



वसुधैव कुटुम्बकम्
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CENTRAL COALFIELDS LIMITED

सेंट्रल कोल्फील्ड्स लिमिटेड

(A Miniratna Subsidiary Company of Coal India Limited)

कोल इंडिया लिमिटेड की अनुषांगी, एक मिनी रत्न कम्पनी

Darbhanga House, Ranchi – 834029

Area: Kathara, PO-Kathara, Dist Bokaro, 829116

CIN No. U10200JH1956GOI000581

OFFICE OF PROJECT OFFICER, SWG-GVP PH II, KATHARA

P.O-SAWANG COLLIERY, PIN-829128

Website <http://www.centralcoalfields.in>

Email: gmkth.ccl@coalindia.in

Email: projectofficeswg@gmail.com

Ref: PO/GVP PH-II/2023-24/459

Date:- 28.06.2023

To,

Registered Post

The Regional Officer,
Regional Office (ECZ)
Ministry of Environment, Forest and Climate Change
Bungalow No- A-2, Shyamali Colony, Doranda
Ranchi, Jharkhand 834002

Sub- Submission of Six monthly EC Compliance (October 2022 to March 2023) and monitoring reports of Govindpur Phase-II OCP of Kathara Area, CCL

Refrence:


1. EC Letter no.- J-11015/490/2008-IA.II(M) dated 24 Dec 2014

Respected Sir,

It is to inform that we are submitting Six monthly EC Compliance (October 2022 to March 2023) report for the conditions stipulated in the Environment Clearance of Govindpur Phase-II OCP of Kathara Area, CCL with monitoring data report. The copy of the compliance report is also being sent in the soft format through E-Mail (ro.ranchi-mef@gov.in) for your kind perusal.

Thanking you

Yours faithfully


28/6/2023
Project Officer
Govindpur Phase-II OCP

Enc:- 1) Six Monthly Compliance Report
2) All Annexures

Copy for Kind Information: -

1. The Member Secretary, JSPCB HEC colony, CTI Colony, Sector-3, Dhurwa, Ranchi834004
2. The Regional Officer, JSPCB H.I.G.-1 Sardar Patel Nagar, Dhanbad-826001
3. The HOD(Env & Forest), CCL HQ, Ranchi
4. The General Manager, Kathara Area
5. The S.O.(Env.), Kathara Area
6. The Office copy

**SIX MONTHLY REPORTS
OF
EMP CLEARANCE
J-11015/490/2008-IA.II (M)
FOR THE PERIOD OCTOBER 2022 TO MARCH 2023**



OCTOBER 2022 TO MARCH 2023

**GOVINDPUR PH-II OCP OF KATHARA AREA
CENTRAL COALFIELDS LIMITED
(A Miniratna Company)**

Status of compliance of the terms and conditions given in the Environmental clearance letter no J-11015/490/2008-IA.II(M) dated 24th December, 2014 issued by MOEF, Govt. of India, New Delhi for expansion of production capacity of Govindpur Ph-II OCP in Kathara Area from 2.20 MTPA to 2.5 MTPA for the period from OCTOBER 2022 to MARCH 2023.

SPECIFIC CONDITIONS

Sl.No	Condition	Status
i)	Grant of EC is only for non-forest area plus forest area within the mining lease for which FC is available. No mining activities will be allowed in the forest area for which FC is not available.	No mining operations are undertaken in forest land for which FC is not available.
ii)	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	Production from the mine will not exceed that limit. (Production of 2022-23 is 1.137 MT)
iii)	No mining operations shall be undertaken in 45.083 ha of forest land until prior clearance has been obtained under the provisions of FC Act, 1980.	Agreed
iv)	Mining shall be carried out as per statute from the streams/nallah flowing within the lease and maintaining a safe distance from River Konar flowing along the lease boundary.	Mining is being done as per statute and plan for project report prepared by CMPDIL. Mining is being done at a safe distance i.e. 100 m from Konar River flowing along the lease boundary.
v)	No washery shall be established within the ML without prior environmental clearances from this Ministry.	No Washery has been established.
vi)	Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of green belt.	Live Top Soil obtained during removal of OB is stacked at earmarked place for reclamation. 1250 cum (approx.) volume of top soil is available in top soil dump as on 01.04.2023. Photograph attached as Annexure-I
vii)	The commitment and action plan submitted by the proponent shall be complied within one year from the date of the issue of the EC and report be submitted to the MoEF. The EAC shall review the compliance report.	As per Minutes of the 21 st EAC (Thermal & Coal Mining projects) meeting held on 18 th - 19 th September,2014 in New Delhi, the proponent submitted the action taken report vis-à-vis the Compliance to the Commitment made during the Public Hearing, which was deliberated in the EAC meeting(21.10.3). Attached as Annexure- II
viii)	Fixed sprinkler system shall become operational from June 2014.	Fix water sprinklers has been made operational. Photographs attached as Annexure- III
ix)	The proponent shall ensure that colony people are supplied with treated drinking water.	Drinking water is supplied after proper treatment through filter plant.
x)	Piezometers should be installed and made functional by June, 2014	Piezometer has been installed in Filter Plant, Zero Point. Photographs are as Annexure-IV
xi)	The Sewage Treatment Plant shall be operational in 300 days from the issue of the EC.	At colony, sewages are treated by septic tank and soak-pit method. Photographs of ETP enclosed as Annexure V and An MOU dt. 22/04/2017 between CCL and Mecon

		Limited for awarding the works related to construction of new STP in respect of Govindpur Project and relevant details regarding tender of work are attached as Annexure VI . STP will be constructed after finalization of tender.
xii)	The baseline survey and evaluation of projects for CSR be completed within one year.	EIA/EMP report related to baseline survey & evaluation of the projects for CSR is attached as Annexure- VII CSR works for last year and work proposed in current year enclosed as Annexure VIII
xiii)	Monitoring of land use pattern shall be carried out and report submitted within one year.	Monitoring of land use pattern was carried out in year 2020-21 and is attached as Annexure-IX .
xiv)	Monitoring of AAQ shall be done every month and report be submitted to the SPCB and the RO, MoEF concerned.	Monitoring of AAQ is done Quarterly and report is submitted to the SPCB and the RO, MoEF along with six monthly compliance reports. Monitoring Report is attached as Annexure -X
xv)	PM _{2.5} shall be monitored from April 2014.	PM _{2.5} is monitored and reports are enclosed as Annexure-X
xvi)	Environment Officers exclusively for environment related works be posted for monitoring and mitigation purpose.	Environment Officer for environment related works are posted for monitoring and mitigation purpose.
xvii)	Coal transportation in pit shall be done by dumper, Surface to Siding by trucks and siding to loading by wagon.	Coal transportation in pit is being done by dumpers, Surface to siding by trucks and siding to loading by wagon.
xviii)	The production of coal shall be within the same Mining Lease area.	Mining is being done as per statute and plan for project report.
xix)	The OB shall be completely re-handled at the end of the mining.	It will be executed as per the plan submitted in the EIA.
xx)	Final mine void depth will not be more than 40 m. The void area will be converted into water body. The rest of the area will be back filled up to the ground level and covered with about a meter thick top soil and put to use.	Final mine void depth will not be more than 40 m and the void area will be converted into water body. The rest of the area will be back filled up to the ground level and covered with about a meter thick top soil and put to use.
xxi)	Garland drain s shall be provided.	Garland land of 2.88 km length proposed in financial year 2022-23. Photographs of garland drain enclosed as Annexure -XI
xxii)	The land after mining shall be brought back for agriculture purpose.	The land after mining will be done as per EIA.
xxiii)	Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.	Mine water is settled in sumps then it is discharged in lagoon.
xxiv)	The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.	CSR fund is calculated and spent as per company CSR policy of company. CSR report is attached as Annexure VIII

xxv)	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	Dust masks are provided to all workers working in the dusty areas. Details of PPEs distributes in last three years is attached as Annexure-XII
xxvi)	Dust mask to be provided to everyone working in the mining area.	Dust masks are provided to all workers working in the dusty areas. Details of PPEs distributes in last three years is attached as Annexure-XII
xxvii)	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	The supervisory staff is responsible for ensuring compulsory wearing of dust mask in the core area.
xxviii)	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	We have established periodical medical examination system with occupational health check facilities initial medical examination for occupational diseases is done at the time of new recruitment and periodical medical examination of 1/5 total manpower is done every year. Camp details, PME report with 2 workers enclosed as Annexure XIII
xxix)	The mining area should be grounded by green belt having thick closed thick canopy of the tree cover.	Green belt has been developed around the mining area. Photographs are attached as Annexure-XIV
xxx)	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilized with plantation so as to withstand the peak water flow and prevent mine inundation.	Appropriate embankment has been provided along the side of the river/nallah flowing adjacent to mine.
xxxi)	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.	There is no overflow of OB into the river & agricultural land as it has been stacked at earmarked areas.
xxxii)	OB shall be stacked at one earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its concerned Regional office on yearly basis.	OB is being stacked at earmarked OB dumpsite(s) only (inside the mine lease boundary). Monitoring and management of vegetation will be done after reclamation. Compliance status is being submitted to the Ministry of Environment & Forests and its concerned Regional office in every six months.
xxxiii)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and	Photographs of Catch drain are enclosed as Annexure XV . Construction of a new siltation pond will be executed after tender and award of work. The total sump capacity is 1,00,000 cub mtrs. Adequate time is given for settlement of silt. Every year sump is being shifted as quarry progresses. Sump dimension (i) 250m x 25m x 12m

	<p>sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.</p>	<p>(ii) 125m x 25m x 8m</p> <p>The collected water is being utilized for watering the mine area, roads, green belt development. Regular drain cleaning is being done before break of monsoon. Garland land of 2.88 km length proposed in financial year 2022-23. Photographs of garland drain enclosed as Annexure XI</p>
xxxiv)	<p>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check runoff and siltation shall be based on the rainfall data.</p>	<p>1.05 km Toe wall has been constructed. Stone pitching has already been done to check run-off and siltation based on the rainfall data. Photographs attached as Annexure-XVI</p>
xxxv)	<p>Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.</p>	<p>There is no CHP in the project so no crusher is required.</p>
xxxvi)	<p>Drills shall be wet operated.</p>	<p>Wet drill is undertaken</p>
xxxvii)	<p>The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,</p>	<p>Regular repairing and tarring of roads are done & being maintained.</p>
xxxviii)	<p>Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.</p>	<p>Control blasting is under taken in daytime under supervision of the blasting officer, proper blast design is prepared to control ground vibration and arrest fly rocks and boulders.</p>
xxxix)	<p>A Progressive afforestation plan shall be implemented covering an area of 197.26 ha at the end of mining, which includes reclaimed External OB dump area (87 ha), Internal OB dump area (18.03 ha), industrial infrastructure (3.12 Ha).and Green belt (89.11 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 inland around the mine and a 3-tier avenue plantation along the main approach roads to the mine.</p>	<p>The density of plantations under taken is 2500 plants per ha. So far 589.71 ha of area have already been planted in the nearby areas. Plantations, as stipulated, will be under taken time to time. Total plantation = 589.71 ha (454.53 ha in Sawang Colliery, 54.15 ha in Govindpur OCP and 81.03 ha in Govindpur Project). Species of plants are Sisam, Gambhar, Bakain, Mahua, Bamboo, Karange, Sal, Kathal, Mango etc. However, after post mining stage afforestation shall be done on backfilled areas, ext. OB dump etc.</p> <p>Geotagged photographs of progressive afforestation are attached as Annexure-XVII</p>
xl)	<p>An estimated total 28.66 Mm³ of OB will be generated during the entire life of the mine. Out of which 24.00 Mm³ of OB will be dumped in one external OB Dumps an earmarked area covering 87ha of land with</p>	<p>Geotagged photographs of grassing & vegetation on OB dumps are attached as Annexure. XVIII</p>


	height of 60m. 4.66Mm ³ of will be one internal OB dump in covering an area of 16.53 ha with height of 0-10m above ground level. The maximum height of external OB dump for hard OB will not exceed 90m 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 MOEF and its Regional Office on yearly basis.	
xli)	The proponent should prepare restoration and reclamation plan for the degraded area. The land to be used in a productive and sustainable manner.	The restoration and reclamation plan for degraded area have been made & submitted in EIA.
xlii)	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	Compensatory Ecological & Restoration of wasteland other degraded land OB dump have been done over an area of 589.71 ha (454.53 ha in Sawang Colliery, 54.15 ha in Govindpur OCP and 81.03 ha in Govindpur Project) with density of 2500/ha saplings.
xliii)	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	Mining will be phased as submitted in EIA. No extra OB dumps will be formed.
xliv)	No groundwater shall be used for mining operations. Rainwater harvesting structures including check dams for recharge of ground water shall be erected within and around the ML in case the water table shows a declining trend. Additional water if any required during mining operations shall be met from mine sump water or from rainwater.	No ground water (bore well) is used for mining operations. Photographs of existing rain water harvesting are attached as Annexure- XIX Proposed rainwater harvesting structures are proposed in financial year 2023-24
xlv)	The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	Water is supplied to nearby villages by pipeline. In addition to this 02(two) nos. deep boring also has been done for the purpose of water supply.

xlvi)	<p>Of the total quarry area of 76.42 ha. the backfilled quarry area of 18.03 ha shall be reclaimed with plantation and a void of 39.71 ha at a depth of 30-40 m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.</p>	<p>Of the total quarry area of 76.42 ha. the backfilled quarry area of 18.03 ha will be reclaimed with plantation</p> <p>Void of 39.71 ha at a depth of 30-40 m will be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation.</p>										
xlvii)	<p>Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.</p>	<p>Water level (from surface) monitored in 03 villages wells is given below-</p> <table border="1" data-bbox="850 741 1473 1232"> <thead> <tr> <th data-bbox="850 741 1078 846">Name of village/locality</th> <th data-bbox="1078 741 1473 846">Water level measured from surface</th> </tr> <tr> <td colspan="2" data-bbox="1078 846 1473 913">Feb '2023</td> </tr> </thead> <tbody> <tr> <td data-bbox="850 913 1078 1019">Sawang, 1-B colony</td> <td data-bbox="1078 913 1473 1019">15'</td> </tr> <tr> <td data-bbox="850 1019 1078 1124">Sawang, Officer colony</td> <td data-bbox="1078 1019 1473 1124">20'</td> </tr> <tr> <td data-bbox="850 1124 1078 1232">Sawang, 1-C colony</td> <td data-bbox="1078 1124 1473 1232">9'</td> </tr> </tbody> </table>	Name of village/locality	Water level measured from surface	Feb '2023		Sawang, 1-B colony	15'	Sawang, Officer colony	20'	Sawang, 1-C colony	9'
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xlviii)	<p>The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.</p>	<p>Rain water harvesting has been constructed in Samudayik Bhawan, Sawang and at Project office, Sawang. Photographs are attached as Annexure-XIX</p>										
xlix)	<p>Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.</p>	<ul style="list-style-type: none"> • At colony sewages are treated by septic tank and soak-pit method. STP is being constructed at Govindpur Colony. • Industrial wastewater (workshop and wastewater from the mine) is properly collected and treated in Effluent treatment Plant commissioned in 2022. • Oil & Grease trap is included in ETP • Photographs are attached as Annexure-V 										
l)	<p>Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for</p>	<p>We have established periodical medical examination system with occupational health check facilities initial medical examination for occupational diseases is done at the time of new recruitment and periodical medical examination of 1/5 total manpower is done every year.</p> <p>PME Target 165 Achieved 165 (Departmental) IME Target 3 Achieved 3 (Departmental)(In 2022)</p>										


