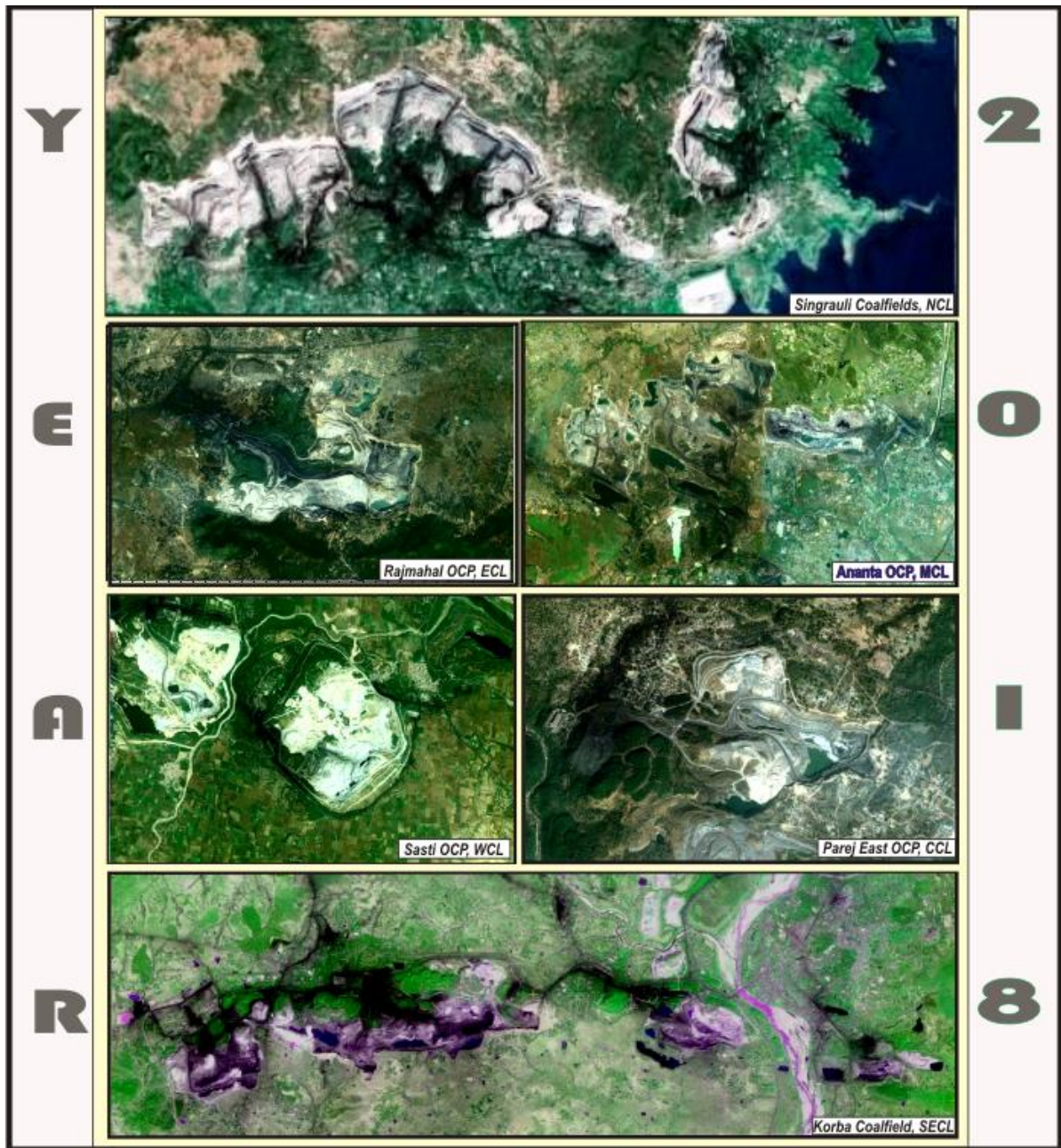
Office of
Public Health Division-III
Phone / FAX :- 0674-2

Invitation for Bid No
No 595-C - The Executive Engineer, PH Division from the Manufacturer / Authorised Dealers / Suppliers required to produce any document during purchase

Sl. No	Name of the work	Approx. value of Work (in lakh)
1	2	3
1	Procurement of grease, nut & bolts, other spares for day to day maintenance of pumps & motor at water treatment plant, Mundali under Non-Plan.	Rs 1.43
2	Supply of W/S & S/I fittings in different lower type Qtrs. (FR) at Sailashreenivihar Bhubaneswar	Rs 2.45

