



MCL



MAHANADI COALFIELDS LIMITED
Office of the Project Officer
Lajkura OCP, Ib Valley Area
P.O. Brajrajnagar
Distt: Jharsuguda, Odisha-768216

Ref. No. MCL/IBVA/PO(LOCP)/Envnt/2025-26/ 06

Date- 13/5/2025

To,
The Chief Conservator of Forest,
Ministry of Environment and Forest,
Regional Office, Eastern Region,
A-3, Chandrashekharpur, Bhubaneswar-751023

Via Email/Post

Sub- Submission of Half Yearly Compliance report of "Environmental Clearance Condition" in respect of Lajkura OCP (Expansion from 3.0 MTPA to 4.5 MTPA) for the period OCTOBER -2024 to MARCH-2025.

Dear Sir,

Enclosed please find herewith 'Half Yearly Compliance report' along with form I, II & III and abstract of the 'monitoring report' of Air, Water, Noise & Effluent quality in respect of Lajkura Open Cast Project (4.5 MTPA) for the period from OCTOBER-2024 to March-2025
This is for your kind perusal & necessary action.

Thanking You,

Yours Sincerely,

PROJECT OFFICER

परिदे लजकुरा ओ.सी.पी.

लजकुरा ओ.सी.पी. ईव वैली अरिया

Project Officer

Lajkura O.C.P. Ib Valley Area

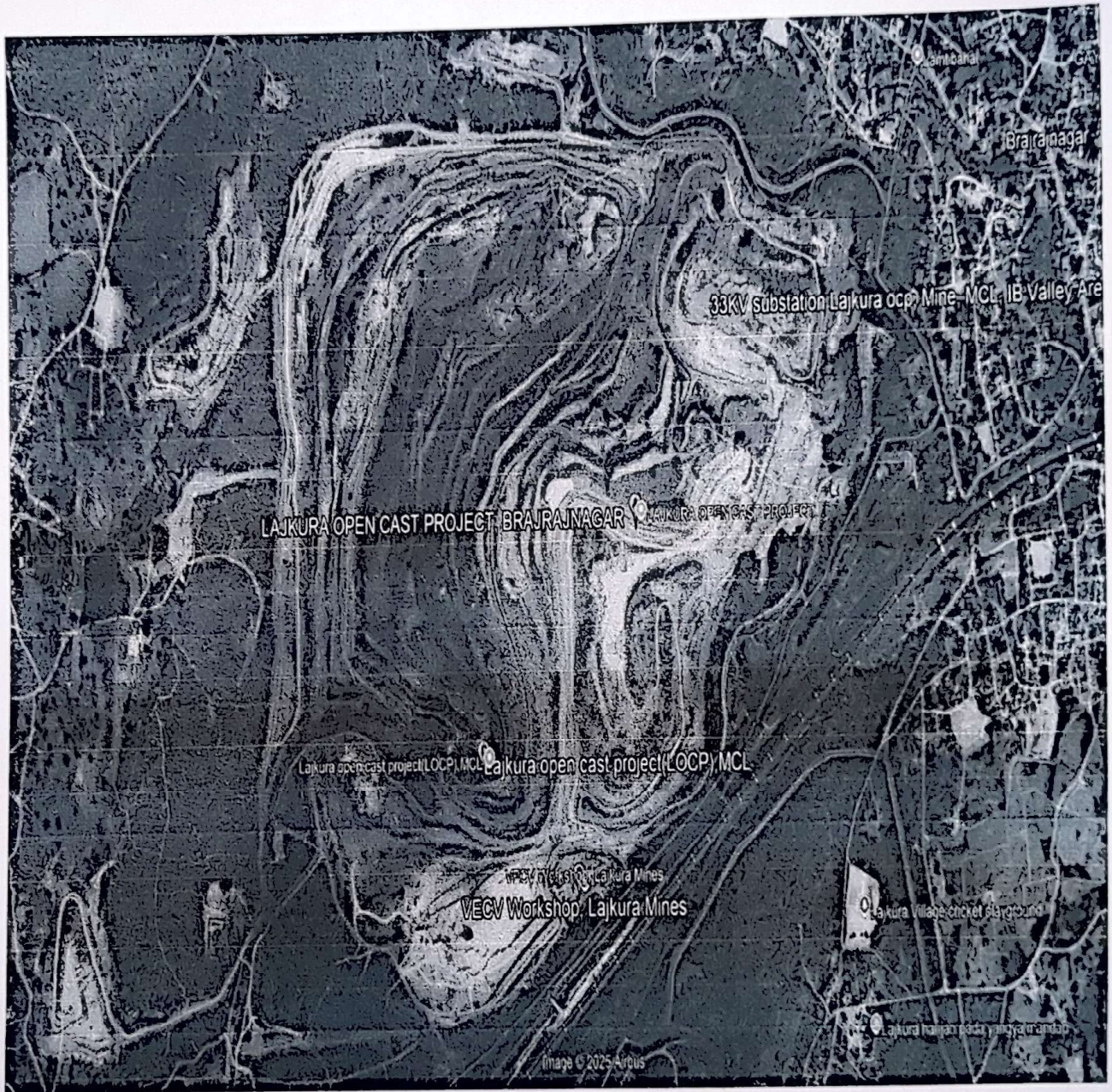
Copy to:

1. Director E.I.A.; Monitoring Cell, Ministry of Environment and Forest,
Paryavaran Bhawan, C.G.O. Complex, New Delhi-110003 - Via SPEED POST
2. Chairman, State Pollution Control Board Odisha, Paribesh Bhawan Nilakanthanagar, Unit-VIII, Bhubaneswar-751012 Bhubaneswar - via Email
3. Regional Officer, State Pollution Control Board Odisha, Cox Colony Sant. Marry Hospital Road,
Jharsuguda - via Email
4. Chief General Manager,(Envnt.), MCL, HQ, Burla, Sambalpur - via Email
5. General Manager, Ib Valley Area - via Email
6. Area Environment Officer, Ib Valley Area - via Email

वयुधेव कुदुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

Land Restoration/Reclamation monitoring of more than 5 Million CUM (Coal+OB) Capacity Opencast Coal Mines of Mahanadi Coal fields Limited based on Satellite Data.