	Occupational diseases and hearing impairment, if any, through a specialized agency /institution within the District/State and the results reported to this Ministry and to DGMS.	
li)	A project specific R&R prepared for the project shall be implemented. R&R for a cost of not less than Rs. 252.52 lakhs shall be completed within an agreed time schedule. Land ousters shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.	Implemented as per R&R Plan for the project.
lii)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its concerned Regional office	Land Restoration / Reclamation Monitoring Report based on Satellite Data for the Year 2020 is attached as Annexure IX
liii)	A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of Environmental Clearance.	A copy of Final mine Closure Plan along with details of Corpus Fund has been submitted to the ministry of Environment & Forests. Mine Closure Plan is attached as Annexure-XX
liv)	The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.	Local Panchayats are consulted to identify socio-economic and welfare measures under CSR.
lv)	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.	The Commitment made by the proponent to the issues raised during Public Hearing is continuously being implemented by the Proponent.


lvi)	<p>Corporate Environment Responsibility:</p> <p>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b) The Environment Policy shall prescribe for standard operating process / procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.</p> <p>c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p> <p>d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances /violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.</p>	<ul style="list-style-type: none"> • A Corporate Environment Policy of Coal India Limited is available in the Company's website. • A Nodal Officer is posted at unit level and an Area Environment Officer is posted at Area Level to ensure the compliance of EC conditions. A Separate Environment cell is created at Head Quarter Level. HOD (E&F) reports directly to the head of the company.
(B). GENERAL CONDITIONS		
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.	There will be no change in mining technology and scope of working without prior approval of the ministry of Environment and Forests.
ii.	No change in the calendar plan of production for quantum of mineral coal shall be made.	There will be no change in the calendar plan of production for quantum of mineral coal.
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, 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.	It is being under taken by CMPDI on Quarterly basis. The results of monitoring reports are enclosed. AAQ monitoring report is attached as Annexure-X
iv.	Data on ambient air quality (PM10, PM 2.5, SO2 and NOx) 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	Data on ambient air quality (PM ₁₀ , pM _{2.5} , SO ₂ and NO _x) and other monitoring data are regularly submitted as enclosure with the Six-Monthly Compliance Report. AAQ monitoring report is attached as Annexure-X

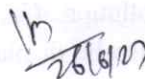
	<p>verification of samples through analysis from independent laboratories</p> <p>recognized under the EPA rules, 1986 shall be furnished as part of compliance report.</p>	
v.	<p>Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.</p>	<p>Adequate measures have been taken; noise levels are regularly monitored and kept below 85 dBA with work environment. Ear plugs / muffs are provided to mine workers for regular use. Quarterly measuring report is enclosed.</p> <p>PPE details are attached as Annexure XII</p>
vi	<p>Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.</p>	<ul style="list-style-type: none"> • Industrial wastewater (workshop and wastewater from the mine) is properly collected and treated in Effluent treatment Plant commissioned in 2022. • Oil & Grease trap is included in ETP • Photographs are attached as Annexure-V
vii.	<p>Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.</p>	<p>Registers are being maintained for keeping records of PUC which is attached as Annexure-XXI</p> <p>Photographs of the vehicles used for transportation of minerals covered with tarpaulins are attached as Annexure-XXII</p>
viii.	<p>Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State</p> <p>Pollution Control Board and data got analyzed through a laboratory recognized under EPA Rules, 1986.</p>	<p>Environmental laboratory with monitoring and analyzing equipment's is operative in CMPDIL, which is a recognized laboratory and we are taking the services of CMPDIL for above purpose.</p> <p>AAQ monitoring report is attached as Annexure-X</p>
ix.	<p>Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.</p>	<p>Dust masks have been issued to exposed workmen. Occupational health monitoring is done by initial Medical Examination and periodic medical examination through our trained Doctors in our hospitals/dispensaries. PME reports of workers are attached as Annexure XIII</p>
x.	<p>Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.</p>	<p>We have established periodical medical examination system with occupational health check facilities initial medical examination for occupational diseases is done at the time of new recruitment and periodical medical examination of 1/5 total manpower is done every year.</p> <p>PME Target 165 Achieved 165 (Departmental) IME Target 3 Achieved 3 (Departmental)(In 2022)</p>

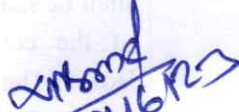
xi.	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	Separate environmental cell has been established There is an Area Environmental Officer to look after the environmental problems.
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.	Year-wise expenditure is attached as Annexure- XXIII
xiii.	The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in .	The advertisement about environment clearance has been published in local newspaper, Prabhat Khabar on 09.03.2011. 
xiv.	A copy of the environmental clearance letter shall be marked to concern Panchayats/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion /representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	Representation has been given to local Panchayats. Copy of EC letter submitted to local panchayat and a receipt copy is attached as Annexure- XXIV
xv.	A copy of the environmental clearance letter shall be shall 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's Office for 30 days.	Copy of environmental clearance has been submitted at JSPCB Ranchi.
xvi.	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM10, PM2.5, SO2	All data is being displayed at the entrance of the project premises and mines office. EC letter is already uploaded on the company's website.

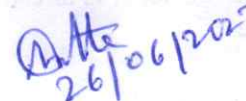
	and NOx(ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	
xvii.	The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.	Six monthly compliance reports are being submitted regularly.
xviii.	The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	Full cooperation to the Regional office of MoEF in monitoring of the stipulated conditions by providing the requisite data/ information/ monitoring reports.
xix	The Environmental statement for each financial year ending 31 March in Form -V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF by e-mail.	The Environmental statement for each financial year ending 31 March in Form-V is submitted to Jharkhand State Pollution Control Board every year before 30 th September. Environment statement is attached as Annexure-XXV

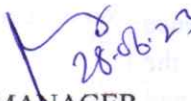

26/6/23
OFFICER(SURVEY)
GVP PH-II OCP

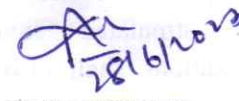

26/06/23
NODAL OFFICER(E&F)
GVP PH-II OCP


26/6/23
PROJECT ENGG. (CIVIL)
GVP PH-II OCP


26/6/23
PROJECT ENGG. (E&M)
GVP PH-II OCP


26/06/2023
PROJECT ENGG. (EXC)
GVP PH-II OCP


28.06.23
MANAGER
GVP PH-II OCP


28/6/2023
PROJECT OFFICER
GVP PH-II OCP

PHOTOGRAPHS OF TOP SOIL DUMP LOCATION



**MINUTES OF THE 21st EAC (THERMAL & COAL MINING PROJECTS) MEETING HELD
ON 18th -19th September, 2014 IN NEW DELHI**

The 21st EAC (Thermal & Coal mining projects) Meeting was held on 18th -19th September, 2014 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

B. Confirmation of Minutes: The Committee confirmed the Minutes of the 19th EAC meeting held on 13th -14th August, 2014. However, clarity is required to be sought from the proponents on status of forest land for which the FC is under process with regard to Kusmunda Opencast expansion project of M/s South Eastern Coalfields Ltd and Coal Washery (4.0 MTPA in an ML area 13.706 ha) of M/s Vedanta Washery and Logistic Solutions Pvt. Ltd., Dist. Raigarh, Chhattisgarh.

C. The following proposals were considered:

21.1 Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat - EC based on TOR granted on 23.03.2011, amended on 30.05.2011 -Further Consideration.

21.1.1 The proposal is for Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat. The proposal was last considered in 12th EAC meeting held on 27th - 28th February, 2014. The Committee had sought following additional information for further consideration:

- i. Necessary affidavit bearing testimony to the fact that the coal from this mine will be exclusively used for Padwa Power Plant would be submitted.
- ii. The Clearances from CRZ angle should be submitted.
- iii. The details of approved mine plan and mine closure plan be submitted.
- iv. Flu gas De-Sulfurization (FGD) Plant be installed in the Power Plant for sulphur removal.
- v. The feasibility of conveyor system for transport of lignite from mine CHP to Common delivery point of Ghogha be studied and details submitted.
- vi. Details of issues raised in the Public Hearing along with the Commitment, Action Plan and Budgetary Provisions.
- vii. A detailed CSR Action Plan along with budgetary provision be submitted.
- viii. A detailed explanation on ingress of sea water to the mine be submitted along with the expert opinion from Roorkee University.
- ix. The accreditation of BISAG be submitted along with the proof of evidence.
- x. The details of disposal of brine after the treatment of saline water be submitted.
- xi. The feasibility of providing housing to contractual labourers at mine site be examined and report submitted.
- xii. The details on impact of mine on mangroves be submitted.
- xiii. A sub EIA on the impact of mine activity on river /canal be prepared.
- xiv. The details of internal dumping along with commitment from the top management for corrective action be submitted.
- xv. The details of OB handling be given including refilling into the mine void and details of final state of internal dumps and mine voids..
- xvi. The reason and source of increase in PM10 be examined & information submitted along with mitigatory measures.

- xxiv. The Gram Panchayat has passed a resolution unanimously on 22.07.14 in favour of the project and issued their consent vide a NOC dated 25.07.2014. This having being identified as the last requirement the EC now should be granted.
- xxv. The project will provide direct and indirect employment opportunities for their livelihood and further improvement in their lives will come from companies CSR activities like health care, education, potable water, infrastructure & sanitation. This has been enumerated in the CSR action plan submitted to MOEF vide letter dtd. 14.10.2011.

21.9.5 The Committee after hearing to the proponent requested the Member Secretary to prepare a detailed Note and place it in the next meeting for internal discussion.

21.10 Govindpur Phase-II OCP for a capacity of 2.20 MTPA (nominal) and 2.50 MTPA (Peak) M/s Central Coalfields Limited, dist. Hazaribag, Jharkhand - EC under 7(ii) of EIA Notification 2006.

21.10.1 The proposal is for Environment Clearance under 7(II) of EIA notification for Govindpur Phase-II OCP for a capacity of 2.20 MTPA (nominal) and 2.50 MTPA (Peak) M/s Central Coalfields Limited, dist. Hazaribag, Jharkhand. The proponent made the presentation and informed that:

- i. Govindpur Ph-II Opencast Project is an operating coal mine under Kathara Area of Central Coalfields Limited, which was started after obtaining Environmental Clearance vide letter no J-11015/490/2008-IA.II(M) dated 18.01.2011 for a normative capacity of 1.20 MTPA & peak capacity of 1.50 MTPA within lease area of 274.95 Ha.
- ii. Environment Clearance for Expansion (Under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 1.5 MTPA to 1.875 MTPA in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha; of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand was granted vide letter no. J-11015/490/2008-IA.II (M) dated 20th May, 2014.
- iii. Applied under one time production capacity expansion of upto 50% in the existing operation as per office memorandum No.J-11015/30/2004- IA.II (M) dated 07.01.2014.
- iv. The latitude and longitude of the project are 23^o 48' 30'' to 23^o 49' 30'' N and 85^o 51' 15'' to 85^o 52' 45'' E respectively.
- v. Joint Venture: There is no Joint venture.
- vi. Coal Linkage: Coal will be supplied to Power houses and other miscellaneous consumers.
- vii. The land usage of the project will be as follows:

Land use details:

S.N.	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	148.167	0.00	148.167
3.	Wasteland	0.00	0.00	0.00
4.	Grazing land	0.00	0.00	0.00
5.	Surface water bodies	21.43	0.00	21.43
6.	Settlements	0.00	0.00	0.00
7.	Others (specify)	60.27	0.00	60.27
	TOTAL	229.87	0.00	229.87

Pre-Mining:

S.N	LAND USE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	0.00	0.00	0.00
2.	Forest land	148.167	0.00	148.167
3.	Wasteland	0.00	0.00	0.00
4.	Grazing land	0.00	0.00	0.00
5.	Surface water bodies	21.43	0.00	21.43
6.	Settlements	0.00	0.00	0.00
7.	Others (specify)	60.27	0.00	60.27
	TOTAL	229.87	0.00	229.87

Post- Mining:

S.No.	Land use during Mining	Land Use (ha)				Total
		Plantation	Water Body	Public use	Undisturbed	
1	External OB Dump+ Internal OB Dump	87.00+12.03	4.50	0.00	0.00	103.53
2	Excavation	6.00	35.21	0.00	18.68	59.89
3	Roads			19.30		19.30
4	Built up Area	3.12	0.00	0.00	0.00	3.12
5	Green Belt					
6	Undisturbed Area	44.03	14.00	0.00	0.00	89.11
	Total	197.26	39.71	19.30	18.68	229.87

Core area :

S No.	Land use category	15th Year	20th Year
1	Quarry & Internal Dump	76.42	Mine Lagoon 35.21 Plantation On Internal Dump 12.03 Lagoon at Internal Dump Lower Benches 4.50 Plantation 6.0 Batter 18.68
2	OB Dump	87.00	Plantation
3	Infrastructure/ Workshop/ CHP	3.12	Plantation after dismantling
4	Road	19.30	Public Use
5	Unworked Area & Safety Zone	44.03	Plantation
	Total	229.87	-

- iv. The total geological reserve is 29.62 MT. The mineable reserve 19.53 MT, extractable reserve is 19.53 MT. The per cent of extraction would be 65.93 %.
- v. The coal grade is E .The stripping ratio is 1.47 m³ /tonne. The average Gradient is 16 – 23 deg. There will be 7 seams with thickness ranging from 1 m to 23 m.
- vi. The total estimated water requirement is 910 m³/day. The level of ground water ranges from 3.77 m to 6.00 m.
- vii. The Method of mining would be Opencast with shovel-dumper combination.

- viii. There is one external OB dump with Quantity of 24.00 million m³ out of total OB of 28.66 million m³ in an area of 87 ha with height of 60 meter above the surface level and one internal dump with Quantity of 4.66 Mbcm in an area of 16.53 ha.
- ix. The final mine void would be in 35.21 Ha with depth of 100 m and the Total quarry area is 76.42 Ha. Backfilled quarry area of 18.03 Ha shall be reclaimed with plantation. A void of 39.71 ha with depth of average 60-70 m which is proposed to be converted into a water body
- x. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xi. The **life of mine** is 13 years including 2013-14.
- xii. **Transportation:** Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at siding into railway wagons.
- xiii. There is R & R involved. However number of PAFs are nil as this an expansion proposal within same ML area.
- xiv. **Cost:** Total capital cost of the project is Rs. 142.11 Crores. CSR Cost Rs. 5 per tonne of coal produced. R&R Cost Rs 252.52 lakh. Environmental Management Cost Rs. 4333.47 Lakhs.
- xv. **Water body:** Konar River marks the western limit of mining area and also forms the main drainage of the area. It lies more than 400m away from mine edge. Montico nallah flowing from north to south marks the eastern limit of mine and joins Konar River towards South of the Project. It is 60-70 m away from mine edge.
- xvi. **Approvals:** Board's approval obtained on 23.12.2009. Mining plan has been approved on 23.12.2009. Mine Closure Plan approval on 24.02.2012.
- xvii. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xviii. **Forestry issues:** Total forest area involved 148.167 ha for mining. Stage -II FC obtained vide letter no. 8-28/2003-FC , dated 02.03.2009.
- xix. Total **afforestation** plan shall be implemented covering an area of 197.26 ha at the end of mining. Green Belt over an area of 89.11 ha. Density of tree plantation 2500 saplings/ Ha. of plants.
- xx. There are no **court cases/violation** pending with the project proponent.

