

CENTRAL COALFIELDS LIMITED
OFFICE OF THE PROJECT OFFICER
JHARKHAND OPEN CAST PROJECT



Ref.No. PO/JOCP/EC/Compliance/23/ 665

Date: 08/08/2023

To
Deputy Director General of Forest,
Integrated Regional Office,
Ministry of Environment, Forest and Climate Change (MoEF&CC)
2nd Floor, Headquarter-Jharkhand State Housing Board,
Harmu Chowk,
Ranchi-834002, Jharkhand

Subject: Half Yearly Compliance Report on Implementation of Condition of Environment Clearance for the period of Oct'22-March'23 in respect to Jharkhand OCP of Hazaribagh Area, CCL.

Dear Sir,

Enclosed please find herewith, "Half Yearly Compliance Report on Implementation of Condition of Environment Clearance for the period of Oct'22-March'23 in respect to Jharkhand OCP of Hazaribagh Area, CCL".

Any suggestion/improvement towards compliance of EC condition shall be well taken care of by CCL.

Yours faithfully

Project Officer

Jharkhand OCP

Project Officer
Jharkhand O.C.P.

Copy to:

1. Member Secretary JSPCB, Ranchi
2. Regional Office JSPCB, Hazaribagh
3. Area Environment Office, Charhi

SIX MONTHLY REPORT

of

ENVIRONMENTAL CLEARANCE

[J-11015/03/2015-IA-II(M)]

For The Period Oct'22 to March'23



JHARKHAND OPENCAST PROJECT

HAZARIBAGH AREA

CENTRAL COALFIELDS LIMITED

(A Miniratna Company)

**Status of Compliance of EC conditions
(No.J-11015/03/2015-IA-II(M))**

**Area: Hazaribagh
Project: Jharkhand OCP**

S.no.	Conditions																	
A. Specific Conditions																		
1.	The maximum production from the mine at any given time shall not exceed the limit as Prescribed in the EC.	<p>Agreed. Maximum production limit is 2.7 MTPA as prescribed in EC. Project has not exceeded the prescribed limit of production.</p> <table border="1"> <thead> <tr> <th>Financial Year</th> <th>Coal production in Million Tonne</th> </tr> </thead> <tbody> <tr> <td>2016-17</td> <td>1.735</td> </tr> <tr> <td>2017-18</td> <td>1.305</td> </tr> <tr> <td>2018-19</td> <td>1.302</td> </tr> <tr> <td>2019-20</td> <td>0.914</td> </tr> <tr> <td>2020-21</td> <td>0.962</td> </tr> <tr> <td>2021-22</td> <td>0.501</td> </tr> <tr> <td>2022-23</td> <td>0.370</td> </tr> </tbody> </table>	Financial Year	Coal production in Million Tonne	2016-17	1.735	2017-18	1.305	2018-19	1.302	2019-20	0.914	2020-21	0.962	2021-22	0.501	2022-23	0.370
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2.	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	<p>Agreed. The life of the Mine is 7 years from the grant of EC dated 08.02.2017 i.e. till 7 February, 2024. Note: In line with the gazette notification dated 18.01.2021 of MoEF&CC, the validity of prior EC and Consent to Operate (CTO) extended up to 07.02.2024.</p>																
3.	The project proponent shall obtain Consent to Operate from the State Pollution Control Board for the existing production capacity of 1 MTPA and also the Consent to Establish for the proposed capacity of 2.70 MTPA prior to enhancing the production capacity.	<p>Consent to Establish (CTE) for the capacity of 2.70 MTPA has been granted vide letter no.JSPCB/HO/RNC/CTE-1280384/2018/894 dated 23.08.2018 and Consent to Operate has been granted by JSPCB vide letter no. JSPCB/HO/RNC/CTO-14052414/2023/296 dated 08.02.2023 for the period up to 07.02.2024.</p>																
4.	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.	<p>Following measure is being undertaken to control dust;</p> <ol style="list-style-type: none"> 1. Transportation of coal is being carried out by tarpaulin covered trucks/Hyva. 2. Total 1.5 Ha avenue Plantation has been done along the road. 3. PCC road of length 4.80 Km and width 7.0 m has been constructed from Laiyo to Chopra more. Cost of the road was Rs 14,39,70,517.89 4. Mobile sprinkler of 28 kl and 12kl have been deployed. 																
5.	Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.	<p>Safety audit and PSC (Pit Safety Committee) meeting is being conducted monthly for ensuring corrective actions and monitoring of occupational safety and other health hazards. Also, the Jharkhand OCP is an ISO45001 (Occupational Health & Safety Management System) certified project, comprehensive</p>																

audit is being done by certified agency.