HALF-YEARLY PROGRESS
REPORT OF
COMPLIANCE TO
ENVIRONMENTAL
CLEARANCE CONDITIONS

(OCTOBER-2024 TO MARCH-2025)

Lajkura OCP Expn. 4.5 MTY
(EXPANSION FROM 3.0 MTPA TO 4.5 MTY)
IB Valley Area



Mahanadi CoalFields Limited

(A subsidiary of Coal India limited)

MCL-A Mini Ratna Company

**HALF-YEARLY REPORT OF COMPLIANCE WITH
ENVIRONMENTAL CLEARANCE CONDITIONS
(HALF YEARLY ENDING MARCH-2025)**

Name of the project: Lajkura OCP Expn. (Expansion from 3.0 MTPA to 4.5 MTPA)

No. & Date of MOEF clearance letter No: J-11015/423/2008-IA-II (M) dated:- 30.01.2015

Condition No.	(A) Specific conditions	Compliance Details		
(i)	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	The mine production is planned keeping in view of the production permission granted in EC. The details of production since last five years and of present year up to March, 2024 are given below-		
		Year	Coal Production	EC Accorded
		2020-21	4.499 MT	4.5 MTPA
		2021-22	4.499 MT	4.5 MTPA
		2022-23	4.5 MT	4.5 MTPA
		2023-24	4.5 MT	4.5 MTPA
		2024-25	4.496 MT	4.5 MTPA
(ii)	The validity of the EC is for the life of the mine or as specified in the EIA Notification 2006. whichever is earlier.	The conditions stipulated in the EC are complied with. The project is presently working within the existing ML area of 721.29 ha. Forest clearance has been acquired. Mine plan is enclosed as (Annexure-1) . Balance life of 10 Yrs (approx) as per Revision of Mine Closure Cost Nov 2023.		

(iii)	A plan be made urgently for mechanised loading of railway wagon at the railway siding to reduce dust generation from loading by pay loader.	Railway wagons are loaded mechanically by pay loader. Presently dust suppression of coal at siding III is being done by water tankers of 28KL (departmental) and contractual water tanker having capacity 12KL. Additionally, 4 nos of Fixed Fog Cannon & 10 nos. of Water Sprinkler have been installed at LOCM Siding III, to suppress fugitive dust emission during loading and transport.
(iv)	Drills shall be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach road and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main roads.	<p>All drills are equipped with dust collector and wet drilling arrangement. Model & name, equipment number of drills stated as:</p> <ol style="list-style-type: none"> (1) RECP-650 DRILL, Diesel, 6020815/RDC-1142, (2) IDM-30 Drill, Diesel, (3) IDM-70E Drill (Atlas Copco), Electric, 201010155/RD-571. <p>Construction of Concrete coal transport road has been completed. Mechanical sweeper has been deployed and is being used efficiently for cleaning the loose dust on the floor. Airborne dust on haul roads and coal transportation roads are being suppressed with departmental Mobile water tanker Sprinklers. Moreover, 3 nos. of mobile fog cannon have been deployed at the Coal transport road for dust suppression.</p>
(v)	No fly ash shall be dumped into the de-coaled void without feasibility study on long-term impacts on the aquifers and life systems and without prior approval of the ministry.	Fly ash will not be dumped into de-coaled void without feasibility studies on long term impacts on the aquifers and life system and without prior approval of the Ministry.
(vi)	Piezometers shall be installed up to the depth of the mine.	As per CGWA guidelines, two piezometers have been installed—one in the core zone (HEMM Workshop, Lajkura OCP) and one in the buffer zone (Adarsh Nagar Colony). One piezometer is equipped with a telemetry system, accessible via https://wlr.shineelectronics.in/index.php using ID: 0284 and Password: LE@0284.
(vii)	Air Quality shall be monitored and the report submitted to the Regional Office of the MoEF and to the Odisha SPCB.	Air quality is monitored by CMPDIL,RI-VII,BBSR and report submitted to the Regional Office of the MoEF and to the Odisha SPCB. Air quality report is being up loaded every month on company website (Annexure-2). Monitoring

		station name and coordinates are stated herewith :-			
		Sl. No.	Name of Air Monitoring station	GPS Coordinate	
				Latitude (N-S)	Longitude (E-A)
		1.	Near PO office	21.822439 N	83.914856 E
		2.	Near South Coal Stock	21.812652 N	83.901910 E
		3.	VIP, guest house, IB Valley	21.836951 N	83.914797 E.
		4.	Khokelmal	21.814918 N	83.878341 E.
		5.	Chuakani	21.50244 N	83.53529 E
(viii)	Coal transportation in pit by tippers, surface to siding by tippers and loading at siding by pay loader/SILO.	The in situ coal is mined by surface miner. Coal from Face is being loaded by pay loaders and is transported by tipping trucks to siding III, where it is loaded into Railway wagons with help of five numbers of pay loaders.			
(ix)	The production shall be within the same mining lease area.	Expansion in production from 3MTPA to 4.5MTPA is within the mining lease area of 721.29 ha of lease Ib Block-V, and Western block of Orient Mine no.1&2. Mine plan enclosed (Annexure-1)			
(x)	The depth of the internal void shall be 35 m from the ground level and should be adequate for fishery purpose.	OB generated in the mine is simultaneously backfilled into the de-coaled quarry area for filling the void. Up to Mar-2025, 151.712 Mm3 has been back filled out of 158.854 Mm3 generated. At the final closer the internal void will be kept within 35 mtrs from ground level.			
(xi)	The production shall be within the same Mining Lease area.	Present production is being carried out from the lease Ib Block No.-V. The expansion of project will be in the lease Ib Block-V and Western Block of Orient Mine No(s). 1, 2 & 3. Both lease has been granted under CBA (A&D) Act, 1957.			
(xii)	The OB shall be completely re handled at the end of the mining and will be back filled upto the ground level and covered with	The excavated overburden (OB) is being simultaneously refilled into the voids created. To date, 177.54 hectares of voids have been backfilled out of			