21.10.2 EC Compliance report: The Compliance Monitoring Report for Govindpur Phase-II OCP project has been sent by the MoEF, Regional Office, Bhubaneswar vide letter no.103-392/08/EPE dated 21.02.2014. The Committee has noted that EC conditions w.r.t no. of sprinklers; peizometers for monitoring of ground water; sewage treatment plant; satellite imagery; monitoring of heavy metals etc. were partly complied for which the proponent had submitted an Action Plan for compliance.

21.10.3 The proponent submitted the action taken report vis-à-vis the Compliance to the Commitment made during the Public Hearing, which was deliberated in the EAC meeting.

21.10.4 The Committee after deliberations recommended the project for granting Environment Clearance subject to following specific conditions:

- i. The OBD to be rehandled. The depth of the void be reduced to 40 meter by reahndling the external OB dump. The proponent to submit the changed post mining land use to the Ministry and also a regular air quality monitoring be carried out.
- ii. The commitment and action plan be complied within one year from the date of the issue of the EC and submit the report to the MoEF. The EAC shall review the compliance report.
- iii. Fixed sprinkler system will become operational from June 2014.
- iv. It should be ensured that colony people are supplied with treated drinking water.
- v. Piezometers should be installed and made functional by June, 2014.
- vi. The Sewage Treatment Plant shall be operational in 300 days.

PHOTOGRAPHS OF FIXED WATER SPRINKLER



Photographs of Piezometer



PHOTOGRAPHS OF EFFLUENT TREATMENT PLANT





GPS Map Camera

Google

Armo, Jharkhand, India
RV34+895, Armo, Jharkhand 829107, India
Lat 23.803307°
Long 85.856694°
23/05/23 01:29 PM GMT +05:30



GPS Map Camera

Google

Armo, Jharkhand, India
RV34+895, Armo, Jharkhand 829107, India
Lat 23.80327°
Long 85.856761°
23/05/23 01:30 PM GMT +05:30



मेकॉन लिमिटेड (भारत सरकार का संस्थान)

MECON LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)

ANNEXURE-VI



प्रधान कार्यालय (Head Office): राँची-2, झारखण्ड, भारत, Ranchi-2, Jharkhand, India, फोन/Phone : 0651-2483000, फैक्स/Fax : 0651-2482189/2482214
ई-मेल/E-mail : ranchi@meconlimited.co.in, वेबसाइट/Website : https://www.meconlimited.co.in
CIN No. : U74140JH1973GOI001199

WORK ORDER

M/s Meco Technologies Private Limited
414, Rajiv Vihar, Near Vasant Vihar,
Bilashpur, Chhattisgarh
Pin code-495006
Mobile No : 9098727477
Email: mecotechnologiesbsp@gmail.com
GeM Seller Id: 6LSI200001813199

Kind Attn.: Mr. Umesh Gulhare

Amendment No.: Nil
Dated: Nil

Work Order No.	Date of Order	Completion Period	Contractor's Code
11.51.Q7FA/WTP_STP_DETP/01C/9870	22/02/2023	As per clause no. 4.0	MECO

Sub: Work Order for "Construction of 1 No. New Sewage Treatment Plant at Kathara Govindpur along with associated Sewerage Network & Intermediate Pumping Stations and Renovation and Upgradation of 4 Nos. Existing Sewage Treatment Plants along with associated Sewerage Network & Intermediate Pumping Stations at Barkakana, Rajrappa, Parej-Charhi & KDH Dakra Areas of Central Coal Fields Limited, Jharkhand".

Ref.: 1. MECON's Tender Enquiry No. 11.51.Q7FA/WTP_STP_DETP/01C dated 27.07.2022
2. Your offer No. MTPL/BSP/2022 dated 09.08.2022
3. Subsequent discussion ending with your email dated 13.02.2023

Dear Sir,

With reference to above, we, the MECON LIMITED (hereinafter referred to as MECON) are pleased to award order on you (hereinafter referred to as Agency/Contractor) for construction of 1 no. New Sewage Treatment Plant at KATHARA GOVINDPUR along with associated sewerage network & intermediate pumping stations and renovation and upgradation of 4 nos. Existing Sewage Treatment Plants along with associated sewerage network & intermediate pumping stations at BARKAKANA, RAJRAPPA, PARHI-CHAREJ & KDH DAKRA areas of Central Coal Fields Limited, Jharkhand, as per terms & conditions herein below:

1.0 SCOPE OF WORK

- 1.1 Your scope of work for construction of 1 no. New Sewage Treatment Plant at KATHARA GOVINDPUR along with associated sewerage network & intermediate pumping stations and renovation and upgradation of 4 nos. Existing Sewage Treatment Plants along with associated sewerage network & intermediate pumping stations at BARKAKANA, RAJRAPPA, PARHI-CHAREJ & KDH DAKRA areas of Central Coal Fields Limited, Jharkhand, is however briefly detailed below:
- 1.1.1 Your scope of work shall include all works, supplies and services for completion of entire work as detailed in the finalized technical specification, duly agreed by you, (enclosed at Annexure - I). Your scope of work shall also include procurement of all materials including components required for completion of supplies, import of equipment/ component (if any) including obtaining import license and coordinated planning for manufacture, testing, surface preparation for painting, painting, inspection, packing, marking, loading on Trucks/ Trailors and transportation to project site at CCL, Jharkhand.
- 1.1.2 All supplies will be dispatched by Road Transport on door delivery and freight pre-paid basis. In case of dispatch through rail, your responsibility shall include taking delivery of the material at railway siding and delivery to project site at no extra cost.

Handwritten signature/initials

Major Offices:

Page 1 of 47

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मेकॉन लिमिटेड
भारत सरकार का संस्थान

MECON LIMITED

A Government of India Enterprise

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ई-मेल / Email : contractranchi@meconlimited.co.in

वेबसाइट / Website : <http://www.meconlimited.co.in>

CIN : U74140JH1973GOI001199

WO No. : 11.51.Q7FA/WTP_STP_DETP/01C/9870 Dated 22/02/2023

- 1.1.3 Arranging necessary Road Permit/ Way Bill, if required, at Contractor's own cost. MECON shall not provide any Road Permit/ Way Bill to the Contractor.
- 1.1.4 The Contractor shall erect and maintain necessary site office and storages (closed storage or open storage or both), store management and maintain, in a neat manner including drainage, of the area placed at the Contractor's disposal. Capacity of the godown shall be such that it can store required quantity of material for uninterrupted work.
- 1.1.5 Safety, security & safe custody of the material in the stores shall be the sole responsibility of Contractor and Contractor shall employ adequate lighting and watch & ward on round the clock basis for the same.
- 1.1.6 Contractor shall provide proper fencing, notice boards, security, round the clock watch & ward to protect and warn the Public and watching of all works at site and when & where necessary as decided by MECON/ CCL or any competent, statutory or other authority for the protection of the works or for the safety and convenience to the Public or others, and till the work are taken over by CCL. Adequate lighting, shall also be provided at the work place & stores. The lighting in the storage area and in & around the work place shall be so arranged that there is sufficient illumination available in minimum area of 15 meters radius or more around the stores & work place. The contractor shall properly store all materials either issued to him or brought by him to the worksite to prevent damages due to rain, wind, direct exposure to sun etc .and also from theft, pilferage, etc. for proper and speedy execution of his works. The contractor shall maintain sufficient stocks of all materials required by him.
- 1.1.7 Unloading of the plant, equipment, structures & material supplied or received by vehicle/ trailer/ courier etc. at stores/ erection site with your own men, material, tools and tackles, with/ without crane (crane hire charges to be borne by the Contractor) whether that happen on week days, Sundays or holidays. MECON will not be responsible for payment of any overtime work.
- 1.1.8 Opening of packing cases, inspecting & checking of plant, equipment, material, spares, consumables, tools & tackles etc. and replacement of those materials missing, short received, damaged or lost in transit. For all such items, contractor shall be responsible for their safe storage and custody till these are handed over to CCL after completion of erection. Any damage, breakage and lost during this period will be to the account of the contractor.
- 1.1.9 Contractor shall arrange transportation of all items, including free issue items, if any, from stores to erection site.
- 1.1.10 Accounting of all materials received from MECON (if any) and transport from Contractor's stores to project / construction site.
- 1.1.11 Providing adequate manpower (i.e. Skilled/Semi-skilled/un-skilled as required) & supervisory personnel as may be required to complete the work within the completion schedule mentioned in the ITT.
- 1.1.12 Providing all the necessary welding equipment, erection tools, instruments, lifting tackles, scaffolding, handling & construction equipment, material etc. required for completion of the job. All temporary approach roads to the site for carrying out construction work shall be constructed and maintained by the contractor at his own cost.
- 1.1.13 Taking required insurance such as Third-party liability Insurance incl. cross liability cover, Automobile Liability Insurance, Workmen Compensation Policy, etc. and other Insurance coverage specified in this work order.
- 1.1.14 Take necessary labour licenses and insurance coverage for entire tenure of work as per prevalent rules of at respective sites, before commencement of site work.
- 1.1.15 Provide assistance and necessary instruments, consumables and facilities for carrying out necessary inspection and testing by MECON, if required, including inspection by MECON/ CCL.
- 1.1.16 Taking required insurance coverage against all supplies, materials, equipment, labour, personnel including third party liability, risk of damage of own / other equipment and properties.



मेकॉन लिमिटेड
भारत सरकार का संस्थान

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वेबसाइट / Website : <http://www.meconlimited.co.in>

CIN : U74140JH1973GOI001199

WO No. : 11.51.Q7FA/WTP_STP_DETP/01C/9870 Dated 22/02/2023

72.0 GENERAL

- 72.1 No Director or official or employee of MECON shall in anyway be personally bound or liable for acts or obligations of MECON against this order or answerable for any default or omission in the observance or performance of any of the acts, matters or things or conditions which are herein contained.
- 72.2 In this Work Order, words and expressions shall have the same meaning as are respectively assigned to them in the clause under definition enclosed hereinafter.
- 72.3 The Contractor shall arrange to obtain from CCL the required gate pass for entry to the CCL's Works for each one of his workmen and staff as per the CCL's prescribed procedure and format. In the event of loss and/ or damage to the gate pass the Contractor shall pay to CCL the prescribed penalty before a new gate pass can be issued. All gate passes issued as aforesaid to the Contractor shall be returned by the Contractor to CCL on completion of the works or on termination of the Contract.
- 72.4 Penalty may be imposed on the Contractor for non-compliance to the SHE (Safety, Health & Environment) requirements working in the Project as per CCL's norms. Ensure that the vehicles used by them meet the emission norms. These are being checked by CCL's Safety department.
- 72.5 The Contractor shall abide by all the security regulations of CCL in force and promulgated from time to time.
- 72.6 The contractor shall be bound to fulfil all the statutory obligations of the Principal Employer under various acts and rules in force from time to time. He shall maintain such records as are required under respective laws and submit them for scrutiny whenever requested by MECON/ CCL. Contractor will be required to submit the specimen Performa duly filled up as per CCL. Contractors are required to take clearance from Safety Engineering Department before starting the job and follow their instructions strictly.
- 72.7 Payment to the contractor workers is mandatorily to be made through Bank by respective contractors.
- 72.8 Contractors must obtain code for Provident Fund (from RPFC Authority) and ESI code directly in their name.
- 72.9 In line with the requirement of Environmental Clause (ISO 14001), all Bidders shall comply with the following:
- Each and every contractor engaged inside the Works shall maintain the up-to-date training certificate of their employees of Environment. The training shall be provided during safety & Environment training prior to start of the job.
 - Any earth excavated during the job shall be disposed-off in a pre-assigned area. The contractor shall take preventive steps to avoid spillage of earth/ debris during transport/ dumping.
 - Maintain a clear work area in and around the work place
 - Ensure optimum use of water and avoid misuse/ wastage
 - Ensure that the vehicles used by them meet the emission norms. These are being checked by Owner's Safety department.

73.0 SECURITY REGULATIONS

- 73.1 The contractor shall abide by all the security regulations of the Owner in force and promulgated from time to time. All construction material, if any like sand, ballast, gravel, etc. shall be brought with mining challans etc. No material once brought in shall be permitted to be taken outside until the completion of the work and thereafter only with the express sanction of the Engineer. Therefore, in order to facilitate the issue of exit gate permits for equipment and materials, the contractor shall fill in Owner's prescribed entry challans as per the Owner's rules and obtain countersignature on all the copies from Owner's security staff at the entry gate furnishing all the details of such materials and equipment which the contractor intends to take in or take out from the Site.



मेकॉन लिमिटेड
भारत सरकार का संस्थान

MECON LIMITED

A Government of India Enterprise

रॉंची / Ranchi-834002 / झारखण्ड / Jharkhand, भारत / India

फोन / Phone : 0651 – 248 3060/ 3566

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वेबसाइट / Website : <http://www.meconlimited.co.in>

CIN : U74140JH1973GOI001199

WO No. : 11.51.Q7FA/WTP_STP_DETP/01C/9870 Dated 22/02/2023

73.2 Copies of such certified entry challans shall be submitted by the contractor to the Owner and Engineer respectively upon entry for their information and record. No exit gate permit shall be issued for any materials or equipment which have not been entered into the said entry challans and have not been signed by the Owner's security staff at the entry gate at the time of entry.

73.3 It will be the responsibility of the contractor to obtain the necessary licence as required under the Contract Labour (Regulation & Abolition) Act 1970 with latest amendments for all the labour engaged by or through him.

74.0 CORRESPONDENCE

All correspondences with regard to **Commercial** matters shall be made in duplicate to the following address:

Shri Neelesh Binay Sokey,
Sr. General Manager (Contracts),
MECON Limited, Ranchi – 834002
Phone no.:0651 – 248 3556/ 3132
E-mail:contractranchi78@meconlimited.co.in

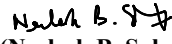
All correspondences with regard to **Technical** matters shall be made in duplicate to the following address:

Sr. General Manager (FS&PD)
MECON Limited, Ranchi - 834002
Vivekananda path
Doranda, Ranchi
Phone : +91651-2483182
E-mail : cclproject@meconlimited.co.in

Kindly acknowledge receipt of this Work Order and return enclosed "Order Acknowledgment" copy within 15 days duly signed on each page as a token of your acceptance of this Work Order with the terms and conditions stipulated therein.

