

ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्ड्स लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

Office of The Project Officer
Garjanbahal Opencast Project
Basundhara Area
At -Garjanbahal
Po -Balinga-770073
Dist -Sundargarh (Orissa)



Ref- MCL/BA/PO/GOCP/E&F/2025-26/61.

Date:- 17/05/25

To,
The Director (S),
MOEF, Eastern Regional Office,
A/3, Chandersekharpur,
Bhubaneshwar-751023

Subject: Submission of Half Yearly Compliance Report of the environmental conditions in respect of Garjanbahal OCP, MCL Basundhara Area for the period of October-2024 to March-2025 of all ECs.

Reference:


- EC obtained vide no -11015/159/2015-IA-II(M) dated 9th November, 2017 for 13 MTY capacity.
- EC obtained vide no -11015/159/2015-IA-II(M) dated 14th February, 2022 for 15.6 MTY capacity.
- Amended EC obtained vide no -11015/159/2015-IA-II(M) dated 12th January, 2023 for 15.6 MTY capacity
- EC obtained vide no -11015/159/2015-IA-II(M) dated 9th March, 2023 for 18.2 MTY capacity.
- EC (revalidated) obtained vide no -11015/159/2015-IA-II(M) dated 8th March, 2024 for 18.2 MTY capacity.

Dear Sir,

Please find here with the Half-yearly compliance report of the Environment Condition for the period October-2024 to March-2025 of all ECs in respect of Garjanbahal OCP and necessary action. This is for your kind perusal and necessary action.

Thanking you.

Yours faithfully,


17/5/25
Project Officer
Garjanbahal OCP,
Basundhara Area
Garjanbahal Opencast Project

Enclosed: As above.

Copy to:

1. Director E.I.A Monitoring Cell, MOEF, Paryvaram Bhawan, CGO complex, New Delhi-110003
2. GM (Envt. & Forest), MCL HQ Burla, Sambalpur
3. SO (Envt. & Forest), Basundhara Area, MCL

GARJANBAHAL OCP, BASUNDHARA AREA, MCL

Half-yearly compliance report for the period of

Oct'2024 to Mar'2025 for 13 MTY EC

Compliance of the generic conditions and environmental safeguards mentioned below

Sl. No.	EC conditions (General, Specific & Others)	EC compliance status by Area/Mine
i	The maximum production of the mine shall not exceed the sanctioned capacity of 10 MTPA (normative)/13 MTPA (peak) as mentioned in the EC.	The EC has been extended for 18.2 MTY capacity. Production till Mar'25 is 18.20 MT.
ii	The validity of the EC is for the life of the mine or as specified in the EIA notification, 2006, whichever is earlier	Noted.
iii	No mining shall be carried out till the proposed railway siding is operational, which is reported to be commissioned by December 2017.	Sardegga railway siding was commissioned as on 24.04.2018. Sardegga railway siding which is under administrative control of Basundhara (West) OCP is expected to handle 20 MT of coal once it is equipped with the necessary infrastructure. However, only 6 rakes of coal are being dispatched at present and looking at the production of Garjanbahal OCP and Kulda OCP, dispatch is being carried out in road as well as rail modes
iv	The baseline air quality has to be significantly improved and the incremental concentration due to the project shall be minimized to ensure predicted air quality within the prescribed standards.	The baseline air quality will be significantly improved and the incremental concentration due to the project will be minimized to ensure predicted air quality within the prescribed standards.
v	The action plan against each of the observations of the Regional Office as per their monitoring report dated 25 th September, 2017 (site visit carried out on 8 th June, 2017) shall be submitted to them to verify the efficacy and adequacy for true compliance of the existing EC conditions. The action taken report after its endorsement by the regional Office shall be sent to the ministry	The action plan against each of the observations of the Regional Office as per their monitoring report dated 25 th September, 2017 (site visit carried out on 8 th June, 2017) has been submitted vide RefNo.: MCL/PO/KOCP/2017-18/511 Dated 24.10.2017.
vi	Standard Operating procedures are required to be prepared and vetted by the company headquarters for adoption of environmental measures in course of various mining activities right from drilling, blasting to coal dispatch, and shall also be submitted to the EAC for monitoring.	Coal production under Garjanbahal OCP is being done by eco-friendly surface miners. Minimal use of blasting is being done only for the OB. The practice is being submitted to MoEF&CC periodically.
vii	Transportation of coal should be carried out by covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.	Transportation of coal is done by the trucks covered by tarpaulin. Regular water sprinkling is being carried out by 46 fixed sprinklers, 6 water tankers, 5 truck mounted mobile fog cannons (including 2 in the coal transport road passing through Kulda OCP) and 3 fixed fog cannons. Three nos of mechanical road sweepers also operate over public coal transportation roads. Care is being taken to keep the ambient air quality parameters within prescribed limits.

viii	Continuous monitoring of occupational safety and other health hazards and the corrective actions need to be ensured.	133 departmental employees have undergone PME and 1063 number of contractual employees have undergone IME for the year 2023. Previous 3 years IME/PME is given as under:										
		Year	Departmental PME		Contractual IME							
			Target	Achievement	Target	Achievement						
		2021	113	145	As per Joinee	263						
		2022	120	125	-do-	472						
		2023	130	133	-do-	1036						
		<p>Regular medical checkups are performed by Basundhara Hospital. It also conducts regular health camps for medical checkup in nearby villages. Based on the regular medical examinations no serious issue has been detected till now and thus no action was taken. Any serious occupational disease if arises shall be reported and dealt with full care. The health of the workforce is given utmost importance with proper PPE kits and safe practices.</p> <p>20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p> <p>Further, as per the stipulated condition good occupational environment for mine workers shall be implemented. And preventive measures for burns, malaria and provision of anti-snake venom is being ensured at Basundhara Hospital.</p>										
ix	Controlled blasting techniques should be adopted to control ground vibration and fly rocks.	Sequentially controlled blasting techniques have been adopted to control ground vibration and fly rocks by electronic/non-electronic detonators for the removal of OB. Vibrometer is used for noting the vibration readings.										
x	Interlocking water spraying arrangement with surface miner cutting picks shall be explored for introduction to help prevent generation of dust at source itself.	The surface miners are equipped with wet arrangements to help prevent generation of dust at source itself.										
xi	Thick green belt of 30-45 m width to be provided to mitigate/check the dust pollution. The 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/ main approach roads.	<p>Plantation details as of now may be given as under:</p> <ol style="list-style-type: none"> 1) 170 nos at Site Office premises 2) 100 nos at Project Office and View Point 3) 5862 nos along 100m lease boundary. 4) Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5) 25000 plants are planted over external OB near Panchayat Road over 10 Ha area <p>Based on land availability & suitability, further plantations will be carried out. It is to note that at present natural afforested trees have formed greenbelt around the mine and they have been left undisturbed.</p>										
(a) Mining												
(i)	No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environment, Forest and Climate Change. No change in the calendar plan including excavation, quantum of coal and waste should be made.	<p>No change in technology and scope of work from current one has been made without approval of MoEF & CC. The mine is using Shovel Dumper technology for excavation of Overburden whereas in Coal it is using Surface Miner with Pay loader & Tipper combination in order to reduce dust emissions. Addendum to Mining Plan for Garjanbahal OCP was approved on 27.11.2018</p> <table border="1" data-bbox="818 1871 1446 1959"> <thead> <tr> <th data-bbox="818 1871 1003 1913">Year</th> <th data-bbox="1003 1871 1192 1959">Coal (Ton)</th> <th data-bbox="1192 1871 1446 1959">Over Burden & Reject (cum.)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>					Year	Coal (Ton)	Over Burden & Reject (cum.)			
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		2024-25	18199916.95	18148163.24
(ii)	Mining shall be carried out as per the approved mining plan, and also abiding by the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS). An approved progressive Mine Closure Plan shall strictly be complied with and submitted.	Mining is being carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS). Addendum to Mining Plan for Garjanbahal OCP was approved on 27.11.2018.		
(b) Land Reclamation				
(i)	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change and its Regional Office.	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has been carried out and the reports are available at the company website https://www.mahanadicoal.in .		
(ii)	Final mine void depth should not be more than 40m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with thick top soil. The land after mining should be restored for agriculture or forestry purpose.	The mine has not reached its final void area.		
(iii)	The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The overburden dumps should be vegetated with suitable native species to prevent erosion and surface run off. The entire excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional office on six monthly basis.	Backfilling process was started in the year 2019. As on March, 2025: Excavated area: 219.45 Ha Backfilled area: 98.11Ha External OB Dump area: 49.53 Ha. Progressive backfilling is done and provision for top soil stacking is being carried out accordingly.		
(iv)	Greenbelt shall be developed all along the mine lease area in a phased manner. The width of the green belt along forest area should not be less than 7.5 m, and the total area covered by 3 tier green belt shall not be less than 100 ha. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	Plantation details as of now may be given as under: 1) 170 nos at Site Office premises 2) 100 nos at Project Office and View Point 3) 5862 nos along 100m lease boundary. 4) Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5) 25000 plants are planted over external OB near Panchayat Road over 10 Ha area. Based on land availability & suitability, further plantations will be carried out. It is to note that at present natural afforested trees have formed greenbelt around the mine and they have been left undisturbed.		
(c) Emissions, Effluent, and Waste Disposal				
(i)	Transportation of coal by road should be carried out by covered trucks only. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM ₁₀ and PM _{2.5} such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board in this regard.	Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 5 nos of 28 kl do the work of dust suppression of CT roads and haul roads. Three Fog cannon systems have been provided to coal stock to mitigate the pollution at dust generating source. Besides of these 10 nos of truck mounted mobile fog cannons in and around the mines have been used to arrest the fugitive dust of CT roads.		

(ii)	Vehicular emission shall be kept under control and regularly monitored. Project should obtain 'PUC' certificate for the vehicles from authorized pollution testing centers.	The vehicles are allowed to run after the submission of PUC certificates, the records of which are duly maintained.
(iii)	Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Cd, Ni, Cr, etc carried out at least once in six months.	Ambient air quality monitoring stations have been established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . locations of the stations have been decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Cd, Ni, Cr, etc will be carried out at as well, once in six months. Monitoring Report is attached herewith.
(iv)	Crusher/feeder and breaker, material transfer points should invariably be provided with dust suppression system. Belt-conveyors should be fully covered to avoid air born dust. Drills shall be wet operated or fitted with dust extractors.	CHP does not exist. Drills are wet operated.
(v)	The project proponent shall not alter the major channels around the site. Appropriate embankment should be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary should be of suitable dimensions and critical patches should be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	The project proponent will not alter the course of any major channels around the site, if any.
(vi)	Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources in the area in consultation with Central Ground Water Board.	Mine sump of nearly 11.7 lakh m ³ capacity serves as a rainwater harvesting structure. Mine water from mine sump is utilized in mining operations. A rooftop water harvesting structure of 16m X 11m is present at the Project.
(vii)	Catch drains and siltation pond of appropriate size shall be constructed around the mine working, coal heaps OB dumps to prevent run off of Water and flow of sediments directly in to the river and other water bodies the water so collected should be utilized for watering the mines area road , green belt development etc, The drains should be regularly de silted particularly after monsoon and maintained properly Sump capacity should provide adequate retention period to allow proper setting of silt material Dimensions of the retaining wall to be constructed at the toe of the dumps and OB benches within the mine to check run – off and siltation should be based on the rainfall data .	Garland drains have been provided around the mine. Catch drains have been provided inside the mine to channelize the run-offs back into the mine sump. Since the mine is new, the overburden dumps are active and hence the retaining wall could not be constructed. Native species of plants shall be planted in due course of time. Regular maintenance of catch drains is being done with the help of departmental machineries and the run offs are being channelized to the mine sump for the subsequent utilization of the water for dust suppression. Presently, a gabion wall of nearly 1 m length is constructed near the toe of the external OB dump near MTK office after the dumping has stopped there. The retaining wall constructed at the toe of the external dump for a length of 500m has been designed on the basis of Rainfall data for the past 7 years. Further retaining wall of 500m length will be constructed at the toe of external OB dump.
(viii)	Industrial waste water (CHP, workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	CHP does not exist. An integrated workshop with 29 components is under construction which houses a newly constructed ETP with capacity of 140 KLD at 10 hours working period.
(d) Noise & Vibration		

(i)	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	Adequate measures are being taken to control the noise pollution. PPE like ear muff is being provided to the work force involved in direct mining to prevent the effect of noise. 17 nos of ear muffs has also been distributed during this period. The noise level survey is also being carried out.																								
(ii)	Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.	Sequentially controlled blasting techniques have been adopted to control ground vibration and fly rocks by electronic/non-electronic detonators for the removal of OB. Vibrometer is used for noting the vibration readings.																								
(e) Occupational Health & Safety																										
(i)	Besides carrying out regular periodic health check-up of their workers, 20% of the workers identified from workforce engaged in active mining operation shall be subjected to health check-up for occupational disease and hearing impairment, if any, through a specialised agency/institution within the District/State and the results reported to this Ministry and DGMS.	<p>133 departmental employees have undergone PME and 1063 number of contractual employees have undergone IME for the year 2023.</p> <p>Previous 3 years IME/PME is given as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Departmental PME</th> <th colspan="2">Contractual IME</th> </tr> <tr> <th>Target</th> <th>Achievement</th> <th>Target</th> <th>Achievement</th> </tr> </thead> <tbody> <tr> <td>2021</td> <td>113</td> <td>145</td> <td>As per Joinee</td> <td>263</td> </tr> <tr> <td>2022</td> <td>120</td> <td>125</td> <td>-do-</td> <td>472</td> </tr> <tr> <td>2023</td> <td>130</td> <td>133</td> <td>-do-</td> <td>1036</td> </tr> </tbody> </table> <p>Regular medical checkups are performed by Basundhara Hospital. It also conducts regular health camps for medical checkup in nearby villages. Based on the regular medical examinations no serious issue has been detected till now and thus no action was taken. Any serious occupational disease if arises shall be reported and dealt with full care. The health of the workforce is given utmost importance with proper PPE kits and safe practices.</p> <p>20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p> <p>Further, as per the stipulated condition good occupational environment for mine workers shall be implemented. And preventive measures for burns, malaria and provision of anti-snake venom is being ensured at Basundhara Hospital.</p>	Year	Departmental PME		Contractual IME		Target	Achievement	Target	Achievement	2021	113	145	As per Joinee	263	2022	120	125	-do-	472	2023	130	133	-do-	1036
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(ii)	Personnel working in dust areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Supervisory staff shall be held responsible for ensuring compulsory wearing of dust mask.	<p>All working personnel working in core zone wear protective respiratory devices and are being imparted regular training and information by regular safety talks and sensitization programs.</p> <p>Distribution of Personnel Protective Equipment in 2021-22:</p> <p>Ear muffs: 17 nos. Helmets: 257 Nos. Safety canvas shoes: 305 Nos Gum Boots: 256 Nos Fluorescent jackets: 25 Nos Hand Gloves: 5 nos</p>																								
(iii)	In case of outsourcing of work through MDO, the project proponent shall ensure the strict enforcement of the above conditions.	The project proponent shall ensure the strict enforcement of the above conditions. No MDO is present at the mine.																								
(f) Biodiversity																										
(i)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry Environment, Forest and Climate Change and its Regional Office.	<p>Field study (for flora and fauna) for Garjanbahal OCP was done by Ecomen Laboratories (P) Ltd., Lucknow. The study was conducted during March 2014 to May 2014. Seasonal changes in ecology and biodiversity was conducted during Nov 2014 to Jan 2015.</p> <p>Site specific Wildlife Management Plan has been prepared and approved for the project and the fund of Rs. 3,40,38,000.00 has been deposited with CAMPA.</p>																								


(g) Implementation of action plan as per public hearing and CSR activities

<p>(i)</p>	<p>Implementation of Action plan on the issues raised during the public Hearing shall be ensured. The Project proponent shall complete all the tasks as per the Action Plan submitted with budgetary provision during the public hearing. Land-oustees should be compensated as per the norms Laid out R&R Police company or the national R&R police the of the State government, whichever is higher.</p>	<p>Public hearing commitment such as providing of fixed water sprinkler at potential dust generation source, use of water tanker, 3 number of trolley mounted fog canon at Kanika siding and 3 numbers at coal stock yard, production with the help of surface miner and drilling and blasting operation are being implemented.</p> <p>Out of total 730 PAFs, 275 PAFs opted for cash compensation in lieu of plots. For balance 455 PAFs, 75 Nos of plots were developed at Barpalli-II resettlement site and 275 plots at Badkhalia RR site, most of PAFs are not giving their consent on the hope of enhancement of RR benefit(building Assistant) by Supreme Court which has been given by Claim Commission and opposed by MCL.</p> <p>The details of the response from the project proponent to the issues raised during the public hearing are as follows:</p> <table border="1" data-bbox="787 527 1451 1938"><thead><tr><th data-bbox="787 527 891 625">Sl. No.</th><th data-bbox="891 527 1047 625">Issued raised by the Public</th><th data-bbox="1047 527 1451 625">Action to be taken by MCL</th></tr></thead><tbody><tr><td data-bbox="787 625 891 1144">1.</td><td data-bbox="891 625 1047 1144">Pollution due to coal dust (Air pollution)</td><td data-bbox="1047 625 1451 1144">1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads. 3. Three Fog cannon system has been provided to coal stock to mitigate the pollution at dust generating source. 4. Besides of these, 10 nos of 12KL truck mounted mobile fog cannons along the CT roads, have been used to arrest the fugitive dust of CT roads.</td></tr><tr><td data-bbox="787 1144 891 1268">2.</td><td data-bbox="891 1144 1047 1268">Production of Coal</td><td data-bbox="1047 1144 1451 1268">Production is being carried out with the help of surface miner and drilling and blasting operation has been minimized</td></tr><tr><td data-bbox="787 1268 891 1696">3.</td><td data-bbox="891 1268 1047 1696">Plantation</td><td data-bbox="1047 1268 1451 1696">Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area</td></tr><tr><td data-bbox="787 1696 891 1938">4.</td><td data-bbox="891 1696 1047 1938">Drinking water supply</td><td data-bbox="1047 1696 1451 1938">The authority has already completed bore-well inside school premises. Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD.</td></tr></tbody></table>	Sl. No.	Issued raised by the Public	Action to be taken by MCL	1.	Pollution due to coal dust (Air pollution)	1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads. 3. Three Fog cannon system has been provided to coal stock to mitigate the pollution at dust generating source. 4. Besides of these, 10 nos of 12KL truck mounted mobile fog cannons along the CT roads, have been used to arrest the fugitive dust of CT roads.	2.	Production of Coal	Production is being carried out with the help of surface miner and drilling and blasting operation has been minimized	3.	Plantation	Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area	4.	Drinking water supply	The authority has already completed bore-well inside school premises. Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD.
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				Nearby villages around the Garjanbahal mine are covered in this scheme.				
(ii)	The Board of every company shall ensure that the company spends, in every financial year, at least two per cent. Of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility p under Section 13 of the Companies Act, 2013, for the socio-economic development of the neighborhood.	The project proponent has expensed an amount of Rs. 656.56 Lakhs towards socio-economic development in and around the mine, in the financial year 2022-23. The expenditure for the last five years before 2022-23 is as follows:						
		SI No	Head	2018-19	2019-20	2020-21	2021-22	2022-23
		1	Drinking Water	25.34	51.01	31.30	32.98	63.67
		2	Education	27.50	69.60	68.41	104.39	72.93
		3	Environment	61.59	55.69	54.15	20.43	24.54
		4	Healthcare	2.62	2.24	Included in 1	Included in 1	Included in 1
		5	Road	132.17	194.42	32.07	-	-
		6	Rural Sports	12.65	0	3.69	-	-
		7	Rural Development	39.30	121.66	Included in 5	525.82	495.41
		8	Others	797.20	0	5.62	-	-
			Total	1098.37	494.62	195.24	683.62	656.56
		(All figures in Rs Lakhs)						
(h) Corporate Environment Responsibility								
(i)	The company should have a well laid down Environment Policy approved by the board of Directors.	The company has a laid down policy known as the Corporate Environment Policy 2018 which is available in the websites: https://www.coalindia.in/departments/environment/policy-env/ and https://www.mahanadicoal.in/Environment/eenvironment.php under the environment drop down menu.						
(ii)	To have proper checks and balance, the company should a well laid down system of reporting of non-compliances/violations of environment norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	The MCL headquarters ensures that there is a proper recording of all the non-compliances/violations of the environment norms so that a time bound action plan could be prepared and implemented as soon as possible.						
(iii)	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a senior Executive, who will report directly to the head of the Organization	Details of environmental cell at area /project level is as follows :- Area level: 1. General Manager 2. Staff Officer (Civil) 3. Area Nodal Officer (Env./ Forest) 4. Area Survey Officer 5. Staff Officer (E&M) Project level: 1. Project Officer 2. Project Civil Engineer 3. Environment Officer 4. Survey Officer. 5. Project Engineer (E&M). It is also displayed in the MCL company's website https://www.mahanadicoal.in/Environment/eenvironment.php						
(iv)	The fund earmarked for environmental protection measures should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.	The fund earmarked for environmental protection measures will not be diverted under any circumstances. Structure of environmental cell for the project has been furnished. Total capital expenditure on environmental protection reported to be Rs.33.23 crore. Recurring expenditure reported to be Rs 7.23 crore, Rs.6.14 crore, Rs.9.43 crore and Rs.2.37 crore for 2022-23, 2021- 22, 2020-21, 2019-2020 respectively.						
(i) Statutory Obligations								
(i)	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Low, if any applicable to the	Agreed upon.						

	project.	
(ii)	This Environmental Clearances is subject to obtaining requisite NBWL clearance from the standing committee of National Board for Wildlife, if any, as applicable to the project.	Not applicable
(iii)	The project proponent shall obtain Consent to Establish and Consent to Operate from the concerned State Pollution Control Board prior to increase in capacity of Washery and effectively implement all the conditions stipulated therein.	There is no washery at present.
(iv)	Project proponent shall obtain the necessary prior permission from the Central ground water authority (CGWA) for drawl of water (surface and ground water).	CGWA permission for renewal of NOC has been obtained on March-2025 and is valid till October 2025 vide no CGWA/NOC/MIN/REN/1/2025/11001 dated 01/03/2025.
(j) Monitoring of Project		
(i)	Regular monitoring of ground water and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent to Ministry of Environment, Forest and Climate change and its Regional Office, Central Ground water Authority and Regional Director, Central Ground Water Board.	Ground water monitoring is being done regularly by the CMPDIL at required interval. The ground water level in being measured at one dug wells at the required frequency. The qualities of these well waters are also monitored frequently.
(ii)	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguard to the ministry of Environment, Forest and Climate Change, its Regional Officer, Central Pollution Control Board and State Pollution Control Board.	It is being submitted in half yearly compliance reports.
(iii)	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Full cooperation is being extended whenever required.
(iv)	The activities pertaining to development of green belt/horticulture shall be reported to the concerned Regional Office of MoEF& CC on six monthly basis from the date of commencement of mining operations.	The greenbelt development is being reported to the MoEF&CC office periodically as per the EC condition.
(v)	For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring.	Report submitted.
(k) Miscellaneous		
(i)	A copy of the clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom suggestion /representation has been received while processing the proposal.	A copy of the environmental clearance has been sent to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tahsildar Office for information in public domain.
(ii)	An electronic copy of the EC letter shall be marked to the concerned State Pollution	An electronic copy of the EC letter has been marked to the concerned State Pollution Control Board, Regional Office,

	Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.	District Industry Sector and Collector's Office/Tehsildar Office.
(iii)	The EC letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM 10, PM2.5, SO2 and NOx(ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate Office and on company's website.	The EC has been uploaded in the company's website https://www.mahanadicoal.in under the dropdown menu environment and forest. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM 10, PM2.5, SO2 and NOx(ambient) and critical sectoral parameters has been displayed in all specified locations.
(iv)	The project proponent should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of the Ministry of Environment, Forest and Climate change at www.environmentalclearance.nic.in and a copy of the same should be forwarded to the Regional Office.	The project proponent has advertised in two local newspapers namely Times of India on 24.12.2017 and the Samaja on 22.12.2017.
(v)	The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the PP for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF& CC by e-mail.	Submitted annually.


 Project Officer
 Garjan Bahal GCP,
 Basuguhara Area
 G.S.

GARJANBAHAL OCP, BASUNDHARA AREA, MCL
Half-yearly compliance report for the period of
October'2024 to March'2025 as per EC for 15.6 MTY EC

Compliance of the generic conditions and environmental safeguards mentioned below

Sl. No.	EC conditions (General, Specific & Others)	EC compliance status by Area/Mine
General Conditions		
i	PP shall obtain CTO for 15.6 MTPA from State Pollution Control Board.	It has been obtained vide consent order no 4216/IND-I-CON-6641 dated 17.03.2022.
ii	PP must comply with all the non-compliances or partially compliances as per the certified compliance report wrt all the EC conditions stipulated in J-11015/159/ 2015.IA.II(M) dated 09.11.2017.	Agreed and duly noted. Action plan has been submitted vide no
iii	Further expansion in capacity will only be considered by EAC when at least 75% of EC conditions are complied fully and PP to obtain 5-star rating from Ministry of Coal as per their guidelines.	Agreed upon. Mine has secured 4 stars in 2023-24.
iv	PP shall implement in-pit conveyor system with silo loading facility till railway siding and No road transportation shall be allowed after December, 2022 and accordingly, SPCB shall not grant CTO for road transportation after December, 2022.	MoEF&CC has extended the time limit up to 31.10.2023 in the amended EC issued on date – 09.01.2023. Further PP approached for time extension till 31.12.2023, during the EAC meeting held on date – 17.11.2023, the minutes of EAC is awaited and shall be submitted once received at our office. The construction of silo loading system with conveyor system is under progress.
v	PP shall conduct carrying capacity assessment study within 1 year and submit to Ministry's IRO and further recommendation shall be complied with strict timeline.	The study is being carried out by CMPDIL by its hired expert. The copy has been shared.
vi	PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.	NEERI Kolkata has been given the job for 3 rd party environment audit for the year 2023. The final report has been submitted.
vii	PP shall engage dedicated agency for plantation in mine site by April, 2022 instead of depending on State Forest Department. PP may seek inputs and expertise from forest department.	Presently, the plantations are carried out at available patches of the mine departmentally at office premises and by DFO, Sundargarh. However, there is no further scope for plantation in the mine lease as of now due to lack of suitable area for plantation. DFO, Sundargarh, CGRVVNL, Chhattisgarh & OFDC Ltd, Jharsuguda are approached for upcoming plantations for the mine as per the availability of the land in upcoming period.
viii	PP should not transport coal through road passing through any village and further ensure that its consumers of coal are also not using	No coal transportation is being undertaken by MCL through villages within its command area. Separate Coal Corridors have been constructed for roads towards Railway Sidings, by- passing

	village road and passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.	all villages. However, coal consumers who are fetching coal through e-auction / FSA cannot be monitored or controlled for its route of transportation.
ix	PP shall obtain No Objection Certificate (NOC) for extraction of Ground Water from Central Ground Water Authority for expansion capacity.	CGWA permission for renewal of NOC has been obtained on March-2025 and is valid till October 2025 vide no CGWA/NOC/MIN/REN/1/2025/11001 dated 01/03/2025.
x	PP shall implement all listed activities which includes Fixed type sprinklers, trolley mounted and mobile fog cannons of 100 mtrs and 40 mts throw, wind barrier at coal stockyard, plantation etc with different timeline till December, 2022 at a cost of Rs. 14. 73 Crores. The numbers of fog cannons shall be increased to 10 (atleast) and commenced within one year of this EC letter.	All the mentioned systems are in place including of trolley mounted fog cannons, fixed sprinklers and truck mounted fog cannons. 10 no of truck mounted fog cannons are already operating in and around the mine in addition to the existing trolley mounted fixed fog cannons.
xi	PP shall implement proposed plantation for next three years as 7.50 Ha (2022-2023), 5 ha (2023-2024), 5 ha (2024-2025) at overall cost of Rs. 7.80 Crores and further plant 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.	The plantations carried out till date based on available area can be given as under: Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area. However, there is unavailability of suitable land for further plantation as of now. Based on land availability & suitability, further plantations will be carried out. It is to note that at present natural afforested trees have formed greenbelt around the mine and they have been left undisturbed.
xii	PP shall commence Rapid loading system with conveyor belt system by December, 2022 and no road transportation shall be carried out by road towards Sardega siding after December, 2022.	Rapid loading system of 20Mty with conveyor Belt system has undergone trial run. Presently coal is being transported through dedicated concrete coal corridor of 7km towards Sardega siding out of which about 2km of transportation will be done by upcoming Rapid loading system.
xiii	PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size till Rapid loading system and conveyor belt system is commenced (i.e. till December, 2022).	At present Tippers of gross weight 25T (10% margin allowed i.e., 28T) are being deployed for coal transportation in the mines as per pre-existing contracts. Deployment of 40-50T trucks in full scale is limited as higher capacity trucks come in the form trailer trucks and these are unsafe to be used within the mine due to higher gradient and DGMS is not permitting use of tractor- trailer trucks within the mine (face to surface). However, two civilian contractors are engaged with 126 high-capacity trucks (44.68%) with gross weight above 40T from total 282 trucks where remaining other trucks deployed by other pre-existing contracts by ESM and PAPs. The remaining 156 trucks (55.32%) will be replaced in phased manner after the completion of existing contracts and the replacement of new ones.
xiv	PP shall develop the pond present near the OB dump and develop aquatic life within 2 years and provide access to villagers as recreational place.	At present the surface run-off from OB dump is insufficient to be stored. However, in subsequent times the drained water through garland drain shall be stored as the pond as per scope.