	about a meter thick top soil and put to use. The land after mining shall be brought back for agriculture purpose.	the 196.65 hectares in the de-coaled area. The initially excavated topsoil (10.530 million cubic meters) has been completely used, spread across external and internal dumps, fostering vegetation growth that has now become self-sustaining. Once the OB dump reaches its final height, the soil will be spread over the dumps, followed by a plantation initiative.
(xiii)	Garland drains are provided.	The total mine excavation area is 292.71 ha. Garland drains are provided where required in the periphery of the mine. Garland drains of a total length of 3890.0 m along the toe of waste dumps and catch drains of a total length of 1580.0 m along haul roads have been provided in the OCP area.
(xiv)	Appropriate embankment shall be provided along the side of the river/nallah near or adjacent to the mine.	Embankment of adequate size has been provided along the side of the nullah (Bagachhopa Nalla) for the length of 1.2 km existing in northern side of the mine. The embankment is about 11 mtrs above the HFL and about 35 mtrs in width. The gradient of the surface of the mine area above the nullah is made towards the mine sump which facilitates surface runoff in to the mine sump.
(xv)	The CSR cost should be Rs 5 per tonnes of coal produced which should be adjusted as per the annual inflation.	As per MCL's CSR policy -2014, CSR fund is allocated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs 2.00 per tonne of coal production of previous year whichever is higher. Average net profit is computed in accordance with the provision of section 198 of the Company Act 2013.
(xvi)	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	Introduction of surface miner has eliminated drilling and blasting. Moreover CHP is equipped with water spraying system as well as enclosures at crushing and transfer points and along conveyor belts, has been provided to guard against fugitive emission from crushing operation, conveyor system ,haulage roads, transfer points, etc. Haul roads are kept wet through water spraying. Apart from this Dust mask has been provided to every persons working in core area to wear as and when required.
(xvii)	Dust mask to be provided to everyone working in the mining area.	Dust mask has been provided to every persons working in mining area as it is also required under Coal Mine Regulation. Total Distributions in the year October-2024 to March-2025 :-

		Dust Mask - Nil Ear Muff/Ear Seal - NIL Safety Shoes - 215 nos Safety Helmets - 15 nos Safety Goggles - Nil												
(xviii)	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	The mining activity is abide with Act, Rules and Regulations and in Coal Mines Regulation 2017, duties and responsibilities of supervisory staffs have been well defined related with Safety and health aspect of work persons.												
(xix)	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	<p>The periodic health check-up of all employee is being done at company hospital as per the rules enacted under Mines Act. The medical investigations are covered under initial and periodical medical examinations. Moreover employee undergo PME once in every 5 year. The tests covered include chest radiography, LFT, audiometric etc. The company hospital also provides health services to surrounding villages under CSR of the company.</p> <p>The details for the year 2024-25 (Oct-24 to March-25) are as follows:-</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Particulars</th> <th>IME</th> <th>PME</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Departmental Employee</td> <td>09</td> <td>26</td> </tr> <tr> <td>2</td> <td>Contractual Employee</td> <td>03</td> <td>Nil</td> </tr> </tbody> </table>	Sl. No.	Particulars	IME	PME	1	Departmental Employee	09	26	2	Contractual Employee	03	Nil
Sl. No.	Particulars	IME	PME											
1	Departmental Employee	09	26											
2	Contractual Employee	03	Nil											
(xx)	The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover	Green belt is existing as natural forest in the western and southern boundary of the mine. The Eastern and northern part of mine boundary has been thickly planted and vegetation has grown up. Any gap if remains will be covered under annual plantation program. The entire external OB dump area of 33.30 ha, internal backfilled dump area of 51.23 ha, waste/barren/degraded land afforestation of 64.05 ha, avenue plantation of 17.50 ha and safety zone/greenbelt plantation of 40.75 ha, put together a total of 206.83 ha with 4,09,682 saplings. Hence, the relative area under progressive afforestation to the envisaged total afforestation area of 549.67 ha is 37.62%.												