Thanking You,

Yours faithfully,
for **MECON LIMITED**


(Neelesh B. Sokey)
Sr. GM (Contracts)

Enclosures:

1. Annexure – I (TS No. : MEC/11/40/Q7DX/TS/003)
2. Annexure – II (Price Schedule)
3. Annexure - III (Integrity Pact)

SL. NO.	ACTIVITY	% OF TOTAL MINE CLOSURE COST	AMOUNT IN LAKH (RS.)
	Landscaping of the clear land for improving its esthetic	0.30	9.34
F	Plantation		
	Plantation over area obtained after dismantling	0.50	15.56
	Plantation around the fencing	0.20	6.22
	Plantation over the cleared off external OB Dump	0.02	0.62
G	Monitoring/ Testing of paramaters for three years		
	Air Quality	0.22	6.85
	Water Quality	0.20	6.22
H	Entrepreneurship Development (Vocational/ skill development training for sustainable income of affected people)	0.26	8.09
I	Miscellaneous and other mitigative measures	2.00	62.24
J	Manpower cost for supervision	0.80	24.90
	Total	100.00	3111.92

Bio-Environment Conservation at Govindpur Ph-II OCP

The mine has been started very recently, how ever the work of reclamation, as given in the condition, is in progress. The plantation is done as per laid down norms i.e. 2500 per ha.

So far 314.53 Ha of area has already been planted in the nearby areas. Plantation, as stipulated, will be under taken from time to time. Total plantation = 314.53 Ha (including area of Sawang Colliery) and 24 km along road. Species of plants are sisam, gambhar, Bakain, Mahua, Bambu, Karange, Sal, Kathal, Mango etc. However after post mining stage afforestation shall be done on backfilled areas, ext. OB dump etc.

Socio-Economic Issues:

The project has given a boost to the economy of the area by providing primary and secondary employment to local people. The infra-structural facilities provided by the project is benefitting local villagers also. The mine closure activity is likely to significantly reduce the impact of industrial activity on the land apart from increasing the green cover and surface water availability. The standard of living of the local inhabitants has improved significantly due to indirect employment and service opportunities.

Resettlement & Rehabilitation of PAPs

As per earlier proposals of Govindpur Ph-II OCP (1.20 MTPA normative capacity & 1.50 MTPA peak capacity), no PAFs were proposed to be rehabilitated. However, employment to land losers was proposed for acquisition of 101.67 Ha of tenancy land, out of which 47.25 Ha has been acquired & balance 54.42 Ha is under process. Employment to 58 land losers has been given and another 67 land losers are expected to get employment as per CIL policy.

Corporate Social Responsibility

Corporate Social Responsibility (CSR) is taken up at Govindpur Ph-II OCP together with other projects at Kathara Area level. Different villages falling in core zone and adjoining areas are benefited through CSR activities run at Area level. The nature of benefits include maintenance of ponds and community buildings, well digging and renovation, road repair, renovation of schools and construction of boundary wall, medical camps, water supply, skill development for employment generation etc. The current financial outgo on this head is Rs 150.00 Lakh per annum for 2013-14. The expenditure on CSR activities in Kathara Area in last few years is given below:

Year	Amount Spent (Rs. Lakh)
2007-08	19.85
2008-09	22.48
2009-10	41.04
2010-11	42.05
2011-12	48.21
2012-13	163.91
2013-14 (proposed)	150.00

As per new CSR Policy of CIL, the fund for CSR activities is proposed to be allocated from 5% of retained earnings of previous year subject to a minimum of Rs 5 / Tonne of coal production of previous year. This area is moderately populated and the local bodies including MP & MLA are involved in the implementation of CSR activities.

Proposed Budget Allocation to Areas For CSR Activities for 2013-14

S.No	Name of Area	2013-14 (Rs.lakh)
1.	Argada	66
2.	Barka Sayal	121
3.	B&K	104
4.	Dhori	268
5.	Hazaribagh	150
6.	Kathara	150
7.	Kuju	100
8.	Magadh & Amrapali	100
9.	N.K.	161
10.	Piparwar	665

Sector wise - All activities of Action Plan 2022-23

Sl. No.	Sector	Area	Name of the Activiy	Project Cost (Rs. Lakhs)	Expected Expenditure in 2022-23 (Rs. Lakhs)	Name of District	Name of Block	Name of Panchayat	Expected/Targeted Beneficiaries (Special category : SC, ST & OBC)				Applicable section as per Schedule VII	Project Duration	<25KM	>25Km	Abstract (Brief) about the project*
									TOTAL	SC	ST	OBC					
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Drinking Water	Kathara	Handpump in Gaga Village, Argua Panchayat	1.00	1.00	Bokaro	Gomia	Gaga	100	20	10	30	I	1 Year	Yes	No	Handpump with borewell and platform
2	Drinking Water	Kathara	Handpump in Pipilo Village, Kanjkiro Panchayat	1.00	1.00	Bokaro	Nawadih	Kanjkiro	80	20	20	30	I	1 Year	Yes	No	Handpump with borewell and platform
3	Drinking Water	Kathara	Construction of Well in Sarhachiya Panchayat	6.00	5.00	Bokaro	Gomia	Sarhachiya	100	25	10	50	I	1 Year	Yes	No	Construction of Pucca Well
4	Drinking Water	Kathara	Construction of Well in Govindpur E Panchayat	6.00	6.00	Bokaro	Bermo	Govindpur E	120	20	10	50	I	1 Year	Yes	No	Construction of Pucca Well
5	Drinking Water	Kathara	Water Purifier(RO) machine near Block Office, SDO Office and other prominent locations	6.00	6.00	Bokaro	Gomia & Bermo	Various Locations	300	100	50	100	I	1 Year	Yes	No	Procurement and provision of RO machine
6	Drinking Water	Kathara	Water Supply Through pipeline near Garwadih, Sawang	8.00	7.00	Bokaro	Gomia	Sawang	80	10	5	35	I	1 Year	Yes	No	Provision of drinking water for villagers
7	Drinking Water	Kathara	Construction of Deep borewells with solar power operated summersible pumpset, pump house, recharge pit etc for drinking water near Bhama Shah Dharmshala, Palihari Gurudih	12.00	10.00	Bokaro	Gomia	Palihari Gurudih	200	50	25	60	I	1 Year	Yes	No	Infrastructure development projects for rural area
8	Sanitation	Kathara	Provision of Dustbins in nearby villages of Kathara Area	5.00	5.00	Bokaro	Gomia & Bermo	Various Locations	500	100	50	200	I	1 Year	Yes	No	Procurement and provision of dustbins
9	Sanitation	Kathara	Construction of Toilet in Mother Teresa Public School	6.00	5.00	Bokaro	Gomia	Kathara	100	25	10	40	I	1 Year	Yes	No	Construction of pucca toilets
10	Sanitation	Kathara	Construction of Toilet in Saraswati Shishu Mandir, Gomia	6.00	5.00	Bokaro	Gomia	Sawang	100	25	10	40	I	1 Year	Yes	No	Construction of pucca toilets
11	Sanitation	Kathara	Construction of Toilet in UMS, Sarhachiya	6.00	5.00	Bokaro	Gomia	Sarhachiya	80	15	10	20	I	1 Year	Yes	No	Construction of pucca toilets
12	Sanitation	Kathara	Construction of One Toilet near Community Hall, Harijan Basti, Govindpur A Panchyat	6.00	5.00	Bokaro	Bermo	Govindpur A	100	50	10	20	I	1 Year	Yes	No	Construction of pucca toilets
13	Sanitation	Kathara	Community Toilet near Bandh Basti	9.50	8.00	Bokaro	Gomia	Bandh	200	50	25	60	I	1 Year	Yes	No	Construction of toilet for local community
14	Eradicating Poverty	Kathara	Providing Sweaters and Blankets to needy people in nearby villages of Kathara Area	1.90	1.90	Bokaro	Gomia & Bermo	Various Locations	100	25	30	25	I	1 Year	Yes	No	Purchase and providing of blankets to poor and needy
15	Education	Kathara	Providing Library Books at various schools of Katahara Area	1.80	1.80	Bokaro	Gomia & Bermo	Various Locations	500	150	50	200	II	1 Year	Yes	No	Purchasing and providing of library books to various schools of Kathara Area
16	Education	Kathara	Distribution of Science Laboratory Items to various schools of Katahara Area	1.80	1.80	Bokaro	Gomia & Bermo	Various Locations	500	150	50	200	II	1 Year	Yes	No	Purchase and providing of Science Laboratory Items to various schools of Katahara Area

List of Activities to be included in CSR Action Plan 2023-24

Sl. No.	Sector	Name of the Activity	Project Cost (Rs. Lakhs)	Expected Expenditure in 2023-24 (Rs. Lakhs)	Name of District	Name of Block	Name of Panchayat	Expected/Targeted Beneficiaries (Special category : SC, ST & OBC)				Applicable section as per Schedule VII	Project Duration	<25KM	Abstract (Brief) about the project*	Manner of Execution
								TOTAL	SC	ST	OBC					
1	Drinking Water	Construction of Well in Sarhachiya Panchayat	6.00	5.00	Bokaro	Gomia	Sarhachiya	100	25	10	50	I	1 Year	Yes	Construction of Pucca Well	By Self
2	Drinking Water	Construction of Well in Govindpur E Panchayat	6.00	6.00	Bokaro	Bermo	Govindpur E	120	20	10	50	I	1 Year	Yes	Construction of Pucca Well	By Self
3	Drinking Water	Water Supply Through pipeline near Garwadih, Sawang	8.00	7.00	Bokaro	Gomia	Sawang	80	10	5	35	I	1 Year	Yes	Provision of drinking water for villagers	By Self
4	Drinking Water	Construction of Deep borewells with solar power operated summersible pumpset, pump house, recharge pit etc for drinking water near Bhama Shah Dharmshala, Palihari Gurudih	12.00	10.00	Bokaro	Gomia	Palihari Gurudih	200	50	25	60	I	1 Year	Yes	Infrastructure development projects for rural area	By Self
5	Sanitation	Construction of Toilet in Mother Teresa Public School	6.00	5.00	Bokaro	Gomia	Kathara	100	25	10	40	I	1 Year	Yes	Construction of pucca toilets	By Self
6	Sanitation	Construction of Toilet in Saraswati Shishu Mandir, Gomia	6.00	5.00	Bokaro	Gomia	Sawang	100	25	10	40	I	1 Year	Yes	Construction of pucca toilets	By Self
7	Sanitation	Construction of Toilet in UMS, Sarhachiya	6.00	5.00	Bokaro	Gomia	Sarhachiya	80	15	10	20	I	1 Year	Yes	Construction of pucca toilets	By Self
8	Sanitation	Construction of One Toilet near Community Hall, Harijan Basti, Govindpur A Panchyat	6.00	5.00	Bokaro	Bermo	Govindpur A	100	50	10	20	I	1 Year	Yes	Construction of pucca toilets	By Self
9	Sanitation	Community Toilet near Bandh Basti	9.50	8.00	Bokaro	Gomia	Bandh	200	50	25	60	I	1 Year	Yes	Construction of toilet for local community	By Self
10	Skill Development & Livelihood	Procurement of 2 nos. Sanitary Napking Manufacturing Machine for distribution to Women SHGs for self employment of rural women	12.00	12.00	Bokaro	Gomia & Bermo	Various Locations	500	150	50	200	II	1 Year	Yes	Procurement and provision of Sanitary Napkin manufacturing machine for SHGs	By Self
11	Environment & SD	Provision of Solar Light Panel with Battery etc. in in house of 16 Tribal Families residing in Asnapani Village, Siyari Panchayat	8.00	8.00	Bokaro	Gomia	Siyari	80	0	80	0	IV	1 Year	Yes	Provision of Solar Light Panel with Battery etc. in in house of 16 Tribal Families residing in Asnapani Village, Siyari Panchayat	By Self
12	Environment & SD	Provision of Solar Lights in Kasturba Gandhi Residential School, Tenughat & Ashram Awasiya Vidyalaya, Tulbul	6.00	6.00	Bokaro	Gomia	Tenughat & Tulbul	200	50	40	60	IV	1 Year	Yes	Procurement and Provision of Solar Lights	By Self
13	Rural Development	Construction of Chabutra with cover shed near Shiv Mandir, Khetko	6.00	5.00	Bokaro	Petarwar	Khetko	100	25	10	40	X	1 Year	Yes	Construction of platform for village meetings	By Self
14	Eradicating Poverty	Blanket Distribution to Poor and Needy people of Kathara Area	10.00	10.00	Bokaro	Various	All panchyats	2000	###	400	500	x	1 year	Y	MP, MLA and mukhiyas of various panchayats request to provide blankets for needy to protect them from extreme cold	By Self
15	Rural Development	Ghat besides Damodar River near Asnapani Niche Mohalla	8.00	6.50	Bokaro	Gomia	Asnapani	80	20	5	30	X	1 Year	Yes	Construction of ghat for multi purpose use by villagers	By Self
16	Rural Development	Construction of Shed near Surjaadi Talab in Tun Tola and Yadav Tola	10.00	8.00	Bokaro	Gomia	Kathara	150	25	75	25	X	1 Year	Yes	Rural Development project	By Self
17	Rural Development	Construction of Boundary Wall of Marriage Hall at Sadam Paschimi Panchayat	6.50	6.50	Bokaro	Gomia	Sadam Paschimi	200	50	40	60	X	1 Year	Yes	Rural Development project	By Self
18	Drinking Water	Handpump in Gaga Village, Argua Panchayat	1.00	1.00	Bokaro	Gomia	Gaga	100	50	10	20	I	1 Year	Yes	Handpump for Drinking Water	By Self
19	Drinking Water	Handpump in Pilipio Village, Kanjkiro Panchayat	1.00	1.00	Bokaro	Nawadih	Kanjkiro	100	25	10	40	I	1 Year	Yes	Handpump for Drinking Water	By Self
20	Health	Promotion of Yoga in Schools of Kathara Area	4.00	4.00	Bokaro	Gomia & Bermo	Various Panchayats	200	50	40	60	X	1 Year	Yes	Improvement in Health Quality	By Self
21	Health	Awareness on Blood Donation and Organizing Blood Donation Camps at different locations under command area	1.80	1.80	Bokaro	Gomia & Bermo	Various Panchayats	100	50	10	20	I	1 Year	Yes	Awareness on Blood Donation	By Self
22	Health	Community Awareness Programme on Preventive Healthcare, Water and Sanitation	1.80	1.80	Bokaro	Gomia & Bermo	Various Panchayats	200	50	25	60	I	1 Year	Yes	Awareness on Preventive Healthcare, Water and Sanitation	By Self