6. Controlled blasting techniques should be adopted to control ground vibration and flyrocks.

Nonels of different sizes and CED are used for controlled blasting. All steps suggested in EMP for mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders is being implemented.

Year wise details of sand bags, wire net and electric detonator used for control blasting:

Year	Nonel	Sandbag	Wire-net
2016-17	646786 mtr	Nil	Nil
2017-18	59206 mtr	Nil	Nil
2018-19	91735	Nil	Nil
2019-20	439966	2100 Nos	5470 sq. feet
2020-21	378402	Nil	Nil
2021-22	130820	Nil	Nil
2022-23	115368	2500 Nos	Nil

7. A progressive afforestation plan shall be implemented covering an area of **105.60 Ha** at the end of mining, which includes reclaimed External OB dump area (**34 Ha**), Internal OB dump area (**58.40 Ha**) and Green belt (**13.20 Ha**) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.

Afforestation has been done over an area of **62.31 Ha** by State Forest Department in consultation with the DFO, Ramgarh which includes **45.81 Ha.** of External OB dump, **15 Ha.** Internal OB Dump and **1.5 Ha.** Avenue Plantation. The density of the trees plantation is 2500 plants per ha.

8. An estimated total **47 Mm³** of OB will be generated during the entire life of the mine. Out of which **10 Mm³** of OB will be dumped in one external OB Dumps an earmarked area covering **34 ha** of land. **37 Mm³** of will be **one** internal OB dump in covering an area of **58.40 ha**. The maximum height of external OB dump will not exceed **90 m and that for soft OB shall not exceed 60 m**. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MOEFCC and its Regional Office on yearly basis.

Height of OB dump has not exceed the limit of 90 m. Till now 5.13 Mm³ OB have been dumped in external dump. Rest OB have been backfilled. Ultimate slope of the dump shall be maintained to 28 degrees.

9. Of the total quarry area of **122.57 ha**, the

Of the total quarry area, 104 Ha. area has been backfilled and

	backfilled quarry area of 58.40 ha shall be reclaimed with plantation and there will be no void left at the end of the mining operations. The land after mining shall be restored for agriculture purpose	62.31 Ha. area has been reclaimed with plantation and there will be two voids left for water supply to the villagers/CCL colony for domestic purpose.																
	B. General Conditions																	
	(a) Mining																	
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.	It is an opencast coal mining project. The Method of mining is opencast with shovel-dumper combination as specified in EC. If there is any change in scope of working/mining technology, a fresh EC will be obtained.																
ii.	No change in the calendar plan including excavation, quantum of coal and waste should be made.	Excavation, quantum of Coal & OB will be made as per approved calendar plan. Coal production not exceeded the limit of approved calendar plan of EC.																
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iii.	Mining shall be carried out as per the provisions outlined in approved mining plan as well as by abiding to the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS).	Mining is being carried out as per the provisions outlined in approved mining plan as well as by abiding to the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS).																
iv.	A progressive Mine Closure Plan duly approved by the Ministry of Coal should strictly be complied with. A compliance report in this regard shall be submitted to Regional Office/MOEF&CC every six month from the date of commencement of mining operations.	Rs. 23, 51, 65,261.84 has been deposited till 31.03.2022 in the escrow account of Jharkhand OCP for reclamation (Technical/biological) of Mine void, OB dumps etc. as per the Financial provision in the Mine Closure Plan. This fund is only being released in progressive terms to CCL by Coal Controller's Organization, Govt. of India, MoC after satisfactory audit/inspection of reclamation works. Since 2012-13 to 2016-17 Jharkhand OCP has expended/claimed Rs. 7,51,93,900.97. An area of 104 Ha. (Approx.) has been backfilled till date and tree plantation has been done in 62.31 Ha. till date.																
	(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,	Digital processing of the project area using remote sensing technique has been carried out regularly once in three years for monitoring land use pattern. Satellite image of the year 2020 is enclosed.																