xv	PP shall prepare Basundhara River conservation plan with respect to its quality check, beautification, plantation along the boundary and construction of over bridge if required and collaborate with state government in river rejuvenation plan.	Basundhara river conservation plan has been prepared and is under process for supporting the river rejuvenation.
xvi	PP shall conduct substantial numbers of tree plantation in the villages of Kushra, Siarnal, Himgir, Kathapall for dust mitigation measures within 2 years and mark it for certification of Ministry's IRO.	Roughly, 45000 plants are grown in Hemgir village. Siarnal village has been evacuated for the Siarnal OCP, however, avenue plantations are done in the suitable patches. Sapling distribution to the nearby villages like Hemgir, Ratanpur Duduka and Kuishira are done for the afforestation by the villagers. The plantation over the villages will be carried out based on the availability of the suitable land as most of the villages are occupied with healthy tree growth.
xvii	PP shall implement Peripheral tree plantation along the mine lease area with miyawaki method of 50 mts width within 2 years through-independent expert	There is no scope for further plantation in the mine lease area as per present scenario. Miyawaki plantation has been carried out over a patch bounded by Subhalia (4 Ha) with 32000 plants and Kirei (6 Ha) with 48000 plants for 10 ha with 80,0000 plants in total near Sundargarh town.
xviii	PP shall explore an action plan for implementation of sand segregation plant to extract sand and aggregate (since quantity of OB is higher) to reduce agricultural land degradation.	Creation of sand segregation plant has not been feasible in the mine at present.
xix	PP also to provide drinking water facilities like installation of RO with proper water supply pipe fittings to nearby rural areas and also to install hand pumps by seeking consent from panchayat of the villages located within the study area of 10 km radius buffer zone within two years	PP is providing drinking water treated from its WTP to 25 numbers of peripheral villages for 2022-23. Besides, It has been informed by the PA's that they have installed 2 numbers of borewell at Tiklipara and Garjanbahal village and one hand pump at Khamarpara village. The PP have already approached the village panchayats and Tehesildar of Hemgir block for identifying the requirement of installation of RO with proper water supply pipe fittings and are in the process of compliance.
xx	PP to install solar lights within 1 year from the grant of this EC along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year	PP have installed 15, 29, 25 nos. of solar street lights in the Kuisira, Ratansara and Ratanpur village respectively. The PP have already approached the village panchayats and Tehesildar of Hemgir block for identifying the requirement of more numbers of solar street lights in the peripheral villages and are in the process of compliance. It is to inform that solar lights are not viable in the roads used for transportation of minerals as heavy vehicles ply in these roads. It requires lights of larger illumination at these roads. PP has already installed lights with better illumination in the coal transportation roads.
xxi	PP to provide sanitation facility like bio toilets to the villages located within the study areas within 1 year from the grant of this EC	PP has installed 100 numbers of toilets in the peripheral villages of the mines, namely Barpali, Kuisira, & Balinga. It was further informed that PP have already approached the village panchayats and Tehesildar of Hemgir block for identifying the requirement of bio-toilets in the peripheral villages and are in the process of compliance.
xxii	PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be	At present 3 CAAQMS stations are present for Basundhara Area. Recently, one no of CAAQMS is brought to the Project Office of Garjanbahal OCP for monitoring at core zone and one is brought to the Gopalpur Road for monitoring near Kulda OCP for installation in the month of January 2024. The real time data generated by already installed CAAQMS is

	displayed digitally at entry and exit gate of mine lease area for public display.	being uploaded in company' website: http://apps.coalindia.in:8080/apex/f?p=159:1:10556120434404																																													
xxiii	PP shall construct new multispecialty (100 beds) hospital in the 10 km of the project area within 2 years for local people out of approved budget.	Recently constructed Basundhara Hospital in the colony township of Basundhara Area, MCL is of 50 bedded capacity. This hospital caters to the need of nearby villagers. It is planned to expand its capacity to 100 beds in due course of time. Proposal for multispecialty hospital is under progress after the handover to the M/s Sanjivani firm.																																													
xxiv	Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.	<p>133 departmental employees have undergone PME and 1063 number of contractual employees have undergone IME for the year 2023.</p> <p>Previous 3 years IME/PME is given as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Departmental PME</th> <th colspan="2">Contractual IME</th> </tr> <tr> <th>Target</th> <th>Achievement</th> <th>Target</th> <th>Achievement</th> </tr> </thead> <tbody> <tr> <td>2021</td> <td>113</td> <td>145</td> <td>As per Joinee</td> <td>263</td> </tr> <tr> <td>2022</td> <td>120</td> <td>125</td> <td>-do-</td> <td>472</td> </tr> <tr> <td>2023</td> <td>130</td> <td>133</td> <td>-do-</td> <td>1036</td> </tr> </tbody> </table> <p>Based on the regular medical examinations no serious issue has been detected till now and thus no action was taken. Any serious occupational disease if arises shall be reported and dealt with full care. The health of the workforce is given utmost importance with proper PPE kits and safe practices. 20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p>	Year	Departmental PME		Contractual IME		Target	Achievement	Target	Achievement	2021	113	145	As per Joinee	263	2022	120	125	-do-	472	2023	130	133	-do-	1036																					
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xxv	Project proponent shall supply clean drinking water and for domestic purpose for the people coming under the zone of influence of this mining activity.	<p>Drinking water is being provided through 08 water purifiers installed within and outside the project area for the local people. Clean Drinking water from WTP Basundhara (1.6 MGD), is also being supplied by means of water tankers to the nearby 25 peripheral villages for 2022-23. Following is the water supply details for 2022-23:</p> <table border="1"> <thead> <tr> <th>#</th> <th>Name of the villages</th> <th>Qty of water supply as per Work Order (in KL)</th> </tr> </thead> <tbody> <tr><td>1</td><td>Tikilipada & Sardega R&R site</td><td>2160</td></tr> <tr><td>2</td><td>Khamarpada</td><td>1440</td></tr> <tr><td>3</td><td>Sarangjharria</td><td>1080</td></tr> <tr><td>4</td><td>Sumura</td><td>1080</td></tr> <tr><td>5</td><td>Ganjeibud</td><td>720</td></tr> <tr><td>6</td><td>Tiuria</td><td>720</td></tr> <tr><td>7</td><td>Kaletpani</td><td>1080</td></tr> <tr><td>8</td><td>Kuisira</td><td>1080</td></tr> <tr><td>9</td><td>Barpali R&R</td><td>1080</td></tr> <tr><td>10</td><td>Balinga</td><td>1080</td></tr> <tr><td>11</td><td>Duduka</td><td>1080</td></tr> <tr><td>12</td><td>Garjanbahal</td><td>1080</td></tr> <tr><td>13</td><td>Bangurkela & Karlikachhar</td><td>1080</td></tr> <tr><td>14</td><td>Tumulia</td><td>2160</td></tr> </tbody> </table>	#	Name of the villages	Qty of water supply as per Work Order (in KL)	1	Tikilipada & Sardega R&R site	2160	2	Khamarpada	1440	3	Sarangjharria	1080	4	Sumura	1080	5	Ganjeibud	720	6	Tiuria	720	7	Kaletpani	1080	8	Kuisira	1080	9	Barpali R&R	1080	10	Balinga	1080	11	Duduka	1080	12	Garjanbahal	1080	13	Bangurkela & Karlikachhar	1080	14	Tumulia	2160
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xxvi	Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.	<p>20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p> <p>PME is done in this regard.</p> <p>IME/PME for last three years are as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Departmental PME</th> <th colspan="2">Contractual IME</th> </tr> <tr> <th>Target</th> <th>Achievement</th> <th>Target</th> <th>Achievement</th> </tr> </thead> <tbody> <tr> <td>2021</td> <td>113</td> <td>145</td> <td>As per Joinee</td> <td>263</td> </tr> <tr> <td>2022</td> <td>120</td> <td>125</td> <td>-do-</td> <td>472</td> </tr> <tr> <td>2023</td> <td>130</td> <td>133</td> <td>-do-</td> <td>1036</td> </tr> </tbody> </table> <p>No occupational diseases are detected till date however, care is taken for the health of all the employees.</p>			Year	Departmental PME		Contractual IME		Target	Achievement	Target	Achievement	2021	113	145	As per Joinee	263	2022	120	125	-do-	472	2023	130	133	-do-	1036
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xxvii	Persons of nearby villages shall be given training on livelihood and skill development to make them employable.	<p>Training on sustainable livelihood and skill development to make them employable are being provided by “MCL-BAIF Comprehensive Community Development Programme” named as ‘CCDP-Uthan has been implemented to give training in Cattle development Programme through breeding services, Goat development programme, Backyard poultry farming, Fodder development programme, Agro-Horti* (WADI**) Development Programme & Awareness Creation & Capacity Building Programme</p> <p>Handyman Project - CIPET Bhubaneswar has provided 6-months residential training to the 24 youth. Candidates have been imparted basic skills of repair and maintenance of domestic/agricultural pumps, submersible pumps, agricultural tools, tractor driven equipment like tillage, plough, cultivation and sowing equipment.</p> <p>‘Handyman’ will be his basic repair-maintenance service provider available at his doorstep. Each candidate has been given a tool kit worth on completion of training. Total project cost is Rs.41 lakhs.</p>																										
xxviii	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of	<p>The project proponent is following the mitigation measures provided in this Ministry's OM No.: Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'. The illumination and sound at night is prevented by eliminating blasting at night, by orienting the mine's flood lights away from</p>																										

	the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours	the villagers and keeping the noise levels well within the prescribed limits for day/night hours.
xxix	PP shall implement rain water harvesting mechanism in order recharge the ground water or as water conservation measure in addition to the proposed structure. PP shall carry out regular monitoring of Ground water level and quality.	Mine sump of nearly 11.7 lakh m ³ capacity serves as a rainwater harvesting structure. Mine water from mine sump is utilized in mining operations. A rooftop water harvesting structure of 16m X 11m is present at the Project.
xxx	PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.	There is no report of loss to farmers and no such report is found by District Commissioner.
xxxi	Hon'ble Supreme Court in a Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India&Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC.	Garjanbahal OCP is an operational mine and all these conditions as per mine plan shall be followed with strict adherence.
(a) Statutory		
(i)	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	Stage-II forest clearance for 88.89 Ha is obtained vide F. no- 8-11/2015-FC dated 6 th March 2018. The details are available in the website https://www.mahanadicoal.in/Environment/eforestcleareance.php . Mining activities are restricted at the acquired forest land only.
(ii)	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	This condition will not be applicable as there is no endangered species in the nearby area.
(iii)	The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of scheduler species in the study area).	Site specific Wildlife Management Plan has been prepared and approved for the project and the fund of Rs. 3,40,38,000.00 has been deposited with CAMPA for its implementation by DFO, Sundargarh.
(iv)	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air	Consent to Establish has been obtained vide no- 3471/IND-II-CTE-6907 dated 10.03.2023 and Consent to Operate has been

	(Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	obtained vide no- 3489/IND-I-CON-6641 dated 10.03.2023. The details are available in the website https://www.mahanadicoal.in/Environment/eforestclearance.php
(v)	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	CGWA permission for renewal of NOC has been obtained on March-2025 and is valid till October 2025 vide no CGWA/NOC/MIN/REN/1/2025/11001 dated 01/03/2025.
(vi)	Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.	Solid/hazardous wastes like oil filters, burnt oil, residual oil wastes are kept separately in the workshop. The burnt oil is stored and recycled by the authorized recycler through the Departmental Store of Basundhara Area.
(b) Air quality monitoring and preservation		
(i)	Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.	At present 5 nos CAAQMS stations are present for Basundhara Area. Recently, one no of CAAQMS at the Project Office of Garjanbahal OCP for monitoring at core zone and one at the Gopalpur Road for monitoring near Kulda OCP are commissioned recently. The real time data generated by already installed CAAQMS is being uploaded in company's website: http://apps.coalindia.in:8080/apex/f?p=159:1:10556120434404
(ii)	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.	Ambient air quality monitoring stations have been established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . locations of the stations have been decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Cd, Ni, Cr, etc will be carried out as well, once in six months.
(iii)	Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM ₁₀ /PM _{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.	Transportation of coal is done by the trucks covered by tarpaulin. Regular water sprinkling is being carried out by 42 fixed sprinklers, 6 water tankers, 5 truck mounted mobile fog cannons (including 2 in the coal transport road passing through Kulda OCP) and 3 fixed fog cannons. Three nos of mechanical road sweepers also operate over public coal transportation roads. Care is being taken to keep the ambient air quality parameters within prescribed limits.
(iv)	The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any	Transportation of coal is carried as per the mining plan. Coal Transportation towards Railway Sidings are being done through coal corridors by-passing all villages en-route. By pass roads shall be constructed in consultation with State Administration taking care of the safe passage of vehicles with

	village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	minimal pollution and chances of accidents with suitable dust control measures like that of MDR-29 road towards Kanika railway siding.
(v)	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.	The vehicles are allowed to run after the submission of PUC certificates, the records of which are duly maintained.
(vi)	Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	CHP does not exist. Drills are wet operated.
(vii)	Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environment friendly sustainable technology should be implemented for mitigating such parameters.	Coal Handling Plant does not exist.
(c) Water quality monitoring and preservation		
(i)	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.	Effluent discharge of the mine is being monitored and ensured that no harm is caused by it.
(ii)	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	The monitoring data of environmental quality parameter (air, water and noise) are displayed at the entrance of the Project Office and the company's website https://www.mahanadicoal.in/Environment/eenvironment.php
(iii)	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.	Ground water monitoring is being done regularly by the CMPDIL at required interval. The ground water level in being measured at one dug wells at the required frequency. The qualities of these well waters are also monitored frequently.
(iv)	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.	Monitoring of upstream and downstream of Basundhara river is being done in six months periodicity.

(v)	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.	Mine sump of nearly 11.7 lakh m ³ capacity serves as a rainwater harvesting structure. Mine water from mine sump is utilized in mining operations. A rooftop water harvesting structure of 16m X 11m is present at the Project.
(vi)	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.	Garland drains have been provided around the mine. Catch drains have been provided inside the mine to channelize the run-offs back into the mine sump. Since the mine is new, the overburden dumps are active and hence the retaining wall could not be constructed. Native species of plants shall be planted in due course of time. Regular maintenance of catch drains is being done with the help of departmental machineries and the run offs are being channelized to the mine sump for the subsequent utilization of the water for dust suppression. A gabion wall of nearly 110 m length is constructed near the toe of the external OB dump near MTK office after the dumping has stopped there. The retaining wall constructed at the toe of the external dump near Panchayat Road covering the plantation dump for a length of 500m constructed on the basis of present requirement.
(vii)	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).	Measures for groundwater recharge have been taken up. As the natural groundwater level in and around the mine area is very low, the drinking water to nearby villages is supplied by water tankers. 25 nearby villages are covered for 2022-23. However, 3 bastis of Garjanbahal, Karlikachar and Bangurkela are being supplied water from borewell.
(viii)	Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.	CHP does not exist. An integrated workshop with 29 components is under construction which houses a newly constructed ETP with capacity of 140 KLD at 10 hours working period.
(ix)	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	The pumped-out water of the mine is sent to the mine sump after allowing it to desilt via series of drains. The mine water is utilized for industrial purposes. The drains are cleaned and desilted regularly in pre-monsoon and post-monsoon periods.
(x)	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan	There is no river/pond/lake at and around the mine lease area of Garjanbahal OCP. However, the entire surface drainage gets diverted to the mine sump of 11.7 lakh m ³ capacity. Basundhara river is the nearest stream of the mine in the area. In this regard, earlier, the surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence

	and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.	of river/rivulet/pond/lake, etc., has been prepared and implemented by the Kulda OC project vide plan no.: MCL/BGA/KOCP/SURV-07 dated 16/08/2008. The plan is updated every month as per the progression of the mines. Chhatnajor nallah has been straightened with the competent approval from State Government and embankment has been provided all along the stream. Embankment of 2.7Km has been constructed near Kulda OCP on the banks of Basundhara nallah to prevent sudden rush of water. Stone pitching has been done along the embankment. Plantation of 1350 nos. of plants has been planted at the edge of embankment to prevent soil erosion. Garland drains (3300m x 1.5m x 1.5m) and Berm (2500m x 1.5m x 1.5m) has been provided all around the mine boundary and External dump, to prevent the surface run-off from outside the mine lease area to enter the Garjanbahal mine.
(xi)	The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.	The riverine/riparian ecosystem management plan is under preparation for Basundhara River and the estimation has been completed. The plan will be implemented as per the direction of irrigation department of Odisha Government.
(d) Noise and Vibration monitoring and prevention		
(i)	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.	Adequate measures are being taken to control the noise pollution. PPE like ear muff is being provided to the work force involved in direct mining to prevent the effect of noise. 17 nos of ear muffs has also been distributed during this period. The noise level survey is also being carried out.
(ii)	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.	Sequentially controlled blasting techniques have been adopted to control ground vibration and fly rocks by electronic/non-electronic detonators for the removal of OB. Vibrometer is used for noting the vibration readings.
(iii)	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.	Noise monitoring is being done on fortnightly basis at the sensitive points in the mine and there is no significant rise in noise level till date. Noise level survey shall be conducted in the mine premises to assess the impact of noise on the workmen in the mine.
(e) Mining Plan		
(i)	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	Mining is being carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
(ii)	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate	Mining is being carried out in compliance to the provisions of the Mining Laws & related to mining & relevant DGMS circular. Mining is carried out as per the approved mining plan.

	General Mines Safety (DGMS).	
(iii)	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.	Stage II FC letter no- 8-11/2015 dated 06.03.2018 for an area of 88.899 Ha. Mining is being done in the diverted forest land only.
(iv)	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	<p>Actions have been taken to reduce energy consumption by conservation, efficiency and use of renewable energy.</p> <p>5.9% of energy has been saved in the period of 2022-23 as compared to the consumption in the period of 2022-23 with respect to the production enhancement from 15.6 MTPA to 18.2 MTPA</p> <p>Practice of Installation of LED lights by replacing Halogen bulbs is being done as a measure to conserve energy. All the Halogen bulbs has been replaced by LED bulbs. 655nos. LED bulbs has been installed in the period of 2022-23</p> <p>16 KVA solar plant has been setup at area administrative buildings.</p> <p>PP have installed 15, 29, 25 nos. of solar street lights in the Kuisira, Ratansara and Ratanpur village respectively.</p>
(f) Land reclamation		
(i)	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1 :50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has been carried out and the reports are available at the company website https://www.mahanadicoal.in/Environment/eenvironment.php
(ii)	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.	The mine has not reached its final void area. The upcoming reclamation works in future shall be carried out as per the approved mining plan and mine closure plan.
(iii)	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/" post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.	<p>All the activities of excavated area, OB dumping, backfilling and future afforestation plan shall be carried out as per Mining Plan and EIA/EMP. Backfilling process was started in the year 2019.</p> <p>As on March, 2025: Excavated area: 201.54 Ha Backfilled area: 95.71 Ha External OB Dump area: 49.53 Ha. Progressive backfilling is done and provision for top soil stacking is being carried out accordingly.</p>

(iv)	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	No fly ash is dumped in the mine as there is no void area in the active mines. There is no generation of fly ash and flue gas inside the mine.
(v)	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.	Top soil stacking is being at earmarked site only. Approximately, an estimated amount of 2 lakh cu.m top soil has been stacked as on date. There is grass growth and shrub growth assisted by the growth of some native species. More than 550 seedballs of fruit bearing plants are thrown over those dumps. Dumps on reaching their final RL will be grassed and planted with native species to reduce erosion and surface run-off.
(vi)	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	No grazing land is involved inside the lease area.
(g) Green Belt		
(i)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.	There is no grazing land inside the lease area.
(ii)	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.	Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat

		<p>Road over 10 Ha area.</p> <p>Based on land availability & suitability, further plantations will be carried out. It is to note that at present natural afforested trees have formed greenbelt around the mine and they have been left undisturbed.</p>																								
(h) Public hearing and Human health issues																										
(i)	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.	Adequate illumination is ensured and being monitored continuously. Illumination plan for the mine is also designed and is complied with.																								
(ii)	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.	<p>133 departmental employees have undergone PME and 1063 number of contractual employees have undergone IME for the year 2023.</p> <p>Previous 3 years IME/PME is given as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Departmental PME</th> <th colspan="2">Contractual IME</th> </tr> <tr> <th>Target</th> <th>Achievement</th> <th>Target</th> <th>Achievement</th> </tr> </thead> <tbody> <tr> <td>2021</td> <td>113</td> <td>145</td> <td>As per Joinee</td> <td>263</td> </tr> <tr> <td>2022</td> <td>120</td> <td>125</td> <td>-do-</td> <td>472</td> </tr> <tr> <td>2023</td> <td>130</td> <td>133</td> <td>-do-</td> <td>1036</td> </tr> </tbody> </table> <p>Regular medical checkups are performed by Basundhara Hospital. It also conducts regular health camps for medical checkup in nearby villages. Based on the regular medical examinations no serious issue has been detected till now and thus no action was taken. Any serious occupational disease if arises shall be reported and dealt with full care. The health of the workforce is given utmost importance with proper PPE kits and safe practices.</p> <p>20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p> <p>Further, as per the stipulated condition good occupational environment for mine workers shall be implemented. And preventive measures for burns, malaria and provision of anti-snake venom is being ensured at Basundhara Hospital.</p>	Year	Departmental PME		Contractual IME		Target	Achievement	Target	Achievement	2021	113	145	As per Joinee	263	2022	120	125	-do-	472	2023	130	133	-do-	1036
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(iii)	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	All working personnel working in core zone wear protective respiratory devices and are being imparted regular training and information by regular safety talks and sensitization programs.																								
(iv)	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.	<p>Public hearing commitment such as providing of fixed water sprinkler at potential dust generation source, use of water tanker, 3 number of trolley mounted fog canon at Kanika siding and 3 numbers at coal stock yard, 42 sprinklers in the mine, production with the help of surface miner and drilling and blasting operation are being implemented.</p> <p>Out of total 730 PAFs, 275 PAFs opted for cash compensation in lieu of plots. For balance 455 PAFs, 75 Nos of plots were developed at Barpalli-II resettlement site and 275 plots at Badkhalia RR site, most of PAFs are not giving their consent on the hope of enhancement of RR benefit(building Assistant) by</p>																								


		<p>Supreme Court which has been given by Claim Commission and opposed by MCL. The details of the response from the project proponent to the issues raised during the public hearing are as follows:</p> <table border="1"> <thead> <tr> <th data-bbox="760 289 865 390">Sl. No.</th> <th data-bbox="865 289 1019 390">Issued raised by the Public</th> <th data-bbox="1019 289 1422 390">Action to be taken by MCL</th> </tr> </thead> <tbody> <tr> <td data-bbox="760 390 865 909">1.</td> <td data-bbox="865 390 1019 909">Pollution due to coal dust (Air pollution)</td> <td data-bbox="1019 390 1422 909"> 1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads. 3. Three Fog cannon system has been provided to coal stock to mitigate the pollution at dust generating source. 4. Besides of these, 10 nos of 12KL truck mounted mobile fog cannons along the CT roads, have been used to arrest the fugitive dust of CT roads. </td> </tr> <tr> <td data-bbox="760 909 865 1031">2.</td> <td data-bbox="865 909 1019 1031">Production of Coal</td> <td data-bbox="1019 909 1422 1031">Production is being carried out with the help of surface miner and drilling and blasting operation has been minimized</td> </tr> <tr> <td data-bbox="760 1031 865 1461">3.</td> <td data-bbox="865 1031 1019 1461">Plantation</td> <td data-bbox="1019 1031 1422 1461"> Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area. </td> </tr> <tr> <td data-bbox="760 1461 865 1797">4.</td> <td data-bbox="865 1461 1019 1797">Drinking water supply</td> <td data-bbox="1019 1461 1422 1797"> The authority has already completed bore-well inside school premises. Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD. Nearby villages around the Garjanbahal mine are covered in this scheme. </td> </tr> </tbody> </table>	Sl. No.	Issued raised by the Public	Action to be taken by MCL	1.	Pollution due to coal dust (Air pollution)	1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads. 3. Three Fog cannon system has been provided to coal stock to mitigate the pollution at dust generating source. 4. Besides of these, 10 nos of 12KL truck mounted mobile fog cannons along the CT roads, have been used to arrest the fugitive dust of CT roads.	2.	Production of Coal	Production is being carried out with the help of surface miner and drilling and blasting operation has been minimized	3.	Plantation	Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area.	4.	Drinking water supply	The authority has already completed bore-well inside school premises. Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD. Nearby villages around the Garjanbahal mine are covered in this scheme.
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3.	Plantation	Plantation details as of now may be given as under: 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area.															
4.	Drinking water supply	The authority has already completed bore-well inside school premises. Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD. Nearby villages around the Garjanbahal mine are covered in this scheme.															
(v)	The project proponent shall follow the mitigation measures provided in this Ministry's OMNo.Z-11013/5712014-IA.II (M) dated 29th	Mitigation measure interalia including use of surface miner, control blasting, mobile tanker, effluent treatment plant, garland drain, catch drain, Noise level with in limit at night etc has been															

	October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	implanted as a part of OM No.: Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
(i) Corporate Environment Responsibility		
(i)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.	The company has a laid down policy known as the Corporate Environment Policy 2018 which is available in the websites: https://www.coalindia.in/departments/environment/policy-env/ and https://www.mahanadicoal.in/Environment/eenvironment.php under the environment drop down menu.
(ii)	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Details of environmental cell at area /project level is as follows :- Area level: 1. General Manager 2. Staff Officer (Civil) 3. Area Nodal Officer (Envt./ Forest) 4. Area Survey Officer 5. Staff Officer (E&M) Project level: 1. Project Officer 2. Project Civil Engineer 3. Environment Officer 4. Survey Officer. 5. Project Engineer (E&M). It is also displayed in the MCL company's website https://www.mahanadicoal.in/Environment/eenvironment.php
(iii)	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Structure of environmental cell for the project has been furnished above. Total capital expenditure on environmental protection reported to be Rs.33.23 crore. Recurring expenditure reported to be Rs 7.23 crore, Rs.6.14 crore, Rs.9.43 crore and Rs.2.37 crore for 2022-23, 2021- 22, 2020-21, 2019-2020 respectively.
(iv)	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self environment audit is being carried out and third party environment audit is being carried out by NEERI, Kolkata and final report has been submitted in December-23.
(j) Miscellaneous		
(i)	The project proponent shall make public the environmental clearance granted for their project along with the environmental	The EC of 15.6 MTY of Garjanbahal OCP is displayed in two Odia newspapers namely Rourkela edition of Samaja and Sambalpur edition of Samaja on 16.03.2022. It is also displayed

	conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	on English newspaper named The New Indian Express dated 16.03.2022. An electronic copy of the EC letter has been marked to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office.
(ii)	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	An electronic copy of the EC letter has been marked to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office.
(iii)	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Duly noted. The compliance and the monitoring data are displayed on the company's website.
(iv)	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Monitoring is done by Routine Environment Monitoring Stations installed at various points in the mine.
(v)	The project proponent shall submit six monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Six monthly compliance has been uploaded on the website of the company and submitted to the Regional Office.
(vi)	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29 th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	Mitigation measure interalia including use of surface miner, control blasting, mobile tanker, effluent treatment plant, garland drain, catch drain, Noise level within limit at night etc has been implemented as a part of OM No.: Z-11013/5712014-IA.11 (M) dated 29 th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
(vii)	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Form V is submitted for each financial year. Latest form V for the year 2022-23 is also submitted.
(viii)	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Mining operation has started on 24-05-2018 and the CTO for 15.6 MTPA was obtained on 17.03.2022 and for 18.2 MTPA has been obtained on 10.03.2023.
(ix)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Stipulations made by the State Pollution Control Board and the State Government are strictly adhered and followed.
(x)	The project proponent shall abide by all the commitments and recommendations made in	The details of action taken plan for public hearing has been furnished before in point (h) (iv) and all the

	the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	commitments/stipulations made in EIA/EMP and public hearing are followed.														
(xi)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	Production is carried out within EC capacity and the quantity approved in CTO. Production details are as under: <table border="1"> <thead> <tr> <th>YEAR</th> <th>ACHIEVEMENT</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>2.81 MT</td> </tr> <tr> <td>2019-20</td> <td>7.59 MT</td> </tr> <tr> <td>2020-21</td> <td>11.77 MT</td> </tr> <tr> <td>2021-22</td> <td>13.55 MT</td> </tr> <tr> <td>2022-23</td> <td>17.29 MT</td> </tr> <tr> <td>2023-24</td> <td>18.19 MT</td> </tr> </tbody> </table>	YEAR	ACHIEVEMENT	2018-19	2.81 MT	2019-20	7.59 MT	2020-21	11.77 MT	2021-22	13.55 MT	2022-23	17.29 MT	2023-24	18.19 MT
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(xii)	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Agreed upon.														
(xiii)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed upon.														
(xiv)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed upon.														
(xv)	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	Full cooperation shall be extended in this regard.														
(xvi)	The above conditions shall be enforced, inter alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules made their under and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Agreed upon.														

S No	Condition Stipulated	Status of Compliance
As per the EC letter No J-11015/159/2015- IA-II(M) Dated 12th Jan., 2023 (amended EC for 15.6 MTY)		
i.	No further expansion in production capacity to this project shall be granted till the compliance of EC conditions.	Agreed upon.
ii.	PP shall implement in-pit conveyor system with silo loading facility till railway siding and no road transportation shall be allowed after October, 2023 and accordingly, SPCB shall not grant CTO for road transportation after October, 2023.	Discussed in general condition (iv)
iii.	PP shall deploy only 40-50 tonnes covered trucks/dumper to reduce fleet size till rapid loading system and conveyor belt system is commenced. (i.e. till October, 2023)	Discussed in general condition (xiii)
iv.	PP shall submit the action plan for in-pit conveyor system for Garjanbahal OC mine separately to IRO and implement the same before submitting any type of application on PARIVESH portal before October, 2023 and accordingly, SPCB shall not grant CTO for non-implementation of in-pit conveyor system after October, 2023	Action plan has been submitted earlier. Complete construction of the in-pit conveyor system is awaited.