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23	Sports	Promotion of Rural Sports through organizing training camps and conducting Volleyball Tournament	6.00	6.00	Bokaro	Gomia & Bermo	Various Panchayats	200	50	40	60	VII	1 Year	Yes	Providing sports material, assistance and competitions for promotion of rural sports	By Self
24	Art & Culture	Supply of musical instruments to local musicians for promoting local culture	1.75	1.75	Bokaro	Gomia & Bermo	Various Panchayats	80	15	10	20	V	1 Year	Yes	Promotion of Art and Culture	By Self
25	Education	Distribution of Sports Items to Schools of Kathara Area	1.80	1.80	Bokaro	Gomia & Bermo	Various Locations	500	150	50	200	II	1 Year	Yes	Improvement in Education Quality	By Self
26	Promotion of Sports	Athletics events for young villagers of Kathara Command Area	6.00	6.00	Bokaro	Gomia & Bermo	Various Locations	250	75	25	100	VII	1 Year	Yes	Providing sports material, assistance and competitions for promotion of rural sports	By Self
27	Education	Distribution of Library Books to various Schools	1.90	1.90	Bokaro	Gomia & Bermo	Various Locations	500	150	50	200	II	1 Year	Yes	Improvement in Education Quality	By Self
28	Social Empowerment	Provision of chairs, plastic stools and dari for supporting women SHGs of the area	3.00	3.00	Bokaro	Bermo & Gomia	Various Locations	200	50	40	60	III	1 Year	Yes	Support in Skill Development Activities	By Self
29	Skill Development & Livelihood	Establishment of Community Library and Career Development Centres in Gomia Block	6.00	6.00	Bokaro	Gomia	Various Locations	500	200	80	100	II	1 Year	Yes	Improvement in Education Quality	By Self
30	Drinking Water	Construction of Deep borewells with solar power operated summersible pumpset, pump house, recharge pit etc for drinking water at Baratand Village, Kankhurd Panchayat	12.00	10.00	Bokaro	Gomia	Kankhurd Panchayat	200	50	25	60	I	1 Year	Yes	Drinking Water Facility	By Self
31	Sports	Distribution of Sports Items to nearby Villages	1.80	1.80	Bokaro	Gomia & Bermo	Various Locations	250	75	25	100		1 Year	Yes	Drinking Water Facility	By Self
32	Rural Development	Development of PM-AWAS Cluster in Gomia Block through District Administration	12.60	12.60	Bokaro	Gomia	Siyari	200	50	25	60	I	1 Year	Yes	Infrastructure development projects for rural area and poverty alleviation	Through District Admin., Bokaro
33	Rural Development	Erection of Overhead Line in Ambatola	6.00	6.00	Bokaro	Petarwar	Champi	500	150	50	200	I	1 Year	Yes	Infrastructure development projects for rural area	By Self
34	Drinking Water	Construction of Well in Gonyiyo Panchayat	6.00	6.00	Bokaro	Nawadih	Gonyiyo	120	20	10	50	I	1 Year	Yes	Construction of Pucca Well	By Self
35	Drinking Water	Construction of Kitchen Shed in Bodia Utkramit Madhya Vidyalaya, Bodia	6.00	6.00	Bokaro	Bermo	Bodia Uttaru	200	50	25	60	II	1 Year	Yes	Improvement in Education Quality	By Self
36	Sanitation	Construction of Toilet in Utkramit Uccha Vidyalaya, Champi	6.00	5.00	Bokaro	Petarwar	Champi	100	25	10	40	I	1 Year	Yes	Construction of pucca toilets	By Self
37	Rural Development	Construction of Shed near Ambatola, Champi	6.00	5.00	Bokaro	Petarwar	Champi	150	25	75	25	X	1 Year	Yes	Rural Development project	By Self
38	Sports	Construction of Toilet near Sadam Playground	6.00	5.00	Bokaro	Petarwar	Champi	100	25	10	40	I	1 Year	Yes	Construction of pucca toilets	By Self
39	Skill Development & Livelihood	Establishment of Community Library and Career Development Centres in Bermo Block	6.00	6.00	Bokaro	Bermo	Various Locations	500	200	80	100	II	1 Year	Yes	Improvement in Education Quality	By Self
Total			236.45	217.45												

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AFM
Kathara Area



[Signature]
22/3/23
SO(P&A)
Kathara Area

[Signature]
22/3/23
SO(Civil)
Kathara

[Signature]
Dy. Manager(CD)
Kathara Area

[Signature]
GM, KTA



CENTRAL COALFIELDS LIMITED KATHARA AREA



CSR ACTIVITIES AT A GLANCE

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KATHARA AREA: CSR Activities at a Glance

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Central Coalfields Limited

Central Coalfields Limited (CCL) was formed on 1st November 1975. Central Coalfields Limited is a Category-I Mini-Ratna Company since October 2007. The company has made a spectacular turn around, a couple of years back and hasd gone from step to step by registering record growth in 4Ps- Production, Productivity, Profit and People's care.

Central Coalfields Limited (CCL), the largest mining company in Jharkhand, spread across eight districts of Jharkhand, has strong bonding and attachment with the community in and around its command areas. The prime focus of CCL has always been to address the socio-economic and environmental concerns of the community which is also reflected in its Vision, Mission and Objectives.

Vision

To emerge as a National player in the Primary Energy Sector, committed to provide energy security to the Country, by attaining environmentally and Socially Sustainable Growth , through best practices from Mine to Market

Mission

The Mission of Central Coalfields Limited (CCL) is to produce and market the planned quantity of Coal and Coal products efficiently and economically in Eco-Friendly manner, with due regard to Safety, Conservation and Quality.

Objectives

- To optimize generation of internal resources by improving productivity of resources, prevent wastage and to mobilize adequate external resources to meet investment need.
- To maintain high standards of Safety and strive for an accident free mining of Coal.
- To lay emphasis on afforestation, protection of Environment and control of Pollution.
- To undertake detailed exploration and plan for new Projects to meet the future Coal demand.
- To modernize existing Mines.
- To Develop technical know-how and organizational capability of Coal mining as well as Coal beneficiation and undertake, wherever necessary, applied research and development work related to Scientific exploration for greater extraction of Coal.

- To improve the quality of life of employees and to discharge the corporate obligations to Society at large and the community around the Coalfields in particular.
- To provide adequate number of skilled manpower to run the operations and impart technical and managerial training for up gradation of skill.
- To improve consumer satisfaction.
- To enhance the CSR activities specifically in the field of Health, Sanitation and Drinking Water in the Surrounding villages.

CSR Objectives

CCL is using CSR as a strategic tool by integrating organisational targets with the aspirations of the community with a focus on inclusive growth of all stakeholders making mining socially sustainable. The CSR activities of CCL are carried within the radius of 25 KM of its operational mines for development of SC/ST, BPL, PAP and villagers in the project areas as per CIL CSR Policy.

Priority Areas

- Drinking Water
- Sanitation
- Education
- Skill Development
- Women Empowerment
- Health
- Infrastructure
- Sports/ Culture
- Social Empowerment
- Environment & SD

CSR Activities undertaken at Kathara Area

The year wise CSR budget sanctioned and allotted to Kathara Area is as follows:

Table 1: CSR Activities at Kathara Area (2014-15 to 2019-20)

Financial Year	No. of Activities	Amount Sanctioned
2014-15	40	176.40
2015-16	21	129.65
2016-17	23	106.00
2017-18	18	49.90
2018-19	12	44.70
2019-20	29	114.22
Sum Total	143	620.87

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

The Priority areas for undertaking CSR activities from 2014-15 to 2019-20 can be seen as detailed in below table:

Table 2: CSR Activities at Kathara Area (2014-15 to 2019-20)

Sector	No. of Activities	Amount Sanctioned
Drinking Water & Water Management	63	291.37
Infrastructure	28	150.40
Sanitation	25	80.70
Education	14	53.50
Skill Development	6	28.00
Sports	4	10.90
Others	3	6.00
Total	143	620.87

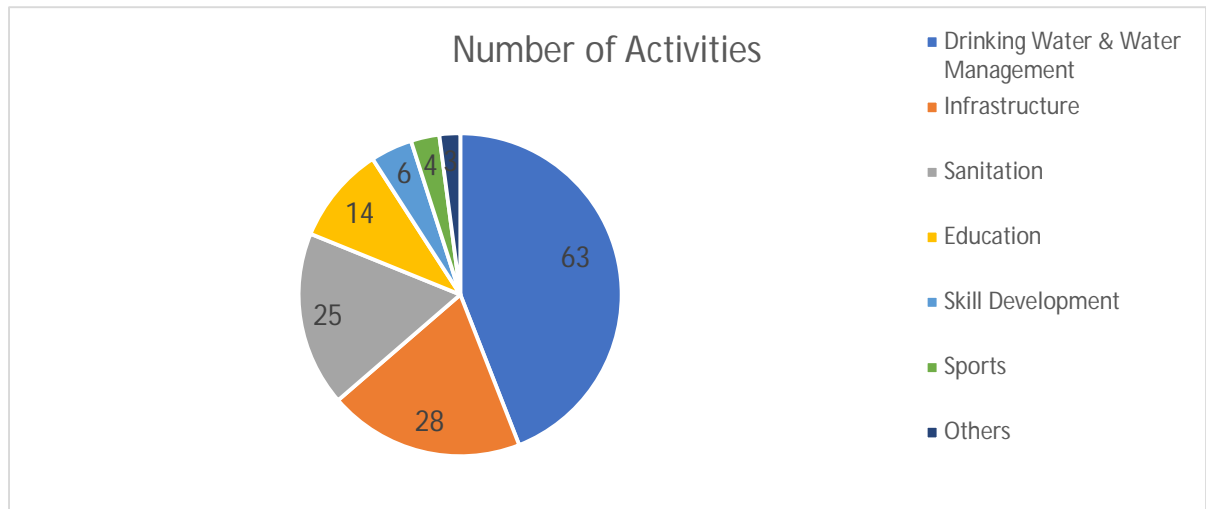


Figure 1: Number of Activities undertaken Sectorwise

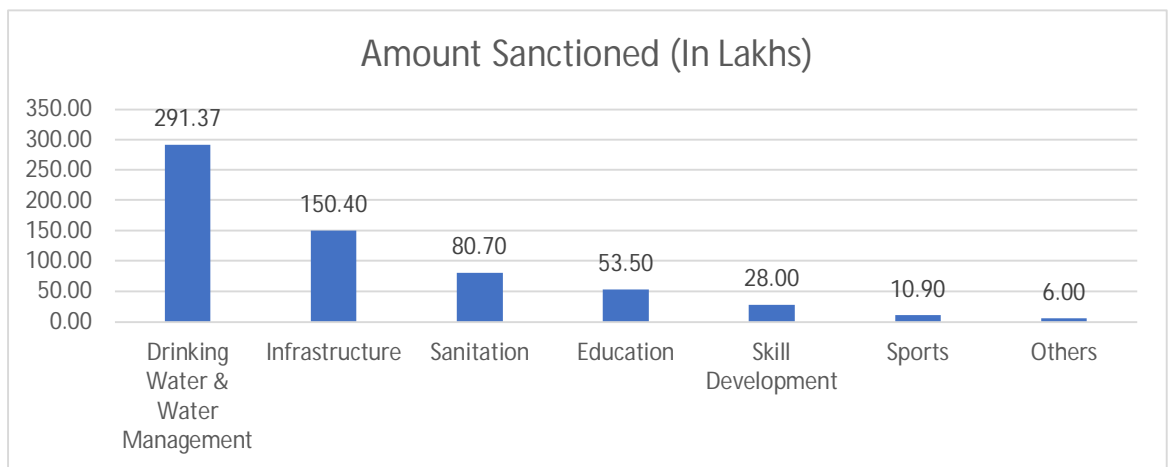


Figure 2: Amount Sanctioned Sectorwise

Drinking Water & Water Management

Drinking Water and Water Management has been one of the priority areas while preparation of CSR Action Plan and major portion of CSR Budget is allotted to this sector. 47% of the fund allotted to Kathara Area has been spent on Drinking Water & Water Management. Kathara Area has worked in area of Drinking Water through installation of handpumps, Wells, Deep Borewells and Ponds.

Table 3: Activities undertaken under Sector "Drinking Water & Water Management"

S.No.	CSR Intervention	Numbers	Locations
1.	Handpump	15	Pilpilo, Sawang, Kaccho, Nayabasti, Hosir, Rathand, Mahlibandh, Tetriyataand, Barai, Narayanpur, Champi
2.	Well	14	Karmatia, Govindpur, Kathara, Sawang, Khetko, Gonimayo, Hosir, Kathara, Nayabasti, Sarhachiya, Kanjkiro, Parariya, Dudhmatia
3.	Deep Borewell	17	Champi, Govdinpur E, Sadam West, Gomia, Khetko, Jarangdih, Hosir, Asnapani, Sadam East, Mahlibandh, Sawang, Kaccho, Armo
4.	Ponds	10	Pilpilo, Asnapani, Sawang, Pipradih, Bhandarkudar, Pararia, Kathara Basti, Armo, Jhirkey, Nainataand
5.	Pipe Line	12	Sawang, Jarangdih Main Market, Hazari Patwa Basti, Jhirki, Sawang Basti, Paswan Tola, Bhaltangoria, Dom Tola, Yadav Tola, Kathara Basti, Mahli Bandh
6.	Water Tank	1	Karmatia
7.	Check Dam	1	Kanjkiro