	Forest and Climate Change its Regional Office.	
ii.	The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adopted to that micro climate.	Afforestation has been done over an area of 62.31 Ha by State Forest Department in consultation with the DFO which includes 45.81 Ha. of External OB dump, 15 Ha. Internal OB Dump. Following species has been planted on the OB Dump: Shisham, Shimal, Sissoo, Kaju, Aam, Amrud, Sharifa, Karanj, Bel, Chakundi, Acacia, Amla, Mahogani, Peepal, Neem, Etc.
iii.	Final mine void depth should not be more than 40 m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with about a meter-thick top soil. The land after mining should be restored for agriculture use.	The existing old quarry is being used for storage of mine water and being utilized for domestic and industrial use. Final mine void depth shall not be more than 40 m. Of the total quarry area, 104 Ha. area has been backfilled and 62.31 Ha. area has been reclaimed with plantation after covering with top soil and there will be two voids left for water supply to the villagers/CCL colony for domestic purpose.
iv.	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 over burden (OB) generated during the mining operations shall be stacked at earmarked dumpsite(s) only and it should not be kept active for a long period of time. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. 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.	The last top soil was generated in 2017-18 and has been utilized for the plantation in the area of 4.0 Ha. during 2018 monsoon plantation. The entire excavated area is being backfilled and afforested in line, with the approved Mine Closure Plan vide letter no. Secy.1/(5)/2016/RBC-XII/1403 dated 28.10.2016. Following species has been planted: Shisham, Shimal, Sissoo, Kaju, Aam, Amrud, Sharifa, Karanj, Bel, Chakundi, Acacia, Amla, Mahogani, Peepal, Neem, Etc.
v.	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation	Plantation has been raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. Afforestation has been done over an area of 62.31 Ha by State Forest Department in consultation with the local DFO which includes 45.81 Ha. of

with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.

External OB dump, **15 Ha.** Internal OB Dump and **1.5 Ha.** Avenue Plantation.

Following species has been planted:

Shisham, Shimal, Sissoo, Kaju, Aam, Amrud, Sharifa, Karanj, Bel, Chakundi, Acacia, Amla, Mahogani, Peepal, Neem, Etc.

Year	Area (in Ha.)	No's of plants
1992-2001	10.0	8,405
2006-07	2.31	5,775
2010-11	26.0	65,000
2011-12	20	50,000
2017-18	4.0	10,000
Total	62.31	1,39,180

(c) Emissions, Effluents, and Waste Disposal

i. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 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 Pollution Control Board in this regard.

One 28 kl capacity of sprinkler and One 12kl Capacity Sprinkler is being run round the clock for controlling dust.

ii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM25, SO2 and NOx monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.

Four ambient air quality monitoring stations has been established in the core zone and Eight air quality monitoring stations has been established in the buffer zone for PM10, PM25, SO2 and NOx monitoring by CMPDIL, Ranchi. The Monitoring station has been established as per the predominant wind direction.

The following four stations has been established in the core zone:

1. Project Office of Jharkhand OCP
2. DAV school, Dam Colony, Ichadh
3. Laiyo Chowk
4. Pump House, Laiyo

The following four stations has been established in the core zone:

1. Rest House, Kedla UGP
2. Manager Office Kedla UGP
3. School Near Mine No. 2, Kedla
4. Post Office, Ichadh
5. Project office Kedla OCP
6. Kedla Basti
7. Old Central School Building , Kedla