 Project Officer
 Garjanbahal GCP,
 Basugadhara Area
 G.M.

GARJANBAHAL OCP, BASUNDHARA AREA, MCL

Half-yearly compliance report for the period of Oct'2024 to Mar'2025 as per EC for 18.2 MTY EC

Compliance of EC conditions vide no -11015/159/2015-IA-II(M) dated 9th March, 2023 for 18.2 MTY EC of Garjanbahal OCP

SL no	Conditions	EC compliance status
i	Environment Clearance for enhanced capacity (i.e from 15.6 MTPA to 18.2 MTPA) shall be applicable after achievement of previous production level i.e 15.6 MTPA of production level.	The production for the period 2023-24 & 2024-25 have surpassed 15.6 MT which stood to 18.20 MT against the EC of 18.2 MTY.
ii	The Project Proponent shall submit the integrated NIT for Kulda and Garjanbahal mines before June, 2023 and start the ground work by December, 2023 for implementing conveyor belt from input to railway siding as per undertaking provided by Director ((Technical/Project & Planning) accordingly the CTO shall be issued by SPCB.	e-tender notice & e-tender document for the work ""Construction of 16.5 Mty CHP on pre-engineered turnkey execution basis for design, supply, erection, commissioning, trail run, testing, operation and maintenance during DLP period for coal evacuation arrangement (12.5 Mty) from Integrated Kulda Garjanbahal OCP by pipe conveyor to Sardega CHP (U/C) at Sardega siding and 4.0 Mty pre-weigh truck loading arrangement for Road sale"" as per EC for 18.2 MTY capacity of Garjanbahal OCP, Basundhara Area, has been submitted vide letter no MCL/BA/PO/GOCP/E&F/2023-24/ 1201 dated: 19.08.2023. Sardega RLS has started its running in December 2024.
iii	PP shall submit the action plan for compliance of non-compliance & partial compliance conditions as highlighted by Ministry's IRO and submit the same within 2 months for completing the work within the stipulated timeline.	Action plan has been submitted vide no: MCL/BA/PO/GOCP/E&F/2023-24/86 dated: 10-04-2023.
iv	PP shall submit Certified Compliance Report of all previous ECs by February, 2024 for further review of EAC of EC conditions.	Certified compliance reports of previous ECs for 13 MTY and 15.6 MTY are submitted vide nos: 101-976/EPE/2244, dated 10.10.2022 and 101-976/18/EPE, dated 17.02.2023.
v	The project proponent shall submit the video footage and photographs after compliance of all above condition, it is mandatory to record the dump site as well as the status of plantation.	Recent drone video of the mine was taken on 16 th December, 2023 which will be shared upon the preparation and submission of the video by the agency (M/s Lighthouse Odisha Productions).

vi	The project proponent shall start ground construction work for inpit belt conveyor system after completing all the necessary procedures by December, 2023.	Necessary activities DGPS Survey of the area by ORSAC and Budget estimate for conveyor system. RLS has been prepared at Sardega Railway Siding for coal transportation in December 2024.
vii	The Project proponent shall develop the Sal Nursery within six months with the minimum capacity of 25000 plants in 5 hectare of the project area and distribute freely to local villagers.	Work order for setting up sal nursery has been awarded to Chhatisgarh Rajya Van Vikash Nigam Limited (CRVNL). Sal nursery has been set up near the Garjanbahal High School inside the mine lease area.
viii	PP shall only plant Sal trees from now onwards on the reclaimed land and other trees/plants on slopes of Overburden dump	Upon the availability of the suitable reclaimed land and dump slopes, the sal trees shall be planted whose saplings will preferably be taken from the sal nursery near Garjanbahal High School.
ix	PP shall conduct tree plantation on the four lanes stretch of distance 25 Km from Duduka to Kanika (100000 numbers) and submit the certified compliance through DFO within 2 years.	The work has been taken up by OFDC Rourkela after due consideration by the Forest Departments. The plantation work is under progress with plantation and pitting works on road sides. The work has been awarded for 3 years with Rs 14.73 crore value. Till March 2025, 10,000 nos of saplings have been planted on road sides from Duduka chowk to Duroboga Chowk. Further 50,000 more seedlings are planned to be planted in 2025 over the Duduka-Kanika Road towards Kanika from Duroboga. The said plantation work shall relate to the avenue plantation works at Bankibahal to Bhedabahal road and Duduka-Gopalpur-Toparia road due to their vast scope based on their feasibility.
x	PP shall conduct tree plantation (100000 numbers) along the four lane road from Bankibahal to Bhedabahal for a distance of 30 Km which is to be completed by December, 2023.	DFO, Sundargarh and OFDC, Jhasruguda were approached for the work. Already plantation of 3834 plants was carried out before by OFDC at available patch in between Bankibahal to Kanika during 2021-22 for R&B, Sundargath Division . The road from Bankibahal has some stretches which is under construction rendering the area unsuitable for plantation. As stated by OFDC, Jharsuguda, there will be isolated patches for plantation to take up in phasewise manner as per feasibility. However, OFDC has planned for 30,000 saplings plantation at the feasible areas subject to feasibility & availability of area in the rainy season as per the availability and feasibility of the area. OFDC Rourkela will take up the work subject to fulfillment of road construction conditions and the existing plantation work at Kanika-Duduka road. OFDC has provided revised estimate for the plantation of 30,000 saplings in May 2025 which has been processed for obtaining the competent approval and sanction of the required amount for carrying out the work. The work of taking up the plantation in this stretch is expected to be taken up in 2025-26.

xi	PP shall complete the improvement to Dudaka-Gopalpur-Toparia road" of 22.22 Kms within one year after the grant of EC. Further tree plantation shall be conducted along the said road.	The 2-lane road from Gopalpur to Toparia was completed recently clearing the side path embankments of the road. A few areas after Gopalpur towards Toparia are found by OFDC Ltd to support the plantation works. OFDC, Rourkela has provided the estimate for 15000 plants with optimistic planning for taking up the work subject to fulfillment of road construction conditions and the existing plantation work at Kanika-Duduka road in May 2025 . The work is thus slated for 2025-26 monsoon subject to the approval and sanction for awarding the work.
xii	PP shall complete the construction and pre-commissioning of ETP proposed for integrated HEMM workshop prior to commissioning of workshop	The ETP has been constructed in the integrated HEMM workshop which is under construction.
xiii	The PP shall submit the status of expenditure incurred from the budget of Public Hearing to IRO- Bhubaneshwar with its six monthly compliance report.	Rs 26.27 Crs expenditure incurred till date in Public Hearing Budget.
xiv	PP shall submit the work done/activities conducted regarding conservation of Basundhara River as per River Conservation Action Plan for 20 km stretch of the river in Basundhara Area.	Basundhara River Conservation Plan has been prepared and the activities will be carried out in phased manner accordingly.
xv	All other terms and conditions as prescribed in the Ministry's letter dated 9th November, 2017, 14th February, 2022 & 12th January, 2023 shall be applicable	Compliance report of all the ECs for 13 MTY, 15.6 MTY, 15.6 MTY(amended) and 18.2MTY dated 9th November, 2017, 14th February, 2022 & 12th January, 2023 have been submitted.
(a)	Statutory Compliance	
i	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	Stage-II forest clearance for 88.89 Ha is obtained vide F. no- 8-11/2015-FC dated 6 th March 2018. The details are available in the website https://www.mahanadicoal.in/Environment/eforestclearance.php . Mining activities are restricted at the acquired forest land only.
ii	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	No critically endangered species are found in the project area so the condition is not applicable.

iii	<p>The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site- Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).</p>	<p>Site specific Wildlife Management Plan has been prepared and approved for the project and the fund of Rs. 3,40,38,000.00 has been deposited with CAMPA for its implementation by DFO, Sundargarh.</p>
iv	<p>The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.</p>	<p>Consent to Establish has been obtained vide no- 3471/IND-II-CTE-6907 dated 10.03.2023 and Consent to Operate has been obtained vide no- 3489/IND-I-CON-6641 dated 10.03.2023. The details are available in the website https://www.mahanadicoal.in/Environment/eforestclearance.php</p>
v	<p>The project proponent shall obtain the necessary permission from the Central Ground Water Authority.</p>	<p>CGWA permission for renewal of NOC has been obtained on March-2025 and is valid till October 2025 vide no CGWA/NOC/MIN/REN/1/2025/11001 dated 01/03/2025.</p>
vi	<p>Solid/hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.</p>	<p>Solid/hazardous wastes like oil filters, burnt oil, residual oil wastes are kept separately in the workshop. The burnt oil is stored and recycled by the authorized recycler through the Departmental Store of Basundhara Area.</p>
b	Air quality monitoring and preservation	
i	<p>Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5 SO2 and NOx, Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically</p>	<p>At present 5 CAAQMS stations are present for Basundhara Area. Recently, one no of CAAQMS is brought to the Project Office of Garjanbahal OCP for monitoring at core zone and one at the Gopalpur Road for monitoring near Kulda OCP are commissioned. Testing of the two stations are under progress. The real time data generated by already installed CAAQMS is being uploaded in company' website: http://apps.coalindia.in:8080/apex/f?p=159:1:10556120434404</p>

	<p>sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.</p>	
ii	<p>The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25 September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.</p>	<p>Ambient air quality monitoring stations have been established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. locations of the stations have been decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets and in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Cd, Ni, Cr, etc will be carried out at as well, once in six months.</p>
iii	<p>Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM/PM:5) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.</p>	<p>Transportation of coal is done by the trucks covered by tarpaulin. Regular water sprinkling is being carried out by 42 fixed sprinklers, 6 water tankers, 5 truck mounted mobile fog cannons (including 2 in the coal transport road passing through Kulda OCP) and 3 fixed fog cannons. Three nos of mechanical road sweepers also operate over public coal transportation roads. Care is being taken to keep the ambient air quality parameters within prescribed limits.</p>
iv	<p>The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be</p>	<p>Transportation of coal is carried as per the mining plan. Coal Transportation towards Railway Sidings are being done through coal corridors by-passing all villages en-route.</p> <p>By pass roads is being constructed in consultation with State Administration taking care of the safe passage of vehicles with minimal pollution and chances of accidents with suitable dust control measures like that of MDR-29 road towards Kanika railway siding.</p>

	so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	
v	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining "PUC certificate from the authorized pollution testing centres.	The vehicles are allowed to run after the submission of PUC certificates, the records of which are duly maintained.
vi	Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	CHP does not exist. Drills are wet operated.
vii	Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environment friendly sustainable technology should be implemented for mitigating such parameters.	CHP does not exist. Other environment friendly technologies like blast free wet cutting of coal by surface miner are being adopted.
c	Water quality monitoring and preservation	
i	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board,	Effluent discharge of the mine is being monitored and ensured that no harm is caused by it.
ii	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of	The monitoring data of environmental quality parameter (air, water and noise) are displayed at the entrance of the Project Office and the company's website https://www.mahanadicoal.in/Environment/eenvironment.php

	Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	
iii	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.	Ground water monitoring is being done regularly by the CMPDIL at required interval. The ground water level is being measured at one dug well at the required frequency. The quality of these well waters is also monitored frequently.
iv	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.	Monitoring of upstream and downstream of Basundhara river is being done in six months periodicity.
v	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.	Mine sump of nearly 11.7 lakh m ³ capacity serves as a rainwater harvesting structure. Mine water from mine sump is utilized in mining operations. A rooftop water harvesting structure of 16m X 11m is present at the Project.
vi	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be	Garland drains have been provided around the mine. Catch drains have been provided inside the mine to channelize the run-offs back into the mine sump. Since the mine is new, the overburden dumps are active and hence the retaining wall could not be constructed. Native species of plants shall be planted in due course of time. Regular maintenance of catch drains is being done with the help of departmental machineries and the run offs are being channelized to the mine sump for the subsequent utilization of the water for dust suppression. A gabion wall of nearly 110 m length is constructed near the toe of the external OB dump near MTK office after the dumping has stopped there.

	<p>regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.</p>	<p>The retaining wall constructed at the toe of the external dump near Panchayat Road covering the plantation dump for a length of 500m constructed on the based on present requirement.</p>
vii	<p>Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).</p>	<p>Measures for groundwater recharge have been take up. As the natural groundwater level in and around the mine area is very low, the drinking water to nearby villages is supplied by water tankers. 25 nearby villages are covered for 2022-23. However, 3 bastis of Garjanbahal, Karlikachar and Bangurkela are being supplied water from borewell.</p>
viii	<p>Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under. and as amended from time to time. Adequate ETP /STP needs to be provided.</p>	<p>CHP does not exist. An integrated workshop with 29 components is under construction which houses a newly constructed ETP with capacity of 140 KLD at 10 hours working period.</p>
ix	<p>The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.</p>	<p>The pumped-out water of the mine is sent to the mine sump after allowing it to desilt via series of drains. The mine water is utilized for industrial purposes. The drains are cleaned and desilted regularly in pre-monsoon and post-monsoon periods.</p>

x	<p>The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc. shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.</p>	<p>There is no river/pond/lake at and around the mine lease area of Garjanbahal OCP. However, the entire surface drainage gets diverted to the mine sump of 11.7 lakh m³ capacity. Basundhara river is the nearest stream of the mine in the area.</p> <p>In this regard, earlier, the surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake, etc., has been prepared and implemented by the Kulda OC project vide plan no.: MCL/BGA/KOCP/SURV-07 dated 16/08/2008. The plan is updated every month as per the progression of the mines.</p> <p>Chhatnajor nallah has been straightened with the competent approval from State Government and embankment has been provided all along the stream.</p> <p>Embankment of 2.7Km has been constructed near Kulda OCP on the banks of Basundhara nallah to prevent sudden rush of water. Stone pitching has been done along the embankment. Plantation of 1350 nos. of plants has been planted at the edge of embankment to prevent soil erosion.</p> <p>Garland drains (3300m x 1.5m x 1.5m) and Berm (2500m x 1.5m x 1.5m) has been provided all around the mine boundary and External dump, to prevent the surface run-off from outside the mine lease area to enter the Garjanbahal mine.</p>
xi	<p>The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation/water resource department in the state government.</p>	<p>The riverine/riparian ecosystem management plan is under preparation for Basundhara River and the estimation has been completed. The plan will be implemented as per the direction of irrigation department of Odisha Government.</p>
d	Noise and Vibration monitoring and prevention	
i	<p>Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed</p>	<p>Adequate measures are being taken to control the noise pollution. PPE like ear muff is being provided to the work force involved in direct mining to prevent the effect of noise. 17 nos of ear muffs has also been distributed during this period.</p> <p>The noise level survey is also being carried.</p>

	norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.	
ii	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.	Sequentially controlled blasting techniques have been adopted to control ground vibration and fly rocks by electronic/non-electronic detonators for the removal of OB. Vibrometer is used for noting the vibration readings.
iii	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.	Noise monitoring is being done on fortnightly basis at the sensitive points in the mine and there is no significant rise in noise level till date. Noise level survey shall be conducted in the mine premises to assess the impact of noise on the workmen in the mine.
e	Mining Plan	
i	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	Mining is being carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
ii	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).	Mining is being carried out in compliance to the provisions of the Mining Laws & related to mining & relevant DGMS circular. Mining is carried out as per the approved mining plan.
iii	No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.	Stage II FC letter no- 8-11/2015 dated 06.03.2018 for an area of 88.899 Ha. Mining is being done in the diverted forest land only.
iv	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	<p>Actions have been taken to reduce energy consumption by conservation, efficiency and use of renewable energy.</p> <p>5.9% of energy has been saved in the period of 2022-23 as compared to the consumption in the period of 2022-23 with respect to the production enhancement from 15.6 MTPA to 18.2 MTPA</p> <p>Practice of Installation of LED lights by replacing Halogen bulbs is being done as a measure to conserve energy. All the Halogen bulbs has been</p>

		<p>replaced by LED bulbs. 655nos. LED bulbs has been installed in the period of 2022-23</p> <p>16 KVA solar plant has been setup at area administrative buildings.</p> <p>PP have installed 15, 29, 25 nos. of solar street lights in the Kuisira, Ratansara and Ratanpur village respectively.</p>
f	Digital Survey	
i	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey has been carried out and the reports are available at the company website https://www.mahanadicoal.in/Environment/eenvironment.php
ii	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27 August, 2009 and subsequent amendments.	The mine has not reached its final void area. The upcoming reclamation works in future shall be carried out as per the approved mining plan and mine closure plan.
iii	The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"" post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry, Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.	<p>All the activities of excavated area, OB dumping, backfilling and future afforestation plan shall be carried out as per Mining Plan and EIA/EMP. Backfilling process was started in the year 2019.</p> <p>As on March, 2025: Excavated area: 201.54 Ha Backfilled area: 95.71 Ha External OB Dump area: 49.53 Ha</p> <p>Progressive backfilling is done and provision for top soil stacking is being carried out accordingly.</p>

iv	<p>Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.</p>	<p>No fly ash is dumped in the mine as there is no void area in the active mines. There is no generation of fly ash and flue gas inside the mine.</p>
v	<p>Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.</p>	<p>Top soil stacking is being done at earmarked site only. Approximately, an estimated amount of 2 lakh cu.m top soil has been stacked as on date. There is grass growth and shrub growth assisted by the growth of some native species. More than 550 seedballs of fruit bearing plants are thrown over those dumps. Dumps on reaching their final RL will be grassed and planted with native species to reduce erosion and surface run-off.</p>
vi	<p>The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of</p>	<p>No grazing land is involved inside the lease area.</p>

	Hon'ble Supreme Court with regard to acquiring grazing land.																				
g	Green Belt																				
i	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.	There is no grazing land inside the lease area.																			
ii	Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/coal transportation roads.	<p>Plantation details as of now may be given as under:</p> <ol style="list-style-type: none"> 1)170 nos at Site Office premises 2)100 nos at Project Office and View Point 3)5862 nos along 100m lease boundary. 4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately. 5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area. <p>Based on land availability & suitability, further plantations will be carried out. It is to note that at present natural afforested trees have formed greenbelt around the mine and they have been left undisturbed.</p>																			
h	Public hearing and Human health issues																				
i	Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six- monthly basis.	Adequate illumination is ensured and being monitored continuously.																			
ii	The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations	<p>133 departmental employees have undergone PME and 1063 number of contractual employees have undergone IME for the year 2023.</p> <p>Previous 3 years IME/PME is given as under:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Departmental PME</th> <th colspan="2">Contractual IME</th> </tr> <tr> <th>Target</th> <th>Achievement</th> <th>Target</th> <th>Achievement</th> </tr> </thead> <tbody> <tr> <td>2021</td> <td>113</td> <td>145</td> <td>As per Joinee</td> <td>263</td> </tr> <tr> <td>2022</td> <td>120</td> <td>125</td> <td>-do-</td> <td>472</td> </tr> </tbody> </table>	Year	Departmental PME		Contractual IME		Target	Achievement	Target	Achievement	2021	113	145	As per Joinee	263	2022	120	125	-do-	472
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	shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.	2023	130	133	-do-	1036
		<p>Regular medical checkups are performed by Basundhara Hospital. It also conducts regular health camps for medical checkup in nearby villages. Based on the regular medical examinations no serious issue has been detected till now and thus no action was taken. Any serious occupational disease if arises shall be reported and dealt with full care. The health of the workforce is given utmost importance with proper PPE kits and safe practices.</p> <p>20% of the workers identified from workforce engaged in active mining operation are subjected to health check-up for occupational disease and hearing impairment, if any, through a specialized agency/institution within the District/State and the results reported to this Ministry and DGMS and the reports will be conveyed to the regional Office with the next half yearly compliance report.</p> <p>Further, as per the stipulated condition good occupational environment for mine workers shall be implemented. And preventive measures for burns, malaria and provision of anti-snake venom is being ensured at Basundhara Hospital.</p>				
iii	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	All working personnel working in core zone wear protective respiratory devices and are being imparted regular training and information by regular safety talks and sensitization programs.				
iv	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.	<p>Public hearing commitment such as providing of fixed water sprinkler at potential dust generation source, use of water tanker, 3 number of trolley mounted fog canon at Kanika siding and 3 numbers at coal stock yard, production with the help of surface miner and drilling and blasting operation are being implemented.</p> <p>Out of total 730 PAFs, 275 PAFs opted for cash compensation in lieu of plots. For balance 455 PAFs, 75 Nos of plots were developed at Barpalli-II resettlement site and 275 plots at Badkhalia RR site, most of PAFs are not giving their consent on the hope of enhancement of RR benefit(building Assistant) by Supreme Court which has been given by Claim Commission and opposed by MCL.</p>				
v	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29 October, 2014, titled "Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are	Mitigation measure interalia including use of surface miner, control blasting, mobile tanker, effluent treatment plant, garland drain, catch drain, Noise level with in limit at night etc has been implanted as a part of OM No.: Z-11013/5712014-IA.11 (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine				


	the part of mine lease areas or habitations and villages are surrounded by the mine lease area".	lease areas or habitations and villages are surrounded by the mine lease area'.
i	Corporate Environment Responsibility	
i	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.	The company has a laid down policy known as the Corporate Environment Policy 2018 which is available in the websites: https://www.mahanadicoal.in/Environment/eenvironment.php .
ii	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Environmental cell reported for the area level comprising of General Manager, Staff Officer (Civil), Area Nodal Officer (Envt./ Forest), Area Survey Officer, Staff Officer (E&M), and environmental cell reported for the project level comprises of Project Officer , Project Civil Engineer, Environment Officer, Survey Officer, Project Engineer (E&M). Management structure of company level is also displayed on the website: https://www.mahanadicoal.in/Environment/eenvironment.php
iii	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Structure of environmental cell for the project has been furnished as above. Total capital expenditure on environmental protection reported to be Rs.33.23 crore. Recurring expenditure reported to be Rs 7.23 crore, Rs.6.14 crore, Rs.9.43 crore and Rs.2.37 crore for 2022-23, 2021-22, 2020-21, 2019-2020 respectively.

iv	Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self environment audit is being carried out and third party environment audit is being carried out by NEERI, Kolkata and final report has been submitted in December-23.
j	Miscellaneous	
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	The advertisement regarding accord of EC has been published in Samaja on 16.03.2023 and the New Indian Express dated 16.03.2023.
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	An electronic copy of the EC letter has been marked to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for display.
iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Compliance status of the accorded Environmental clearance including monitored data has been uploaded on the website of the company. The reports are displayed over the website: https://www.mahanadicoal.in/Environment/estatutorycp.php
iv	The project proponent shall monitor the criteria pollutants level namely; PM, SO2. NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Criteria pollutants level namely; PM10, SO2, NOx (ambient levels) or critical sectoral parameters has been monitored and displayed for public and uploaded in the website of the company. The website for display is: https://www.mahanadicoal.in/Environment/eenvironment.php
v	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of	Six monthly compliance has been uploaded on the website of the company and submitted to the Regional Office.

	Environment, Forest and Climate Change at environment clearance portal.							
vi	The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29 October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.	Mitigation measure interalia including use of surface miner, control blasting, mobile tanker, effluent treatment plant, garland drain, catch drain, Noise level with in limit at night etc has been implanted as a part of OM No.: Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.						
vii	The project proponent shall submit the environmental statement for each financial year in Form- V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Form V is submitted for each financial year. Latest form V for the year 2022-23 is also submitted and uploaded in the company's website.						
viii	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Mining operation has started on 24-05-2018 and the CTO for 18.2 MTPA has been obtained on 10.03.2023.						
ix	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Stipulations made by the State Pollution Control Board and the State Government are strictly adhered and followed.						
x	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	<p>The details of the response from the project proponent to the issues raised during the public hearing are as follows:</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Issued raised by the Public</th> <th>Action to be taken by MCL</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Pollution due to coal dust (Air pollution)</td> <td> 1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads. </td> </tr> </tbody> </table>	Sl. No.	Issued raised by the Public	Action to be taken by MCL	1.	Pollution due to coal dust (Air pollution)	1. Transportation of coal is carried out by fully covered trucks. It is being ensured that the trucks are fully covered with tarpaulin. 2. 5 nos. of 28 kl does the work of dust suppression of CT roads and haul roads.
Sl. No.	Issued raised by the Public	Action to be taken by MCL						
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				<p>3. Three Fog cannon system has been provided to coal stock to mitigate the pollution at dust generating source.</p> <p>4. Besides of these, 10 nos of 12KL truck mounted mobile fog cannons along the CT roads, have been used to arrest the fugitive dust of CT roads.</p> <p>5. 16 nos of fixed sprinklers near coal stockyard are present totaling 42 sprinklers in the mine.</p>		
		2.	Production of Coal	Production is being carried out with the help of surface miner and drilling and blasting operation has been minimized		
		3.	Plantation	<p>Plantation details as of now may be given as under:</p> <p>1)170 nos at Site Office premises</p> <p>2)100 nos at Project Office and View Point</p> <p>3)5862 nos along 100m lease boundary.</p> <p>4)Nearly 9400 nos. of plants at safety zone inside lease boundary at 4 patches over 5.9 Ha approximately.</p> <p>5)25000 plants are planted over external OB near Panchayat Road over 10 Ha area</p>		
		4.	Drinking water supply	<p>The authority has already completed bore-well inside school premises.</p> <p>Drinking water supply is being done for peripheral villages during summer (90 days) through water tankers from WTP of Basundhara Area of capacity of 1.6 MGD. Nearby villages around the Garjanbahal mine are covered in this scheme.</p>		
xi	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry	Production is carried out within EC capacity and the quantity approved in CTO. Production details are as under:				
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 50px; text-align: center;">YEAR</td> <td style="width: 50px; text-align: center;">ACHIEVEMENT</td> </tr> </table>		YEAR	ACHIEVEMENT	
YEAR	ACHIEVEMENT					


	of Environment, Forests and Climate Change.		2018-19	2.81 MT	
			2019-20	7.59 MT	
			2020-21	11.77 MT	
			2021-22	13.55 MT	
			2022-23	17.29 MT	
			2023-24	18.20 MT	
			2024-25	18.20 MT	
xii	Concealing factual data or submission of false fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Agreed upon.			
xiii	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Agreed upon.			
xiv	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed upon.			
xv	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Agreed upon.			


 Project Officer
 Garjan Bahal GCP,
 Basuguhara Area
 Garjan Bahal GCP

GARJANBAHAL OCP, BASUNDHARA AREA, MCL
Half-yearly compliance report for the period of
October'2024 to March'2025 as per EC for 18.2 MTY EC

Compliance of EC conditions vide no -11015/159/2015-IA-II(M) dated 8th March, 2024 for 18.2 MTY EC of Garjanbahal OCP

#	Conditions	Compliance
1	PP shall submit an action taken report against the CCR dated 1/02/2024 to concerned Regional Office and get the ATR closed before Dec,2024. Except the condition for which extension of time is granted.	ATR has been submitted for latest CCR report. As per the latest CCR ATR shall be enclosed with the completion of activities.
2	EC is valid for the project life as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier subject to completion of in pit belt conveyor system by July 2025. PP shall submit the revised mining plan to concerned RO, in case life of mine increases/decreases from 11 years due to change in reserve or production level. PP shall ensure that no mining operation shall be carried out without a valid EC.	The condition has been agreed and mining operation is being carried out accordingly.
3	PP shall get the Basundhara River conservation plan approved by the concerned authority.	The plan is being prepared and is currently under approval stage for the conservation of Basundhara River in consultation with the State Government.
4	The Committee observed that "Audit of Plantation Green Cover Mapping and Assessment of Above Ground Biomass and Carbon Sequestration in the Plantation site of Garjanbahal OCP" shall be conducted by recognized institute such as ICFRE for the same. The recommendation of the same shall be submitted to the Ministry along with action plan and budgetary requirement for completion of the same.	The activity is under consideration for carrying out upon the availability of suitable plantation patches. Plantation of thick green leaf species are being carried out at the available areas for checking carbon footprint under control. Presently, CMPDIL is carrying out the carbon sequestration study around Kulda OCP and Garjanbahal OCP.
5	PP shall seek quotations from the manufactures for installation of solar light fulfilling the illumination criteria of DGMS.	Presently, the LED lights are being used for adequate illumination along the mines. Solar lights of adequate illumination in the mine is not available as per now. Scope of using the solar lights in office premises as per possibility is being considered.


 Project Officer
 Garjanbahal OCP,
 Basundhara Area
 MCL
 Eastern Coal Project

ଓଡିଶା ବନ ଉନ୍ନୟନ ନିଗମ ଲିମିଟେଡ

Odisha Forest Development Corporation Limited
(Formerly Orissa Forest Development Corporation Limited)
(A Government of Odisha Undertaking)



CIN-U02005OR1962SGC000446

OFFICE OF THE DIVISIONAL MANAGER, ROURKELA (C-KL) DIVISION.
Rourkela, Odisha, PIN-769001, Tele/Fax-0661-2600694
[Website: www.odishafdc.com E-mail ID : dmrourkelac@gmail.com]

No. 1623 dt. 30.04.2025

To

The Staff Officer.
Environment & Forest
Garjanbahal OCP, MCL, Basundhara Area.
Sundargarh.

Sub: - Regarding taking up plantation over 30,000 seedlings along Bankibahal Bhedabahal Road under Garjanbahal OCP MCL Basundhara Area.
Regarding approval of Estimate.

Ref: - Letter No. MCL/BA/PO/GOCP/2025-26/08 dt.10.04.2025 of Project Officer Garjanbahal OCP Basundhara Area.