		The afforestation programme at the post mining stage is incorporated in the project report and project is going on as per plan.
(xxi)	The embankment constructed along the river boundary shall be of suitable dimensions and critical Patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and mine inundation.	The embankment between nullah and mine is of sufficient dimension, and size is 1.2km. X 35mtr X 11 mtrs (above HFL). There is no danger of inundation and nullah is seasonal. Grass and plantation has been done over the slope to arrest soil erosion.
(xxii)	There shall be no overflow of OB into the river and into the agriculture fields and massive plantation of native species shall be taken up in the area between the river and project.	No rivers pass near the dumps. Precise precautions are in place to prevent overflow from the OB dumps into agricultural fields. The OB benches are designed in a bench-like structure with a slope angle of approximately 280. Catch drains have been made to manage rainwater flow, directing it towards the mine sump. Once a dump area reaches its final height and is officially reclaimed, it is planted to prevent soil erosion. Furthermore, till the time between the inception and attainment of final height of Dump, Grassing is done all over the slope to avoid any overflow.
(xxiii)	OB shall be stacked at three-earmarked external OB dumpsites(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation become self-sustaining. Compliance status shall be submitted to the ministry of Environment, Forest and Climate Change and its concerned Regional office on yearly basis.	OB generated is backfilled in internal dumps and external dumps. The OB has been dumped in benches with slope angle not more than 280. Audit for plantation is done every year by District Audit/ monitoring committee and report submitted.
(xxiv)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drain shall be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak	Complied. The length of existing catch drain is approx. 2700 m and the capacity of siltation sump is 30.45 lakh cu. meters and total max. runoff of the mine is 24.33 lakh cu. meters (NIT Rourkela study report). Total runoff is collected in the mine sump. The size of Garland drains (size, gradient and length) and sump capacity is designed keeping in sufficient safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Water so collected is utilised for mining use. Garland

	sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	drains of a total length of 3890.0 m along the toe of waste dumps and catch drains of a total length of 1580.0 m along haul roads have been provided in the OCP area.
(xxv)	Dimensions of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.	Provided as per mining Regulation to arrest dump slide facing to working area. Retaining walls of RCC structure of a total length of 918.60 has been constructed for the waste dumps. At the other places the dimension of the walls are 3.0m.X1.5m.X500m. (Approx.).
(xxvi)	Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points etc.	Due to introduction of surface miner maximum quantity of coal produced is of (-) 100 mm size which is directly transported to siding from face, eliminating use of CHP. However, CHP is equipped with water spraying system as well as enclosures at crushing and transfer points and along conveyor belts, has been provided to check fugitive emission from crushing operation, conveyor system, haulage roads, transfer points, etc. Fixed Fog canon is being installed to arrest the Air born dust in and around the CHP.
(xxvii)	Drills shall be wet operated	All drills are equipped with dust collector and wet drilling arrangement and due care is taken to prevent dust emission and getting it airborne.
(xxviii)	The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	Total of 5.00 km of internal coal transportation roads have been concreted. The remaining internal coal transportation roads are constructed with WMM. Additionally, proposal to create WMM from Weigh Bridge 2 to Pit Head junction of 700 mtr has been awarded in April 2025, and work will commence shortly. Mobile water tankers and fog cannons are regularly deployed on all coal transportation and other roads to prevent dust generation. Additionally, plantation of thick-leaf trees on both sides of the roads is planned as part of the overall dust suppression strategy.
(xxix)	Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigate measures for control of ground vibrations and to arrest the fly rocks and boulders shall be	Controlled blasting is in practice as per guideline of Directorate General of Mines Safety to control ground vibration and fly rock and executed under close supervision of expert team.

	implemented.	
(xxx)	A progressive afforestation plan shall be implemented covering an area of 445.68ha at the end of mining, which includes reclaimed External OB dump area (189.13 ha), Internal OB dump area (156.67 ha), along roads and green belt (398.34 ha), Undisturbed area (72.39 ha) built up area (26.89 ha) and in township located outside the lease by planting native species in consultation with the local DFO/ Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.	Progressive Afforestation program is in force. Every year plantation target is set up according to availability of area. The external OB dump area of 33.30 ha, internal backfilled dump area of 51.23 ha, waste/barren/degraded land afforestation of 64.05 ha, avenue plantation of 17.50 ha and safety zone/greenbelt plantation of 40.75 ha, put together a total of 206.83 ha with 4,09,682 saplings has been planted. Hence, the relative area under progressive afforestation to the envisaged total afforestation area of 549.67 ha is 37.62%.
(xxxii)	An estimated total 359.35 Mm ³ of OB will be generated during the entire life of the mine. Out of which 47.50 Mm ³ of OB will be dumped in the three external OB Dumps an earmarked area covering 106.63 ha of land with height of 90m. 311.85 Mm ³ of will be one internal OB dump in covering an area of 398.34 ha with height upto the ground level. The maximum height of external OB Dump for hard OB will not exceed 90m. the maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.	OB generated is backfilled in the voids of the mine as well as dumped to external OB dump. Height of external OB dump is within 90 m and slope angle is maintained at 28 degrees. The mine is working in the expansion area after grant of Forest clearance Stage-2. Reclaimed dump sites is being continuously Monitoring. After reaching full & final height and after technical reclamation plantation will be done over the dumps.
(xxxiii)	The proponent should prepare restoration and reclamation plan for the degraded area. The land is used in a productive and sustainable manner.	The reclamation plan has been incorporated in the project report. The broken/degraded area is back filled and restored as per the plan. Backfilled area is developed into green in sustainable manner. Total backfilled area up to March'25 is 177.54 ha out of 292.71 ha excavated area and plantation has been done over 51.23 ha on Inside ML incl. Internal Backfilled Dump.