		8. Rest House Kedla OCP Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc is also being carried out once in six months (Report enclosed)
iii.	Data on ambient air quality (PM10, PM 2.5, SO2 and NOR) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	Fortnightly monitoring is done by CMPDIL which is NABL certified. Monitoring data is sent to MoEF&CC and JSPCB in every six months. (NABL Certificate enclosed)
iv.	Transportation of the coal by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the coal so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying Capacity of such roads. Furthermore, transportation of coal by road should be carried out by covered trucks only. A 3 tier green belt comprising of a mix of native species shall be developed all along the major approach roads.	A bypass PCC road has been constructed from Laiyo to Chopra More, Kedla of length 4.80 Km of width 7.0 m. The road passes through acquisition area of Jharkhand OCP, Kedla UGP and Kedla OCP. Both side dense plantation has been done at the project cost of Jharkhand OCP, Kedla UGP and Kedla OCP. And also there is natural dense vegetation/trees exist on both sides of the coal transport road. The existing plantation is more dense than Three Tier Plantation. No road movement for coal transportation is being used on existing village road network.
v.	The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centers.	Transportation of coal is being carried out by covered trucks. Total 1.5 Ha avenue Plantation has been done along the road and One 28 kl capacity of sprinkler and One 12kl Capacity Sprinkler is being run round the clock for controlling dust. All vehicles have updated 'PUC' certificate from authorized pollution testing centers.
vi.	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers.	One 28 kl capacity of sprinkler and One 12kl Capacity Sprinkler is being run round the clock for controlling dust. The two mobile water sprinkler are being run 4 trips in Haul road/ coal transport road in on shift. There is no Crusher at Jharkhand

	Crusher and material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust. Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured. Drills shall be wet operated.	OCP. Only, Wet Drilling is being operated.
vii.	The Project Proponent should 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.	Chuta Nallah is flowing adjacent (North) to the Project. Embankment has been constructed along river/nallah as and where necessary. Stone pitching and Check Dam has constructed for strengthen the Chutua Nallah.
viii.	There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.	The existing old quarry sump is being used for natural storage of Rain water and ground water recharge. It is also being supplied for domestic and industrial use.
ix.	The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.	Dump mass is being consolidated with proper filling/leveling with the help of dozer/compactors.
x.	Sufficient number of Gullies to be provided for better management of water. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments	Garland drain has been provided all along the OB dump. The cost of garland drain was Rs 7,34,939.40 Toe wall of length 350m height 1.2 m has been constructed. The cost of toe wall was Rs 7,16,939.81. Mine water is collected at Filter plant reservoir and then filtered water is being supplied to the CCL colony. During the rainy season, water will be allowed to accumulate in the sump on the floor of lower most Seam of the quarry. The capacity of sump is 110 Million Gallon. Sumps are provided for the dewatering pumps which will transfer in-pit water for collection at Filter plant reservoir or controlled discharge off the site.

	<p>directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site.</p> <p>Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals. Dimension 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.</p>	
xi.	<p>Industrial waste water (CHP, workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents. Sewage treatment plant of adequate capacity shall be installed in the existing colony and offices.</p>	<p>ETP facility has been provided at workshop to treat the workshop effluent along Oil and grease trap. Water reused after the treatment, no water is being discharged from ETP. The capacity of ETP sedimentation tank is 75 KL.</p> <p>Chutua Nala after confluence with Kedla Nala and Downstream of Chutua Nallah are being regularly monitored by CMPDIL for all the parameters mentioned in GSR 422 (E) dated 19th May, 1993 and 31st December, 1993.</p>
	(d) Noise & Vibration Control	
i.	<p>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</p>	<p>Safety audit and PSC (Pit Safety Committee) meeting is being conducted monthly for monitoring of occupational safety and other health hazards. (Minutes of PSC meeting of January month). As recommended by PSC regular maintenance of HEMM is being ensured for controlling noise. Adequate measures are being taken for control of noise levels. Noise levels are regularly monitored and kept below 85 dBA in the work environment. Workers engaged in blasting and drilling operation of HEMM etc are provided with ear plugs/muffs.</p>
ii.	<p>Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.</p>	<p>Nonels of different sizes and CED are used for controlled blasting. All steps suggested in EMP for mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders is being implemented.</p>
iii.	<p>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</p>	<p>Blasting is done only from 2:00 p.m. to 3:00 p.m. for minimizing sound and illumination at project sites. PPs undertakes to ensure that the biological clock of 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</p>

close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of 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.

light/night hours.
Quarterly monitoring data is annexed.

iv. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of Coal Handling Plants and HEMM, etc. should be provided with ear plugs/muffs.