Dear Sir,

With reference to the above cited letter in the captioned subject, we would like to submit an estimate of 30,000 seedlings to be planted along Bankibahal Bhedabahal Road of Basundhara area (MCL) for Rs. 4,50,30,145/- (Rupees Four Crore Fifty Lakh Thirty Thousand One Hundred Forty-five) only for information and accordance of kind administrative approval.

That the estimate has been prepared with reference to the approved norm communicated by O.F.D.C., Head Office, Bhubaneswar vide letter No.8087/PL/102/1994 dtd.02/05.04.2022. But the approved norm was in the earlier labour rate of Rs.315/- per M.D. which applicable since 2022-23 onwards.

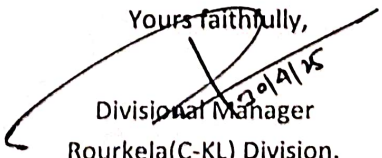
So we have given the effect of

1. Revised labour rate Rs.452/- M.D. in lieu of Rs.315/- per M.D.
2. 5% escalation on the cost of one number seedling is projected in 2nd year & 3rd year maintenance cost to accommodate future escalation in labour rate and material cost.

3. As per the rate analysis of the PCCF, Odisha for the cost of seedling, we have given the effect of present labour rate Rs.452/- per M.D. in place of Rs.315/- per M.D. comes to Rs.56.94/- per plant as seedling cost against Rs.42.10/-, which may kindly be approved.

Encl: - As above (one set)

Yours faithfully,


Divisional Manager
Rourkela(C-KL) Division.

SCHEME FOR AVENUE PLANTATION
ALONG BOTH SIDES OF

**Bankibahal
Bhedabahal road
(MCL AUTHORITY
GARJANBAHAL OCP
BASUNDHARA AREA)**

ESTIMATE
FOR
30,000 PLANTS
TO BE UNDERTAKEN BY
ODISHA FOREST DEV. CORPORATION LTD.
ROURKELA (C-KL) DIVISION
DURING 2025-26 ONWARDS

Submitted by

Divisional Manager
Rourkela(C-KL) Division.

Avenue Plantation along Bankibahal Bhedabahal Road, Sundargarh Section in the State of Odisha.

CHAPTER-I

INTRODUCTION:

The MCL authority, Garjanbahal OCP, Basundhara area assigned huge number of plantation target to take up the avenue plantation & block plantation in Rourkela (C-KL) Division under Sundargarh jurisdiction as per their letter No.MCL/BA/PO/GOCP/2025-26/08 dated 10.04.2025.

- 1) Bankibahal Bhedabahal 30,000 nos. plantation.

Garjanbahal OCP, Basundhara Area has been assigned huge plantation targets of 100000 seedlings for 30 KM stretch but at present 30000 plants have been allotted to OFDC ltd. In the upcoming year we will achieve the target allotted by the MCL authority. The sites are not fully suitable for plantation work due to non-completion of the road construction work.

FACTS ABOUT THE PROJECT SITE

1 **Location:**

The project is started from Bankibahal to Bhedabahal 30 KM Sundargarh Section (KM 0 to KM 30) in the State of Odisha under MCL, Garjanbahal OCP, Basundhara area but the plantation is proposed to be taken up only from Gopalpur to Toparia at a stretch of 14.7 KM.

2 **Topography and drainage:**

The stretch is highly undulating because of the presence of low fallow land in between. The drainage is poor although there are rivers like rapid flow across it.

3 **Geography and Climate:**

The geography of project area comprises the following: -

From Gopalpur to Toparia

Climate:

The project area experiences extreme weather, of climate with hot and dry summer followed by humid Monsoon a cold winter. The hot season commences from 1st week of March and lasts till the second half of June. In the month of May, temperature rises up to 47^o. Similarly, in the month of December, the mercury goes down to 5^oC. The project area experiences rainfall from South Western monsoon. Since 1982 as per the data available with District. There has not been a single occurrence of cyclone in the project area. There are possibilities of strong winds with the speed of 50-60 KM/ph before on set of monsoons. The relative humidity is high during rainy season. Most of the rainfall is confined to the months from June to October visited by south west monsoon. Mercury rises of 47^o Celsius during May with intolerable heat wave and falls as low as 11.8^o Celsius during December with extreme cold. The rainfall is highly uneven and irregular and being generally over 75%. After rainy season the humidity gradually decreases and the weather becomes dry towards the winter.

Forests and Forest types:

The forests in the locality as per Champion & Seth classification come under the category Northern tropical dry deciduous forests.

VENUE DEPARTMENT

Roads around the world tend to improve their environment, includes reduction of population (both atmospheric & noise), reduction of stress and beautification of the Road. Atmospheric pollution is one of the major problems these days. Combating atmospheric pollution requires two-pronged approach. On one side we need to reduce the emission of pollutants and on other side we ought to keep trying to purify the air. Purification of the air can be brought about by plantation of the trees in the road side. Journey on the National Highway can be made more bearable by widespread planting of tree. Which trap dust and effectively reduce atmospheric pollution. Another advantage of the trees is their ability to reduce the intensity of noise. A multi staged dense young forest reduces the noise per meter by 0.16 db (Bernatky,1978). Greenery on the road side helps overcome the psychosomatic stress during the journey. Trees bring back a certain harmony to the road and therefore play a vital role in psychological health of travellers. All of these advantages associated with trees have highlighted the concepts of green corridors along the roadside. Roads are one of the major sources of atmospheric as well as noise pollution. Plantation along the roads can play an important role in addressing with these problems. Success of plantation cannot be guaranteed if it is not in keeping with the indigenous climate & social conditions. Percentage of plant survival along the roads has been low owing to number of reasons, most important of them being vandalism. Number of incidents of vandalism can be curtailed if people are made to feel responsible for the care of plants. The best way to achieve this is their active involvement in plantation. An important factor that underscores the need for public participation in the plantation is lack of resources with administration. The need for care of young roadside trees to protect them against environment hazards.

Objectives of Avenue plantation:

1. To make careful care and management of tree populations on the roadside settings for the purpose for improving the avenue plantation.
2. To provide shade beauty and privacy to the travellers.
3. To develop emotional attachments between trees and people that will influence the feelings for preservation of trees in forests.
4. To reduce the effects pollutants emitted from the vehicles besides arresting movement of dust.
5. To enhance the bio-aesthetic value, trees act as carbon sinks, check soil erosion conserve moisture.
6. To detect, recognize and monitor air pollution effects.
7. To maintenance of a healthy environment and functionally viable ecosystem.
8. To make a composition of tall, medium and small tree, will make the green belt functionally viable. Gaseous materials & S.P.M. can be trapped at different heights through canopies of trees at different levels.
9. To make the Avenue reasonable dense, a spacing of 4.0 mt X 4.0 mt is proposed to be adopted, so that the top canopy can be closed at a shortest possible time.
10. To increase productivity of primarily medicinal and nutritional value.
11. To increase production of leaves, pods fruits, seed etc medicinal and nutritional value.

12. To generate employment for the local communities.
13. To improve aesthetic value of the site.
14. The ornamental plants of various species provide a soothing effect and also serve as shelter for the birds.
15. To act as one of the measures for pollution control.
16. Foliage tree helps in reducing noise and dust pollution.
17. To provide comfort to the travellers by way of shade.
18. To conserve roads by way of arresting soil erosion at the embankment slopes.
19. To conserve soil and water for maintaining the water regime.
20. Prevention of glare from the head light of the vehicle.
21. Above all to prevent pollution in coal transport roads.

Functions and value:

1. Function the dynamic operation of the forest, includes biochemical cycles, gas exchange primary productivity, competition, succession and regeneration.
2. In road environment, green-belt functions are frequently related to the human environment.
Trees are usually selected, planted trimmed and natured by people, often with specific intentions.
3. The functional benefits provided by this tree depend on structural attributes, such as species and location, as well as management activities that influence its growth, crown dimensions, and health.
4. Road site greenbelt functions are thus often oriented toward human outcomes, such as shade, beauty, and breach of monotony.
5. Road side green belt improves air quality, absorb rainwater, improve biodiversity.
6. The social and even medical benefits of nature are also dramatic.
7. Simply being able to see a natural view out of the window improves self-discipline in inner city girls.

Challenges of Avenue Plantation:

1. The road environment presents the arboriculture challenges of limited root and canopy space, poor soil quality, deficiency or excess of water and light, heat, pollution, mechanical & chemical damage to trees and mitigation of tree-related hazards.
2. Management challenges include maintaining a tree and planting site inventory, quantifying and maximizing the benefits of trees, minimizing costs, obtaining and maintaining public support and funding and establishing laws and policies for trees on public and on private land.
3. Avenue forestry presents many social issues that require addressing to allow avenue forestry to be seen by the many as an advantage rather than a course on their environment. Social issues include under funding and lack of management.
4. Avenue forestry also challenges the tree surgeons that tend the trees.
5. The lack of space requires greater use of rigging skills and traffic and pedestrian control.

Constraints to Avenue forestry:

1. Available growing space is limited in road. This problem is compounded by pressure to convert green space, agriculture lands.

2. Harsh growing conditions that makes tree survival an achievement.
3. Lack of information on the tolerances of Avenue tree cultivators to environment constrains.
4. Poor tree selection which leads to problems in the future.
5. Poor nursery stock and failure of post-care.
6. Limited genetic diversity.
7. Too few communities have working tree inventories and very few have Avenue forest management plans.
8. Lack of public awareness about the benefits of healthy Avenue forests.
9. Poor tree care practices by citizens and untrained arborists.

Target:

Total target of 30,000 seedlings in 14.7 KM between Gopalpur to Toparia in Bankibahal Bhababahal Road, Sundargarh Section (KM 0 to KM 30) in the State of Odisha under Sundargarh jurisdiction (14.7KM) with spacing of 4 metres between plant to plant with a post planting care of 3 years.

Species Composition:

Species which have proven ability to withstand the effects of SO₂, HF, NO_x and SPM, trees which provide dense shade or colourful flowers may be planted in single or multiple rows along the roads as avenue trees, as detailed below:

SPACEMENT:The species to be planted at a spacing of 4mt x 4mt between plant to plant.

CHOICE OF SPECIES: The plantation will be taken up at spacing of 4mt x 4mt between plant to plant species of Badachakunda, Jamun, Krushanchuda, Neem, Radhachuda, Kadamba, Patuli, Sana Chakunda and Simaruba.

PLANTING

- I. The grown up / procured 1 year & 6 months seeding is to be loaded carefully to the mini truck and transported to the pit site just before plantation.
- II. Pits of size 60 cm x 60 cm x 60 cm will be dug either by soil excavator mechanically or by engaging manpower and the excavator soil are to be dumped in proportion of 1/3 and 2/3rd on opposite sides the pits and are allowed to weather. The soil below the pit should be loosened to a further depth of 15cm for smooth growth of roots.
- III. The pits will be refilled with 1/3rd topsoil first by breaking the clods and 2/3rd soil on the top 75% of the pit and left till planting.
- IV. Well decomposed FYM @ 0.50cft/Bio fertilizer 0.75 gm and NPK 100 gms per plant and chlorpyriphos 20gm/Plant will be added to soil 3days before planting of the seeding and watered once after thoroughly mixing with soil.
- V. After three days the seeding brought form nursery will be planted by carefully removing the woven sack by blade or knife and cutting the coiled roots if any to allow fresh roots to come up.
- VI. After planting the soil around the plant should be trashed firmly to allow the plant to stand on its own and stack preferably bamboo stake be provided to the plant and tied at three places to allow the plant to sand erect.

- VII. As a protection measure in the avenue plantation FDPE gabion will be provided against each plant and the gabion is to be fixed by using bamboo sticks and GI wire to save the plant from grazing.
- VIII. The plant will be weeded & soil working, manuring etc, will be done after one month of first weeding & soil working.
- IX. 2ndweeding, soil working, manuring etc. will be done after one month of first weeding & soil working.
- X. Watering to the plants will be started from November onwards till completion of 3rd year.
- XI. Watch 7 Ward will be provided from the month of August soon after completion of plantation & will continue up to 3rdyear to ensure proper protection of the plantation.

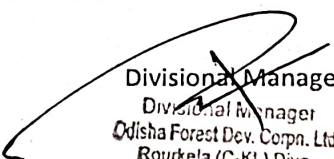
Payment of Escalation: Escalation of labour wages on account of statutory increase as per minimum wages Act, notified by chief labour commissioner / Govt. of Odisha from time to time will be paid by user agency (MCL).

Further the three years approved estimated cost shall be deposited in instalment basis as follows.

SINo	Instalment	Release of Payments for different years		
		1 st .year	2 nd year	3 rd year
1	1st	80% of the approved Estimated cost of 1 st year before commencement	70% of approved Estimate cost of 2 nd year before commencement	70% of approved Estimate cost of 3 rd year before commencement
2	2nd	20% of approved estimated value of 1 st year after digging of pits & planting.	30% of the approved estimate of 2 nd year after causality replacement	30% of the approved estimated cost of 3 rd year after joint enumeration

HANDING OVER CERTIFICATE

After completion of three years the plantation will be handed over to the MCL authority.


 Divisional Manager
 Divisional Manager
 Odisha Forest Dev. Corpn. Ltd
 Rourkela (C-KL) Divn

**Garjanbahal OCP, Bankbahal Bhedabahal Road Sundargarh
MCL(Plantation 30,000 Plants)**

ANNEXURE-1

1st Year PLANTATION COST UTILISING TALL SEEDLINGS DURING 2025-26 FOR 30,000 SPACEMENT

PLANTATION ESTIMATE IS PREPARED BASING ON MINIMUM WAGES RATE @452.00 PER M.D.

1st Year Operation Cost norm for 1000 nos. of Saplings

1ST YEAR OPERATION.


SL.No	Item of work	Unit	Qty	Rtae	Amount
1	Cost of Sapling(1 year&6 months old seedling in Poly pot size of 12" x 8") including 10% casualty.	No	1100	56.94	62634
2	Allignment & stacking at 4 mtr spacing including clearance sites in avenue & 2.5 m x 2.5m in case of block.	MD	15	452.00	6780
3	Exavation of pits in hard soil with vertical cut edges to make an uniform cube & heaping the excavated soil outside the pits.	MD	123	452.00	55350
4	Refilling of pits with excavated soil after breaking the clods completely.	MD	17	452.00	7684
5	Carriage and transport of sapling from Nursery site to plantation site over an average lead of 10 kms.	No.	1100	6.00	6600
6(a)	Cost of FYM 0.50 cft per plant.	CFT	500	25.00	12500
b.	Cost of Bio-fertilizer.	Kg			15000
c.	Cost of Vermicompost.				
d.	Cost of NPK 100gm per plant in two dose.	Kg	100	30.00	3000
e.	Cost of Cholopyriphos 20 gm per plant.	Kg	150	20.00	3000
f.	Cost of Granular.				
7	Planting of sapling after carefully removing from sacks including mixing of FYM, Bio-fertilizer, Chloropyriphcs & Scooping the soil to required depth & pressing the soil around the plants.	MD	50	452.00	22600
8	1st weeding around the plant to a radius of 45cm, application of Urea 100gm / plant in holes.	MD	28	452.00	12656
9	2nd weeding around the plant to a radius of 45 cm.	MD	20	452.00	9040
10	Cost of Manures (NPK).	Kg	50	30.00	1500
11	Soil working around 0.5 MT radius of the plant & application of Urea 100 gm per plant, mulching with availble materials.	MD	32	452.00	14464
12	Watering for 5 months-10 days per month from November. to March including cost of Water, Labour & Transportation through tractor / tanker.	No.	1000	90.00	90000
13	Watch & ward for 9 months from July to March	MD	140	452.00	63280
15	Contingency				7722
					393810
	Cost per plant		393.81		
	Cost of 30,000 seedlings @393.81		1,18,14,300.00		

Contd/P-2

2ND YEAR MAINTAINANCE EXPENSES FOR 30,000 NOS OF SEEDLING DURING 2026-27					ANNEXURE-II
Sl No.	Item of works	Unit	Qty.	Rate	Amount
1	Cost of sapling- 1 yr & 6 months old for casualty replacement.	No	100	56.94	5694
2	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10 KMS.	No	100	6.00	600
3	Replacemet of casualty after reopening the pits & Planting of sapling 100 nos.	M.D	10	452.00	4520
4	A) cost of DAP & CDM/including transportation to be applied to 100 plants 1.6 yr old seedling.	Kg			1250
	B) Cost of FYM.	-	-	-	-
	C) Cost of Fertiliser 200 gm for 1000 plants.	Kg	-	30.00	1500
	D) Cost of NPK.	Kg	50	30.00	1500
	E) Cost of Chlorophyriphos dust 20 gm per plant for 100 plants.	Kg	1	150.00	150
5	1st weeding around the plants to radius of 45 cm 7 application.	M.D	24	452.00	10848
6	2nd weeding around the plants to radius of 0.5 mtr.	M.D	16	452.00	7232
7	Soil working around 0.5 mtr radius & application of fertilizer moisture, conservation & mulching.	M.D	24	452.00	10848
8	Watering for 08 months 04 days per month including cost of water,Labour & Transportation through Tractor/Tanker (April to June & Nov. to March).	No	1000	70.00	70000
9	Watch & ward for 12 months from April to March(365 days).	M.D.	180	452.00	81360
10	Contingency Expenses				3910
	Total				199412
	Cost per Plant		199.41		
	Add Escalation @5% on cost per plant i.e. Rs.199.41+9.97=209.38 to accommodate escalation of labour rate & cost of materials		209.38		
	Cost of 30,000 seedlings @209.38 per seedling		62,81,400.00		

3RD YEAR MAINTAINANCE EXPENSES FOR 30,000 SEEDLING DURING 2027-28					ANNEXURE-III
Sl No.	Item of works	Unit	Qty.	Rate	Amount
1	Weeding and Pruning	M.D	20	452	9040
2	Watering (3 month (April to June)	NO.	1000		26250
3	Watch & Ward for 12 months from Apr. to March(365 days)	M.D	180	452	81360
4	Contingency Expenses				2333
	Total				118983
	Cost per plant		118.98		
	Add Escalation @5% cost per plant i.e.118.98+5.95=124.93 to accommodate esclation of labour rate & cost of materials		124.93		
	Cost of 30,000 seedlings @ 124.93		37,47,900.00		

Contd/P-3


 Divisional Manager
 Odisha Forest Dev. Corpn. Ltd
 Rourkela (C-KL) Divn

FIBRE SQUARE NET CONTINUOUS FENCING FOR BLOCK OR MULTI ROW AVENUE PLANTATION						
Sl. No.	Item of works	Unit	Qty.	Rate	Amount	Amount for 30000 plants
1	Cost of Gabion/fencing(fibre heavy quality fresh tree guard)	Nos	1000	288	2,88,000.00	8640000
2	Cost of repair & maintenance of gabion/fencing per metre in 2nd year	No.	1000	40	40,000.00	1200000
3	Cost of repair & maintenance of gabion/fencing per metre in 3rd year	No.	1000	50	50,000.00	1500000
Total					3,78,000.00	1,13,40,000.00
Cost per Plant		378.00				
Cost of 30,000 seedlings		1,13,40,000.00				

ABSTRACT FOR PLANTATION						
Sl. No.	Year of operation	Working cost	Cost of Gabion	Estt. Cost @15%	GST@18%	Total Amount (Rs)
1	1st year plantation	1,18,14,300.00	86,40,000.00	30,68,145.00	42,34,040.00	2,77,56,485.00
2	2nd year maintenance	62,81,400.00	12,00,000.00	11,22,210.00	15,48,650.00	1,01,52,260.00
3	3rd year maintenance	37,47,900.00	15,00,000.00	7,87,185.00	10,86,315.00	71,21,400.00
TOTAL:		2,18,43,600.00	1,13,40,000.00	49,77,540.00	68,69,005.00	4,50,30,145.00

(Rupees Four Crore Fifty Lakh Thirty Thousand One Hundred Forty-five)only.

Divisional Manager,
Rourkela(C-KL) Division.

Annexure - I (A)

COST NORM FOR RAISING 1000 SEEDLINGS WITH MAINTENANCE UPTO 6(SIX) MONTHS (Wage rate @452/- per day)

Sl. No.	Item of works	Preferable period of execution	Unit	Unit Cost	Materials Qty.	Man-days	Labour Cost (Rs)	Material Cost (Rs)	Total
1	2	3	4	5	6	7	8	9	10
A. COST FOR 6 MONTHS OLD SEEDLINGS									
1	Cost of polythene (9" X 5"8 160)400Nos/Kg=2.5kg		Kg	208	3	0.00	0.00	520.00	520.00
	Poly pot mixture (Soil, Sand and CDM in ratio (2:1:1)			0	0	0.00			0.00
2	(i) Soil @ Rs.10/cft	Nov-Dec	Cft	10	22	0.00	0.00	220.00	220.00
	(ii) Sand @ RS.16/cft	Nov-Dec	Cft	16	11	0.00	0.00	176.00	176.00
	(iii) CDM @ Rs.25/cft	Nov-Dec	Cft	25	11	0.00	0.00	275.00	275.00
	(iv) Insecticide Bio-pesticide 2kg.	Nov-Dec	Cft	150	2	0.00	0.00	300.00	300.00
3	Preparation of Soil Mixture includes pulverisation and straining	Nov-Dec	M.D.	452	0	2.00	904.00	0.00	904.00
4	Filling & Setting	Nov-Dec	M.D.	452	0	3.00	1356.00	0.00	1,356.00
5	Collection of seed gardening & treatment	Dec	M.D.	452	0	2	904.00	0.00	904.00
6	Preparation of germination bed, dibbling/ transplanting and provision of shed. (including cost of straw, bamboo split etc.)	Jan	M.D.	452	0	2	904.00	315	1,219.00
7	Watering (Jan to March)	Jan-Mar	M.D.	452	0	9	4068.00	0.00	4,068.00
8	Maintenance of Nursery including Fencing upto March	Jan-Mar	M.D.	452	0	4	1808.00	500	2,308.00
9	Application of insecticides	May-June	M.D.	452	0	0.25	113.00	0	113.00
10	Contingencies(Water can, Buckets, Nursery shed etc.)		0	0	0	0.00	0.00	460.50	460.50
	Total			3,573	49	22	10,057	2,767	12,824

2nd Financial Year (Shifting of seedling to large polythene bags to avoid root coiling & better

(1st Financial Year) April-March

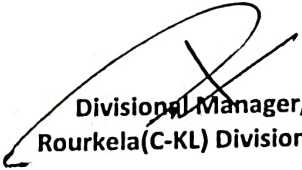
1	Watering for 3 months (April to June)	April to June	M.D.	452	0	9	4068	0	4,068.00
2	Cost of insecticide/ Boi pesticide	May-June	M.D.	0	0	0	0	400	400.00
3	Application of insecticide/ Boi pesticide (Cost)	May-June	M.D.	452	0	1	452	0	452.00
4	Poly pot (12" X 8" X 300 gauge)	May-June	Kg.	208	10	0	0	2080	2,080.00
5	Potting mixture (i) Soil @ Rs.10/cft	April -May	Cft	10	55	0	0	550	550.00
	(ii) Sand @ RS.16/cft	April -May	Cft	16	27	0	0	432	432.00
	(iii) CDM @ Rs.25/cft	April -May	Cft	25	28	0	0	700	700.00
	(iv) Insecticide (Thimet) 2kg. @150/kg	April -May	Kg	150	2	0	0	300	300.00
6	Preparation of potting fixture including pulverization and straining	Oct-Nov	M.D.	452	0	6	2712	0	2,712.00
7	Sidling of polythene begs including reporting and setting	Oct-Nov	M.D.	452	0	20	9040	0	9,040.00
8	Watering for 3 months (Oct-Mar)	Oct-Mar	M.D.	452	0	19	8588	0	8,588.00
9	Sorting, Weeding, Grading and resetting over one year period	April-June	M.D.	452	0	15	6780	0	6,780.00
10	Contingencise							550	550.00
TOTAL:-						70	31640	5012	36,652.00

C. 3rd Financial Year (Maintenance upto Planting) April-June

1	Watering for 3 months	April to June	M.D.	452	0	12	5424	0	5424
2	Weeding, Shifting & Garding	April to June	M.D.	452	0	4	1808	0	1808
3	Contingencies	April to June						230	230
TOTAL:-						16	7232	230	7462

ABSTRACT

Particulars		Labour Cost(Rs)	Material Cost (Rs.)	Total Cost (Rs.)
A	1st Financial Year (3 Months)	10,057	2,767	12,824
B	2nd Financial Year (1 Year)	31640	5012	36,652
C	3rd Financial Year (3 Months)	7232	230	7,462
TOTAL:-		48,929	8,009	56,938


 Divisional Manager,
 Rourkela(C-KL) Division.

COST NORM FOR RAISING 1000 SEEDLINGS WITH MAINTENANCE UPTO 6 (SIX) MONTHS (Wage rate @ Rs. 315/- per day)

Item of Work	Preferable Period of execution	Unit	Unit Cost	Material Qty.	Man-days	Labour Cost (Rs)	Material Cost (Rs.)	Total Cost (Rs.)
2	3	4	5	6	7	8	9	10

COSTS FOR 6 MONTHS OLD SEEDLINGS

Cost of Polythene (9"X 5"X 8 160) 400 Nos/ kg.= 2.5 kg'		Kg.	208	2.5	0	0	520	520
Poly pot Mixture (Soil, sand and CDM in ratio (2:1:1)			0	0	0			
(i) Soil @ Rs. 10/cft	Nov-Dec	Cft	10	22	0	0	220	220
(ii) Sand @ Rs. 16/cft	Nov-Dec	Cft	16	11	0	0	176	176
(iii) CDM @ Rs. 25/cft	Nov-Dec	Cft	25	11	0	0	275	275
(iv) Insecticide Bio-Pesticide 2 kg. @ 150/kg.	Nov-Dec	Kg.	150	2	0	0	300	300
Preparation of Soil Mixture includes pulverisation and straining	Nov-Dec	MD	315	0	2	630	0	630
Filling & setting	Nov-Dec	MD	315	0	3	945	0	945
Collection of seed grading & treatment	Dec	MD	315	0	2	630	0	630
Preparation of germination bed, dibbling/transplanting and provision of shed. (including cost of straw, bamboo split etc.)	Jan	MD	315	0	2	630	315	945
Watering (Jan to March)	Jan-Mar	MD	315	0	9	2835	0	2835
Maintenance of Nursery including Fencing upto March	Jan-Mar	MD	315	0	4	1260	500	1760
Application of insecticides	May-June	MD	315	0	0.25	78.75	0	78.75
Contingencies (Water can, Buckets, Nursery Shed etc.)				0	0	0	460.5	460.5
TOTAL				48.5	22.25	7008.75	2766.5	9775.25

2nd Financial Year (Shifting of Seedlings to large Polythene bags to avoid root coiling & better growth) April-March


Watering for 3 months (April to June)	April-June	MD	315	0	9	2835	0	2835
Cost of Insecticide/Bio-Pesticide	May-June	MD	0	0	0	0	400	400
Application of insecticides/Bio-Pesticide (Cost)	May-June	MD	315	0	1	315	0	315
Poly pot (12"X8"X300 gauge)	May-June	Kg.	208	10	0	0	2080	2080
Potting mixture (i) Soil @ Rs.10/- cft	April-May	cft	10	55	0	0	550	550
(ii) Sand @ Rs. 16/ cft	April-May	cft	16	27	0	0	432	432
(iii) CDM @ 25/- cft	April-May	cft	25	28	0	0	700	700

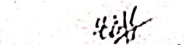
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(iv) Insecticide (Thimet) - 2 kg @ Rs.150/- kg	April-May	Kg.	150	2	0	0	300	
Preparation of Potting mixture including pulverization and straining	Oct-Nov	MD	315	0	6	1890	0	1890
Filling of polythene bags including reporting and setting	Oct-Nov	MD	315	0	20	6300	0	6300
Watering for 3 months (Oct to Mar)	Oct-Mar	MD	315	0	19	5985	0	5985
Sorting, Weeding, Grading and resetting over one year period	April-June	MD	315	0	15	4725	0	4725
Contingencies							550	550
TOTAL					70	22050	5012	27062
3rd Financial Year (Maintenance up to Planting) April-June								
Watering for 3 months	Apr-June	MD	315	0	12	3780	0	3780
Weeding, shifting & grading	Apr-June	MD	315	0	4	1260	0	1260
Contingencies	Apr-June						230	230
Total					16	5040	230	5270

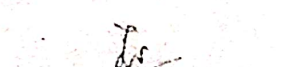
ABSTRACT


Particulars	Labour Cost (Rs)	Material Cost (Rs.)	Total cost (Rs.)
1 st Financial Year (3 Months)	7008.75	2766.50	9775.25
2 nd Financial Year (1 year)	22050	5012	27062.00
3 rd Financial Year (3 Months)	5040	230	5270.00
TOTAL	24098.75	8008.50	42107.25

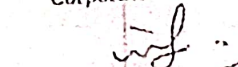

General Manager
Bhubaneswar Zone


Director (Finance)
Corporate Office


Director (Commercial)
Corporate Office


Divisional Manager
Bhubaneswar (Pl.) Division


Divisional Manager
Bartipada(C) Division


Manager (Commercial)
Corporate office

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ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

Office of The Project Officer
Garjanbahal Opencast Project
Basundhara Area
At: Garjanbahal
Po: Balinga-770076
Dist: Sundargarh (Orissa)



Ref:- MCL/BAPO/GOCP/2025-26/ 08

Date:- 10-04-2025

To,
The General Manager
Sambalpur (C) Zone
Sambalpur-768006

Sub: Plantation Works to be taken up during 2025-26, through MCL Basundhara Area.

