



MCL

Ref:- MCL/BA/PO/GOCP/E&F/2023-24/ 2403

Date:- 18-01-2024

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

Subject: Submission of Half Yearly Compliance Report of the environmental conditions in respect of Garjanbahal OCP, MCL Basundhara Area for the period of April-2023 to September-2023 of all 3 ECs as on 16/01/2024.

Reference:

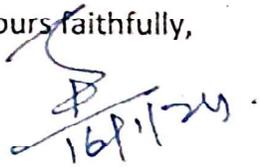
- EC obtained vide no -11015/159/2015-IA-II(M) dated 9th November, 2017 for 13 MTY capacity.
- EC obtained vide no -11015/159/2015-IA-II(M) dated 14th February, 2022 for 15.6 MTY capacity.
- Amended EC obtained vide no -11015/159/2015-IA-II(M) dated 12th January, 2023 for 15.6 MTY capacity
- EC obtained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

Sir,

Please find here with the Half-yearly compliance report of the Environment Condition for the period April'2023 to September'2024 of all 3 ECs as on 16/03/2024 in respect of Garjanbahal OCP and necessary action. This is for your kind perusal and necessary action.

Thanking you.

Yours faithfully,


16/1/24
Project Officer
Garjanbahal OCP,
Basundhara Area

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

April'2023 to Sep'2023 as per EC for 18.2 MTY EC as on 16.01.2023

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 2022-23 has surpassed 15.6 MT which stood to 17.29 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.
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 is under preparation at Sardega Railway Siding for coal transportation till the time.
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.	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. Very less area is feasible for conducting roadside plantation as stated by OFDC, Jhasruguda. However, OFDC has planned for 20,000 saplings plantation at the feasible areas subject to feasibility & availability of area in the rainy season next year.
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 . Very less area is feasible for conducting roadside plantation as stated by OFDC, Jhasruguda. However, OFDC has planned for 20,000 saplings plantation at the feasible areas subject to feasibility & availability of area in the rainy season next year.
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.	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. Very less area is feasible for conducting roadside plantation as stated by OFDC, Jhasruguda. However, OFDC has planned for 20,000 saplings plantation at the feasible areas subject to feasibility & availability of area in the rainy season next year. OFDC letter attached in Annexure-II.
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	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).	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 (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.	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
v	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	CGWA permission has been obtained on Oct-2021 and is valid till October 2023. The renewal application vide no: 21-4/2233/OR/MIN/2019 dated 19/10/2023 has been submitted online, which is under process for approval under Evaluation Officer, CGWA.
vi	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.	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 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 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 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 being uploaded in company' website: http://apps.coalindia.in:8080/apex/f?p=159:1:10556120434404

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 so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.</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>
v	<p>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</p>	<p>The vehicles are allowed to run after the submission of PUC certificates, the records of which are duly maintained.</p>

	certificate from the authorized pollution testing centres.	
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 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	<p>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.</p>	<p>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.</p>
iv	<p>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.</p>	<p>Monitoring of upstream and downstream of Basundhara river is being done in six months periodicity.</p>
v	<p>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.</p>	<p>Mine sump of nearly 11.7 lakh m³ capacity serves as a rainwater harvesting structure. Mine water from mine sump is utilized in mining operations.</p> <p>A rooftop water harvesting structure of 16m X 11m is present at the Project.</p>
vi	<p>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.</p>	<p>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.</p> <p>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.</p> <p>Presently, 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> <p>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.</p>

	<p>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>Further retaining wall of 500m length will be constructed at the toe of external OB dump.</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 July, 2023:</p> <p>Excavated area: 150.30 Ha</p> <p>Backfilled area: 65.37 Ha</p> <p>External OB Dump area: 49.53 Ha</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> <p>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.</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 & 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 shall be subjected to health check-up	<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>	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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	for occupational diseases and hearing impairment, if any, as amended time to time.	<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 the part of mine lease areas or	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 lease areas or habitations and villages are surrounded by the mine lease area'.

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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/estatutorycyp.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.
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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>							
		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 of Environment, Forests and Climate Change.	Production is carried out within EC capacity and the quantity approved in CTO. Production details are as under:									
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			2020-21	11.77 MT	
			2021-22	13.55 MT	
			2022-23	17.29 MT	
			2023 (Till December)	11.35 T	
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,
 Garjanbahal OCP,
 Basundhara Area, MCL

GARJANBAHAL OCP, BASUNDHARA AREA, MCL

Half-yearly compliance report for the period of

Apr'2023 to Sep'2023 as per EC for 15.6 MTY EC as on 16.01.2023

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. Presently, the self-evaluation for the year 2022-23 is sent to Ministry for the recommendation.
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 has been obtained on Oct-2021 and is valid till October 2023. The renewal application vide no: 21-4/2233/OR/MIN/2019 dated 19/10/2023 has been submitted online, which is under process for approval under Evaluation Officer, CGWA.
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.	<p>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.</p> <p>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.</p>
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 which is under construction and is expected for trial run within Feb-24. 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 has been obtained on Oct-2021 and is valid till October 2023. The renewal application vide no: 21-4/2233/OR/MIN/2019 dated 19/10/2023 has been submitted online, which is under process for approval under Evaluation Officer, CGWA.
(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 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 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	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.