(xxxiii)	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	Due initiative has been taken for gap plantation in reserve forest near Laikera of Jharsuguda District as compensatory afforestation. Villages surrounding the mine have been covered under CSR. Company is giving emphasis on development of park, construction/ restoration of ponds, toilets/bath on the matter of hygiene etc.
(xxxiv)	The mining shall be phased out in a sustainable manner. No extra over burden dumps are permitted.	Duly Noted.
(xxxv)	No ground water shall be used for the mining operations.	No ground water is used for mining operations.
(xxxvi)	Of the total quarry area of 398.34 ha the backfilled quarry area of 398.34 ha shall be reclaimed with plantation and stabilized with plantation/ afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Reclamation is being carried out in phase manner as per plan and at the end of mining the targeted area will be covered with afforestation as per guide line.
(xxxvii)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon(August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests and Climate Change and the Central Pollution Control Board quarterly within one month of monitoring.	As per CGWA guidelines, two piezometers have been installed—one in the core zone (HEMM Workshop, Lajkura OCP) and one in the buffer zone (Adarsh Nagar Colony). One piezometer is equipped with a telemetry system, accessible via https://wlr.shineelectronics.in/index.php using ID: 0284 and Password: LE@0284
(xxxviii)	The company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby villages in	Complied. Two existing mine sumps and one sedimentation pond are effectively serving as groundwater recharge structures. Additionally, a rainwater harvesting system has been installed in the colony at the GM Complex. A proposal for a similar system at Lajkura OCP has been sent to



	case the village well go dry due to dewatering of mine.	higher authorities for consideration, in line with CGWA conditions. Drinking water is also being supplied to nearby villages—Madhubannagar, Brajrajnagar Township No. 1, and Gopivihar—during summer months, as part of the Company's CSR commitment.
(xxxix)	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	STP of capacity 0.5 MLD has been installed at Adarshnagar colony belonging to Lajkura OCP. ETP has been established in workshop of departmental and contractual premise. The water collected is reused and report of water quality is submitted to Pollution Control Board. ETP's at both sites have been renovated with installation of Skimmer for OIL extraction. Work order for Providing 02 numbers of 10 MT Hook loader type closed containers to RE Sustainability Limited who is the sole authorized hazardous waste collection and disposal agency in Odisha.
(xl)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialized agency/ institution within the District/ State and the results reported to this Ministry and to DGMS.	The periodic health check-up of all employee is being done at Company Hospital as per the rules enacted under Mines Act. The medical investigations are covered under initial and periodical medical examinations chest radiography, LFT, audiometric etc. 1/5 of the total no. of employee undergo PME every year.
(xli)	Land oustees shall be compensated as per norms laid out R&R policy of CIL or the National R&R policy or R&R policy of State Government whichever is higher.	Presently R&R policy of State Government (Govt. Of Odisha) is being followed for providing compensation to the Land oustees as it provides higher benefit than any other R&R policy as stated.
(xlii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on the scale of 1:5000) of the core zone and buffer zone, from the start of the project until the end of mine life shall be prepared once in 3 years (for anyone particular season which is consistent in the time series), and the report submitted to MOEF&CC and its concerned Regional office.	For monitoring land use pattern and for post mining land use, the satellite imagery plan prepared under the guidance of CMPDIL has been uploaded in the MCL website. The same is being attached (Annexure- 3) for ready reference.

(xliii)	<p>A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of this letter for approval, in case expansion in ML area is not implemented.</p>	<p>Since there is no expansion in the mine lease area, as per the approved final mine closure plan for 3 MTY, progressive balance amount of Rs 57.31 crore has been credited in the Escrow account (till 31/03/2025) including interest , against mine closure cost of Lajkura OCP.</p>
(xliv)	<p>The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.</p>	<p>Welfare measures under CSR are taken up in consultation with the District Administration of Jharsuguda which in turn consults the concerned Panchayats of the local villages.</p>
(xlv)	<p>Corporate Environment Responsibility: The company shall have a well laid down Environment Policy approved by the Board of Directors. The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringement Order of the company to deal with environmental or forest norms/conditions. The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with environmental clearance conditions shall be furnished. To have proper checks and balances, the company shall have a well laid down system of reporting of non- compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</p>	<p>Coal India Ltd. is having well defined Environment policy and standard operating procedure. Separate Environment department at CIL HQ is looking into the matter of environment issues and also submitting reports to the Board of Director. MCL, as a subsidiary company of CIL following the same environment policy. The environment policy of Company is available on company website. The salient points of the policy are-</p> <ol style="list-style-type: none"> 1. Commitment for mitigation of pollution, reclamation of degraded land, preservation of Bio-diversity and proper disposal of waste. 2. Ensuring compliance of EC norms. 3. Due consideration of sustainable development. 4. Implement EMP effectively. 5. Create environmental awareness among employees.

Condit ion No..	B. General conditions	Compliance Details																					
(i)	No change in technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	The mining technology is Shovel-Dumper/tipper combination for OB removal. Presently almost 100% coal production is done through Surface Miner to produce (-)100 mm coal which enhances better environment condition because it eliminates blasting and use of CHP thus reducing dust generation.																					
(ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	<p>Complied. Below is the details of the production for last four years :-</p> <table border="1" data-bbox="923 573 1810 847"> <thead> <tr> <th>Year</th> <th>Coal Production</th> <th>EC Accorded</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>2.839 MT</td> <td>4.5 MTPA</td> </tr> <tr> <td>2020-21</td> <td>4.499 MT</td> <td>4.5 MTPA</td> </tr> <tr> <td>2021-22</td> <td>4.499 MT</td> <td>4.5 MTPA</td> </tr> <tr> <td>2022-23</td> <td>4.499 MT</td> <td>4.5 MTPA</td> </tr> <tr> <td>2023-24</td> <td>4.5 MT</td> <td>4.5 MTPA</td> </tr> <tr> <td>2024-25</td> <td>4.496 MT</td> <td>4.5 MTPA</td> </tr> </tbody> </table>	Year	Coal Production	EC Accorded	2019-20	2.839 MT	4.5 MTPA	2020-21	4.499 MT	4.5 MTPA	2021-22	4.499 MT	4.5 MTPA	2022-23	4.499 MT	4.5 MTPA	2023-24	4.5 MT	4.5 MTPA	2024-25	4.496 MT	4.5 MTPA
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2023-24	4.5 MT	4.5 MTPA																					
2024-25	4.496 MT	4.5 MTPA																					
(iii)	Four ambient air quality monitoring station shall be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} SO ₂ , and NO _x monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in particulates shall be carried out at least once in six month.	<p>Four monitoring stations have been established in core zone and buffer zone as per advise of Regional officer OSPCB, Jharsuguda covering entire mine these are -</p> <ol style="list-style-type: none"> 1. St. no. 1- Near Project Office, LOCP 2. St. no.2- Near South Coal Stock 3. St. no.3- Near VIP Guest House 4. St. no.4- Khokelmal <p>One additional Air Monitoring Station (Chuakani) has been installed for better performance.</p>																					