Dear Sir,

This is to inform you that Garjanbahal OCP, Basundhara Area, has been assigned huge plantation targets in the coming years. Apart from biological reclamation of mining areas, the plantation alongside the following coal transport roads has been assigned in the form of conditions in Environment Clearance for both the projects by MOEF&CC, GOI:

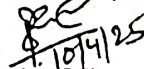
- Duduka to Kanika-25Km: 100000 nos of plants
- Bankibahal to Bedabahal-30Km: 100000 nos of plants
- Duduka-Gopalpur-Toparia-22.22Km: No target for plantation nos

It is to note that the plantation work of a) Duduka-Kanika Road (MDR-29) has already been taken up by OFDC, Rourkela (CKL) Division as per the mutual consent of OFDC and MCL. Earlier OFDC Jharsuguda (CKL) Division has given the quotes for a) Duduka-Kanika Road (100000 nos) and b) Bankibahal Bhedabahal Road (30000 nos) but later the work for a) Duduka-Kanika Road was later taken up by OFDC Rourkela (CKL) Division as per the consent and suitability of OFDC Sambalpur Zone.

Fresh proposal at current rates and norms for the works for b) Bankibahal to Bedabahal Road and c) Duduka-Gopalpur-Toparia Road may be sought from OFDC Rourkela (CKL) Division for smooth carrying out of the plantation work. As per the meeting of OFDC-Sambalpur Zone and MCL representatives at Sambalpur and verbal discussion of Nodal Officer (E&F), Garjanbahal OCP, Basundhara Area, MCL and General Manager OFDC, Sambalpur considering the vast expanse of work along the coal transportation roads mentioned in points b) and c), OFDC Rourkela may be engaged to take up the work in continuation manner. As Duduka-Gopalpur-Toparia road mostly falls within the mining lease of Siarmal OCP, Coal Mining Project, the plantation is proposed to be taken up only from Gopalpur to Toparia at a stretch of 14.7 Kms. The map showing the roads assigned for the plantation works has been attached herewith for your kind reference. The copy of EC stating the conditions for plantation for both the projects also has been enclosed herewith for reference. As per the recently released mission green objective the proposal shall consider the implementation of Mission Green targets set by MoC for MCL with special focus on livelihood generation / SHGs involvement/ developing forest-based startups / entrepreneurship.

You are humbly requested to kindly arrange to provide the schemes for these plantation works by OFDC Rourkela (CKL) Division so that competent approval may be obtained for the same and the work may be started before onset of this monsoon.

Yours faithfully,


Project Officer
Garjanbahal OCP
Basundhara Area-MCL

Copy to:

- Divisional Manager, OFDC, Rourkela (CKL) Division, Rourkela-769010
- General Manager (Envt & Forest), MCL
- General Manager, Basundhara Area, MCL
- SO(E&F),BA

ଓଡ଼ିଶା ବନ ଉନ୍ନୟନ ନିଗମ ଲିମିଟେଡ

Odisha Forest Development Corporation Limited
(Formerly Orissa Forest Development Corporation Limited)
(A Government of Odisha Undertaking)



CIN-U02005OR1962SGC000446

OFFICE OF THE DIVISIONAL MANAGER, ROURKELA (C-KL) DIVISION.
Rourkela, Odisha, PIN-769001, Tele/Fax-0661-2600694
[Website: www.odishafdc.com E-mail ID : dmrourkelac@gmail.com]

No. 1777 dt. 16.05.2025

To

The Staff Officer.
Environment & Forest
Garjanbahal OCP, MCL, Basundhara Area.
Sundargarh.

Sub: - Regarding taking up plantation over 15,000 seedlings along Gopalpur-Toparia Road under Garjanbahal OCP MCL Basundhara Area.

Regarding submission & approval of Estimate.

Ref: - Letter No. MCL/BA/PO/GOCP/2025-26/08 dt.10.04.2025 of Project Officer Garjanbahal OCP Basundhara Area.

Dear Sir,

With reference to the above cited letter in the captioned subject, we would like to submit an Estimate of 15,000 seedlings to be planted along Gopalpur- Toparia Road 14.7 KM of Basundhara area (MCL) for Rs. **2,47,11,193/- (Rupees Two Crore Forty-seven Lakh Eleven Thousand One Hundred Ninety-Three)** only for information and accordance of kind administrative approval. The Revised Estimate is prepared considering the minimum wages @462/- as per notification No.2602 /LC, Bhubaneswar, Govt. of (Odisha) dated 30.04.2025 with effect from 01.04.2025.

That the estimate has been prepared with reference to the approved norm communicated by O.F.D.C., Head Office, Bhubaneswar vide letter No.8087/PL/102/1994 dtd.02/.05.04.2022.

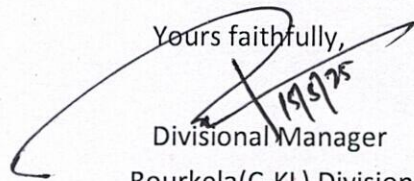
Therefore, it is requested to accept our proposal and administrative approval may please be accorded thereof. Further it is requested to release funds as per stipulation in the attached scheme of plantation.

1. 80% of 1st year operation cost: - Rs.1,21,70,698.00

Hence, we would request you kindly release an amount of Rs.1,21,70,698/- (Rupees One Crore Twenty -one Lakh Seventy Thousand Six Hundred Ninety-eight) only favouring Divisional Manager, Rourkela (C-KL) Division A/c No.0395201010704, IFSC-CNRB0000395, Canara Bank, Udit Nagar, Rourkela through RTGS from any Nationalised Bank.

Encl: - As above (one set)

Yours faithfully,


Divisional Manager

Rourkela(C-KL) Division.

SCHEME FOR AVENUE PLANTATION

ALONG BOTH SIDES OF

GOPALPUR TO TOPARIA

(MCL AUTHORITY

GARJANBAHAL OCP

BASUNDHARA AREA)

ESTIMATE

FOR

15000 PLANTS

TO BE UNDERTAKEN BY

ODISHA FOREST DEV. CORPORATION LTD.

ROURKELA (C-KL) DIVISION

DURING 2025-26 ONWARDS

Submitted by

Divisional Manager
Rourkela(C-KL) Division.

**Scheme for Avenue+Block Plantation along Gopalpur-Toparia Road,
Sundargarh Section in the State of Odisha.**

CHAPTER-I

INTRODUCTION:

The MCL authority, Garjanbahal OCP, Basundhara area assigned huge number of plantation target to take up the avenue plantation & block plantation in Rourkela (C-KL) Division under Sundargarh jurisdiction as per their letter No.MCL/BA/PO/GOCP/2025-26/08 dated 10.04.2025.

- 1) Gopalpur-Toparia,15,000 nos. plantation.

Garjanbahal OCP,Basundhara Area has been assigned huge plantation targets, out of which 15,000 seedlings for 14.7 KM stretch at present have been allotted to OFDC Ltd. In the upcoming year. We will achieve the target allotted by the MCL authority. The sites are not fully suitable for plantation work.

FACTS ABOUT THE PROJECT SITE

1 Location:

The project is started from Duduka-Gopalpur - Toparia 22.22 KM Sundargarh Section (KM 0 to KM 22.22 KM) in the State of Odisha under MCL, Garjanbahal OCP, Basundhara area but the plantation is proposed to be taken up only **from Gopalpur to Toparia at a stretch of 14.7 KM as the most of area falls Siarmal OCP jurisdiction.**

2 Topography and drainage:

The stretch is highly undulating because of the presence of low fallow land in between. The drainage is poor although there are rivers like rapid flow across it.

3 Geography and Climate:

The geography of project area comprises the following: -

From Gopalpur to Toparia

Climate:

The project area experiences extreme weather, of climate with hot and dry summer followed by humid Monsoon a cold winter. The hot season commences from 1st week of March and lasts till the second half of June. In the month of May, temperature rises up to 47^o. Similarly, in the month of December, the mercury goes down to 5^oC. The project area experiences rainfall from South Western monsoon. Since 1982 as per the data available with District. There has not been a single occurrence of cyclone in the project area. There are possibilities of strong winds with the speed of 50-60 KM/ph before on set of monsoons. The relative humidity is high during rainy season. Most of the rainfall is confined to the months from June to October visited by south west monsoon. Mercury rises of 47^o Celsius during May with intolerable heat wave and falls as low as 11.8^o Celsius during December with extreme cold. The rainfall is highly uneven and irregular and being generally over 75%. After rainy season the humidity gradually decreases and the weather becomes dry towards the winter.

Forests and Forest types:

The forests in the locality as per Champion & Seth classification come under the category Northern tropical dry deciduous forests.

VENUE DEPARTMENT

Roads around the world tend to improve their environment, includes reduction of population (both atmospheric & noise), reduction of stress and beautification of the Road. Atmospheric pollution is one of the major problems these days. Combating atmospheric pollution requires two-pronged approach. On one side we need to reduce the emission of pollutants and on other side we ought to keep trying to purify the air. **Purification of the air can be brought about by plantation of the trees in the road side.** Journey on the National Highway can be made more bearable by widespread planting of tree. Which trap dust and effectively reduce atmospheric pollution. Another advantage of the trees is their ability to reduce the intensity of noise. A multi staged dense young forest reduces the noise per meter by 0.16 db (Bernatky,1978). Greenery on the road side helps overcome the psychosomatic stress during the journey. Trees bring back a certain harmony to the road and therefore play a vital role in psychological health of travellers. All of these advantages associated with trees have highlighted the concepts of green corridors along the roadside. Roads are one of the major sources of atmospheric as well as noise pollution. Plantation along the roads can play an important role in addressing with these problems. Success of plantation cannot be guaranteed if it is not in keeping with the indigenous climate & social conditions. Percentage of plant survival along the roads has been low owing to number of reasons, most important of them being vandalism. Number of incidents of vandalism can be curtailed if people are made to feel responsible for the care of plants. The best way to achieve this is their active involvement in plantation. An important factor that underscores the need for public participation in the plantation is lack of resources with administration. The need for care of young roadside trees to protect them against environment hazards.

Objectives of Avenue plantation:

1. To make careful care and management of tree populations on the roadside settings for the purpose for improving the avenue plantation.
2. To provide shade beauty and privacy to the travellers.
3. To develop emotional attachments between trees and people that will influence the feelings for preservation of trees in forests.
4. To reduce the effects pollutants emitted from the vehicles besides arresting movement of dust.
5. To enhance the bio-aesthetic value, trees act as carbon sinks, check soil erosion conserve moisture.
6. To detect, recognize and monitor air pollution effects.
7. To maintenance of a healthy environment and functionally viable ecosystem.
8. To make a composition of tall, medium and small tree, will make the green belt functionally viable. Gaseous materials & S.P.M. can be trapped at different heights through canopies of trees at different levels.
9. To make the Avenue reasonable dense, a spacing of 4.0 mtr X 4.0 mtr is proposed to be adopted, so that the top canopy can be closed at a shortest possible time.
10. To increase productivity of primarily medicinal and nutritional value.
11. To increase production of leaves, pods fruits, seed etc medicinal and nutritional value.

12. To generate employment for the local communities.
13. To improve aesthetic value of the site.
14. The ornamental plants of various species provide a soothing effect and also serve as shelter for the birds.
15. To act as one of the measures for pollution control.
16. Foliage tree helps in reducing noise and dust pollution.
17. To provide comfort to the travellers by way of shade.
18. To conserve roads by way of arresting soil erosion at the embankment slopes.
19. To conserve soil and water for maintaining the water regime.
20. Prevention of glare from the head light of the vehicle.
21. Above all to prevent pollution in coal transport roads.

Functions and value:

1. Function the dynamic operation of the forest, includes biochemical cycles, gas exchange primary productivity, competition, succession and regeneration.
2. In road environment, green-belt functions are frequently related to the human environment.
Trees are usually selected, planted trimmed and natured by people, often with specific intentions.
3. The functional benefits provided by this tree depend on structural attributes, such as species and location, as well as management activities that influence its growth, crown dimensions, and health.
4. Road site greenbelt functions are thus often oriented toward human outcomes, such as shade, beauty, and breach of monotony.
5. Road side green belt improves air quality, absorb rainwater, improve biodiversity.
6. The social and even medical benefits of nature are also dramatic.
7. Simply being able to see a natural view out of the window improves self-discipline in inner city girls.

Challenges of Avenue Plantation:

1. The road environment presents the arboriculture challenges of limited root and canopy space, poor soil quality, deficiency or excess of water and light, heat, pollution, mechanical & chemical damage to trees and mitigation of tree-related hazards.
2. Management challenges include maintaining a tree and planting site inventory, quantifying and maximizing the benefits of trees, minimizing costs, obtaining and maintaining public support and funding and establishing laws and policies for trees on public and on private land.
3. Avenue forestry presents many social issues that require addressing to allow avenue forestry to be seen by the many as an advantage rather than a course on their environment. Social issues include under funding and lack of management.
4. Avenue forestry also challenges the tree surgeons that tend the trees.
5. The lack of space requires greater use of rigging skills and traffic and pedestrian control.

Constraints to Avenue forestry:

1. Available growing space is limited in road. This problem is compounded by pressure to convert green space, agriculture lands.

2. Harsh growing conditions that makes tree survival an achievement.
3. Lack of information on the tolerances of Avenue tree cultivators to environment constrains.
4. Poor tree selection which leads to problems in the future.
5. Poor nursery stock and failure of post-care.
6. Limited genetic diversity.
7. Too few communities have working tree inventories and very few have Avenue forest management plans.
8. Lack of public awareness about the benefits of healthy Avenue forests.
9. Poor tree care practices by citizens and untrained arborists.

Target:

Total target of 15,000 seedlings in 14.7 KM between Gopalpur to Toparia in Bankibahal Bhedabahal Road, Sundargarh Section (KM 0 to KM 14.7KM) in the State of Odisha under Sundargarh jurisdiction (14.7KM) with spacing of 4 metres between plant to plant with a post planting care of 3 years.

Species Composition:

Species which have proven ability to withstand the effects of SO₂, HF, NO_x and SPM, trees which provide dense shade or colourful flowers may be planted in single or multiple rows along the roads as avenue trees, as detailed below:

SPACEMENT:The species to be planted at a spacing of 4mt x 4mt between plant to plant.

CHOICE OF SPECIES: The plantation will be taken up at spacing of 4mt x 4mt between plant to plant species of Badachakunda, Jamun, Krushanchuda, Neem, Radhachuda, Kadamba, Patuli, Sana Chakunda and Simaruba.

PLANTING

- I. The grown up / procured 1 year & 6 months seeding is to be loaded carefully to the mini truck and transported to the pit site just before plantation.
- II. Pits of size 60 cm x 60 cm x 60 cm will be dug either by soil excavator mechanically or by engaging manpower and the excavator soil are to be dumped in proportion of 1/3 and 2/3rd on opposite sides the pits and are allowed to weather. The soil below the pit should be loosened to a further depth of 15cm for smooth growth of roots.
- III. The pits will be refilled with 1/3rd topsoil first by breaking the clods and 2/3rd soil on the top 75% of the pit and left till planting.
- IV. Well decomposed FYM @ 0.50cft/Bio fertilizer 0.75 gm and NPK 100 gms per plant and chlorpyriphos 20gm/Plant will be added to soil 3days before planting of the seeding and watered once after thoroughly mixing with soil.
- V. After three days the seeding brought form nursery will be planted by carefully removing the woven sack by blade or knife and cutting the coiled roots if any to allow fresh roots to come up.
- VI. After planting the soil around the plant should be trashed firmly to allow the plant to stand on its own and stack preferably bamboo stake be provided to the plant and tied at three places to allow the plant to sand erect.

- VII. As a protection measure in the avenue plantation FDPE gabion will be provided against each plant and the gabion is to be fixed by using bamboo sticks and GI wire to save the plant from grazing.
- VIII. The plant will be weeded & soil working, manuring etc, will be done after one month of first weeding & soil working.
- IX. 2ndweeding, soil working, manuring etc. will be done after one month of first weeding & soil working.
- X. Watering to the plants will be started from November onwards till completion of 3rd year.
- XI. Watch & Ward will be provided from the month of August soon after completion of plantation & will continue up to 3rdyear to ensure proper protection of the plantation.

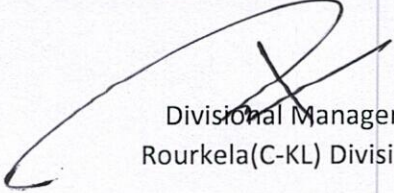
Payment of Escalation: Escalation of labour wages on account of statutory increase as per minimum wages Act, notified by chief labour commissioner / Govt. of Odisha from time to time will be paid by user agency (MCL).

Further the three years approved estimated cost shall be deposited in instalment basis as follows.

SINo	Instalment	Release of Payments for different years		
		1 st .year	2 nd year	3 rd year
1	1st	80% of the approved Estimated cost of 1 st year before commencement	70% of approved Estimate cost of 2 nd year before commencement	70% of approved Estimate cost of 3 rd year before commencement
2	2nd	20% of approved estimated value of 1 st year after digging of pits & planting.	30% of the approved estimate of 2 nd year after causality replacement	30% of the approved estimated cost of 3 rd year after joint enumeration

HANDING OVER CERTIFICATE

After completion of three years the plantation will be handed over to the MCL authority with 80% survival.


 Divisional Manager
 Rourkela(C-KL) Division.

Garjanbahal OCP,Gopalpur-Toparia Road 14.7 KMSundargarh MCL (Plantation 30,000 Plants)					ANNEXURE-1	
1st Year PLANTATION COST UTILISING TALL SEEDLINGS DURING 2025-26 FOR 15,000 SPACEMENT ALONG THEGopalpur-Toparia ROAD, 4MTR X 4MTR.						
PLANTATION ESTIMATE IS PREPARED BASING ON MINIMUM WAGES RATE @462.00 PER M.D.						
1st Year Operation Cost norm for 1000 nos. of Saplings						
1ST YEAR OPERATION.						
SL.No	Item of work	Unit	Qty	Rtae	Amount	
1	Cost of Sapling(1 year&6 months old seedling in Poly pot size of 12" x 8") including 10% casualty.	No	1100	58.02	63822	
2	Allignment & stacking at 4 mtr spacing including clearance sites in avenue & 2.5 m x 2.5m in case of block.	MD	15	462.00	6930	
3	Excavation of pits in hard soil with vertical cut edges to make an uniform cube & heaping the excavated soil outside the pits.	MD	123	462.00	56826	
4	Refilling of pits with excavated soil after breaking the clods completely.	MD	17	462.00	7854	
5	Carriage and transport of sapling from Nursery site to plantation site over an average lead of 10 kms.	No.	1100	6.00	6600	
6(a)	Cost of FYM 0.50 cft per plant.	CFT	500	25.00	12500	
b.	Cost of Bio-fertilizer.	Kg			15000	
c.	Cost of Vermicompost.					
d.	Cost of NPK 100gm per plant in two dose.	Kg	100	30.00	3000	
e.	Cost of Cholopyriphos 20 gm per plant.	Kg	150	20.00	3000	
f.	Cost of Granular.					
7	Planting of sapling after carefully removing from sacks including mixing of FYM, Bio-fertilizer, Chloropyriphcs & Scooping the soil to required depth & pressing the soil around the plants.	MD	50	462.00	23100	
8	1st weeding around the plant to a radius of 45cm, application of Urea 100gm / plant in holes.	MD	28	462.00	12936	
9	2nd weeding around the plant to a radius of 45 cm.	MD	20	462.00	9240	
10	Cost of Manures (NPK).	Kg	50	30.00	1500	
11	Soil working around 0.5 MT radius of the plant & application of Urea 100 gm per plant, mulching with availble materials.	MD	32	462.00	14784	
12	Watering for 5 months-10 days per month from November. to March including cost of Water, Labour & Transportation through tractor / tanker.	No.	1000	90.00	90000	
13	Watch & ward for 9 months from July to March	MD	140	462.00	64680	
15	Contingency				7835	
					399607	
	Cost per plant		399.61			
	Cost of 15,000 seedlings @399.61		59,94,150.00			

Contd/P-2

Divisional Manager
Rourkela(C-kl)Division

					ANNEXURE-II	
2ND YEAR MAINTAINANCE EXPENSES FOR 15,000 NOS OF SEEDLING DURING 2026-27						
Sl No.	Item of works	Unit	Qty.	Rate	Amount	
1	Cost of sapling- 1 yr & 6 months old for casualty replacement.	No	100	58.02	5802	
2	Carriage and transport of saplings from Nursery site to plantation site over an average lead of 10 KMS.	No	100	6.00	600	
3	Replacemet of casualty after reopening the pits & Planting of sapling 100 nos.	M.D	10	462.00	4620	
4	A) cost of DAP & CDM/including transportation to be applied to 100 plants 1.6 yr old seedling.	Kg			1250	
	B) Cost of FYM.	-	-	-	-	
	C) Cost of Fertiliser 200 gm for 1000 plants.	Kg	-	30.00	1500	
	D) Cost of NPK.	Kg	50	30.00	1500	
	E) Cost of Chlorophyriphos dust 20 gm per plant for 100 plants.	Kg	1	150.00	150	
5	1st weeding around the plants to radius of 45 cm 7 application.	M.D	24	462.00	11088	
6	2nd weeding around the plants to radius of 0.5 mtr.	M.D	16	462.00	7392	
7	Soil working around 0.5 mtr radius & application of fertilizer moisture, conservation & mulching.	M.D	24	462.00	11088	
8	Watering for 08 months 04 days per month including cost of water, Labour & Transportation through Tractor/Tanker (April to June & Nov. to March).	No	1000	70.00	70000	
9	Watch & ward for 12 months from April to March(365 days).	M.D.	180	462.00	83160	
10	Contingency Expenses				3963	
	Total				202113	
	Cost per Plant	202.11				
	Add Escalation @5% on cost per plant i.e. Rs.202.11+10.10=212.21 to accommodate escalation of labour rate & cost of materials	212.21				
	Cost of 15,000 seedlings @212.21 per seedling	31,83,150.00				

					ANNEXURE-III	
3RD YEAR MAINTAINANCE EXPENSES FOR 15,000 SEEDLING DURING 2027-28						
Sl No.	Item of works	Unit	Qty.	Rate	Amount	
1	Weeding and Prunning	M.D	20	462	9240	
2	Watering (3 month (April to June)	NO.	1000		26250	
3	Watch & Ward for 12 months from Apr. to March(365 days)	M.D	180	462	83160	
4	Contingency Expenses				2373	
	Total				121023	
	Cost per plant	121.02				
	Add Escalation @5% cost per plant i.e.121.02+6.05=127.07 to accommodate esclation of labour rate & cost of materials	127.07				
	Cost of 15,000 seedlings @ 127.07	19,06,050.00				

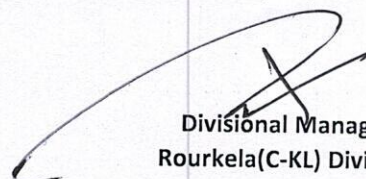
Divisional Manager
Rourkela(C-kl)Division

Contd/P-3

FIBRE SQUARE NET CONTINUOUS FENCING FOR BLOCK OR MULTI ROW AVENUE PLANTATION						
Sl No.	Item of works	Unit	Qty.	Rate	Amount	Amount for 15,000 plants
1	Cost of Gabion/fencing(fibre heavy quality fresh tree guard)	Nos	1000	288	2,88,000.00	4320000
2	Cost of repair & maintenance of gabion/fencing per metre in 2nd year	No.	1000	40	40,000.00	600000
3	Cost of repair & maintenance of gabion/fencing per metre in 3rd year	No.	1000	50	50,000.00	750000
Total						
Cost per Plant					378.00	
Cost of 15,000 seedlings					56,70,000.00	
					3,78,000.00	56,70,000.00

ABSTRACT FOR PLANTATION						
Sl. No.	Year of operation	Working cost	Cost of Gabion	Estt. Cost @25%	GST@18%	Total Amount (Rs)
1	1st year plantation	59,94,150.00	43,20,000.00	25,78,538.00	23,20,684.00	1,52,13,372.00
2	2nd year maintenance	31,83,150.00	6,00,000.00	9,45,788.00	8,51,209.00	55,80,147.00
3	3rd year maintenance	19,06,050.00	7,50,000.00	6,64,013.00	5,97,611.00	39,17,674.00
TOTAL:		1,10,83,350.00	56,70,000.00	41,88,339.00	37,69,504.00	2,47,11,193.00

(RupeesTwo Crore Forty-seven Lakh Eleven Thousand One Hundred Ninety Three)only.


 Divisional Manager,
 Rourkela(C-KL) Division.

**OFFICE OF THE
LABOUR COMMISSIONER: ODISHA: BHUBANESWAR**

+++

NOTIFICATION

No. 2602/LC, Bhubaneswar, dated 30.04.2025

Whereas the minimum rate of wages for unskilled, semi skilled, skilled and highly skilled categories of employees in 91 scheduled employments were fixed/ revised by the Government in Notification No. 5308- LESI-LL1-III-0081-2017/LESI dtd.18.07.2024 of the Labour & ESI Department, Odisha published in the Extraordinary Issue No. 1367 of the Odisha Gazette dtd. 18.07.2024 read with Notification No.6471 dtd. 20.08.2024 and Notification No.6471 dtd. 20.08.2024 of the Government.

And whereas, the State Minimum Wages Advisory Board in its 53rd Meeting have advised to adopt a system of revision of the special allowance called Variable Dearness Allowances @ Rs. 2.60 paise per point rise in All India Consumer Price Index Number for Industrial Workers (base 2016-100) as may be notified by the Labour Commissioner, Odisha at half yearly interval i.e. on 1st April and 1st October, from the date of notification of the revised wages.

And whereas, the Variable Dearness Allowance for the half year commencing w.e.f. 1st April, 2024 is required to be effected on the basis of the increase in average Consumer Price Index Number for Industrial workers reaching 143.55 from 139.6 as on 31.12.2024 and thereby resulting in an increase of 3.95 points.

Now therefore, I Sri Indramani Tripathy, I.A.S., Labour Commissioner, Odisha in exercise of the powers delegated in the aforesaid Notification do hereby notify that the Variable Dearness Allowance (VDA) @ Rs. 10.00 per day (after rounding off) shall be payable to the unskilled, semi-skilled, skilled and highly skilled categories of employees in all 91 scheduled employments (list enclosed in the Schedule) w.e.f. 1st April, 2025 in addition to the minimum rate of wages notified vide the aforesaid Notification of Government in Labour & ESI Department, Odisha. Accordingly, the present rate of minimum wages including VDA per day w.e.f. 1st April, 2025 shall be as under:

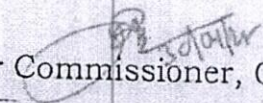
Category of Employee	Minimum Wage per day w.e.f. 18.07.2024	V.D.A. per day w.e.f. 01.04.2025	Total V.D.A. per day w.e.f. 01.04.2025	Minimum Wage with VDA per day w.e.f. 01.04.2025
Unskilled	Rs.450/-	Rs.10/-	Rs.12/-	Rs.462/-
Semi skilled	Rs.500/-	Rs.10/-	Rs.12/-	Rs.512/-
Skilled	Rs.550/-	Rs.10/-	Rs.12/-	Rs.562/-
Highly Skilled	Rs.600/-	Rs.10/-	Rs.12/-	Rs.612/-

Labour Commissioner, Odisha

11211

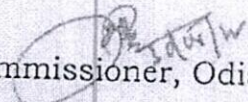
Memo No. 2603 /dtd. 30.04.2025

Copy forwarded to all Joint Labour Commissioners / all Divisional Labour Commissioners / all District Labour Officers / all Assistant Labour Officers for information and necessary action. They are requested to circulate the same among all concerned immediately.


Labour Commissioner, Odisha

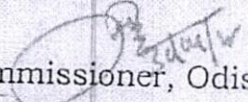
Memo No. 2604 /dtd. 30.04.2025

Copy forwarded to all Heads of Departments of Odisha /All District Collectors of Odisha for kind information.


Labour Commissioner, Odisha

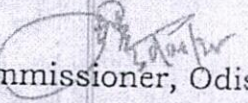
Memo No. 2605 /dtd. 30.04.2025

Copy submitted to the Secretaries to Government of Odisha, all Departments for kind information.


Labour Commissioner, Odisha

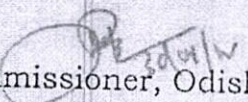
Memo No. 2606 /dtd. 30.04.2025

Copy submitted to the Principal Secretary to Government, Labour & ESI Department, Odisha, Bhubaneswar for kind information.


Labour Commissioner, Odisha

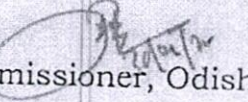
Memo No. 2607 /dtd. 30.04.2025

Copy forwarded to the Private Secretary to Hon'ble Minister, Labour & ESI, Odisha for kind information.


Labour Commissioner, Odisha

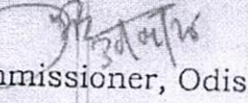
Memo No. 2608 /dtd. 30.04.2025

Copy submitted to the Private Secretary to Hon'ble Chief Minister, Odisha for kind information.


Labour Commissioner, Odisha

Memo No. 2609 /dtd. 30.04.2025

Copy forwarded to the Director, Printing Stationery and Publication, Odisha, Madhupatna, Cuttack with a request to publish the above notification in the next issue of Odisha Gazette and supply 200 copies to this office.