Safety audit and PSC (Pit Safety Committee) meeting is being conducted monthly for monitoring of occupational safety and other health hazards. (Minutes of PSC meeting of January month). As recommended by PSC regular maintenance of HEMM is being ensured for controlling noise. Adequate measures are being taken for control of noise levels. Noise levels are regularly monitored and kept below 85 dBA in the work environment. Workers engaged in blasting and drilling operation of HEMM etc are provided with ear plugs/muffs.

(e) Occupational Health & Safety

i. 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 prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.

Periodical medical examination of Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc is being done in regular basis and necessary remedial preventive measures is being taken accordingly
The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards has been taken care by Project Dispensary, Sharmik Chikitsalay, Hospital.

Calendar Year	PME	IME	VTC (Basic)	VTC (Refr)	Spcl. Training
2016	111	71	77	70	78
2017	97	144	117	76	178
2018	94	65	126	76	77
2019	106	06	06	74	15
2020	73	03	03	84	15
2021	108	03	03	86	18
2022	106	03	03	83	18

ii. Besides carrying out regular periodic health check-up of their workers, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an Specialized agency institution within the District/State and the results reported to this Ministry and to DGMS.

PME of 1/5th of the work force is done regularly by Qualified Medical Practitioners of the company.

Personnel working in dusty 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.

Personnel working in dusty areas have been provided with protective respiratory devices and provided with adequate training and information on safety and health aspects.

Calendar Year	PME	IME	VTC (Basic)	VTC (Refr)	Spcl. Training
2016	111	71	77	70	78
2017	97	144	117	76	178
2018	94	65	126	76	77
2019	106	06	06	74	15
2020	73	03	03	84	15
2021	108	03	03	86	18
2022	106	03	03	83	18

They have well trained in safety and health aspects.

iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

The Jharkhand OCP is an existing project, no additional construction of housing required. However, CCL provide necessary infrastructure and facilities such as fuel for cooking, toilets with septic tank and soak pit, safe drinking water, medical health care to the existing labourers.

v. In case of outsourcing of work through MDO, the project proponent shall ensure the strict compliance enforcement of the above conditions.

Noted. The above conditions are being implemented for departmental as well as contractual workers of 1/5th of the work force.

(f) Biodiversity

i. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, **if any, spotted in the study area.** Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

From the study of Project and Development India Limited (PDIL), it is observed that there is no endangered and endemic species found in the area as per Red Book of Botanical Survey and Zoological survey of India as per Wild Life (Protection) Act 1972. Hence Wild life conservation plan was not needed. Although, as per recommendation of EIA/EMP report, Following species has been planted:
Shisham, Shimal, Sissoo, Kaju, Aam, Amrud, Sharifa, Karanj, Bel, Chakundi, Acacia, Amla, Mahogani, Peepal, Neem, Etc.

(g) Implementation of Action Plan as Per Public Hearing & CSR Activities

i. 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 provisions during the Public Hearing. Land oustees should be compensated as per the norms laid out R&R

Action Plan submitted for ensuring the issues rose during the Public Hearing. 43 No.s of employment has been provided to Land oustees in lieu of the land as per R&R policy of CCL.

Policy of the Company or the National R&R Policy or R&R Policy of the State Government, whichever is higher.

CSR Expenditure by Hazaribagh Area

S. No.	Financial Year	Actual Expenditure (Rs. In Lakh)
1.	2018-19	34.6
2.	2019-20	12.53
3.	2020-21	22.28
4.	2021-22	3.03
5.	2022-23	23.11
Total in last 5 years		95.55

CSR expenditure for the Socio Economic Development of the neighborhood Habitats which could be planned in consultation with the Panchayat of the local administration, and executed by the Project Proponent more, systematically based on the 'Need based door to door survey' by established Social institutes/Workers A report, in consonance with the format prescribed in Annexure of the Companies (Corporate Social Responsibility Policy) Rules, 2014, shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

iii. The project proponent shall follow the mitigation measures provided in Office Memorandum No.Z-11013/57/2014-1A.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".