	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 so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	By pass roads shall be 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.
(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-20012/1/2006-1A.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 is 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	Monitoring of upstream and downstream of Basundhara river is being done in six months periodicity.

	submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.	
(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. Presently, 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 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.
(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 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.
(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	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

	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/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.	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. 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)	Mining is being carried out in compliance to the provisions of the Mining Laws & related to mining & relevant DGMS

	abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (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 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/eenvironmentment.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	<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 July, 2023: Excavated area: 150.30 Ha Backfilled area: 65.37 Ha External OB Dump area: 49.53 Ha</p>

	land use pattern shall be submitted to the MOEFCC/RO.	
(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 runoff.
(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.

		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.																								
(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 Supreme Court which has been given by Claim Commission and</p>																								

		<p>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="764 262 865 359">Sl. No.</th> <th data-bbox="865 262 1019 359">Issued raised by the Public</th> <th data-bbox="1019 262 1422 359">Action to be taken by MCL</th> </tr> </thead> <tbody> <tr> <td data-bbox="764 359 865 877">1.</td> <td data-bbox="865 359 1019 877">Pollution due to coal dust (Air pollution)</td> <td data-bbox="1019 359 1422 877"> 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="764 877 865 1003">2.</td> <td data-bbox="865 877 1019 1003">Production of Coal</td> <td data-bbox="1019 877 1422 1003">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="764 1003 865 1339">3.</td> <td data-bbox="865 1003 1019 1339">Plantation</td> <td data-bbox="1019 1003 1422 1339"> 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. </td> </tr> <tr> <td data-bbox="764 1339 865 1675">4.</td> <td data-bbox="865 1339 1019 1675">Drinking water supply</td> <td data-bbox="1019 1339 1422 1675"> 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.	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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(v)	The project proponent shall follow the mitigation measures provided in this Ministry's OMNo.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	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'.	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 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	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 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

	seven days and in addition this shall also be displayed in the project proponent's website permanently.	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 environment 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 EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The details of action taken plan for public hearing has been furnished before in point (h) (iv) and all the 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" data-bbox="841 233 1369 436"> <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 (Till December)</td> <td>11.35 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 (Till December)	11.35 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 OCP,
 Basundhara Area, MCL

GARJANBAHAL OCP, BASUNDHARA AREA, MCL

Half-yearly compliance report for the period of Apr'2023 to Sep'2023 for 13 MTY EC as on 16.01.2023

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 March'23 is 17.29 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.	Sardega railway siding was commissioned as on 24.04.2018. Sardega 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 the nearby projects of Basundhara Area, it is not sufficient.
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 Ref No.: 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 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.
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.

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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. <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"> <thead> <tr> <th>Year</th> <th>Coal (Ton)</th> <th>Over Burden & Reject (cum.)</th> </tr> </thead> <tbody> <tr> <td>16-01-2024</td> <td>12391326.37</td> <td>11893499.38</td> </tr> </tbody> </table>	Year	Coal (Ton)	Over Burden & Reject (cum.)	16-01-2024	12391326.37	11893499.38																		
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(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 July, 2023: Excavated area: 150.30 Ha Backfilled area: 65.37 Ha 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. 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	The vehicles are allowed to run after the submission of PUC

	and regularly monitored. Project should obtain 'PUC' certificate for the vehicles from authorized pollution testing centers.	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 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	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.

	before discharge of workshop effluents.																									
(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	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																								

<p>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>	<p>Jan 2015. 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>
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(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="792 716 1451 1913"> <thead> <tr> <th data-bbox="792 716 894 814">Sl. No.</th> <th data-bbox="894 716 1052 814">Issued raised by the Public</th> <th data-bbox="1052 716 1451 814">Action to be taken by MCL</th> </tr> </thead> <tbody> <tr> <td data-bbox="792 814 894 1333">1.</td> <td data-bbox="894 814 1052 1333">Pollution due to coal dust (Air pollution)</td> <td data-bbox="1052 814 1451 1333"> 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="792 1333 894 1455">2.</td> <td data-bbox="894 1333 1052 1455">Production of Coal</td> <td data-bbox="1052 1333 1451 1455">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="792 1455 894 1793">3.</td> <td data-bbox="894 1455 1052 1793">Plantation</td> <td data-bbox="1052 1455 1451 1793"> 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. </td> </tr> <tr> <td data-bbox="792 1793 894 1913">4.</td> <td data-bbox="894 1793 1052 1913">Drinking water supply</td> <td data-bbox="1052 1793 1451 1913">The authority has already completed bore-well inside school premises. Drinking water supply is being</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.	4.	Drinking water supply	The authority has already completed bore-well inside school premises. Drinking water supply is being
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				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.				
(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 (Envnt./ 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 project.	Agreed upon.
(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 has been obtained on Oct-2021 and is valid till October 2023. The renewal application vide no: 21-4/2233/OR/MIN/2019 dated 19/10/2023 has been submitted online, which is under process for approval under Evaluation Officer, CGWA.
(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	Report submitted.

	of periodicity of monitoring.	
(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 Control Board, Regional Office, District Industry Sector and Collector's Office/Tahsildar Office for information in public domain within 30 days.	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/Tahsildar Office.
(iii)	The EC letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as 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,
 Garjanbahal OCP,
 Basundhara Area, MCL