Labour Commissioner, Odisha

Annexure - I (A)

COST NORM FOR RAISING 1000 SEEDLINGS WITH MAINTENANCE UPTO 6(SIX) MONTHS (Wage rate @462/- per day)

Sl. No.	Item of works	Preferable period of execution	Unit	Unit Cost	Materials Qty.	Man-days	Labour Cost (Rs)	Material Cost (Rs)	Total
1	2	3	4	5	6	7	8	9	10
A. COST FOR 6 MONTHS OLD SEEDLINGS									
1	Cost of polythene (9" X 5"8 160)400Nos/Kg=2.5kg		Kg	208	3	0.00	0.00	520.00	520.00
2	Poly pot mixture (Soil, Sand and CDM in ratio (2:1:1)			0	0	0.00			0.00
	(i) Soil @ Rs.10/cft	Nov-Dec	Cft	10	22	0.00	0.00	220.00	220.00
	(ii) Sand @ RS.16/cft	Nov-Dec	Cft	16	11	0.00	0.00	176.00	176.00
	(iii) CDM @ Rs.25/cft	Nov-Dec	Cft	25	11	0.00	0.00	275.00	275.00
	(iv) Insecticide Bio-pesticide 2kg.	Nov-Dec	Cft	150	2	0.00	0.00	300.00	300.00
3	Preparation of Soil Mixture includes pulverisation and straining	Nov-Dec	M.D.	462	0	2.00	924.00	0.00	924.00
4	Filling & Setting	Nov-Dec	M.D.	462	0	3.00	1386.00	0.00	1,386.00
5	Collection of seed gardening & treatment	Dec	M.D.	462	0	2	924.00	0.00	924.00
6	Preparation of germination bed, dibbling/ transplanting and provision of shed. (including cost of straw, bamboo split etc.)	Jan	M.D.	462	0	2	924.00	315	1,239.00
7	Watering (Jan to March)	Jan-Mar	M.D.	462	0	9	4158.00	0.00	4,158.00
8	Maintenance of Nursery including Fencing upto March	Jan-Mar	M.D.	462	0	4	1848.00	500	2,348.00
9	Application of insecticides	May-June	M.D.	462	0	0.25	115.50	0	115.50
10	Contingencies(Water can, Buckets, Nursery shed etc.)		0	0	0	0.00	0.00	460.50	460.50
	Total			3,643	49	22	10,280	2,767	13,046

B. 2nd Financial Year(Shifting of seedling to large polythene bags to avoid root coiling & better growth) April-March

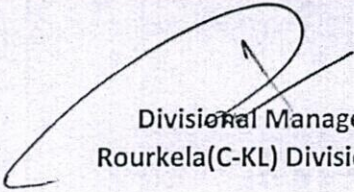
1	Watering for 3 months (April to June)	April to June	M.D.	462	0	9	4158	0	4,158.00
2	Cost of insecticide/ Boi pesticide	May-June	M.D.	0	0	0	0	400	400.00
3	Application of insecticide/ Boi pesticide (Cost)	May-June	M.D.	462	0	1	462	0	462.00
4	Poly pot (12" X 8" X 300 gauge)	May-June	Kg.	208	10	0	0	2080	2,080.00
5	Potting mixture (i) Soil @ Rs.10/cft	April -May	Cft	10	55	0	0	550	550.00
	(ii) Sand @ RS.16/cft	April -May	Cft	16	27	0	0	432	432.00
	(iii) CDM @ Rs.25/cft	April -May	Cft	25	28	0	0	700	700.00
	(iv) Insecticide (Thimet) 2kg. @150/kg	April -May	Kg	150	2	0	0	300	300.00
6	Preparation of potting fixture including pulverization and straining	Oct-Nov	M.D.	462	0	6	2772	0	2,772.00
7	Sidlling of polythene begs including reporting and setting	Oct-Nov	M.D.	462	0	20	9240	0	9,240.00
8	Watering for 3 months (Oct-Mar)	Oct-Mar	M.D.	462	0	19	8778	0	8,778.00
9	Sorting, Weeding, Grading and resetting over one year period	April-June	M.D.	462	0	15	6930	0	6,930.00
10	Contingencise							550	550.00
TOTAL:-						70	32340	5012	37,352.00

C. 3rd Financial Year (Maintenance upto Planting) April-June

1	Watering for 3 months	April to June	M.D.	462	0	12	5544	0	5544
2	Weeding, Shifting & Garding	April to June	M.D.	462	0	4	1848	0	1848
3	Contingencies	April to June						230	230
TOTAL:-						16	7392	230	7622

ABSTRACT

Particulars		Labour Cost(Rs)	Material Cost (Rs.)	Total Cost (Rs.)
A	1st Financial Year (3 Months)	10,280	2,767	13,046
B	2nd Financial Year (1 Year)	32340	5012	37,352
C	3rd Financial Year (3 Months)	7392	230	7,622
TOTAL:-		50,012	8,009	58,020


 Divisional Manager,
 Rourkela(C-KL) Division.

ANNEXURE

COST NORM FOR RAISING 1000 SEEDLINGS WITH MAINTENANCE UPTO 6 (SIX) MONTHS (Wage rate @ Rs. 315/- per day)

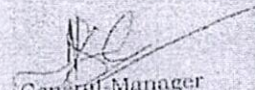
Sl. No.	Item of Work	Preferable Period of execution	Unit	Unit Cost	Material Qty.	Man-days	Labour Cost (Rs)	Material Cost (Rs.)	Total Cost (Rs.)
2	3	4	5	6	7	8	9	10	
A COSTS FOR 6 MONTHS OLD SEEDLINGS									
	Cost of Polythene (9"X 5"X 8 160) 400 Nos/ kg. = 2.5 kg'		Kg.	208	2.5	0	0	520	520
	Poly pot Mixture (Soil, sand and CDM in ratio (2:1:1)			0	0	0	0	220	220
	(i) Soil @ Rs. 10/cft	Nov-Dec	Cft	10	22	0	0	176	176
	(ii) Sand @ Rs. 16/cft	Nov-Dec	Cft	16	11	0	0	275	275
	(iii) CDM @ Rs. 25/cft	Nov-Dec	Cft	25	11	0	0	300	300
	(iv) Insecticide Bio-Pesticide 2 kg. @ 150/kg.	Nov-Dec	Kg.	150	2	0	0	300	300
3	Preparation of Soil Mixture includes pulverisation and straining	Nov-Dec	MD	315	0	2	630	0	630
4	Filling & setting	Nov-Dec	MD	315	0	3	945	0	945
5	Collection of seed grading & treatment	Dec	MD	315	0	2	630	0	630
6	Preparation of germination bed, dibbling/transplanting and provision of shed. (including cost of straw, bamboo split etc.)	Jan	MD	315	0	2	630	315	945
7	Watering (Jan to March)	Jan-Mar	MD	315	0	9	2835	0	2835
8	Maintenance of Nursery including Fencing upto March	Jan-Mar	MD	315	0	4	1260	500	1760
9	Application of insecticides	May-June	MD	315	0	0.25	78.75	0	78.75
10	Contingencies (Water can, Buckets, Nursery Shed etc.)				0	0	0	460.5	460.5
	TOTAL				48.5	22.25	7008.75	2766.5	9775.25
B 2nd Financial Year (Shifting of Seedlings to large Polythene bags to avoid root coiling & better growth) April-March									
1	Watering for 3 months (April to June)	April-June	MD	315	0	9	2835	0	2835
2	Cost of Insecticide/Bio-Pesticide	May-June	MD	0	0	0	0	400	400
3	Application of insecticides/Bio-Pesticide (Cost)	May-June	MD	315	0	1	315	0	315
4	Poly pot (12"X8"X300 gauge)	May-June	Kg.	208	10	0	0	2080	2080
5	Potting mixture (i) Soil @ Rs.10/- cft	April-May	cft	10	55	0	0	550	550
	(ii) Sand @ Rs. 16/- cft	April-May	cft	16	27	0	0	432	432
	(iii) CDM @ 25/- cft	April-May	cft	25	28	0	0	700	700

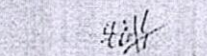
(iv) Insecticide (Thimet) - 2 kg @ Rs.150/- kg	April-May	Kg.	150	2	0	0	300	300
Preparation of Potting mixture including pulverization and straining	Oct-Nov	MD	315	0	6	1890	0	1890
Filling of polythene bags including reporting and setting	Oct-Nov	MD	315	0	20	6300	0	6300
Watering for 3 months (Oct to Mar)	Oct-Mar	MD	315	0	19	5985	0	5985
Sorting, Weeding, Grading and resetting over one year period	April-June	MD	315	0	15	4725	0	4725
Contingencies							550	550
TOTAL					70	22050	5012	27062


3 rd Financial Year (Maintenance up to Planting) April-June								
Watering for 3 months	Apr-June	MD	315	0	12	3780	0	3780
Weeding, shifting & grading	Apr-June	MD	315	0	4	1260	0	1260
Contingencies	Apr-June						230	230
Total					16	5040	230	5270

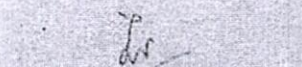
ABSTRACT

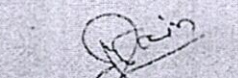
Particulars		Labour Cost (Rs)	Material Cost (Rs.)	Total cost (Rs.)
A	1 st Financial Year (3 Months)	7008.75	2766.50	9775.25
B	2 nd Financial Year (1 year)	22050	5012	27062.00
C	3 rd Financial Year (3 Months)	5040	230	5270.00
	TOTAL	24098.75	8008.50	42107.25


General Manager
Bhubaneswar Zone


Director (Finance)
Corporate Office


Director (Commercial)
Corporate Office


Divisional Manager
Bhubaneswar (PL) Division


Divisional Manager
Baripada(C) Division


Manager (Commercial)
Corporate office

ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्डस लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

Office of The Project Officer
Garjanbahal Opencast Project
Basundhara Area
At:-Garjanbahal
Po:-Balinga-770076
Dist:-Sundargarh (Orissa)



MCL

Ref:- MCL/BA/PO/GOCP/2025-26/ 08

Date:- 10-04-2025

To,
The General Manager
Sambalpur (C) Zone
Sambalpur-768006

Sub: Plantation Works to be taken up during 2025-26 through MCL Basundhara Area.

Dear Sir,

This is to inform you that Garjanbahal OCP, Basundhara Area, has been assigned huge plantation targets in the coming years. Apart from biological reclamation of mining areas, the plantation alongside the following coal transport roads has been assigned in the form of conditions in Environment Clearance for both the projects by MOEF&CC, GOI:

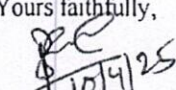
- Duduka to Kanika-25Km: 100000 nos of plants
- Bankibahal to Bedabahal-30Km: 100000 nos of plants
- Duduka-Gopalpur-Toparia-22.22Km: No target for plantation nos

It is to note that the plantation work of a) Duduka-Kanika Road (MDR-29) has already been taken up by OFDC, Rourkela (CKL) Division as per the mutual consent of OFDC and MCL. Earlier OFDC Jharsuguda (CKL) Division has given the quotes for a) Duduka-Kanika Road (100000 nos) and b) Bankibahal Bhedabahal Road (30000 nos) but later the work for a) Duduka-Kanika Road was later taken up by OFDC Rourkela (CKL) Division as per the consent and suitability of OFDC Sambalpur Zone.

Fresh proposal at current rates and norms for the works for b) Bankibahal to Bedabahal Road and c) Duduka-Gopalpur-Toparia Road may be sought from OFDC Rourkela (CKL) Division for smooth carrying out of the plantation work. As per the meeting of OFDC-Sambalpur Zone and MCL representatives at Sambalpur and verbal discussion of Nodal Officer (E&F), Garjanbahal OCP, Basundhara Area, MCL and General Manager OFDC, Sambalpur considering the vast expanse of work along the coal transportation roads mentioned in points b) and c), OFDC Rourkela may be engaged to take up the work in continuation manner. As Duduka-Gopalpur-Toparia road mostly falls within the mining lease of Siarmal OCP, Coal Mining Project, the plantation is proposed to be taken up only from Gopalpur to Toparia at a stretch of 14.7 Kms. The map showing the roads assigned for the plantation works has been attached herewith for your kind reference. The copy of EC stating the conditions for plantation for both the projects also has been enclosed herewith for reference. As per the recently released mission green objective the proposal shall consider the implementation of Mission Green targets set by MoC for MCL with special focus on livelihood generation / SHGs involvement/ developing forest-based startups / entrepreneurship.

You are humbly requested to kindly arrange to provide the schemes for these plantation works by OFDC Rourkela (CKL) Division so that competent approval may be obtained for the same and the work may be started before onset of this monsoon.

Yours faithfully,


10/4/25
Project Officer
Garjanbahal OCP
Basundhara Area-MCL

Copy to:

- Divisional Manager, OFDC, Rourkela (CKL) Division, Rourkela-769010
- General Manager (Envt & Forest), MCL
- General Manager, Basundhara Area, MCL
- SO(E&F),BA

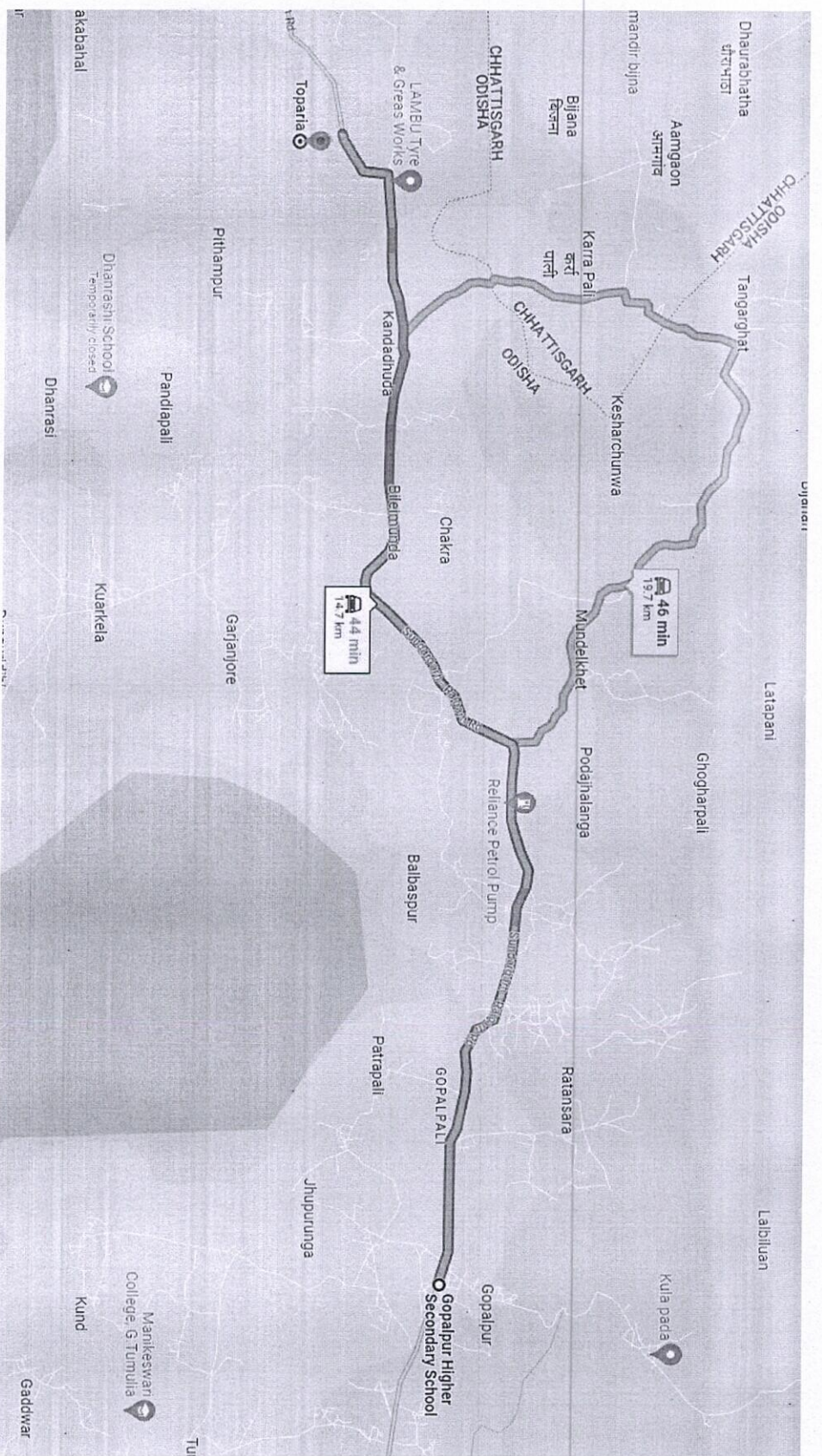


FIG – 03 : GOPALPUR TO TOPARIA ROAD – 14.7 KMS

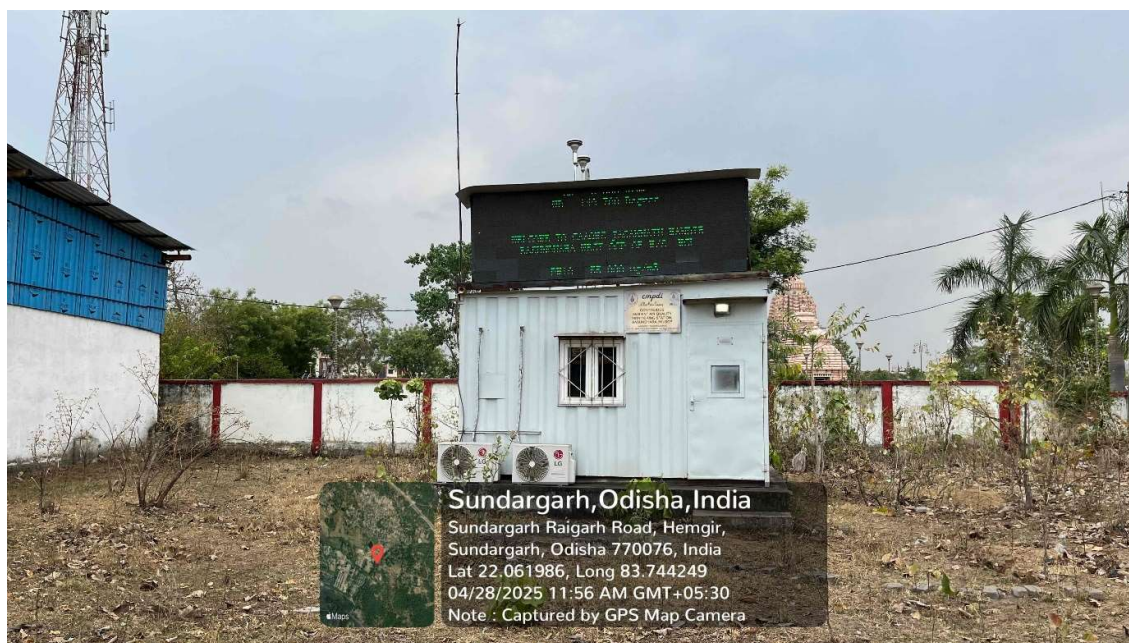
TARGET PLANTATION : 15000 (AVENUE + BLOCK PLANTATION ALONG ROAD)

BASUNDHARA AREA SOLAR PROJECT

SL NO.	PLACE OF INSTALLATION	CAPACITY IN KW	NO OF SOLAR PANEL	TOTAL GENERATION IN MWh TILL DATE
1	Market Complex Basundhara	101.01	182	69.17
2	DAV School Basundhara	38.85	69	16.91
3	Stadium Basundhara	32.19	58	24.24
4	MT Hostel Basundhara	60.49	109	42.27
5	Meghdoot Basundhara	30.52	55	22.84
6	Kulda Project Office Basundhara	61.05	110	33.97
7	GM Office Basundhara Area	30.52	55	16.21
8		354.63	638	225.61

FUTURE PLANNING			
SL NO	TYPE OF SOLAR PLANT	CAPACITY	LOCATION
1	FLOATING SOLAR POWER PLANT	5 MW	B(W)OCP, EAST PUMP
2	GROUND MOUNTED SOLAR POWER PLANT	10 MW	GOCP/KOCP OB DUMP YARD

PAST CSR ACTIVITY REGARDING SOLAR LIGHT INSTALLATION	
SL NO	NAME OF THE VILLAGE WHERE SOLAR STREET LIGHT WAS INSTALLED UNDER CSR ACTIVITY
1	RATANSARA VILLAGE
2	MEHERPADA, RATANPUR VILLAGE
3	KUISIRA VILLAGE



Location	Particulars	Annual Average 2022	Annual Average 2023	Annual Average 2024	Annual Standard
CAAQMS JAGANNATH	PM _{2.5}	27.6 µg/m ³	31.30 µg/m ³	30.30µg/m ³	60 µg/m ³
	PM ₁₀	36.4 µg/m ³	41.00µg/m ³	54.60µg/m ³	100 µg/m ³
	SO ₂	9.8µg/m ³	8.5µg/m ³	3.2 µg/m ³	40 µg/m ³
	NO _x	21.9µg/m ³	27.9µg/m ³	24.60µg/m ³	60 µg/m ³



Garjanbahal, Odisha, India
 2Q79+66, Garjanbahal, Odisha 770076, India
 Lat 22.013204°
 Long 83.768257°
 09/05/24 11:59 AM GMT +05:30

Location	Particulars	Annual Average 2022	Annual Average 2023	Annual Average 2024	Annual Standard
CAAQMS GARJANBAHAL	PM _{2.5}			42.84 µg/m ³	60 µg/m ³
	PM ₁₀			52.93µg/m ³	100 µg/m ³
	SO ₂			16.42 µg /m ³	40 µg/m ³
	NO _x			25.70µg/m ³	60 µg/m ³



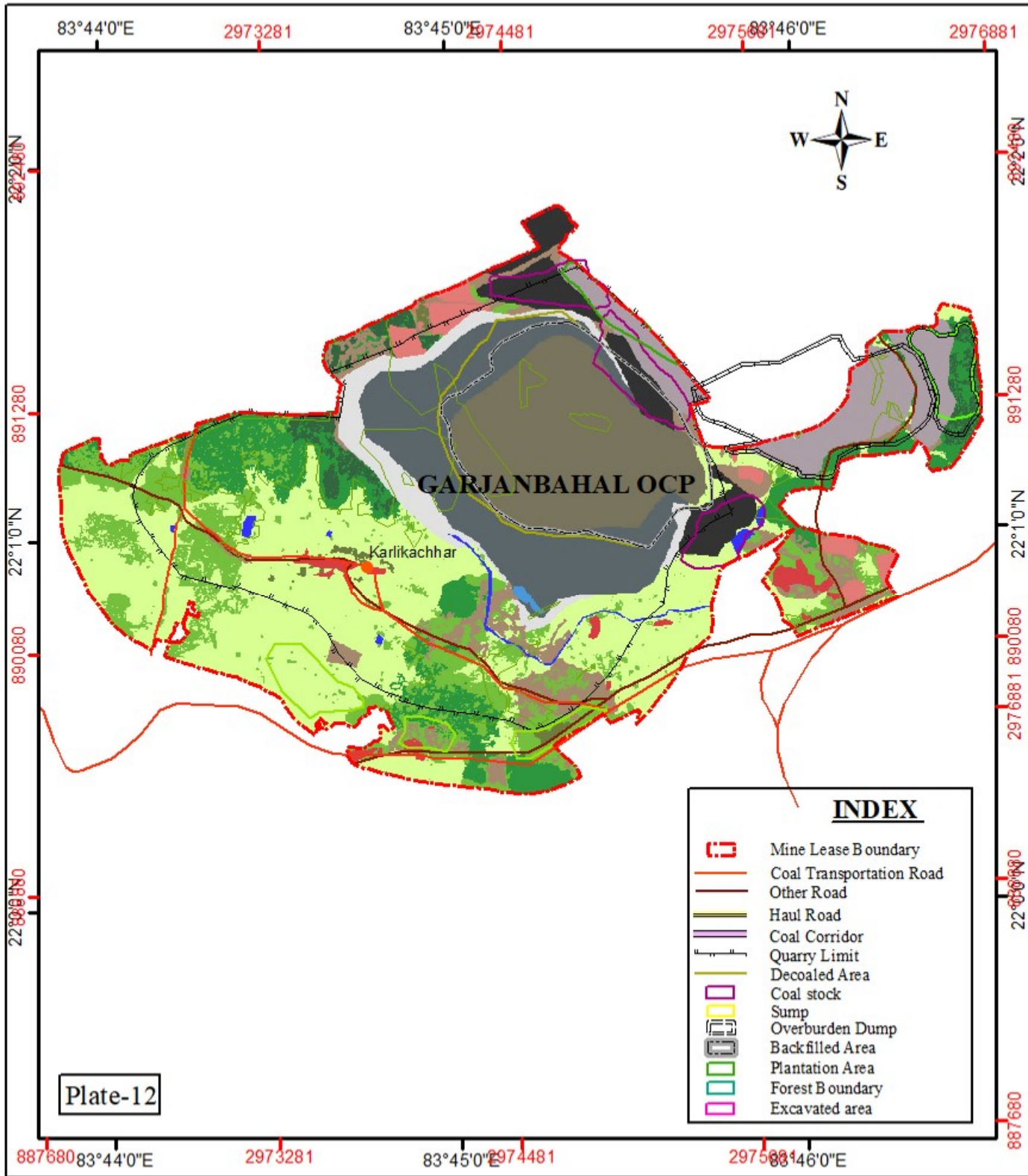
Location	Particulars	Annual Average 2022	Annual Average 2023	Annual Average 2024	Annual Standard
CAAQMS GOPALPUR	PM _{2.5}	41.6µg/m ³	36.6µg/m ³	70.4µg/m ³	60 µg/m ³
	PM ₁₀	62.1µg/m ³	51.4µg/m ³	103.4µg/m ³	100 µg/m ³
	SO ₂	13.3µg/m ³	9.5µg/m ³	12.8µg/m ³	40 µg/m ³
	NO _x	14.9µg/m ³	17.4µg/m ³	12.3µg/m ³	60 µg/m ³



Location	Particulars	Annual Average 2022	Annual Average 2023	Annual Average 2024	Annual Standard
CAAQMS KULDA SIARMAL	PM _{2.5}			87.74 µg/m ³	60 µg/m ³
	PM ₁₀			164.97µg/m ³	100 µg/m ³
	SO ₂			0.85µg/m ³	40 µg/m ³
	NO _x			5.82µg/m ³	60 µg/m ³



Location	Particulars	Annual Average 2022	Annual Average 2023	Annual Average 2024	Annual Standard
CAAQMS KULDA	PM _{2.5}	23.2µg/m ³	23µg/m ³	32.6µg/m ³	60 µg/m ³
	PM ₁₀	28.3µg/m ³	31.8µg/m ³	48.8µg/m ³	100 µg/m ³
	SO ₂	3.6µg/m ³	4µg/m ³	7.5µg/m ³	40 µg/m ³
	NO _x	24.5µg/m ³	16.3µg/m ³	25.6µg/m ³	60 µg/m ³



Area Statistics - Garjanbahal OCP (2024)				
Classes		Colour	Area	
Level-I	Level-II		Area (Km ²)	% of Total
Forest Area	Dense Forest		0.14	2.14
	Open Forest		0.56	8.56
	Total Forest Area (A)		0.70	10.70
Scrubs	Scrubs (B)		0.83	12.69
Plantation	Social Forestry		0.03	0.46
	Plantation on Backfill		0.00	0.00
	Plantation on OB Dump		0.00	0.00
	Total Plantation (C)		0.03	0.46
Total Vegetation(A+B+C)			1.56	23.85
Agriculture	Agriculture Land		1.84	28.13
Waste Land	Waste Land		0.40	6.12
Mining Area	Coal Quarry		0.74	11.31
	Barren OB Dump		0.44	6.73
	Area Under Backfilling		0.79	12.08
	Water Filled Quarry		0.01	0.15
	Coal Dump		0.28	4.28
	Advance Quarry Site		0.24	3.67
	Total Mining Area		2.50	38.23
Settlements	Rural Settlement		0.07	1.07
	Industrial Settlement		0.14	2.14
Total Settlement Area			0.21	3.21
Water Body	River, Ponds		0.03	0.46
Total			6.54	100.00

INDEX	
	Mine Lease Boundary
	Coal Transportation Road
	Other Road
	Haul Road
	Coal Corridor
	Quarry Limit
	Decoaled Area
	Coal stock
	Sump
	Overburden Dump
	Backfilled Area
	Plantation Area
	Forest Boundary
	Excavated area

Customer		Mahanadi Coalfields Limited			
Title		Land Reclamation Monitoring of OC Projects			Job No. 564924124
Subject Land Reclamation Status of Garjanbahal OCP based on Satellite Data (IRS-R2A/L-IV) of the year 2024	Activity	Name	Designation	Signature	Date
	Prepared	A. Biswas	Sr.Mgr.(Geology)		
	Checked	T.Mondal	CM (E&M)		
Approved	M. Rastogi	GM (Geomatics)			
Scale:		0 0.325 0.65 1.3 Km			Sheet 1
Drg No.		HQ REM 07 A4 24 12			Rev.No.0

Plate-12

**Supplying of Drinking Water for the year 2024-25 under CSR Scheme of
Basundhara Area**

Sl. No.	Description of work	Quantity of Water (in Liters) for 90 days	Work order Value/RE Value (in Lakh)
1	Supplying of drinking water to Kulda village through tanker for the year 2023-24 under CSR scheme of Basundhara Area (for 365 days)	2160000	4.09
2	Supplying of drinking water to Siarmal and Tumulia village through tanker (for 90 days) under CSR scheme of Basundhara Area (1st Re-tender)	3240000	3.81
3	Supplying of drinking water to Gopalpur, Haldibahal and Chhitkendhipa village through tanker (for 90 days) under CSR scheme of Basundhara Area	2520000	2.63
4	Supplying of drinking water to Garjanbahal, Kiripsira, Bangurkela and Karlikachhar village through tanker (for 90 days) under CSR scheme of Basundhara Area	2880000	4.86
5	Supplying of drinking water to Khamarpada, Tilkilipada, Sardega and Narsinghpur and village through tanker (for 90 days) under CSR scheme of Basundhara Area	4320000	3.45
6	Supplying of drinking water to Ratanpur, Ratansara and Balbaspur village through tanker (for 90 days) under CSR scheme of Basundhara Area (1st Re-tender)	2160000	3.17
7	Supplying of drinking water to Ganjeibud, Tiuria and Sarangijharia village through tanker (for 90 days) under CSR scheme of Basundhara Area	2520000	3.09
8	Supplying of drinking water to Kaletpani, Kulapada and Sumura village through tanker for 90 days under CSR scheme of Basundhara Area	2880000	2.70
9	Supplying of drinking water to Balinga (Barpali Road Side) and Barpali village through tanker (for 90 days) under CSR scheme of Basundhara Area	2160000	2.58
10	Supplying of drinking water to Naktideul, Banpatra, Telendihi, Jhuprunga and Patrapali village through tanker (for 90 days) under CSR scheme of Basundhara Area	2520000	3.61
11	Supplying of drinking water to Kuisira and Duduka village through tanker (for 90 days) under CSR scheme of Basundhara Area (1st Re-Tender)	2160000	3.03
	Total	29520000	37.02

क्रमांक संख्या: एम.सी.एल/मुख्यालय/ पर्यावरण एवं वन/2024/1861 दिनांक: 28/09/2024

सेवा में,
सदस्य सचिव,
राज्य प्रदूषण नियंत्रण बोर्ड, उड़ीसा,
ए-118, नीलकंठ नगर, यूनिट-VIII, भुवनेश्वर-751012.