Noted. The Project proponent has been followed the mitigation measures as provided in Office Memorandum No.Z-11013/57/2014-1A.11 (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects. Such as, Check Dam, Retaining Walls, Garland Drains, Settling Ponds has been provided, Natural water bodies has not been disturbed, Old sump is being used for supply of water, Medical camp is being organized regularly for villagers of core/buffer zone.

iv. The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.

Grazing ground has been provided between the project Office and OB dump and sparse trees has been provided mid-day shelter from the scorching sun. Trees shall not be felled in this area.

(h) Corporate Environment Responsibility

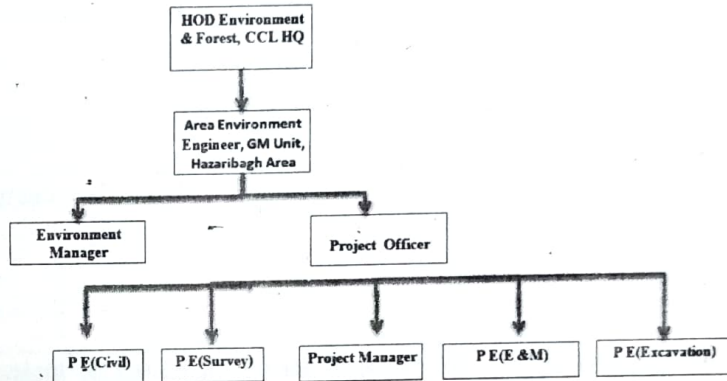
The Company should have a well laid down Environment Policy approved by the Board of Directors.

Corporate Environment Policy has been approved by the board of directors of the company vide letter no. CS/BM/410/2019/410 dated 10.12.2019.

ii. The Environment Policy should prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

The Corporate environment policy has prescribed for standard operating process/procedures to bring into focus of the environmental or forest norms/conditions such as to control and monitor air, water & noise parameters. Land reclamation, statutory clearances, preservation of bio-diversity, Mine closure plan and mine fire.

iii. The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.



The hierarchical system to deal with environmental issues and for ensuring compliance with the environmental clearance conditions.

iv. To have proper checks and balances, the Company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large.

A committee has been constituted vide letter no. CCL/HOD (E&F)/2019/348 dated 26.07.2019 with following members at area level to monitor the compliance of EC and FC stipulated in the coal mines.

1. Area General Manager
2. Staff Officer (civil)
3. Area Finance Manager
4. Staff Officer (X)
5. Staff Officer (E&M)
6. Staff Officer (MM)
7. Staff Officer (survey)
8. Area Environmental Officer
9. Staff Officer (P&P)

v. 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.

An Environment Management Cell has been established in this project, headed by Project Officer, Jharkhand Opencast Project Officer is assisted by a team of following personnel.

1. Colliery Manager, Jharkhand OCP
2. Project Engineer (C), Jharkhand OCP
3. Project Engineer (E&M), Jharkhand OCP
4. Project Engineer (X), Jharkhand OCP
5. Area Environment Engineer, Hazaribag Area.

A committee has also been constituted for compliance of

		environmental and forest clearances
vi.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.	Agreed. The funds earmarked for environmental protection measures will not be diverted for other purpose.
	(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 Law, if any, as may be applicable to this project.	Agreed and Noted.
ii.	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, as applicable for this Mining project.	Agreed and Noted.
iii.	The Project Proponent shall obtain Consent to Establish and Consent to Operate from the concerned State Pollution Control Board prior to commencement of mining operations and effectively implement all the conditions stipulated therein.	Consent to Establish for the capacity of 2.70 MTPA has been granted vide letter no. JSPCB/HO/RNC/CTE-1280384/2018/894 dated 23.08.2018 and Consent to Operate has been granted by JSPCB vide letter no. JSPCB/HO/RNC/CTO-14052414/2023/296 dated 08.02.2023 for the period up to 07.02.2024.
iv.	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.	No objection certificate (NOC) for ground water abstraction has been obtained from Central Ground Water Authority, Ministry of Jal Shakti, Government of India vide letter no. CGWA/NOC/MIN/ORIG/2021/13991 valid up to 7.12.2023.
v.	Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commence after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.	Ground water level of the area is continuously monitored by CMPDI and CGWB. As per the assessment done by CGWB, Mid-Eastern Region, Patna has reported the stage of ground water development in Mandu development block (where Jharkhand Expn. OCP exist), Ramgarh district as 25.41% and identified the region with category "Safe".