Sl No.	Name of Air Monitoring station	GPS Coordinate	
		Latitude (N-S)	Longitude (E-A)
1.	Near PO office	21.822439 N	83.914856 E
2.	Near South Coal Stock	21.812652 N	83.901910 E
3.	VIP, guest house, IB Valley	21.836951 N	83.914797 E
4.	Khokelmal	21.814918 N	83.878341 E
5.	Chuakani	21.50244 N	83.53529 E

St. no.1,2 no. are in core zone st no. 3,4,5 are in buffer zone. All the listed pollutant is determined as per schedule by CMPDI.

(iv) Data on ambient air quality (PM₁₀, PM_{2.5} SO₂, and NO_x and heavy metals such as Hg, As, Ni, Cr, etc.) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months.

Ambient Air quality data, heavy metals and other monitoring data are monitored as per the prescribed schedule and report submitted to pollution board in six month (Annexure -2).

(v) Adequate measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.

HEMM are provided with inbuilt system designed to minimize noise level. Ear plug/ ear muffs are also provided to work persons who may expose noise. A proposal for procurement of 200 nos of Ear Muff in under approval stage will be distributed shortly. As per monitoring report the noise level is within prescribed limit. (Annexure -4).

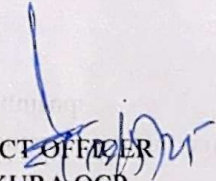
(vi)	Industrial waste water (workshop and wastewater from mine) shall be properly collected and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	Workshop effluent and waste water from mine are being treated in ETP/OGTP located near to workshop and also in the contractual premise. MDTP is located near the LOCP canteen respectively so as to confirm to the prescribed standard.
(vii)	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the material shall be covered with tarpaulins and optimally loaded.	All departmental/contractual vehicles of LOCP are regularly checked and maintained as per maintenance & monitoring schedule to control vehicular emissions. All truck loaded with coal optimally and is covered with tarpaulin before they are allowed to go outside of the mine.
(viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State pollution Control Board and data got analysed through a laboratory recognized under EP rules, 1986.	Monitoring of environmental quality parameters is being carried out by CMPDIL, RI-VII, BBRS which have laboratories recognized under EP Rules, 1986 and results of monitoring are being submitted to OSPCB. Result of monitoring is also available on Company website.
(ix)	Personnel working in dusty areas shall wear protective respiratory devices and they shall be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to expose to dust and to take corrective measures, if needed.	Precautions have been implemented to minimize both the generation and dispersal of dust. Additionally, workers in areas prone to dust exposure are supplied with personal protective equipment. As part of the Occupational Health Surveillance Program, one-fifth of the total workforce undergoes Periodical Medical Examination annually. Furthermore, all employees receive regular training in accordance with VT rules and specific training aligned with DGMS circulars, focusing on health and safety aspects.

(x)	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Management is keeping close look on Safety and Health aspect of the persons deployed by the contractors and also monitor Environmental conditions because rules enacted are equally applicable to all. As per Mines Rules Contractual workers also have to go for Initial and Periodical medical examination. Between Oct-2024 and March-2025 09 nos. of Departmental employee and 03 nos. of contractual workers have undergone IME, while 26 nos. of departmental workers have undergone PME.
(xi)	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the head of the company.	A separate department to look after Environment related matters is in existence at Corporate office. The department is headed by Chief General Manager (Environment); A well-defined organisation from top downwards right up to area and project level with well laid down span of control is in operation. The head of the department reports directly to head of the Company.
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not diverted for other purpose. Year wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Complied. The fund earmarked for environmental protection measures is kept under head ENVIRONMENT and expenditure reflected in cost sheet. The expenditure in the main head for the year 2024-25 is Rs. 12.73 Crore (Approx) Report is submitted every year in form -V
(xiii)	The Project authorizes shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of the Ministry of Environment & Forests at http://envfor.nic.in .	Complied. The EC was published in two news papers namely 'New Indian express' BBSR on 13.02.2015 (English daily) and 'Sambad' (Odia daily) on date 13.02.2015.