विषय: एम.सी.एल. के सभी कार्यरत परियोजनाओं का वर्ष 2023-24 का पर्यावरण संबंधी विवरण फॉर्म-V की प्रस्तुति।

महोदय,
पर्यावरण संरक्षण अधिनियम, 1986 एवं संशोधन, 1993 के अधिनियम 14 के पालनार्थ, एम.सी.एल. के निम्नलिखित 24 खदानों, 02 रेलवे साइडिंग और 01 वाशरी के वर्ष 2023-24 का पर्यावरण संबंधी विवरण फॉर्म-V में एक साथ जिल्दबद्ध कर एक किताब के रूप में इस पत्र के साथ संलग्न कर आपके सूचनार्थ प्रस्तुत है।

क्र. सं.	इच-वैली कोलफील्ड्स के खदानों के नाम।	क्र. सं.	तालचर कोलफील्ड्स के खदानों के नाम।
1	बसुंधरा (वेस्ट) खुली खदान।	17	कनिहा खुली खदान।
2	कुलडा खुली खदान।	18	लिंगराज खुली खदान।
3	गरजनबहल खुली खदान।	19	भरतपुर खुली खदान।
4	चारमन खुली खदान।	20	तलचेर भूमिगत खदान।
5	समलेखरी खुली खदान।	21	नंदिरा भूमिगत खदान।
6	नाजकुरा खुली खदान।	22	जगन्नाथ खुली खदान।
7	ओरिएंट 1&2 भूमिगत खदान।	23	धुवनेखरी खुली खदान।
8	ओरिएंट 3 भूमिगत खदान।	24	अनंता खुली खदान।
9	ओरिएंट 4 भूमिगत खदान।	25	बनराम खुली खदान।
10	हिराखंड बुंदिया भूमिगत खदान।	26	हिंगुला खुली खदान।
11	लखनपुर खुली खदान।	27	सुभद्रा खुली खदान।
12	बेलपहार खुली खदान।		
13	एकीकृत एलबीएल खुली खदान।		
14	इच-वैली कोल वाशरी।		
15	कनिका RS.		
16	लाइकेरा RS.		

कृपया पावती भेजने की कृपा करें।
सधन्यवाद।

अनुलग्नक: यथोपरि।

भवदीय,

डॉ. र. शर्मा
महाप्रबंधक (पर्या. एवं वन),
एमसीएल मुख्यालय।
अंकित

- क्षेत्रीय अधिकारी, उ.रा.प्र.नि.बो., झारसुगुडा: एमसीएल के इच कोलफील्ड्स परियोजनाओं की वर्ष 2023-24 का पर्यावरण संबंधी विवरण फॉर्म-V में एक साथ जिल्दबद्ध कर एक किताब के रूप में संलग्न करते हुए प्रस्तुत।
- क्षेत्रीय अधिकारी, उ.रा.प्र.नि.बो., अंगुल: एमसीएल के तालचेर कोलफील्ड्स परियोजनाओं की वर्ष 2023-24 का पर्यावरण संबंधी विवरण फॉर्म-V में एक साथ जिल्दबद्ध कर एक किताब के रूप में संलग्न

To: SEP 2024

30 SEP 2024

The Member Secretary,
State Pollution Control Board, Odisha,
A-118, Nilakantha Nagar, Unit VIII, S.P.C. BOARD
Bhubaneswar-751012

Sub: Submission of Environmental Statement in Form- V of the Operating Projects of MCL for the year 2023-24.

Sir,

In compliance of Rule-14 of Environmental Protection Rules, 1986 and Amendment, 1993, the Environmental Statement in Form- V for each of following 24 mines, 02 Railway siding & 01 Washery of MCL for the year 2023-24, bound together in the form of a book is enclosed along with this letter for your kind information.

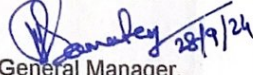
Sl. No.	Name of the Mines in Ib-Valley Coalfield	Sl. No.	Name of the Mines in Talcher Coalfield.
1	Basundhara (W) OCP	17	Kaniha OCP
2	Kulda OCP	18	Lingaraj OCP
3	Garjanbahal OCP	19	Bharatpur OCP
4	Siarmal OCP	20	Talcher UG
5	Samaleswari OCP	21	Nandira UG
6	Lajkura OCP	22	Jagannath OCP
7	Orient 1&2 UG	23	Bhubaneswari OCP
8	Orient 3 UG	24	Ananta OCP
9	Orient 4 UG	25	Balram OCP
10	Hirakhand Bundia Mine	26	Hingula OCP
11	Lakhanpur OCP	27	Subhadra OCP
12	Belpahar OCP		
13	Integrated LBL OCP		
14	IB Coal Washery		
15	Kanika Railway Siding		
16	Laikera Siding		

Kindly acknowledge the receipt.

Thanking You.

Encl.: As above.

Yours faithfully,


General Manager,
Envt. & Forest, MCL HQ.
अंकित

Copy to:

- Regional Officer, OSPCB, Jharsuguda: along with Environmental Statement in Form-V for the year 2023-24 Projects of Ib Coalfields, MCL bound together in one volume book.
- Regional Officer, OSPCB, Angul: along with Environmental Statement in Form-V for the year 2023-24

FORM-V

ENVIRONMENTAL STATEMENT

Environmental statement for the financial year ending 31st Mar, 2024

Part – A

- i) Name & Address of the owner/ occupier:
of the industry operation or process
(Name of the Project Officer/ Sub-Area
Manager & Office address to be given) Shri Kanti Bhushan Chowdhury, Project Officer,
Garjanbahal OCP, PO: Basundhara,
Dist.: Sundargarh (Odisha),
Pin: 770076.
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production
during the year 2022-23) : 18.19 MTPA (18.20 MTe)
-
- iv) Year of establishment : 24.05.2018
- v) Date of the last Environmental
Statement submitted : 22.09.2023

Part – B

Water & Raw Material Consumption

Note: Average Water Consumption (Cu-m/ day) for the whole year is given. Raw material consumption is given per unit of coal produced.

(I) Water Consumption (Cu-m/ day):

Ser No.	Industrial/ Mining	Consumption in Cu-m/ day
1. a	Haul Road Dust Suppression	1974
b	Dust Suppression at CHP	Not Applicable
c	Dust Suppression at Siding	0
d	Fire Fighting	55
e	Workshop	15
f	Others	0
2.	Domestic	5
3.	Total in kl/ day	2049 Kl/day

Name of the Product	Water Consumption per unit of product (l/ t)	
	2022-23	2023-24
Coal	51.64	41.09

(II) Raw Material Consumption (per tonne of coal):

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2022-23(Dept. + Contr.)	2023-24(Dept. + Contr.)
H.S. Diesel (l/ t)	1.276	1.146
Petrol (l/ t)	Nil	Nil
Lubricants (l/ t)	0.015	0.013
Electricity (Units/ t)	0.481	0.465
Explosives (kg/ t)	0.195	0.184

Part – C
Pollution Discharged to Environment/ Unit of Output

(Parameter as specified in the 'Consent' issued)

Pollutants	Quantity of pollutants discharged (mass/ day)	Concentrations of pollutants in discharges (mass/ volume)			Percentage variation from prescribed standards with reasons
		Mine Effluent	OGT Outlet	STP Outlet	
Point of examination : Mine Sump water					
TSS (mg/l)	Not possible to quantify	32	-	-	The environmental parameters are within permissible limits.
BOD mg/l)		-	-	-	
COD (mg/l)		34	-	-	
pH		8.19	-	-	
O & G (mg/l)		<4.0	-	-	
Air (Ambient air quality of one station-annual average) station : Karlikachar					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	179			The environmental parameters are within permissible limits.
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		95			
SO ₂ ($\mu\text{g}/\text{m}^3$)		13.76			
NO _x ($\mu\text{g}/\text{m}^3$)		14.02			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		44			

Part – D
Hazardous Wastes

As specified under Hazardous Wastes (Management & Handling) Rules, 1989.

Hazardous Waste	Total Quantity (kg)	
	During the current financial year (2022-23)	During the current financial year (2023-24)
(a) From process :		
i. Burnt Oil in Workshops	43800 Ltrs	45000 Ltrs
ii. Oil soaked filters	1535 Nos.	1530 Nos.
(b) From pollution control facilities:		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	Nil	Nil
ii. Oily sludge	Nil	Nil
iii. Chemical Waste(if any)	Nil	Nil

Part – E
Solid Wastes (other than hazardous)

Particulars	Total Quantity	
	During the current financial year (2022-23)	During the current financial year (2023-24)
(a) From process (Top soil and Over burden)	15.823 Mm ³	15.916 Mm ³
(b) From pollution control facilities (STP & Sed-Pond Sludge)	Nil	Nil
(c) 1- Quantity recycled or re-utilized (OB back-filled)	Nil	Nil
2- Sold	Nil	Nil
3- Disposed	Nil	Nil

Part – F

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

(I) Hazardous Wastes:

Name of Hazardous Wastes	Quantity generated in the year 2022-23	Disposal Practices
Burnt Oil, etc. (l) (from W/Shop)	45000 Ltrs	Transferred to regional store from where it is auctioned to authorized agency.
Oil soaked filters(kg) (from W/Shop)	1530 Nos.	Stored in impervious pit
Oil & Grease (kg) (from ETP/OGT)	Nil	N.A.
Oily Sludge (te.) (from ETP/OGT)	Nil	N.A.
Oil imulsion	Nil	N.A.
Chemical Waste if any (kg)	Nil	N.A.
Battery (nos.)	34 Nos.	Transferred to regional store from where it is auctioned to authorized agency.

Note: A detailed note on disposal practices of the above should be given separately.

(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2022-23	Disposal Practices
Top Soil (m ³)	0.228 Mm ³	Kept in separate top soil dump for future use.
OB (m ³)	15.688 Mm ³	Dumped in internal as well as external OB dump.
STP & Sed-Pond Sludge	Nil	N.A.

Land Reclamation & OB disposal – progressive till March, 2023:

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	49.53 Ha	23.290 Mm ³ /Nil
2) Excavated land	183.63 Ha	52.638 Mm ³ /Nil
3) Land affected (1+2)	233.16 Ha	Nil
4) Backfilled (out of 2)	90.25 Ha	29.348 Mm ³ /Nil
5) Land physically reclaimed (out of 3)	Nil	Nil
6) Land biologically reclaimed (out of 3)	Nil	Nil

Part – G

Impact of pollution control measures on conservation of natural resources and consequent on cost of production.

In order to carry out mining in an eco-friendly manner, a detailed Environmental Management Plan (EMP) was prepared by Regional Institute-VII of CMPDIL. The main pollution control measures suggested in EMP along with the measures implemented so far have been summarized in the Table-1.1 to 1.3.

Table – 1.1
Air Pollution Control Measures

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Water sprinkling and grading of all roads to minimize air-borne dust from vehicles.	Provided	The water sprinkling is done by 5 nos of 28 KL water tankers along the haul roads of the mine and coal transport roads involve 3 nos of 12 KL truck mounted fog cannons.
2	Biological reclamation of land.	Provided	Till now safety zone plantation has been conducted along the lease boundary of the mine with approximately 9400 plants. External dump plantation will be carried out in 2024-25 and internal dump plantation shall be taken up after the dump reaches the desired level. Grassing is however developed over all the dumps naturally and by seedball throwing.
3	Green belt around mine & infrastructures.	Provided	Greenbelt will be developed all along the mine lease area in a phased manner and the details regarding the same will be conveyed to the MoEF & CC and its Regional Office from time to time.
4	Drills fitted with dust control devices.	Provided	All the drill are fitted with wet dust extractors for wet drilling.
5	Dust suppression/ dust extraction system to be provided in CHP.	NA	CHP does not exist.
6	Improved maintenance of plant & machinery.	Provided	Integrated HEMM workshop with 29 components is under construction with the desired facilities for plant & machinery.
7	Mechanized coal transportation system.	Provided	Coal transportation system is presently carried out by the tippers for road sale and railway sidings form coal stockyard.

Table – 1.2
Water Pollution Control Measures

Sl. No.	EMP Provisions/ Additional precautions	Whether provided or not	Remarks
1	Mine water is to be collected in central sump on dip side of pit. This will act as sedimentation lagoon.	Provided	A single main sump at the dip side of the pit of approximately 11.7 lakh cu.m capacity acts as minewater reservoir.
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provided	Drains constructed.
3	Surface run-off from external dump would be collected through a series of contour drains which would be connected to a water retention pond. The clear water from this pond will be re-utilised	Provided	Surface run-off presently flow through the garland drains along the toe of the dumps. Pond construction is being considered for 2024-25.
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank & soak-pit.	Domestic waste arrangement provided at Basundahara Colony.	Soak pit arrangement and STP is provided at colony
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	ETP with OGT has been newly constructed and provided with integrated HEMM workshop at Garjanbahal OCP.
6	Zero discharge from mine shall be maintained.	Maintained	All the minewater goes to mine sump
7	Piezometers shall be installed for measurement of under-ground water depth and its quality.	Provided	1.MIP 01: Garjanbahal primary school, Garjanbahal 2.MIP 11: Primary school, Karlikachar village

Table – 1.3
Land Reclamation

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Top soil Management: Proper stripping, Storage, and Relocation of top soil.	Provided	Top soil is stored at internal dump in front of

			MTK office.
2	Physical Reclamation of OB Dump: Proper reshaping and regrading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.	Under progress	All OB dumps are still active except a patch of external dump recently.
3	Biological Reclamation: Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Provided	

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

COST OF ENVIRONMENTAL MANAGEMENT DURING 2023-24 was Rs. 4.40 per Tonne of Coal.

Part – H

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

Head	Amount Rs. (approx)
Wheel Washing System	1,00,10,000.00
Vertical Greenery System	30,93,415.00
Mechanical Road Sweeper	14,592,178.66
Fog Canon	53,10,000.00
ETP & OGT construction	100,00,000.00
Dust suppression (Contractual + Departmental)	37,00,000.00
Garland drains & check dams	2,00,000.00
Consent (SPCB) & NOC (CGWB)	52,01,000.00
Others i.e. up keeping works for aesthetic view	7,00,000.00
Departmental water tankers (Maintenance, POL cost, etc.)	12,00,000.00
Fire tender (Maintenance, POL cost, etc.)	4,00,000.00
Plantation	2,57,25,410.00
Rain water harvesting structure	5,00,000.00
Construction and maintenance of transport roads	1,00,00,000.00
Wind barrier	3,00,00,000.00
Total	12,06,32,003.66

Part – I

Any other particulars for improving the quality of the environment.

Note: Please attach a plan showing the relevant features like Present Working/ Quarry, External Dump, Back-filling, Plantation, Sedimentation Pond/ MDTP, Oil & Grease Trap/ ETP, Workshop, CHP, STP, etc. and Environmental Monitoring Stations.


Signature of the Project Officer.

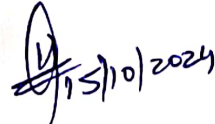
(With Seal)
Project Officer
Bhilai OCP, MCL

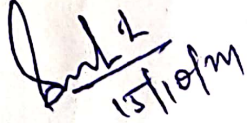
Illumination survey (Opencast mines)

NAME OF AREA: -BASUNDHARA AREA
NAME OF PROJECT: -GARJANBAHAL OCP
DATE OF INSPECTION: -15/10/2024

Sl No.	Location	Standard as per DGMS circulars	Observed reading	Remark
1	Surface Minor Departmental Patch	15H, 25V	18H, 22V	Procurement of different type light fitting i.e., 400W, 1000W and long range 350W lights are in procurement stage at area level.
2	Surface Minor Contractual Patch	15H, 25V	14H, 21V	
3	OB face Dept.	15H, 15V	13H, 17V	
4	OB Face Contractual	15H, 15V	12H, 15V	
5	Area of Drilling rig works	25V	20V	
6	At drill holes	15H	12H	
7	Manual working zone Near Excavation Office	15H, 25V	12H, 20V	
8	OB Dump Dept.	15H, 15V	12H, 13V	
9	OB Dump contractual	15H, 15V	14H, 18V	
10	Coal stock yard-II	15H, 15V	21H, 46V	
11	Coal stock yard-III	15H, 15V	10H, 13V	
12	Siding (Kanika)	15H, 15V	13H, 16V	
13	Haul roads	10H	11H	
14	Coal transporting road	10H	11H	
15	Operator's cabin(dumper)	50H	48H	
16	Roadways foot paths from bench to bench	10H	11H	
17	Permanent paths for use of persons	10H	11H	
18	Pumping station	40H	38H	
19	Near Weighbridge No.-04	20H, 20V	17H, 18V	
20	HEMM(Dumper) Parking yard	50H	56H	
21	Vehicle Parking yard	50H	48H	


15/10/24
Manager (Min.)
Garjanbahal OCP


15/10/2024
Project Engineer (E&M)
Garjanbahal OCP


15/10/24
Electrical safety Officer (E&M)
Garjanbahal OCP



भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
और गंगा संरक्षण विभाग
केन्द्रीय भूमि जल प्राधिकरण
Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development & Ganga Rejuvenation
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION

Project Name:	Garjanbahal Open Cast Coal Mining Project Of M/s Mahanadi Coalfields Limited												
Project Address:	O/o The General Manager, Mcl Basundhara Area												
Village:	Garjanbahal	Block:	Hemgir										
District:	Sundargarh	State:	Odisha										
Pin Code:													
Communication Address:	Project Officer, Garjanbahal Ocp, Mcl Basundhara Area, Hemgir, Sundargarh, Odisha - 770076												
Address of CGWB Regional Office :	Central Ground Water Board South Eastern Region, Bhujal Bhawan, Khandagiri Square, Nh-5, Bhubaneshwar, Khordha, Odisha - 751030												
1. NOC No.:	CGWA/NOC/MIN/REN/1/2025/11001			2. Date of Issuance	01/03/2025								
3. Application No.:	21-4/2233/OR/MIN/2019			4. Category: (GWRE 2024)	Safe								
5. Project Status:	Existing With Additional Ground Water Requirment			6. NOC Type:	Renewal								
7. Valid from:	22/10/2023			8. Valid up to:	21/10/2025								
9. Ground Water Abstraction Permitted:													
Fresh Water		Saline Water		Dewatering		Total							
m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year	m ³ /day	m ³ /year						
8.00	2920.00			4770.00	1741050.00	4778.00	1743970.00						
10. Details of ground water abstraction /Dewatering structures													
Total Existing No							Total Proposed No						
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu	
Abstraction Structure*	0	0	2	0	0	0	0	0	0	0	0	0	
Dewatering Structure*	0	0	0	0	0	5	0	0	0	0	0	0	
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps													
11. Ground Water Abstraction/Restoration Charges paid (Rs.):							10495575.00						
12. Environment Compensation (if applicable) paid (Rs.):							0.00						
13. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers						Monitoring Mechanism						
							Manual	DWLR**	DWLR With Telemetry				
**DWLR - Digital Water Level Recorder	2						0	1	1				

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

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SAVE WATER - SAVE LIFE

CENTRAL GROUND WATER AUTHORITY

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(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

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

Mandatory conditions:

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website (www.cgwa-noc.gov.in) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m³/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

General conditions:

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m³/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).
- 31) In the self-compliance report, the PP shall submit details of Drilling Agency/ Agencies, which has/ have constructed BW(s)/ TW(s) along with undertaking to the effect that all necessary measures have been taken as per directions of Hon'ble Supreme Court provided in Annexure-VII of guidelines dated 24.09.2020 in respect of abandoned/ failed BW(s)/ TW(s)/Piezometer(s), if any. The PP is advised to engage registered drilling agency/ agencies. In the event of any mishap/ unfortunate incident due to negligence in taking measures for prevention of accident due to falling in Bore Well, both PP and concerned drilling agency shall jointly be held responsible and penal action as per extant Government rules shall be taken.

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

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CENTRAL GROUND WATER AUTHORITY
Department of Water Resources, River Development and Ganga Rejuvenation
Ministry of Jal Shakti, Govt. of India

Receipt

(As per the guideline Gazette Notification S.O. 3281(E) regarding the New Guidelines dated 24.09.2020 of CGWA, MoJS, Govt. of India)
<https://cgwa-noc.gov.in>

Application No.:	21-4/2233/OR/MIN/2019	Date of Issuance:	01/03/2025
Name of Firm:	GARJANBAHAL OPEN CAST COAL MINING PROJECT OF M/S MAHANADI COALFIELDS LIMITED		
AppType Category:	Coal		
Application Type:	Mining		
PAN/GSTIN No. of Firm/Individual:	/		

S N	Description	Amount (Rs.)
1.	Application Processing Fee	5000.00
2.	Ground Water Abstraction charges	10495575.00
3.	Ground Water Restoration charges	0
4.	Environmental Compensation Charges (ECRGW) (Date From to) Days-	
5.	Penalty for non-Compliance of NOC conditions Condition to be mentioned	300000.00
6.	Adjustment Charges	
7.	Rebate	
8.	Charges for correction/modification in the existing issued No Objection Certificate	
S.No.	Description	Rate
(i)	Change in User ID	Rs. 1000
(ii)	Change in firm Name	Rs. 5000
(iii)	Extension of No Objection Certificate	Rs. 5000
(iv)	Issuance of duplicate No Objection Certificate	Rs. 5000
(v)	Issuance of corrigendum to No Objection Certificate	Rs. 5000
(vi)	Any other items/correction etc.	Rs. 500
Rs. Rupees One Crore Eight Lakh Five Hundred Seventy Five Only		10800575.00

This is an system generated invoice, hence, does not require ink signed.

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Term and conditions:

- i. All disputes are subject to Delhi Jurisdiction.
- ii. Any complaint in regard to the rates will not be entertained.

Member-Secretary
CGWA, New Delhi

CENTRAL GROUND WATER AUTHORITY

ଓଡ଼ିଶା ବନ ଉନ୍ନୟନ ନିଗମ ଲିମିଟେଡ

Odisha Forest Development Corporation Limited

(A Government of Odisha Undertaking)

CIN-UO2005OR1962SGC000446

OFFICE OF THE GENERAL MANAGER, SAMBALPUR ZONE

Remed Saw Mill & Timber Depot Compound, Remed, Sambalpur, PIN-768006

(Website: www.odishafdc.com E-mail ID: gmsambalpur@gmail.com)



MINUTES OF DISCUSSION WITH DIVISIONAL MANAGERS OF SAMBALPUR(C) ZONE IN PRESENCE OF THE USER AGENCIES HELD ON DT.07.03.2025 IN THE CONFERENCE HALL AT ZERO POINT, DEBRIGARH WL SANCTUARY, SAMBALPUR.

The Zonal level Divisional Managers conference was held under the Chairmanship of General Manager, Sambalpur(C)Zone on Dt. 07.03.2025 at 11.00 am in the conference hall, Zero Point, Debrigarh WL Sanctuary, Sambalpur. The list of participants is annexed separately.

The General Manager, OFDC Ltd, Sambalpur (C) Zone welcomed all participants and initiated the discussion agenda wise such as Working of Timber Coupes (2024-25), Tree felling Projects, item wise sale and disposal of stock from depot, Status of plantation, Bamboo coupe working, Rourkela Smart city project/landscaping work, Royalty statement Kendu leaf and Revenue position upto Feb'2025.

The concerned Divisional Managers put forth their agenda wise information and the Chairman cum General Manager, Sambalpur (C) Zone responded with suggestions as under:-

Working of Timber Coupes (2024-25)

Rairakhol (C-KL) Division

There are 12 no's of Timber have been taken delivery by DM Rairakhol, out of which in 9 Coupe Tree felling have been started and one Coupe (**Rahan FS-IV**) has been surrendered due to non marking of trees. In 5 Coupes felled trees are being transported to Depot. The Divisional Manager, Rairakhol (CKL) Division has been advised to complete the tree feeling, conversion and transportation works within time limit.

Deogarh (CKL) Division

As per working plan there were 09 Coupes to be worked out during 2024-2025. Out of 09 Coupes only 02 coupes were taken delivery and the felling transportation work has been completed. And in case of other 07 Coupes, which were jointly verified by Divisional Manager, Deogarh and DFO Deogarh(T) and reported that there were no trees to be marked for felling.

Sambalpur(CKL) Division

In case of Bamra Wild Life Division, the Divisional Manager, Sambalpur(CKL) Division stated that out 04 Coupes tree felling and transportation work has been completed in 3 coupes and in case of remaining Sauntimal- IX (Bamra) the Divisional Manager has been advised to expedite the VSS level meeting in coordination with Bamra Wild Life Division to complete the work by 31.03.2025.

Rourkela(CKL) Division

In case of Rourkela(C-KL) Division out of 20 number of coupes allotted, the tree felling work of 04 coupes could not be initiated due to PESA problem. The SDM stated that DFO Bonai has

been requested to resolve the issue highlighting the Grama Sabha resolution. Out of 16 number of coupes 70% tree felling. Conversion and Transportation work has been completed.

The Divisional Manager has been advised to complete the work within the time limit.

Jharsuguda(CKL) Division

In case of Sundargarh Forest Division out of 05 number of timber coupes, coupe work in respect of 4 coupes has been completed.

In case of Bamra Forest Division out of 06 timber coupes 03 numbers of coupes work has been completed and the Divisional Manager have been advised to complete the transportation work from Bamra Wild Life Division within time limit.

Tree felling Projects

Rairakhol(CKL) Division

The DM Rairakhol has been advised to move the Head Office for early release of funds for tree felling in construction of OAV building Pentbhal.

Deogarh(CKL) Division

In case of Talcher- Bimlagarh Railway line work the Divisional Manager is requested to write a letter to the DFO Deogarh with a copy to Collector Deogarh to solve the private land ownership dispute.

Sambalpur(CKL) Division

In case of Sambalpur (C-KL) Division out of 10 number of deposit works of tree felling 02 numbers of projects of NLC Talibira, there is objection by the local villagers. The Divisional Manager has been advised to discuss the issue with DFO, Tahsildar and user agency to expedite the work.

Rourkela(CKL) Division

The Head Office is to be moved for early release of funds for felling of 5961 numbers of trees under Barsuan- Taldihi, Kalta Mining lease (ML-130 & ML-162) of M/s SAIL, Rourkela.

Jharsuguda(CKL) Division

In Siarmal OCP, the balance un-felled 4003 numbers of trees of MCL Phase-II project, the Divisional Manager, Jharasuguda (C-KL) Division has been requested to coordinate with DFO Sundargarh, user agency MCL to organize village level meeting for convincing the villagers.

In case of the project of Jharsuguda By-Pass including ROB under NH49, the Divisional Manager has been advised to Coordinate with Tahsildar NHAI Authority.

In balance tree falling projects, the Divisional Manager has been requested to expedite the work to complete the same within time limit.

Plantation Activity

The Divisional Managers, Jharsuguda(C-KL) Division, Rourkela(C-KL) Division and Sambalpur(CKL) Division will communicate and coordinate for FC, EC and CSR activities. In this

regard the concerned Divisional Managers will contact the MCL authority about statutory provision in tree plantation under the above schemes and take up the work during July 25.

Side by side the MCL authorities stated that, there are proposals for Road side plantation, Miyawahi plantation and creation of ECO Park. with the limited floated tenders. The Divisional Managers, Rourkela(C-KL) Division and Sambalpur(C-KL) Division are advised to participate in the upcoming above said tenders and put full effort for remarkable achievement.

Kendu leaf

- 1) All Divisional Managers have been advised to analyse the unsold kendu leaf lots with due discussion with concerned DFO in following points.
 - i) In case of non bidding of any kendu leaf lots.
 - ii) In the Phadi Houses and CGs where the sale process is abnormally delayed or sluggishness is noticed in sale.
- 2) The Divisional Manager, Rairakhol is advised to remain vigilant on the quality of seized Kenduleaf delivered by Territorial Division and analyse the sale status. If any kind of malpractice is noticed the same may be informed to the higher ups.

Sale and Disposal

The Divisional Manager, Jharsuguda(C-KL) Division and Deogarh (C-KL) Division are advised to analyze and organize the timber stocks for better disposal of the same in order to achieve timber revenue.

In case of any bottlenecks in issue of timber permits, the concerned Divisional Managers are to pursue their counterpart DFOs to impress upon the Range Officer and ACF for the same.