(j) Monitoring of Ambient Air & Water Quality and Reporting

<p>i. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. The critical parameters as per the Notification such as PM10, PM25, NOX and SOx etc. in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored {(TDS, DO, PH and Total Suspended Solids (TSS)}. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.</p>	<p>Monitoring of Ambient Air Quality is being carried out fortnightly by CMPDIL. The monitored data is uploaded on the website of the company. It will be displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain.</p>
<p>ii. The Proponent shall install online Ambient Air Quality Monitoring System and there should be system for display of digital AAQ data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site.</p>	<p>CAAQMS has been installed at Parej Regional Store which is in Buffer Zone of Jharkhand OCP (8.0 Km Aerial Distance). In addition to the above Tender for installation of PM 10 analyzer with online connectivity to JSCP B has been initiated vide Bid No. GEM/2022/B/2800549 dated 30.11.2022. There is no discharge points of STP and ETP. Water being reused from ETP.</p>
<p>iii. Regular monitoring of ground water level 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 project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April- May); monsoon (August), post-monsoon</p>	<p>CMPDI has established a network of 31 monitoring stations (Dug Well) spread over the buffer zone (10 Km radius) and Core Zone (2km radius) to collect the Ground water level of the area.. Locations and design of piezometers has been prepared by CMPDIL, Ranchi.</p>

	(November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.	
iv.	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table.	Agreed. The natural water bodies and or streams which are flowing in an around the village, shall not be disturbed. A provision for regular monitoring of water table in open dug well located in village is being incorporated to ascertain the impact of mining over ground water table. Stone pitching and Check Dam has constructed for strengthen the Chutua Nallah.
v.	Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	Regular monitoring of water quality upstream and downstream of water bodies is being carried out by CMPDIL, Ranchi and record of monitoring data is maintained and submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
vi.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.	Six monthly reports on the status of the implementation of the stipulated environmental safeguards is being submitted to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
vii.	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 and it has been followed. The project authorities provide full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
viii.	The activities pertaining to development of	Plantation has been raised in a 7.5m wide green belt in the safety

	green belt/ horticulture shall be reported to concerned DFO/Collector on six monthly basis from the date of commencement of mining operations.	zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. Afforestation has been done over an area of 62.31 Ha by State Forest Department in consultation with the local DFO which includes 45.81 Ha. of External OB dump, 15 Ha. Internal OB Dump and 1.5 Ha. Avenue Plantation. Following species has been planted: Shisham, Shimal, Sissoo, Kaju, Aam, Amrud, Sharifa, Karanj, Bel, Chakundi, Acacia, Amla, Mahogani, Peepal, Neem, Etc.
	(k) Miscellaneous	
i.	For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring. Similarly, the annual reports for the financial year should reach the office of the concerned authority on or before 1st June of following year.	For half yearly monitoring reports for the period of April to September and October to March of the financial years is being submitted.
ii.	Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.	PSC (Pit Safety Committee) meeting is being conducted monthly for monitoring of hazards. (Minutes of PSC meeting of January month). Regular maintenance of HEMM is being done a per the PSC for reduce HSD and energy consumption.
iii.	The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The project authorities has informed to the Regional Office JSPCB regarding approval of the project obtained Consent to Establish vide letter no. JSPCB/HO/RNC/CTE-1280384/2018/894 dated 23.08.2018
iv.	A copy of 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 clearance letter has been provided to gram Panchayat.
v.	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office! Tehsildar Office for 30 days. A copy of the EC letter shall be also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for 30 days.	Copy of EC and compliance report is being submitted to Jharkhand State Pollution Control Board.
vi.	The EC letter shall be uploaded on the company's website. The compliance status of	The EC letter, six monthly compliance report and environmental quality parameters has been uploaded on CCL website.