Figure 3: Handpump near Babu Quarters, Jarangdih

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास



Figure 4: Handpump near Mansa Nagar

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

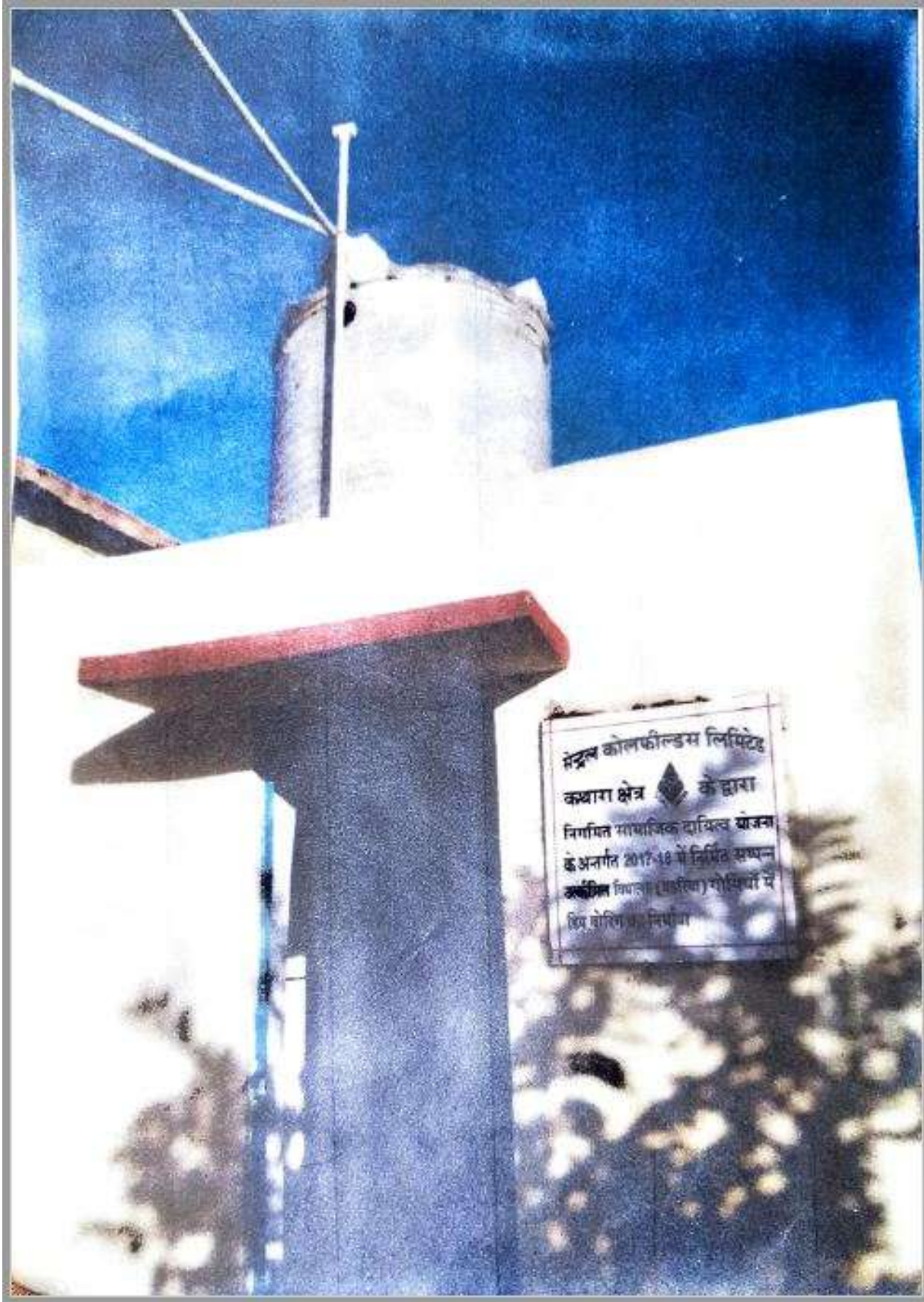


Figure 5: Deep Boring at Utkramit Vidyalaya, Padaria

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास



Figure 6: Deep Boring at Middle School, Champi

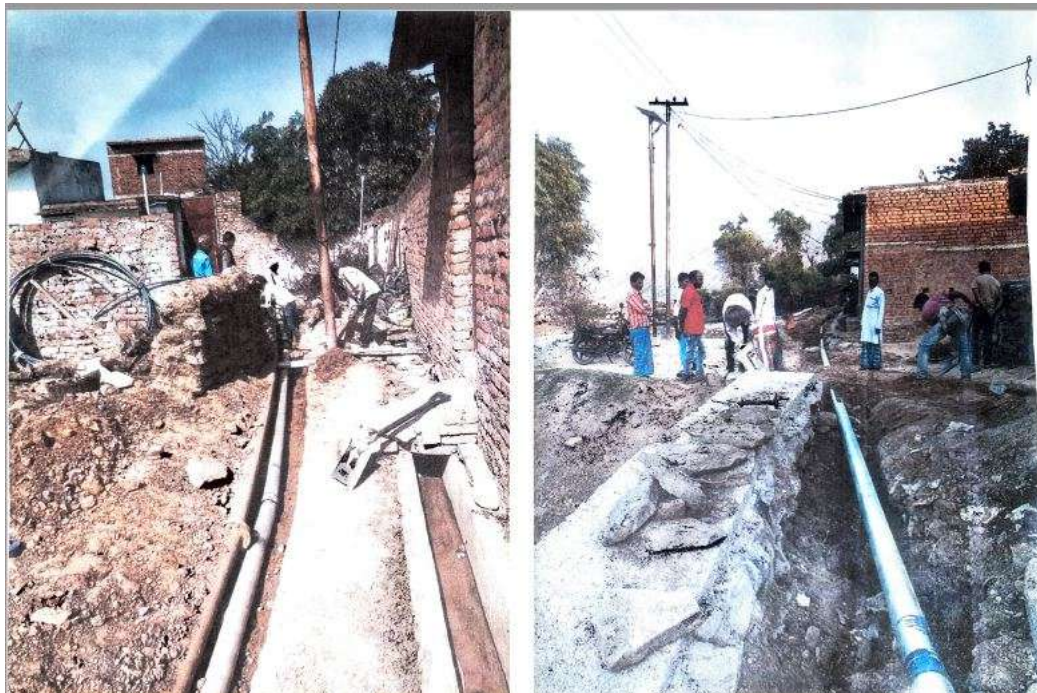


Figure 7: Pipeline at Jhirki

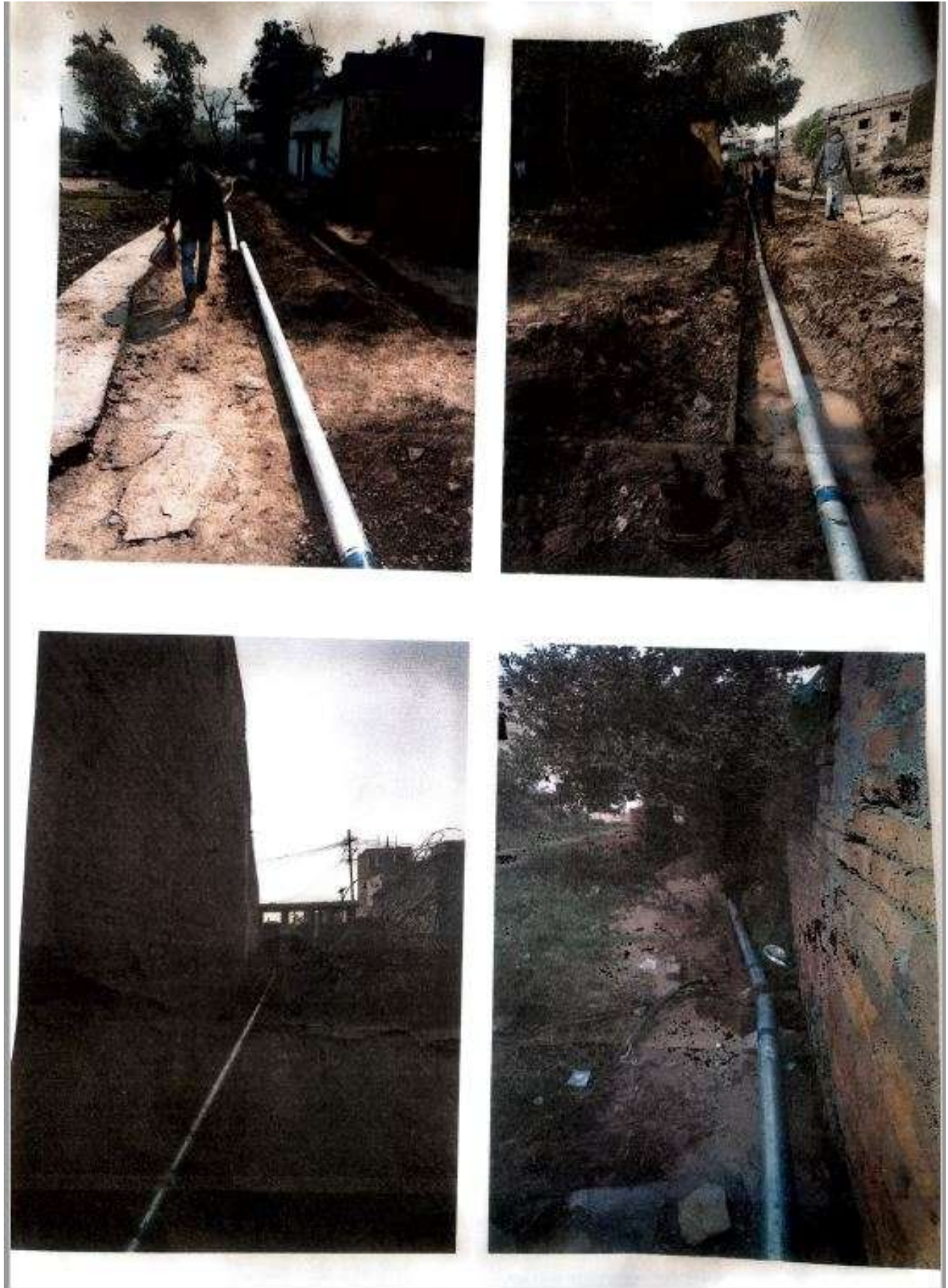


Figure 8: Fabrication of Pipeline at Jhirki

Infrastructure

Infrastructure development has been the second most preferred area of CSR intervention at Kathara Area. Nearly 1.50 Crores has been spent on various activities of Infrastructure development.

Table 4: Activities undertaken under Sector "Infrastructure"

S.No.	CSR Intervention	Numbers	Locations
1.	Boundary Wall	9	Kanjkiro Playground, Sasbera Community Centre, Kathara Graveyard, Tenughat Community Centre, Khetko Playground, Armo Playground etc.
2.	PCC Road	8	Siyari, Bodia Basti, Sadam East, Khetko, Patwa Tola Hazari, Thakur tola, Bhaltangoria
3.	Shed	5	Kathara Basti, Jarangdih, Khetko, Gandhi Gram, Mahli Bandh
4.	Community Hall	4	Khetko, Kathara Community Centre, Hazari More, Kathara Basti



Figure 9: Construction of Three Rooms, Floor and Community Hall at Kathara



Figure 10: Community Hall at Sawang



Figure 11: PCC Road at Patwa Basti, Hazari Panchayat

Sanitation

Kathara Area has undertaken 25 activities under Sanitation sector worth Rs. 80.70 Lakhs in recent years. Out of 19 activities related to construction of toilets, 18 has been constructed in various schools of the area preferably girls school which has helped in increasing the attendance of girls students in school. The major activities undertaken under Sanitation are as follows:

Table 5: Activities undertaken under Sector "Sanitation"

S.No.	CSR Intervention	Numbers	Locations
1.	Toilets	19	Champi Utkramit High School, Turi Tola Utkramit Vidyalaya, Gomia Girls High School, MIA School Jhirkey, Rajendra High School, Ambedkar Uchha Vidyalaya Tulbul, Hazari Middle School, Palihari Gurudih Girls High School, Adarsh High School Gomia, Sarsawati Shishu Vidya Mandir Champi, Middle School Dudhmatia, Bodia Utkramit Middle School etc.
2.	Drains	6	Govindpur, Sadam Purvi Panchayat, Lahariataand, St. Paul School Govindpur



Figure 12: Construction of Toilets at Utkramit Vidyalaya, Turi Tola, Kathara

Education

Kathara Area has undertaken 14 activities under Education sector worth Rs. 53.50 Lakhs in recent years. The activities undertaken in Education sector ranged from construction of Room, Boundary Walls, Electric Wiring, Drinking Water facility etc. In current year, it is proposed for establishment of a Community Library and provision of Science Laboratory at Schools. The major activities undertaken under Eductaion are as follows:

Table 6: Activities undertaken under Sector "Education"

S.No.	CSR Intervention	Numbers	Locations
1.	Class Rooms	3	Swami Vivekanand School, Bandh Madarsa, Adarsh Uccha Vidyalaya Gomia
2.	Boundary Wall	3	+2 Gomia Uccha Vidylaya, Utkramit Middle School Jhoparpatti, Rajkiya Urdu Utkramit Middle School Asnapani
3.	Electric Wiring	2	Swami Vivekanand School, +2 Gomia Uccha Vidyalaya



Figure 13: Construction of Classroom at Vivekanand High School, Jarangdih

Skill Development

Kathara Area has established a Community Centre in September 2019 after making necessary repair and maintenance of RR Shop Guest House, Jarangdih. Computer Training has been provided to 50 females of Kathara area in the first training programme conducted at the Skill Development Centre. Due to imposition of social distancing norms, currently no training programme is running at the centre. Three trainings on Mobile Repairing, Food Processing and Beautician Training will be started after lifting of Social Distancing norms. Sewing Machines has been procured for establishment of a Sewing Centre for empowering women in getting self employment.



Figure 14: Inauguration of Skill Development Centre, Kathara Area



Figure 15: Computer Training



Figure 16: Computer Training

Kathara Area has also utilized the Skill Training Programme provided by Central Institute of Plastics Engineering & Technology (CIPET), Ranchi to provide training to PAPs and youths of nearby villages of Kathara Command Area. In the first batch conducted from 11.02.2019 to 09.08.2019, 40

Candidates were trained and out of which 34 Candidates successfully completed the training and got placed. **Out of these 34 Candidates, 28 Candidates belong to Kathara Area who have been successfully placed and are employed in Plastic Industry.** In the next batch too, many candidates of Kathara Area got training and placement.



Figure 17: PAP's trained through CIPET, Ranchi



Figure 18: PAP from Kathara Area trained and placed through CIPET, Ranchi

Sports

CSR through promotion of Sports helps empower communities, changes mentalities, develops skills, builds national pride and helps in breeding next generation leaders. With this view in mind, CCL has entered into joint initiative with State Government Jharkhand and running JSSPS programme. Last year, Team from Kathara Area was deputed to Godda district for conducting Phase-I and Phase-II trials

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

for selection of Sports cadets. Kathara Area conducted selection trials for 34700+ students during Phase-I which was the highest among all areas.



Figure 19: Registration for Khel Mahakumbh Phase II



Figure 20: Khel Mahakumbh



Figure 21: Khel Mahakumbh Trials at Godda



Figure 22: Khel Mahakumbh Trials at Godda



Figure 23: Khel Mahakumbh Trials at Godda



Figure 24: Khel Mahakumbh Trials at Godda



Figure 25: Khel Mahakumbh Trials at Godda

CCL has been organising Grameen Football Tournament in all areas to promote sports among rural areas. Kathara Area conducted Grameen Football in December 2019 which saw the **participation of highest no. of teams all areas. 40 teams participated in Grameen Football organised at Kathara Area.**



Figure 26: CMD, CCL inaugurating Grameen Football Tournament at Kathara Area

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

Health

Kathara Area has conducted various health camps under CSR. The snapshot of camps conducted in last two years is as below:-

S.No.	Name of Camp	No. of Camps	No. of Beneficiaries	No. of Camps	No. of Beneficiaries
1	Anemia Detection Camp/ Diabetic Detection Camp	4	186	2	272
2	Village Health Checkup Camp	32	905	42	693
3	School Health Camp	20	800	20	1903
4	CSR patients at Hospital	0	4100	NA	4753
Total		56	5991	64	7621