1 Bid documents consisting of plan specification

Land Restoration / Reclamation Monitoring of 52 Opencast Coal Mines Projects of CIL producing more than 5 mcm (Coal+OB) Based on Satellite Data for the Year 2018



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A Mini-Ratna Company

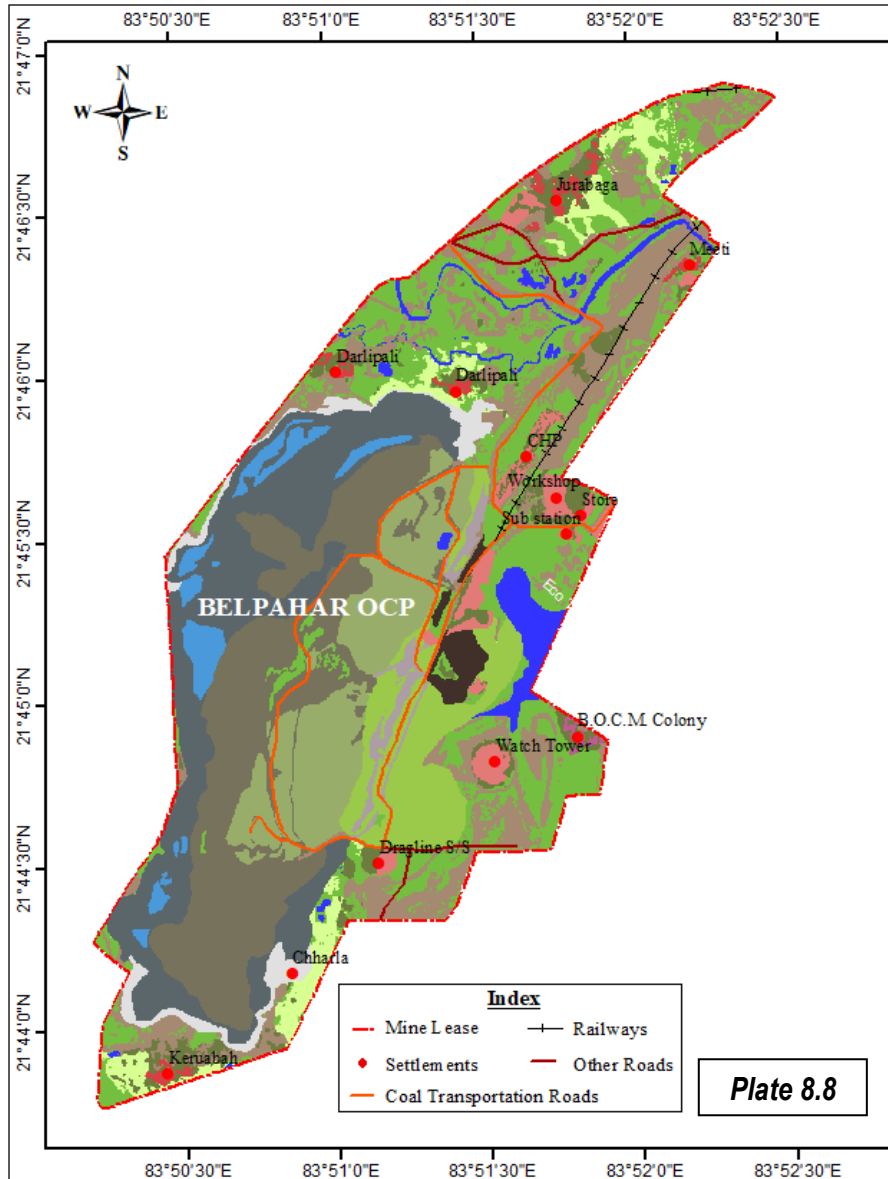


Plate 8.8

Area Statistics - Belpahar OCP (2018)				
Classes		Colour	Area	
Level-I	Level-II		Area (Km ²)	% of Total
Scrubs	Scrubs (A)		1.92	19.71
	Social Forestry		0.39	4.00
Plantation	Plantation on Backfill		0.91	9.34
	Plantation on OB Dump		0.59	6.06
	Total Plantation (B)		1.89	19.40
Total Vegetation(A+B)			3.81	39.12
Agriculture	Agriculture Land		0.32	3.29
Waste Land	Waste Land		1.51	15.50
	Coal Quarry		1.31	13.45
Mining Area	Barren OB Dump		0.12	1.23
	Area Under Backfilling		1.55	15.91
	Water Filled Quarry		0.21	2.16
	Coal Dump		0.10	1.03
	Advance Quarry Site		0.23	2.36
	Total Mining Area		3.52	36.14
Settlements	Rural Settlement		0.08	0.82
	Urban Settlement		0.01	0.10
	Industrial Settlement		0.23	2.36
Total Settlement Area			0.32	3.29
Water Body	River, Ponds		0.26	2.67
Total			9.74	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 (RS-2/L-IV) of the year 2018	Activity	Name	Designation	Signature	Date
	Prepared	A. Biswas	Mgr.(Geology)		
	Checked	T. Mondal	CM (RSC)		
	Approved	R. Kumar	HOD(Geomatics)		
Scale: 0 0.5 1 2 Km		Sheet 1			
Drg No.		HQ REM 07 A4 18 08			Rev No.0