(xiv)	<p>A copy of the environmental clearance letter shall be marked to concerned Pancchayat/ZilaParisad, Municipal Corporation or Urban Local Body and local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website.</p>	<p>Complied. Copy of the clearance letter is available on Company web site</p>
(xv)	<p>A copy of the clearance letter shall be displayed on the website of the concerned SPCB. The EC letter shall also be displayed at the regional Office, District Industry Centre and Collector's Office/ Tehsildar's Office for 30 days.</p>	<p>Copy sent to State Pollution Control Board for uploading in their website. Copy of the EC has been sent to the Collector's office, Municipal Office and local NGO.</p>
(xvi)	<p>The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of the environmental quality parameter (air, water, noise and soil) and critical pollutants such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient and stack if any) and critical sartorial parameters shall also be displayed at the entrance of the project premises and mines office in corporate office and on the company's website.</p>	<p>EC and all clearances from Pollution Board have been loaded in company website. The monitoring data of the environmental quality parameter and critical pollutants and critical sartorial parameters are displayed on electronic display board at the entrance of the Project Office. Report of Environmental monitoring data is available at company web site</p>

(xvii)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in email) to the respective Regional office of the MOEF, the respective Zonal Offices of CPCB and the SPCB.	The compliance report is submitted to the statutory authorities and, conditions are complied with.
(xviii)	The regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/ monitoring reports.	Co-operation is extended to regional office and necessary data is submitted as when required.
(xix)	The environmental statement for each financial year ending 31 st March in Form-V is mandated to be submitted by the project proponent to 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 the compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.	The Environmental statements (Form-V) in respect of Lajkura OCP for the year 2023-24 has been submitted to OSPCB through GM (Envt.), MCL. vide ref.no: MCL/HQ/Envt. & Forest)/2024/1881 dated: 28.09.2024
5.	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.	Duly agreed, we shall abide by all the commitments and recommendations made in the EIA/EMP report
6.	The commitment made by the Proponent to the issue raise during Public Hearing shall be implemented by the Proponent.	The entire issues raised during Public Hearing have been implemented.
7.	The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	All necessary clearances/approvals have been obtained.

8.	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Agree with the EC condition.
9.	The proponent shall setup an Environment Audit Cell with responsibility and accountability to ensure implementation of all the EC Conditions.	Environment audit cell is already in place. One officer at Area and One at Unit level have been given responsibility to ensure implementation of all the EC conditions
10.	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Duly Agreed
11.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention Environment (Protection) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon ^{ble} Supreme Court of India/ High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and the diseases due to the mining operations.	This EC condition is noted and agreed.
12.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Duly Agreed
13.	This EC supersedes the earlier EC, vide letter No. J-11015/423/2008-IA-II dated 12.03.2013 for 3.00 MTPA.	This is noted.

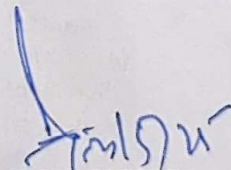

 PROJECT OFFICER
 LAIKURA OCP
 परियोजना अधिकारी
 लजकुख ओ.सी.पी. हव वेली क्षेत्र
 Project Officer
 Laikura O.C.P. NB Valley Area

FORM-1

MINISTRY OF ENVIRONMENT & FOREST
REGIONAL OFFICE
MONITORING PROFORMA PART-1 (DATA SHEET)

Sl. No.		
1.	Project Type: River-Valley/ Mining Industry / Thermal /Nuclear/Other(Specify)	Mining Industry
2.	Name of the Project	Lajkura OCP Expn.(4.5 MTY),MCL
3.	Clearance Letter(s)OM no. &Date	J-11015/423/2008-IA.II(M) dated 30.01.2015
4.	Location: (a) district(s),State(s)	Jharsuguda, Odisha.
5.	Address of concerned project (with pincode and telephone/ telex/ Fax nos.)	Office of the Project Officer, Lajkura OCP, PO-Lamtibahal, BrajrajNagar, Distt- Jharsuguda, Odisha,Pin-768216;Phone:(06645-242095)
	Address of Executive project Engineer / Manager (with pin code and telephone/ telex/ Fax nos.)	----do----
6.	Salient Features	
	a. Of the project	Targeted output: 4.5Mty. Minable reserve: 45 MT.(As on 1 st Apr,2025) Stripping ratio: 3.40 cum/t;
	b. Mining Technology	Opencast Mining (Shovel-dumper/tipper system of mining for O B removal and Coal seam is extracted with the help of Surface Miner as well as conventional drilling and blasting combined system.)
	c. Of the Environment	Capital cost of Env't. Mgmt (As per EMP for expansion of 2.5 Mty).—1656.56 Lakhs Resettlement & rehabilitation, Pollution abatement measure cost, Effluent treatment cost, Compensatory afforestation, Arboriculture, Peripheral development, Rain water harvesting etc.
7.	Breakup of the project area:	
	a. Submergence area (Forest and Non-Forest)	721.29ha
	b. Others	
8.	Break-up of project affected population : With enumeration of those losing houses/dwelling units only, both dwelling units and agriculture land and landless labourers/ artisans	Nil
	a. SC,ST/Adivasis	Nil
	b. Others	Nil
9.	Financial Details:	
	a. Project cost as originally planned and incremental Subsequently estimates and the year of price reference.	
	a. Allocation made for environmental and year wise break up	Rs 43.6 cr. for 1 MTPA and then incremental capacity expansion for 3 MTY and 4.5 MTY As per P.R.

	b. Allocation made for environmental and year wise break up	Rs 1656.56 lakhs (As per Chapter-9 PR for management plans, with item-wise expansion of 3.0Mty) . The different heads are resettlement & rehabilitation, land reclamation, Air pollution measures, Water pollution measures, compensatory afforestation and other misc cost etc. Now project is working in 50% expansion within same leasehold area.
	c. Benefit cost ratio/ internal rate of return and the year of assessment	Total Cost of production Rs : 835.31 per ton Profit Rs : 212.38 per ton (As per cost sheet of LOCP. till 31 March'25)
	d. Whether 9(c) includes the cost of environmental management plan so far.	Yes
	e. Actual expenditure incurred on the Project so far (capital) till 31.03.2025	Rs. 380.00 Cr
	f. Actual expenditure incurred on the Env't. Mgtm plans, during 2024-25	Rs. 12.73 cr. (Approx.)
10.	Forest land requirements	
	a. The status of approval of a diversion of forest land for non-forestry use.	FC has been granted to this project vide Ref. no.- 8- 28/2014-FC , Date-29.08.2014 and no-10F (CON) 219 / 2015 / 10345/F&E, Bhubaneswar, Dt.31.05.16 for diversion of 159.18 ha forest land including 2.51 ha coming within safety zone.
	b. The status of Tree felling	completed
	c. Comments on the viability and Sustainability programme in the light of actual fields experience so far	Viabile
11.	Status of construction:	
	Date of commencement (Actual and/or planned)	This is an Expansion Project planned initially for 1Mty now extended for 4.5Mty.
	Date of completion (Actual and/ or planned)	NA
12.	Reason for the delay if the project is yet to start	Not Applicable
13.	Date of Site visit	
	The date on which the project was monitored By the Regional Office, If any.	29.01.2025
	Date of visit for this monitoring report	-
14.	Details of correspondence with project authority for obtaining action plan, information and status of compliance to safeguard.	To MOEF, &OSPCB