Figure 27: School Health Camp at Kathara Area



Figure 28: Anemia Detection Camp

CSR in time of Corona

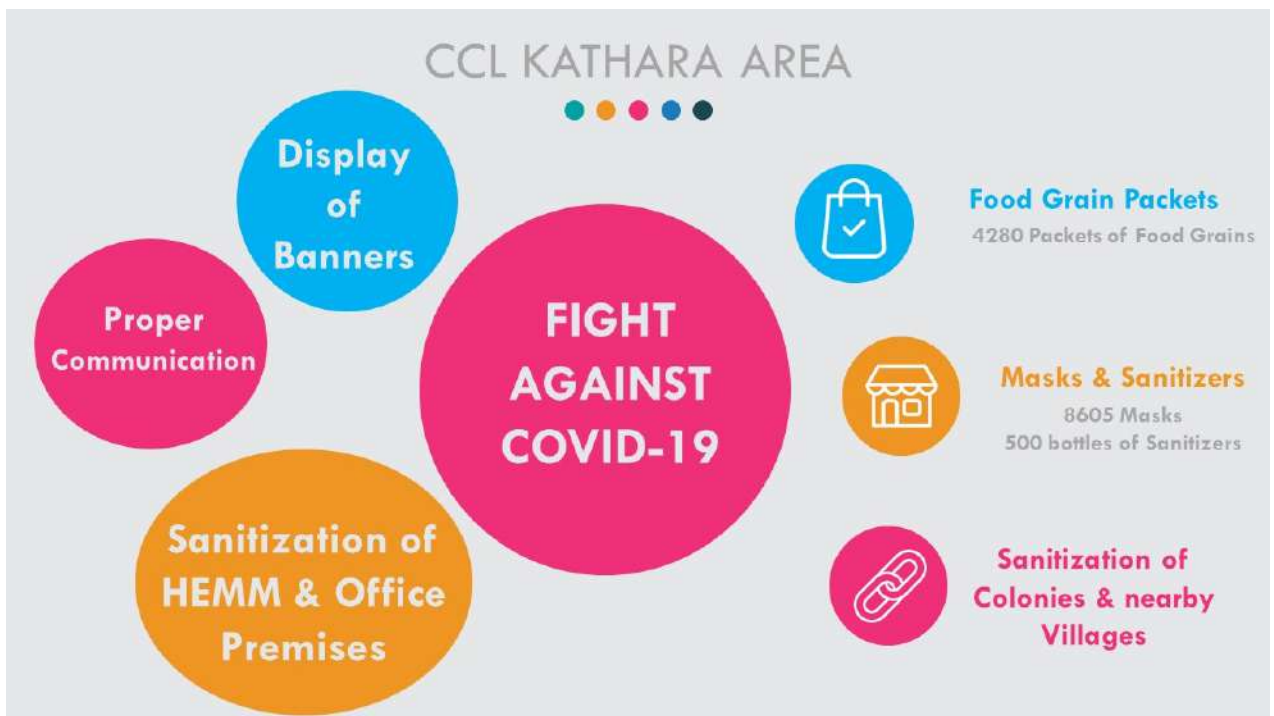


Figure 29: Fight against Corona at Kathara Area

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

Display of Banners



Figure 30: Display of Banners

Proper Communication



Figure 31: Proper Communication

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

Sanitization of Office Premises



Figure 32: Sanitization of Office Premises

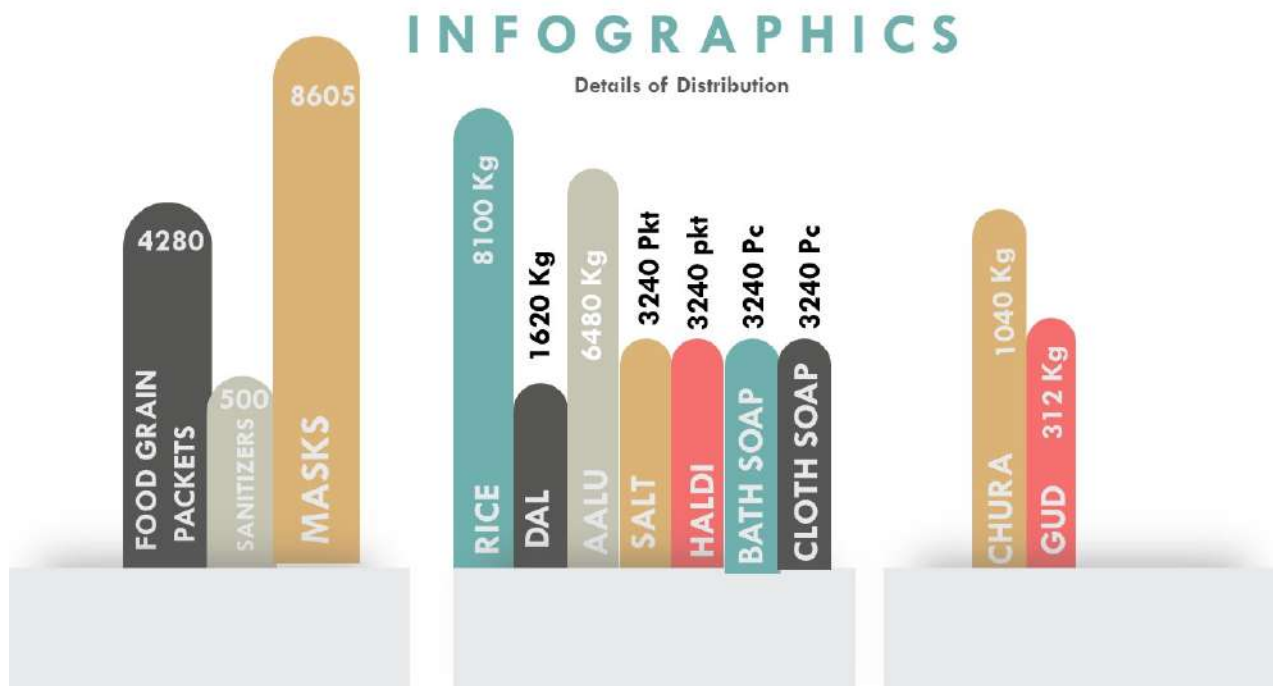


Figure 33: Infographics

Distribution in Progress



Figure 34: Distribution in Progress

Media Coverage



महाप्रबंधक कथारा के सौजन्य से स्वांग कोलियरी क्षेत्र का सेनेटाइजेशन कार्य प्रारंभ

आजकल विद्यार्थी सेक्टर में भी महामारी फैल रही है। कोलियरी क्षेत्र के सौजन्य से स्वांग कोलियरी क्षेत्र का सेनेटाइजेशन कार्य प्रारंभ किया गया। इसके लिए स्वयंसेवकों की टोली का गठन किया गया है। इस टोली के सदस्यों को आवश्यक सामान प्रदान किया जा रहा है।

कथारा चार नंबर दुर्गा मंडप में सीसीएल के सीएसआर फंड से अनाज का हुआ वितरण



जारंगडीह दक्षिणी पंचायतवासियों के बीच किया गया खाद्य पदार्थों का वितरण

महाप्रबंधक महेंद्र कुमार पंचायत के निर्देश पर चंदन कुमार की उपस्थिति में किया गया और लोगों से आग्रह किया गया है कि कोरोनावायरस के संक्रमण को रोकने के लिए फेस मास्क या अन्य सरकार के द्वारा 14 अप्रैल तक लॉक डाउन को घोषणा किया गया है जिसका अर्थ सभी अहम गतिविधियों को रोकना है।

जरूरतमंदों के बीच खाद्यान्न और मास्क का वितरण



कथारा (बेल्गाँव) के महाप्रबंधक एस.के. शर्मा ने बताया कि कोरोनावायरस के बीच खाद्य एवं मास्क का वितरण सीएसआर फंड से किया जा रहा है। 1 हजार 2 सौ 15 जरूरतमंदों के बीच 2.5 किलोग्राम चावल, अनाज किलो दाल, 1 किलो आलू, 1 किलो मक्का, 2 पीस सामू, लवंग एवं एक चम्मच जैतून तेल का वितरण से किया जा चुका है।

जारंगडीह उतरी पंचायत भवन में सीसीएल सीएसआर फंड से अनाज वितरण

बेल्गाँव/कथारा: पिछले कुछ दिनों से सीसीएल कथारा प्रखंड द्वारा लगातार गरीबों, मजदूरों के बीच अनाज वितरण का कार्यक्रम चला रहा है इसी के तहत मंगलवार को सीएसआर फंड के माध्यम से बेल्गाँव प्रखंड के जारंगडीह उतरी पंचायत में गरीबों, मजदूरों के बीच अनाज का वितरण किया गया जिसमें सीसीएल अधिकारी चंदन कुमार के अलावा एससी सदस्य एसबी दिनेश्वर, पंचायत के मुखिया इन्द्रियाज अंसारी उपमुखिया रोहान धारी, कमलेश गुप्ता आदि लोग उपस्थित थे। वहीं दूसरे तरफ बीडिया दक्षिणी पंचायत के मुखिया धनश्याम प्रसाद द्वारा कथारा स्थित कुष्ठा वेदना बला में गरीबों, भूखे व मुकलिसों के बीच खिचड़ी का वितरण किया। कुल मिलाकर लॉकडाउन के घोषणा के बाद से ही क्षेत्र में मददकारों की कमी देखने को मिली। हर दिन किसी ना किसी माध्यम से गरीबों को खिचड़ी के साथ-साथ अनाज भी उपलब्ध हो जाता है।

सीसीएल कथारा क्षेत्र के सीएसआर योजना ने किया अनाज का वितरण



सीसीएल कथारा ने बांटे अनाज व मास्क

कथारा: सीसीएल कथारा ने लॉकडाउन में अनाज-मास्क का वितरण और 20 कॉलोनीयों में सेनेटाइजेशन का काम किया है। यहां सीसीएल कथारा के अधिकारी चंदन कुमार ने कहा कि सीसीएल मुख्यालय एवं कथारा महाप्रबंधक एनके पंचायती के निर्देश पर क्षेत्र के जरूरतमंदों के बीच अनाज का वितरण किया जा रहा है। यहां अमित टोपी एवं अन्य कर्मी हैं।

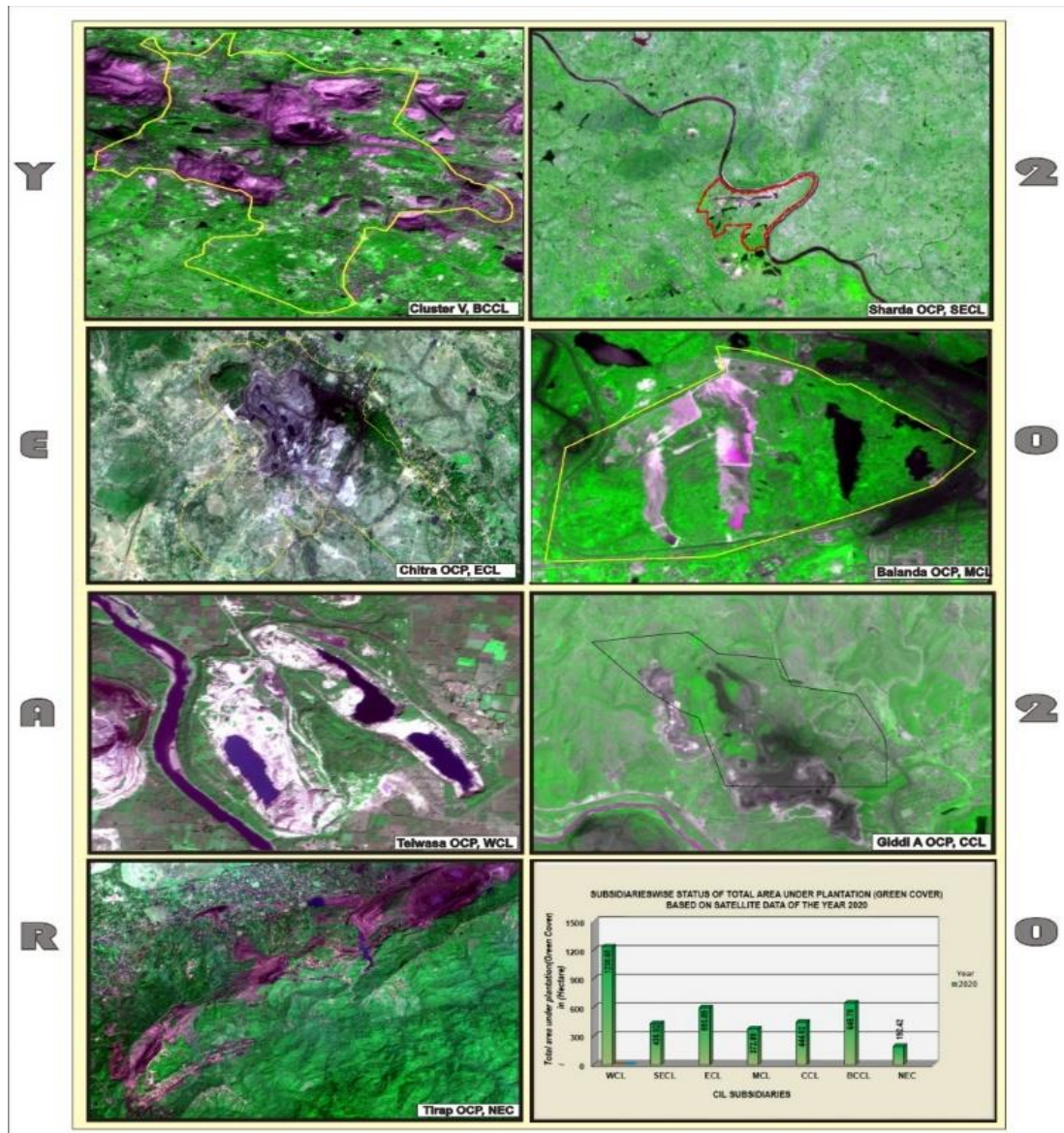
Figure 35: Media Coverage

हमारी प्राथमिकताएँ: गरीबों, ग्रामीणों, श्रमिकों एवं किसानों का सर्वांगीण विकास

**Together We can and
We will make the Difference.**

Thanks and Regards
**CSR Team,
Kathara Area**

Land Restoration / Reclamation Monitoring of 46 Opencast projects, 09 Cluster of mines and 05 Underground mines of CIL producing less than 5 m.c.m. (Coal+OB) based on Satellite Data for the Year 2020



Submitted to
Coal India Limited

**Land Restoration / Reclamation Monitoring of 46 Opencast Projects, 09
Cluster of mines and 05 Underground mines of CIL producing less than
5 m.c.m. (Coal+OB) based on Satellite Data for the Year 2020**

March- 2021



**Remote Sensing Cell
Geomatics Division
CMPDI, Ranchi
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Executive Summary

- 1.0 Project** Land restoration/ reclamation monitoring of 60 projects consisting of 46 opencast coal mines, 9 clusters of (OC+UG) mines and 5 Underground mines of different subsidiaries of Coal India Ltd. (CIL) producing less than 5 million cubic meter (Coal+OB) annually, based on satellite data regularly at an interval of three years.
- 2.0 Objective** Objective of the land restoration / reclamation monitoring is to assess the area of backfilled, plantation, social forestry, active mining area, green cover, water bodies, and distribution of wasteland, agricultural land and forest in the leasehold area of these projects. This will help in assessing the progressive status of mined land reclamation and to take up remedial measures, if any, required for environmental protection.
- 3.0 Salient Findings** Out of the total mine leasehold area of 49743.76 Hectares of the 60 projects combine with 46 opencast coal mines, 9 cluster of (OC+UG) mines and 5 Underground mines producing less than 5 mcm (Coal +OB) considered for monitoring during 2020-21; total excavated area is only 7452.33 hectares out of which 938.83 hectares (12.60%) has been planted (*Biologically Reclaimed*), 3025.27hectares (40.59%) area is been under backfilling (*Technically Reclaimed*) and 3488.23 hectares (46.81%) area is under active mining. It is evident from the analysis that 3964.10 hectares (53.19%) area of the 60 projects taken for study for the year 2020-21 is under reclamation and balance 3488.23 hectares (46.81%) area is under active mining. Company wise details are given in Table-1 & Fig-1.
- The Projects selected for land reclamation monitoring in the year 2020-21 are subdivided into three groups viz (A) 46 opencast projects belonging to WCL, SECL, CCL, ECL, MCL & NEC, (B) 09 Cluster of mines of BCCL & ECL and (C) 05 Underground mines of SECL & MCL.
- For 46 nos. of Opencast mines which is indicated as Group (A), in Table – 1, out of total mine leasehold area 24604.03 hectare of 46 OC projects of WCL, SECL, ECL, MCL, CCL & NEC producing less than 5 mcm (Coal+OB) annually considered for

monitoring during 2020-21; total excavated area is 5298.66 hectares, out of which 801.30 hectares (15.12%) area has been planted (Biologically Reclaimed), 2010.71 hectares (37.95%) area is under backfilling (Technical Reclamation) and balance 2486.65 hectares (46.93%) area is under active mining. Company wise details of land reclamation of above 46 projects is given in table - 1 (A) & Fig-1.