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Annexure -8

TABLE--

GROUND WATER LEVEL MONITORING DATA

Area:

Lakhanpur

Date of Sampling	Project	Name of the Station	Ground Water level (in meter)
5/13/2020	Belpahar OCP	Piezometer No MIP 08; Village Kusraloi, Inside the premises of Prathamik Vidyalaya	6.10
5/19/2020	Belpahar OCP	Piezometer No MIP 07; Infront of DAV school Bandbahal, Inside colony substation.	7.20
5/2/2020	Lakhanpur OCP	Piezometer No MIP 10; Village Dahaldera; Inside the premisses of UP school.	15.00
5/14/2020	Lakhanpur OCP	Piezometer No MIP 09; Village Junion; Inside the premisses of State Govt. Horticulture Institute.	8.00
5/19/2020	Lilari OCP	Piezometer No MIP 06; Infront of Lilari mines Project office.	32.18

Lalitha
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

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



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Piezometer Water Quality Data: Lakhanpur Area

Project / OCP	Belpahar OCP		Indian Drinking Standards (IS-10500):2012	
	Infront of DAV School Bandhahal, Inside	Village Kussraloi, Inside the Premises of Prathmik Vidyalaya		
Monitoring Station				
Date of Sampling	9-Jun-2020	9-Jun-2020	Acceptable	Permissible
Colour(Hazen)	1	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	5
pH	6.73	7.31	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	160	36	200	600
Total Hardness (Ca CO₃)(mg/L)	164	60	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	8	6	250	1000
Total Dissolve Solid(mg/L)	186	110	500	2000
Calcium(mg/L)	41.6	12.8	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	2.11	32.50	200	400
Nitrate(mg/L)	<0.5	13.5	45	No relaxation
Fluoride(mg/L)	<0.3	<0.3	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	<0.04	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation

MS/PC

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

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



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Test Report

GROUND WATER LEVEL MONITORING DATA

Area:

Lakhanpur

Project:

Belpahar OCP

Date of Sampling	Name of the Station	Ground Water level (in meter)
06-Nov-20	Piezometer No MIP 07; Infront of DAV school Bandbahal, Inside colony substation.	5.90
06-Nov-20	Piezometer No MIP 08; Village Kusraloi, Inside the premises of Prathamik Vidyalaya	4.18

Project:

Lakhanpur OCP

Date of Sampling	Name of the Station	Ground Water level (in meter)
06-Nov-20	Piezometer No MIP 09; Village Junion; Inside the premises of State Govt Horticulture Institute.	7.27
06-Nov-20	Piezometer No MIP 10; Village Dahaldera; Inside the premises of UP school.	13.89

Project:

Lilari OCP

Date of Sampling	Name of the Station	Ground Water level (in meter)
06-Nov-20	Piezometer No MIP 06; Infront of Lilari mines Project office.	8.56

Kattawath
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

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



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Test Report

GROUND WATER LEVEL MONITORING DATA

Area:

Lakhanpur

Project:

Belpahar OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
13-Jan-21	Piezometer No MIP 08; Village Kusraloi, Inside the premises of Prathamik Vidyalaya	5.27
13-Jan-21	Piezometer No MIP 07; Infront of DAV school Bandbahal, Inside colony substation.	6.52

Project:

Lakhanpur OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
13-Jan-21	Piezometer No MIP 10; Village Dahaldera; Inside the premises of UP school.	14.13
13-Jan-21	Piezometer No MIP 09; Village Junion; Inside the premises of State Govt Horticulture Institute.	3.46

Project:

Lilari OCP

Date of Sampling	Name of the Station	Ground Levels (in meter)
14-Jan-21	Piezometer No MIP 06; Infront of Lilari mines Project office.	18.21

Tattanaik

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Dal Singh

O. I. C.
Env. Lab
CMPDI, RI-VII, LAB
BHUBANESWAR