Revenue

As regard to achievement of timber revenue during 2024-25 there is budgetary target of 33.70 crores out of that 82.69% has been achieved as on 28.02.2025. As per discussion with the Divisional Managers they have been advised to achieve 92% in case of Rourkela(C-KL) Division, 80% in case of Rairakhol Division, 70% in case of Sambalpur(C-KL) Division, 95% in case of Jharsuguda(C-KL) Division and 68% in case of Deogarh (C-KL) Division by 31.03.25.

In addition, all Divisional Managers are advised to follow GST Rules with respect to issue of proforma invoice and GST Invoice to concern user agencies, if required GST wing of Head Office may be moved for suitable action.

Last but not the least, basing on the suggestions of different User Agencies, the OFDC is to take up plantation activities in Mined out area, Avenue Plantation, CSR Plantation under FC/EC conditions and also to generate some livelihood with the help of local SHG to encourage forest based start-ups.

The Meeting ended with vote of thanks.

*General Manager
Sambalpur (C) Zone*



Memo no. 399⁽⁵⁾ Dt. 03/04/2025

Copy to Divisional Managers, Sambalpur (CKL) Division, Rourkela(CKL) Division, Rairakhol (CKL) Division, Deogarh (CKL) Division and Jharsuguda (CKL) Division for information and necessary action.


**General Manager,
Sambalpur (C) Zone**

Memo No. 400⁽²⁾ Dt. 03/04/2025

Copy to the Regional Chief Conservator of Forest, Sambalpur and Regional Chief Conservator of Forest, Rourkela for information and necessary action.


**General Manager,
Sambalpur (C) Zone**

Memo No. 401 Dt. 03/04/2025

Copy submitted to the Managing Director, OFDC Ltd., Bhubaneswar for kind information and necessary action.


**General Manager,
Sambalpur (C) Zone**



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP				
Monitoring Station	External CT Road, Barpali				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(µg/m ³)
14-Mar-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Project	Kulda OCP				
Monitoring Station	Laikera Railway Siding				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(µg/m ³)
14-Mar-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Project	Garjanbahal OCP				
Monitoring Station	Karlikachar Village				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(µg/m ³)
14-Mar-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Hataraik

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR



cmpdi

A Mini Ratna Company

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Garjanbahal OCP				
Monitoring Station	KAN-1 Near Coal Sampling Lab				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(µg/m³)</i>
14-Mar-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)		-	-

Project	Garjanbahal OCP				
Monitoring Station	Garjanbahal village				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(ng/m³)</i>	<i>(µg/m³)</i>
14-Mar-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Affanik

**Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR**

[Signature]

संदर्भ संख्या: MCL/GM/BA/Civil/AOC/24-25/**F-50/505** दिनांक : 06/08/2024

To,

Jai Maa Bhawani Works,
AT-KONARK LANE, PO-ORIENT COLLIERY,
BRAJRAJNAGAR, JHARSUGUDA, PIN-768233
E-Mail: umesh6903@gmail.com
Mobile: 9668843949

Subject: Award Letter/ Letter of Acceptance for the work "Renovation of pond near nallah at coal stock no.02 at Garjanbahal OCP of Basundhara Area"

Ref:

1. NIT No.MCL/GM/BA/C/e-Tender/24-25/33 Dated: 15/05/2024.
2. Tender ID: 2024_MCL_308161_1
3. SAP PO No. : 5600072960
4. SAP Contract No.: 9700013261

Dear Sir,

With reference to above noted tender, the contract for "Renovation of pond near nallah at coal stock no.02 at Garjanbahal OCP of Basundhara Area" is hereby awarded to you for a contract value of Rs. 61,72,370.56 (L1 offer- Rs. 51,86,866.02+ 18 % GST- Rs. 9,33,635.88+ 1% BOCW Cess - Rs. 51,868.66) (GST Registered Bidder under regular scheme)(Sixteen Lakhs Seventy - Two Thousand Three Hundred Seventy Rupees) which is 32.80 % below the estimated cost & updated cost of Rs. 91,85,075.26 (Incl. GST & BOCW Cess). The Award of Contract is subject to the following terms and conditions:

1. That an amount of Rs. 1,14,900/- (Rupees One Lakh Fourteen Thousand Nine Hundred) only deposited by you towards the earnest money On-line vide e-Procurement Ref. Number: 3193151056007, Bank / UTR Number: 159165106 Bank Name - Axis Agreegrator Bank Net-banking is being adjusted as a part of Performance Security Deposit.
2. (i) That the total Performance Security Deposit including EMD amount will be limited to 5% of the value of work (Excluding GST and including cess) i.e., Rs. 60,746/- (Rupees Sixty Thousand Seven Hundred And Forty Six) only. The balance amount of performance security deposit of Rs. 2,61,937/- (Rupees Two Lakh Sixty One Thousand Nine Hundred And Thirty Seven) only shall be submitted by you within 21 days of receipt of letter of award/acceptance in any of the form given below:
 - a) Govt. securities, FDR or any other form of deposit stipulated by the owner.
 - b) Payment through NEFT/RTGS in the designated account of MCL Basundhara Area.

Seebodh
06.08.24

If you fail to comply with the requirement as stated above it shall constitute sufficient ground for cancellation of the award of work and forfeiture of the bid security and banning of the bidder from participating in future tenders in **Mahanadi Coalfields Limited** for a period of minimum one year from the date of issue of such letter.

3. That all running on account bills shall be paid at **95%**(ninety five percent) of work value. This **5%** (five percent) (excluding GST) deduction towards retention money will be the second part of security deposit. Refund of security deposit shall be dealt as per clause no.4 of the general terms and conditions of the tender document.
4. That the security deposit amount & all other deductions as stated above shall not carry any interest.
5. This work should be completed within a period of **120 (One Hundred And Twenty) days** (as specified in the NIT) time which shall be reckoned from the next working day of the expiry of 10* (ten) days from the issue of Letter of Acceptance of Tender or 7(seven) days after handing over the site of work or handing over reasonable number of working drawings to the contractor reasonable number of working drawings, whichever is later. However, the Date of Commencement may be decided with mutual consent with the Contractor prior to the date as prescribed above.
6. A copy of the Bill of Quantity(BOQ) is enclosed herewith for ready reference. Your offer excluding GST & including **BOCW Cess** component is **below 15%** of the justified value. Hence, an amount of ₹. **13,87,641/- (Rupees Thirteen Lakh Eighty Seven Thousand Six Hundred And Forty One)** only towards **additional performance security** (as per Clause No.4.8 of terms and conditions of the GTC) is to be deposited by you.

(Applicable in case of Percentage rate tenders) As this is a percentage rate tender, the identification of *Abnormally Low Rate (ALR)* and *Abnormally High Rate (AHR)* items is not applicable in this case.

7. That the arrangement of all materials including cement & steel for the total work shall be your responsibility as per terms of original tender document conditions.
8. Price variation clause is **not applicable** (as specified in NIT) for this work as per NIT.
9. All the terms & conditions of original tender shall be applicable for this work.
10. The Royalty Clearance Certificate should be submitted by you from the appropriate State Government Authorities prior to payment of Final Bill/Release of Security Deposit.
11. You have to ensure implementation of CMPF/EPF and Miscellaneous Provision Act, 1948 and allied scheme framed thereunder (if applicable) in respect of the workers deployed by you as per the provisions of the tender documents mentioned under "**CMPF/EPF**" Clause.
12. If available, electricity will be supplied at one point and necessary recovery of the cost of energy consumed will be made at the rates prescribed by the department from time to time. Energy meter for this purpose shall be provided by you.
13. The arrangement of water for the construction purpose shall be your responsibility.
14. The licence as per Contract Labour(R&A) Act, 1970 shall have to be obtained before execution of the agreement (if applicable).

Subodh
06.08.24

15. That the Insurance policies as per Clause no.13(xviii) of the General terms and conditions of the tender document shall be submitted before execution of the agreement(If applicable)
16. That the payment to the workmen engaged on the work shall be made as per minimum wages act and necessary payment certificate shall be obtained from the authorized representative of the department. All other provisions made in the various statutes including Contract Labour (Regulation & Abolition) Act, 1970 and the Contract Labour (Regulation & Abolition) Central Rules, 1971, Minimum Wages Act, Workmen Compensation Act etc. and latest amendment thereof will be maintained by you.
17. You must not engage any Child Labour during the course of execution of the contract work within the meaning and scope of the Child Labour Prohibition & Regulation Act-1986 & its relevant Act and Rules amended from time to time by the Govt. of India.
18. **(In case of JV firm)** That, you are requested to register the JV agreement in accordance with Registration Act as per Clause No.2.2.XIV under Instruction to bidder in General Terms and Condition of NIT.
19. You are requested to submit the details regarding your bank account as per the Mandate form duly filled in, self-authenticated & certified by the concerned bank to facilitate e-Payment along with cancelled cheque/ self-attested legible photocopy of cheque/ photocopy of legible first page of pass book containing details.
20. That matters relating to any dispute or difference arising out of this tender and subsequent contract Awarded based on this tender, shall be **dealt as per Clause No. 16- title-'Settlement of Disputes' of the 'General Terms and Conditions' of 'Conditions of Contract' of the tender document.**
21. You have to submit valid electrical license either in your name or in name of any authorized representative/supervisor [under whose supervision electrification work (internal and/or external) will be executed] issued by Electrical Licensing Board / Authority of the Indian State / UT, in accordance with Indian Electricity Rule before execution of electrical works, if any.

You are requested to submit a non-judicial stamp paper of value of **Rs.50/- (Rs.20/- +20/-+10/)** (**Rupees Fifty**) only for execution of the agreement for this work alongwith following documents within a period of **21(Twenty One)** days from receipt of this letter and also attend this office for signing the agreement:

- i. The copy of PAN card, Labour Licence (If applicable), Insurance policies (if applicable), GST Registration Certificate, Joint Venture Agreement, Memorandum and Articles of Association Power of attorney etc., and the balance amount of **Performance Security deposit amount** as per clause **no.1 (i) & (ii)** above.
- ii. Certificate regarding handing over of the site without any encumbrance duly signed by the authorized representative of the contractor, Engr.-in-charge of the work and **Staff Officer (Civil), Basundhara Area.**
- iii. Time Bound Programme for completion of the work within the scheduled time as per NIT showing physical progress of work duly signed by the authorized representative

Subodh
06.08.21

H2

of the contractor, Engr.-in-charge of the work and **Staff Officer (Civil), Basundhara Area.**

Sanjeev Pradhan, Sr. Overseer, GOCP, BA, shall be responsible for recording measurement in the M.B., **Meetha Lal Meena, Dy. Manager (Civil), GOCP, BA**, shall be responsible for 1st level check measurement and **Sanjay Kumar Ambastha, Manager(Civil), GOCP, BA**, shall be responsible for 2nd level check measurement for this work. However, subsequent changes if needed during progress of work may be made by the **Staff Officer (C)**.

Please contact **Sanjay Kumar Ambastha, PE(Civil), GOCP, BA** to start the work.

Please return one copy of the work order duly signed within **07 (seven)** days of receipt of this letter as a token of acceptance of work order.

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Subodh
06.08.24
Staff Officer (Civil)
Basundhara Area

Distributions:

- 1) General Manager, BA-for kind information
- 2) General Manager (Civil)/HOD, MCL HQ-for kind information
- 3) CM(C) Quality Control MCL HQ
- 4) PO, KOCP
- 5) A.F.M., BA-This has reference to F.C. No: MCL/BA/GM/AFM/REV/24-25/GOCP/ESTIMATE/ENVIRONMENTAL OTHER (41100019)/01 Dt 31/07/2024 for Rs.61,72,370.56/-.

(ITC is not available for this work)

- 6) APM, BA
- 7) Sanjay Kumar Ambastha, PE(Civil), GOCP, BA
- 8) Meetha Lal Meena, Dy. Manager (Civil), GOCP, BA
- 9) Sanjeev Pradhan, Sr. Overseer, GOCP, BA
- 10) A.L.C. (C), Old Chief Engineer's Bungalow, Sector-5, Rourkela-769002.
- 11) Shri Ashish Bahuguna, IAS (Retd.), E-12/7, Vasant Vihar, New Delhi – 110057, E-mail: iem-abahuguna.mcl@coalindia.in
- 12) Office Copy

Bill of quantity for the work "Renovation of pond near nallah at coal stock no. 02 at Garjanbahal OCP of Basundhara Area."

It.No.	Description	Qty	Unit	Rate (in Rs)	Amount
1	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 1000 metres. (Excavation for roadwork in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location with all lifts and lead upto 1000m as per relevant clauses of section - 300 of specifications)	19346.97	cum	77.00	1489716.69
2	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications. Stone/Boulder	160.00	cum	2527.00	404320.00
3	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :Raised and cut pointing	1280.00	sqm	446.40	571392.00
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources: 6 graded stone aggregate 20 mm nominal size derived from natural sources).	96.00	cum	5137.80	493228.80
5	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	48.00	cum	864.60	41500.80
6	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	960.00	sqm	851.70	817632.00
7	Cast in Situ Cement Concrete M20 kerb (Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409): A Using Concrete Mixer	640.00	metre	321.00	205440.00
8	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, 1/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	4236.00	kg	803.45	3403414.20
9	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 20 mm nominal size derived from natural sources).	2.97	cum	5831.25	17318.81
10	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.:All kinds of soil.	8.00	cum	216.05	1728.40
11	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	4.00	cum	864.60	3458.40
12	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources).	6.00	cum	4621.85	27731.10
13	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement- All work up to plinth level :1:1.5:3 (1 cement: 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources).	17.90	cum	6777.45	121316.36
14	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.Thermo-Mechanically Treated bars of grade Fe-500D or more.	895.00	kg	97.90	87620.50
15	Centering and shuttering including strutting, propping etc. and removal of form for.Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	60.00	sqm	537.90	32274.00
16	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	2.64	sqm	173.70	458.57

Subodh
06.08.24

Event Report

Company Name, Company Address

Start Time: 2024-10-24 PM 02:15:00

SV-1 Serial Number: SR4EW4D18315

End Time: 2024-10-24 PM 02:15:05

Duration Time: 5sec

Project: Name

Client Name:

Location: Location

Measuring Point:

Blast to Sensor Distance(m.)

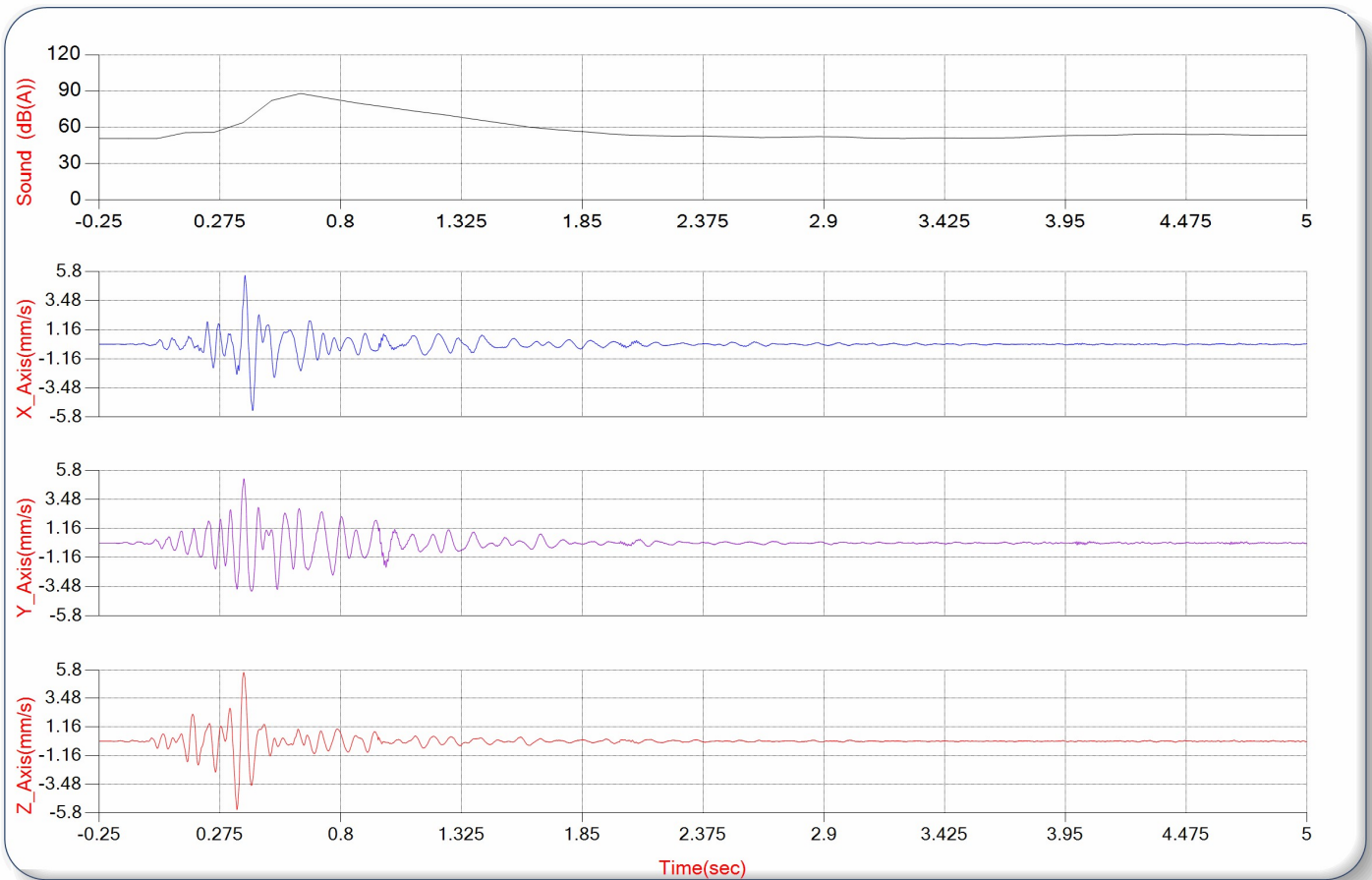
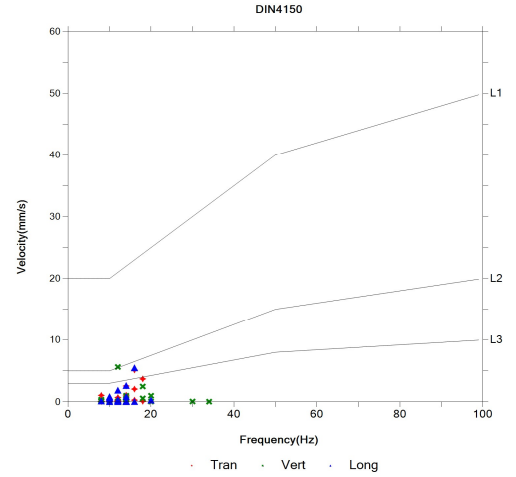
Maximum weight per Delay(kg.)

Post Event Notes:

	X-axis (L)	Y-axis (T)	Z-axis (V)
Trigger Time (sec)	0.38	0.38	0.38
Peak Particle Velocity (mm/s)	5.50	5.14	5.62
ZC Frequency (Hz)	16	16	12
Peak Acceleration (g)	0.0564	0.0527	0.0432
Peak Displacement (mm)	0.054722	0.051134	0.074549

Peak Vector Sum: 8.73 mm/s at 0.381 sec

PSPL: 87.97 dB (A) at 0.375 sec



Time Scale: 0.525 sec/divide

Amplitude Scale: Geo (2.32mm/s/divide) Mic (30.0 dB (A)/divide)

Printed: 2024-10-25 AM 09:38:40(Firmware Ver 3.1 401 Software Ver 3.0.5.4f), Copyrighted SV Corporation

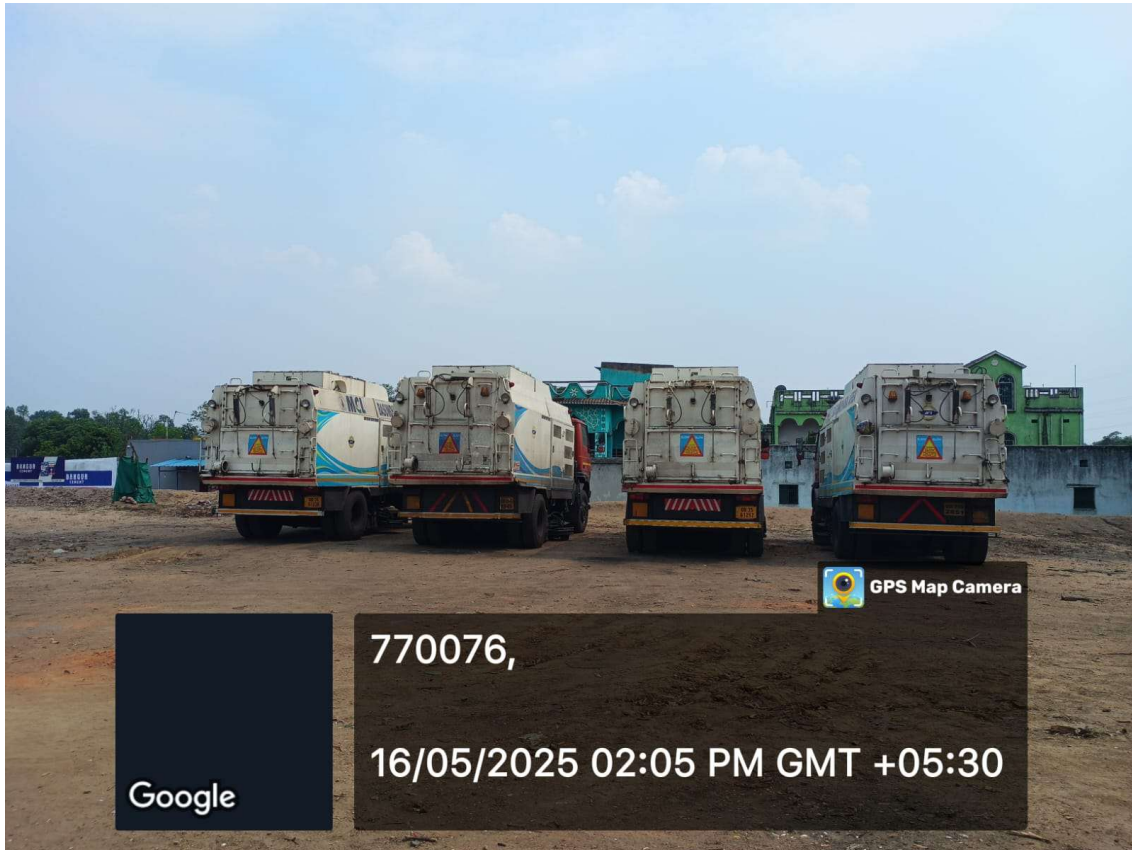
Avenue Plantation at Duduka Kanika Road



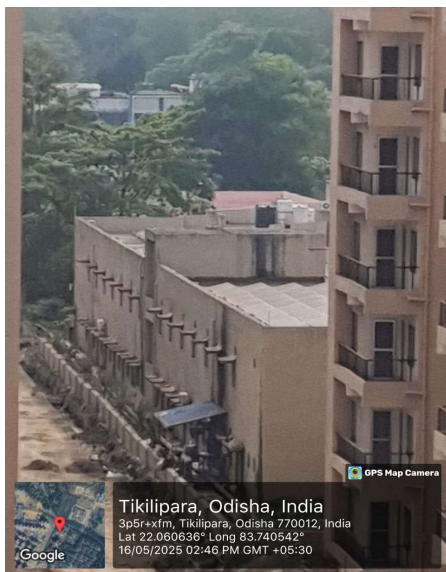
Pond at Garjanbahal OCP



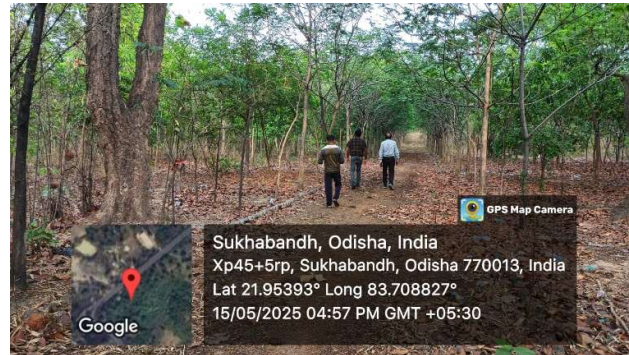
Mechanical Road Sweepers



Rooftop Solar lights at Shopping Complex of Bashundhara Area



Plantations at Hemgir village



Sardegia RLS 20 MTY



Tarpaulin covered coal transport trucks



Wet Drilling



Wet cutting by Blast free Surface Miner



CAAQMS at PO Office GOCP



Bankibahal-Bhedabahal Coal Transportation Road



Toilets under CSR scheme



Solar light at Barpalli village



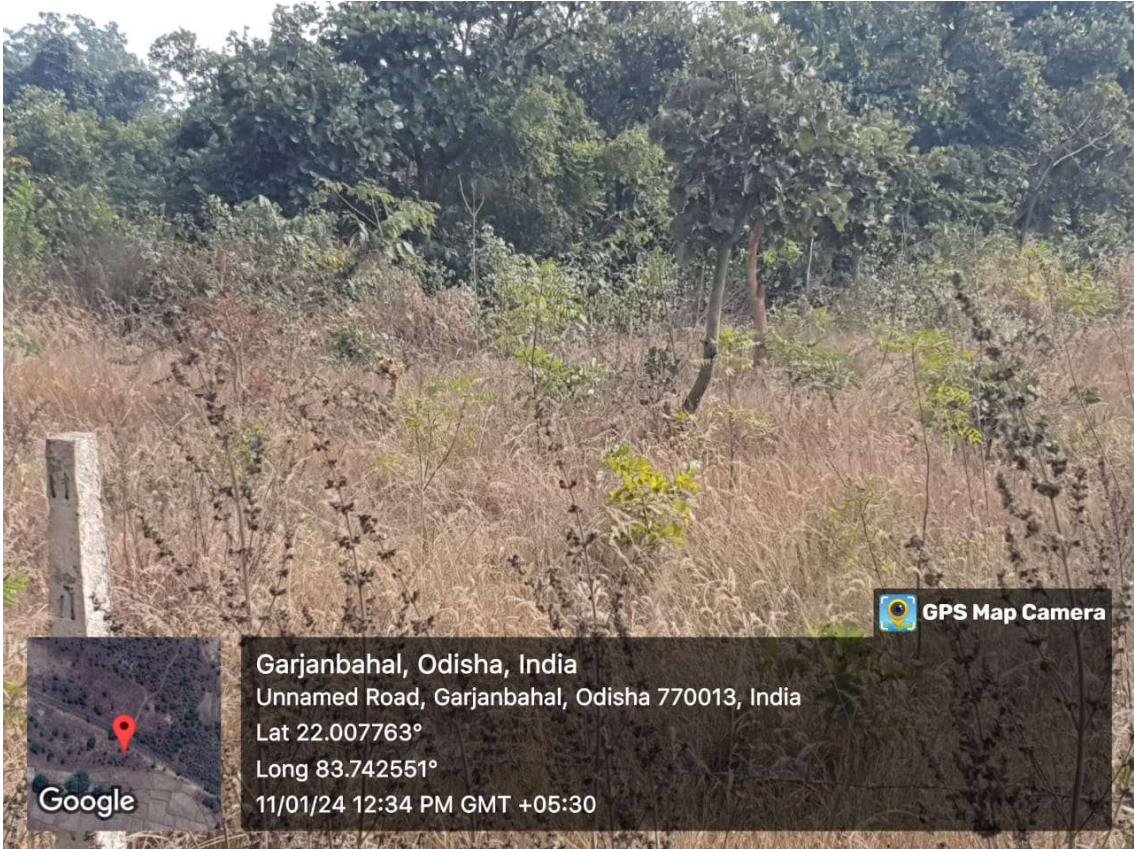
Plantation at Garjanbahal OCP, Basundhara Area, MCL



External Dump Slope Plantation at Garjanbahal OCP



Safety Zone Plantation along the mine lease boundary





 GPS Map Camera



Garjanbahal, Odisha, India
Unnamed Road, Garjanbahal, Odisha 770013, India
Lat 22.007763°
Long 83.742551°
11/01/24 12:33 PM GMT +05:30



 GPS Map Camera



Garjanbahal, Odisha, India
Unnamed Road, Garjanbahal, Odisha 770013, India
Lat 22.007763°
Long 83.742551°
11/01/24 12:33 PM GMT +05:30



 GPS Map Camera




Garjanbahal, Odisha, India
Unnamed Road, Garjanbahal, Odisha 770013, India
Lat 22.007763°
Long 83.742551°
11/01/24 12:32 PM GMT +05:30



Garjanbahal, Odisha, India
Unnamed Road, Garjanbahal, Odisha 770013, India
Lat 22.007763°
Long 83.742551°
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 GPS Map Camera




 GPS Map Camera



Garjanbahal, Odisha, India
Unnamed Road, Garjanbahal, Odisha 770013, India
Lat 22.007763°
Long 83.742551°
11/01/24 12:31 PM GMT +05:30




Google

 GPS Map Camera

Sundargarh, Odisha, India
Unnamed Road, Odisha, India
Lat 22.007085°
Long 83.748797°
11/01/24 12:15 PM GMT +05:30



 GPS Map Camera



Sundargarh, Odisha, India

Unnamed Road, Odisha, India

Lat 22.007085°

Long 83.748797°

11/01/24 12:16 PM GMT +05:30

Google



GPS Map Camera



Sundargarh, Odisha, India

Unnamed Road, Odisha, India

Lat 22.007085°


Long 83.748797°

11/01/24 12:15 PM GMT +05:30



Google

Sundargarh, Odisha, India
Unnamed Road, Odisha, India
Lat 22.00738°
Long 83.748683°
11/01/24 12:12 PM GMT +05:30

 GPS Map Camera