<p>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 PM10, PM25, SO2 and NO (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.</p>	
<p>vii. The project authorities 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 web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.</p>	<p>The issue of the clearance letter informing that the project has been accorded environmental clearance has been published in two local newspapers; 1. Dainik Bhaskar, Ranchi & 2. Dainik Jagran, Ranchi. A copy of the clearance letter has been forwarded to the State Pollution Control Board and is also available at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same has been forwarded to the Regional Office.</p>
<p>viii. 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.</p>	<p>The Environmental Statement for each financial year ending 31 March in Form-V is being submitted to Jharkhand State Pollution Control Board.</p>
<p>5. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.</p>	<p>The project proponent undertakes all the commitments and recommendations made in the EIA/EMP report and also that during the presentation to the EAC. Project proponent shall implement the commitment made during Public Hearing shall be implemented by the proponent.</p>

<p>6. The project proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.</p>	<p>The project proponent has obtained all necessary clearances/approvals that may be required before the start of the project.</p> <p>Forestry clearances:</p> <table border="1" data-bbox="644 310 1410 495"> <thead> <tr> <th>Area(in Ha.)</th> <th>Stage-2 FC issued vide letter no. & date</th> </tr> </thead> <tbody> <tr> <td>6.59</td> <td>F. No. 8-52/2003-FC (Vol.I) dated 22.03.2010</td> </tr> <tr> <td>96.28</td> <td>F. No. 8-52/2003-FC (Vol.I) dated 28.05.2004</td> </tr> <tr> <td>57.94</td> <td>F. No. 8-752/93-FC dated 27.03.1997</td> </tr> <tr> <td>160.81</td> <td>Total Area</td> </tr> </tbody> </table> <p>State Pollution Control Board Clearances: Consent to Establish for the capacity of 2.7 MTPA has been granted by JSPCB vide letter no. JSPCB/HO/RNC/CTE-1280384/2018/894 dated 23.08.2018 and Consent to Operate has been granted by JSPCB vide letter no. JSPCB/HO/RNC/CTO-14052414/2023/296 dated 08.02.2023 for the period up to 07.02.2024.</p>	Area(in Ha.)	Stage-2 FC issued vide letter no. & date	6.59	F. No. 8-52/2003-FC (Vol.I) dated 22.03.2010	96.28	F. No. 8-52/2003-FC (Vol.I) dated 28.05.2004	57.94	F. No. 8-752/93-FC dated 27.03.1997	160.81	Total Area
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57.94	F. No. 8-752/93-FC dated 27.03.1997										
160.81	Total Area										
<p>7. The PP shall set up an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.</p>	<p>A committee has been constituted vide letter no. CCL/HOD (E&F)/2019/348 dated 26.07.2019 with following members at area level to monitor the compliance of EC and FC stipulated in the coal mines.</p> <ol style="list-style-type: none"> 1. Area General Manager 2. Staff Officer (civil) 3. Area Finance Manager 4. Staff Officer (X) 5. Staff Officer (E&M) 6. Staff Officer (MM) 7. Staff Officer (survey) 8. Area Environmental Officer 9. Staff Officer (P&P) 										
<p>8. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this EC and attract action under the provisions of Environment (Protection) Act, 1986.</p>	<p>Project proponent hereby declare that all the information given above is true to the best of the knowledge.</p>										
<p>9. The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The PP</p>	<p>Agreed. The PP shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations. Fortnightly monitoring of groundwater and surface water is done by CMPDIL which is NABL certified. Monitoring data is sent to MoEF&CC and JSPCB in every six months.</p>										

	shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.	
10	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed. There has no appeal made against this EC as prescribed under Section 16 of the National Green Tribunal Act, 2010.
11	This EC supersedes the earlier EC granted vide letter No. J-11015/12/89-IA.11(M) dated 30th January, 1995 for 1 MTPA in a total area of 278.88 ha.	Mining is being done as per the present EC vide no. J-11015/03/2015-IA-II(M) dated 08.02.2017 for the capacity of 2.7 MTPA of area 261.84 Ha.



Project Officer

Jharkhand Open Cast Project

Project Officer
Jharkhand O.C.P.