PROJECT OFFICER
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 Project Officer
 Lajpura O.C.P. NB Valley Area

FORM-II

PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION (For the year 2024-2025)

1.No.of village affected : Nil

2.Families affected : SC ST OTH Total Nil

3.Compensation package offered per family:

State/Centre norms
As per State Govt. Package

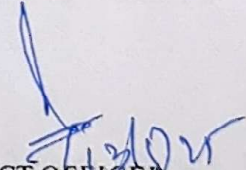
4.Budget/estimate for rehabilitation. : NIL
a)Total outlay :
b)Amount paid/used :

5.Employment details
a)Total employment to be provided : NA
b)Employment given so far. : NA

6. Rehabilitation &Resettlement details. : No Shifting

a) Nos. of families rehabilitated : NA
i)Name of the site : NA
iv) Families rehabilitated. : SC ST OTH TOTAL - NA
b).families yet to be rehabilitated : NA
i) Name of site : NA
ii).No. of families : SC ST OTH TOTAL - NA

Any other information. : NO


PROJECT OFFICER
LAKURA OCP
लजपुरा ओ.सी.पी. इव वैली क्षेत्र
Project Officer
Lajkura G.C.P. IB Valley Area

FORM-III

FORMATE FOR PROVIDING PARTICULARS ON GREEN BELT/PLANTATION UNDER F(C)ACT1980 AND E(P)ACT1986.

1. a. Name of Organization : MAHANADICOALFIELDS LIMITED
- b. Env't clearance order No. : **J-11015/423/2008-1A-11(M) dated -30.01.2015**
- c. Forest clearance order No. : FC has been granted to this project vide Ref. no.- 8-28/2014-FC , Date-29.08.2014 and no. 10F(CON)219/2015/10345/F&E Bhubaneswar, Dt. 31.05.2016 for Diversion of 159.18ha forest land including 2.51ha Coming within safety zone.
2. Location, Block/Sub Division/Distt./State : Vill/Mauja-Brajrajnagar, Unit-I ; Jharsuguda, Sub-division – Jharsuguda, Dist:-Jharsuguda(Odisha).
3. Address for communication : Lajkura OCP, P.O. Lamtibahal, Brajrajnagar, Dist:-Jharsuguda (Odisha). PIN-768216.
4. Existing vegetation in the area/region:
- a. Species (Trees/shrub/Grasses/climbers). : Planted Trees, shrub, Grasses and climbers. (Within 1.0Mtyboundary)
- b. major prevalent species of each type :
5. Land coverage by the project
- a. Total area under the project : 721.29Ha
- b. Area covered for basic infrastructure (road/building/factoryetc.) : 115.67 Ha (Approx)
6. Details about natural vegetation
- a. Name and number of tree/species felled. : NA
- b. Name and number of plants species till Available in the area : NA
- c. By protecting the area will indigenous stock comes up : Yes .
- d. Extent of green belt developed : 33.3Ha (External Dump) + 51.23 (Inside ML incl. Internal Dump) & Remaining in colony and other place
7. Plantation required to be carried out as per
- a. Condition of Environment : As per specific condition Xvi
The density of the tree shall be around 2500 plants per ha.
- b. A condition of forest(C)Act Forest clearance in Ha/Nos : NA.
- c. Voluntarily in Ha./Nos : NA.

8. Details about plantation

a. Total area available for plantation in 2025-26: **3 Ha (Inside ML) and 52.5 Ha (Outside ML)** in each category.

Greenbelt	Ext. Dumps	B/F area	Road sides	Blocks plantation
Nil	Nil	nil	Nil	Nil

b. Plantation details(Category wise& Methodology used)

Year of Plantation	Species planted	Spacing	Height Attained	Total area Covered till date	Proposed plantation Programme in 2025-26 (in Ha.)
1991 to Till date	Wood plants, fruit bearing and medicinal plants.	As per norms	Self Sustainable	29% of broken up area.	3 Ha (Inside ML) and 52.5 Ha (Outside ML)

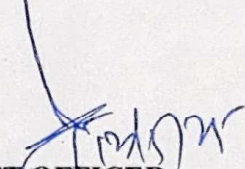
c. survival% of plantation (for last five years): 75%-80% after 3 years of operation.

9. Agency carrying out plantation and maintenance: Nil

10. Inspection of plantation by field : Officers from OSPCB and Dist. Forest observation committee
Experts and their comments and follow up action

11. Remarks/any other information. : ----

Date:


PROJECT OFFICER
LAJKURA OPENCAST PROJECT
IB VALLEY AREA, MCL

परियोजना अधिकासी
लजकुरा ओ.सी.पी. इव वैली क्षेत्र
Project Officer
Lajkura G.C.P. IB Valley Area