- Comparing the status of land reclamation for 46 no. of opencast projects in WCL, ECL, SECL, CCL, MCL & NEC monitored in the year 2020-21 with respect to previous cycle study done for the same set of OC mines in the year 2017-18 in these opencast projects of CIL's subsidiary coal companies, it is evident from the analysis that area under land reclamation has increased from 1681.39 Hectares (43.07%) (Yr. 2017) to 2812.01 Hectares (53.07%) (Yr. 2020-21) which includes both plantation (Biological Reclamation) and areas under backfilling (Technical Reclamation). This increase of 1130.62 hectare area under land reclamation in a period of three years is due to addition of 03 OC projects of ECL and 02 OC projects of SECL and sincere efforts made by CIL's subsidiary companies towards land reclamation their mining area.
- It has been observed that in opencast projects in WCL, SECL, CCL, MCL, ECL & NEC, technical and biological reclamation has either increased or remained static in the leasehold area of opencast projects in the year 2020-21 as compared to the year 2017-18.
- The 46 nos. of opencast projects in WCL, SECL, CCL, MCL, ECL & NEC taken for study of land reclamation monitoring in the year 2020-21: the area under green cover has gone up from 1764.03 Ha (9.79%) area in the year 2017-18 to 2561.48 Ha (10.41%) area in the year 2020-21.
- For 9 nos. of Clustered mines which is indicated as Group (B) in Table -1, out of total mine leasehold of 17047.22 Hectare for total nos of 09 clusters 05 nos in BCCL and 04 nos in ECL producing less than 5 million cu.m. (Coal+OB) annually considered for monitoring during the year 2020-21; total

excavated area 1790.74 Ha, out of which 123.81 Ha (6.91%) area has been planted on backfill (Biologically Reclaimed), 844.49 Ha (47.16%) area is under backfilling (Technical Reclamation) and balance 822.44 Ha (45.93%) area is under active mining.

- In BCCL and ECL, cluster of mines consisting mostly opencast mine and few underground mines have been taken into consideration for land reclamation monitoring in the year 2020-21 on request of these subsidiaries.
- It is evident from Group (B) (refer table -1) that for 09 clusters taken for monitoring of land reclamation, plantation on backfill (Biologically Reclamation) has increased from 31.60 Ha (5.57%) in the year 2017 to 123.81 Ha (6.91%) in the year 2020 and Technical Reclamation has increased from 457.35 Ha (45.94%) in the year 2017 to 844.49 Ha (47.16%) in the year 2020.
- The area under green cover has gone up from 566.96 hectares (8.62%) in the year 2017 to 1179.75 hectares (6.92%) in the year 2020. The decrease of 1.70 % in percentage of green cover in the year 2020 as compared to the year 2017 is due to increase in area of leasehold boundary this year and percentage of green cover generated has been calculated with respect to area of leasehold boundary. Area of leasehold boundary has increased in the year 2020 due to addition of UG and OC mine in SECL and ECL as mentioned in Table-1.
- Total area under reclamation in 09 nos of cluster of BCCL and ECL has gone up from 488.95 hectares (49.11%) in 2017 to 968.30 hectares (54.07%) in 2020-21.
- For 5 nos. of underground mines which is indicated as Group (C), in Table – 1, out of total mine leasehold of 8092.51 Hectare for 02 underground mines of SECL and 03 nos. of Underground mines of MCL producing less than 5 million cu.m. (Coal+OB) annually considered for monitoring during the year 2020-21; total excavated area 362.93 Ha only, out of which 13.72 Ha (3.78%) area has been planted on backfill (Biologically Reclaimed) and 170.07 Ha (46.86%) area is under backfilling (Technical Reclamation) and balance 179.14 (49.36%) area is under active mining.

- Total area under reclamation in 02 nos of UG mine of SECL and 03 nos UG mine of MCL is 183.79 hectares (50.64%) in the year 2020.
- 02 nos each underground and OC mines of SECL and 03 nos of Underground mines of MCL producing less than 5 million cu.m. (Coal+OB) annually considered for the first time for land reclamation monitoring during the year 2020-21. Hence comparison has not been made this year however, data generated of these UG mine will be considered as base data for comparison of status of land reclamation for same set of mine during interval of three year.
- From Table 1; Group (A), (B) and (C) combined, it can be seen that total area of leasehold boundary in the 60nos of project consisting of 46 nos of OC, 09 nos of Cluster of mines and 05 nos of Underground mines of WCL, SECL, ECL, MCL, BCCL, CCL & NEC is 49743.76 Ha; total excavated area is 7452.33 only, out of which 938.83 Ha (12.60%) area has been planted on backfill (Biologically Reclaimed), 3025.27 Ha (40.59%) area is under backfilling (Technical Reclamation) and balance 3488.23 Ha (46.81%) area is under active mining.
- It has been observed that in all subsidiaries of CIL, biological reclamation as well as areas under technical reclamation has increased in the leasehold boundary from 486.48 (9.93%) (Yr.2017) to 938.83 Ha (12.60%) and 1683.86 Ha (34.37%) to 3025.27 (40.59%) respectively.
- Overall, the area under green cover has gone up from 2330.99 hectares (9.48%) in 2017-18 to 3910.54 hectares in 2020-21 as indicated in bar chart (fig-3).
- Total area under reclamation in all subsidiaries of CIL has gone up from 2170.34 hectares (44.30%) in 2017-18 to 3964.10 hectares (53.19%) in 2020-21.

Table-1
Company wise Land Reclamation Status in 46 OC , 09 Cluster of (UG+OC) mines and 05 underground mines producing
(Less than 5 million cu.m. Coal + OB) based on Satellite Data of year 2020

Sl. No.	Coal Company (No. of OC Projects , Cluster of mines & Underground mines)		Area in Hectare (% calculated in respect of total excavated area)																	
			Leasehold / All Right Boundary		Technical Reclamation		Plantation				Area under Active Mining		Total Excavated Area		Total Area under Plantation (% Green Cover generated in Leasehold)		Total Area under Reclamation			
							Biological Reclamation		Other Plantation											
							Area under Backfilling	Area under Plantation on backfill	Plantation on External OB Dumps	Socail Forestry, Avenue Plantation etc.										
1	2	3	4	5	6	7	8	9 (=4+5+8)	10 (=5+6+7)	11 (=4+5)										
	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020		
(A)	PROJECTWISE(OC)																			
1	WCL(14)	WCL (15)	7289.16	7759.95	337.31 26.45%	485.02 33.08%	60.35 4.73%	68.11 4.65%	526.46	760.04	406.54	402.50	877.63 68.82%	913.11 62.27 %	1275.29	1466.24	993.35 13.63%	1230.65 15.86%	397.66 31.18%	553.13 37.72%
2	SECL(05)	SECL (07)	2058.00	4732.67	527.00 52.75%	592.32 47.33%	181.00 18.12%	249.48 19.94%	11.00	63.77	9.00	55.95	291.00 29.13%	409.55 32.73%	999.00	1251.35	201.00 9.77%	369.20 7.80%	708.00 70.87%	841.80 67.27%
3	-	ECL (03)	-	1824.91	-	53.81 35.98%	-	0.00 0.00%	-	25.90	-	33.99	-	95.74 64.02%	-	149.55	-	59.89 3.28%	-	53.81 35.98%
4	MCL(03)	MCL (05)	700.22	2322.58	48.62 24.12%	126.56 24.77%	31.18 15.47%	226.16 44.26%	22.22	26.69	4.09	12.45	121.74 60.40%	158.22 30.97%	201.54	510.94	57.49 8.21%	265.30 11.42%	79.80 39.60%	352.72 69.03%
5	CCL(13)	CCL (13)	6376.05	6376.05	276.25 22.81%	702.86 41.42%	170.20 14.05%	239.74 14.13%	122.86	123.71	81.39	80.57	764.54 63.13%	754.40 44.45%	1210.99	1697.00	374.45 5.87%	444.02 6.96%	446.45 36.87%	942.60 55.55%
6	NEC(03)	NEC (03)	1587.87	1587.87	37.33 17.21%	50.14 22.43%	12.15 5.60%	17.81 7.97%	77.84	121.33	47.75	53.28	167.41 77.19%	155.63 69.61%	216.89	223.58	137.74 8.67%	192.42 12.12%	49.48 22.81%	67.95 30.39%
	TOTAL (A)(38)	TOTAL (A) (46)	18011.30	24604.03	1226.51 31.42%	2010.71 37.95%	454.88 11.65%	801.30 15.12%	760.38	1121.44	548.77	638.74	2222.32 56.93%	2486.65 46.93%	3903.71	5298.66	1764.03 9.79%	2561.48 10.41%	1681.39 43.07%	2812.01 53.07%
(B)	CLUSTERSWISE																			
1	BCCL(04)	BCCL(05)	6576.22	7988.22	457.35 45.94%	657.49 50.55%	31.60 3.17%	27.81 2.14%	108.72	113.72	426.64	504.23	506.65 50.89%	615.44 47.31%	995.60	1300.74	566.96 8.62%	645.75 8.08%	488.95 49.11%	685.30 52.69%
2	-	ECL (04)	-	9059.00	-	187.00 38.16%	-	96.00 19.59%	-	194.00	-	244.00	-	207.00 42.24%	-	490.00	-	534.00 5.89%	-	283.00 57.76%
	TOTAL(B) (04)	TOTAL(B) (09)	6576.22	17047.22	457.35 45.94%	844.49 47.16%	31.60 3.17%	123.81 6.91%	108.72	307.72	426.64	748.23	506.65 50.89%	822.44 45.93%	995.60	1790.74	566.96 8.62%	1179.75 6.92%	488.95 49.11%	968.30 54.07%
(C)	PROJECTWISE(UG)																			
1	-	SECL (02)	-	4256.71	-	0.00 0.00%	-	0.00 0.00%	-	0.00	-	61.72	-	0.00 0.00%	-	0.00	-	61.72 1.45%	-	0.00 0.00%
2	-	MCL (03)	-	3835.80	-	170.07 46.86%	-	13.72 3.78%	-	34.48	-	59.39	-	179.14 49.36%	-	362.93	-	107.59 2.80%	-	183.79 50.64%
	-	TOTAL(C) (05)	-	8092.51	-	170.07 46.86%	-	13.72 3.78%	-	34.48	-	121.11	-	179.14 49.36%	-	362.93	-	169.31 2.09%	-	183.79 50.64%
	TOTAL CIL (A+B+C) (42) (Less than 5 MCM)	TOTAL CIL (A+B+C) (60)	24587.52	49743.76	1683.86 34.37%	3025.27 40.59%	486.48 9.93%	938.83 12.60%	869.10	1463.64	975.41	1508.08	2728.97 55.70%	3488.23 46.81%	4899.31	7452.33	2330.99 9.48%	3910.54 7.86%	2170.34 44.30%	3964.10 53.19%

Note : In reference of the above Table, different parameters are classified as follows :

1. Area under Biological Reclamation includes areas under plantation done on backfilled area only.
2. Area under Technical Reclamation includes area under barren backfilled only
3. Area under Active mining includes coal quarry site, quarry filled with water. Area of Coal Dump has been excluded from Area under Active Mining in this table.
4. Social Forestry and Plantation on external OB dump are not included in Biological Reclamation and are put under separate categories as shown in the table.
5. (%) calculated in the above table is in respect of total excavated area except for "Total area under plantation" where % is in terms of leasehold area.

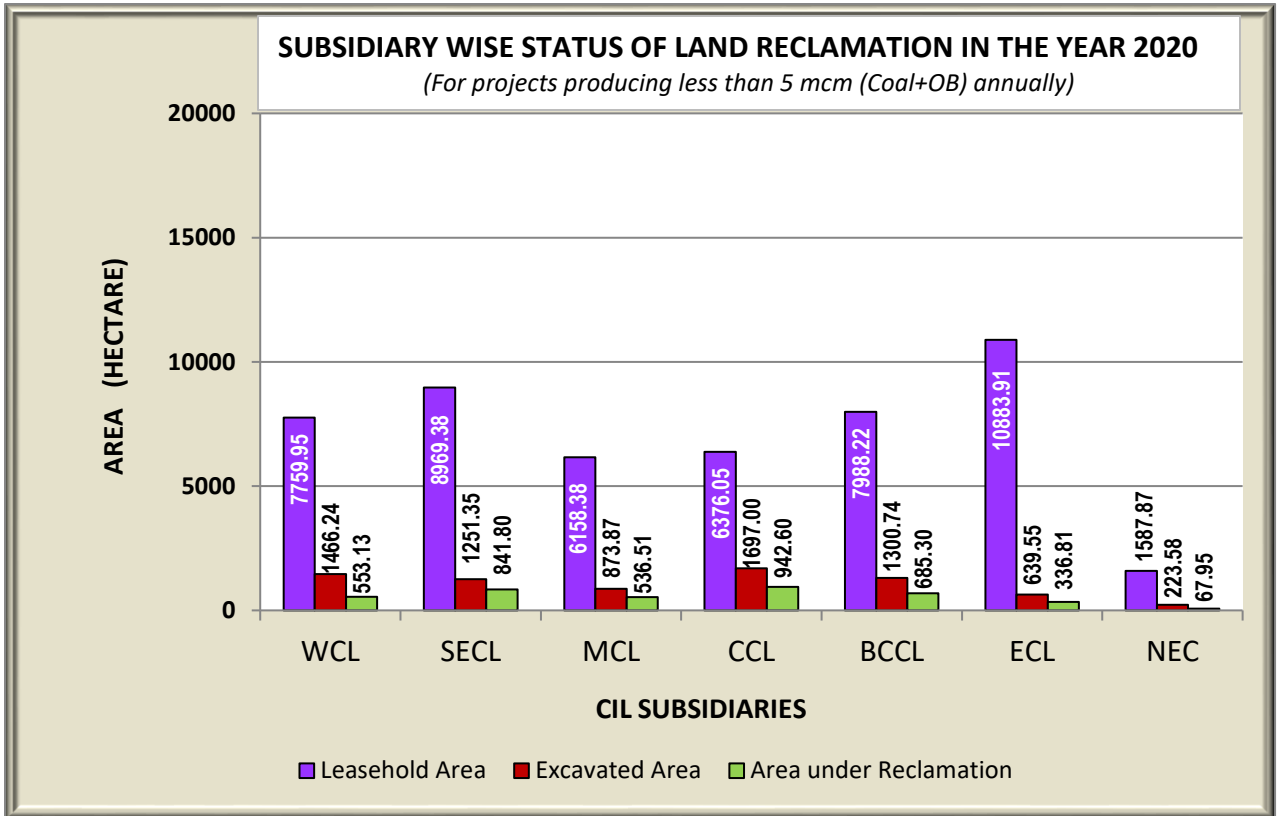


Fig. 1 : Company wise Land Reclamation Status in the Year 2020

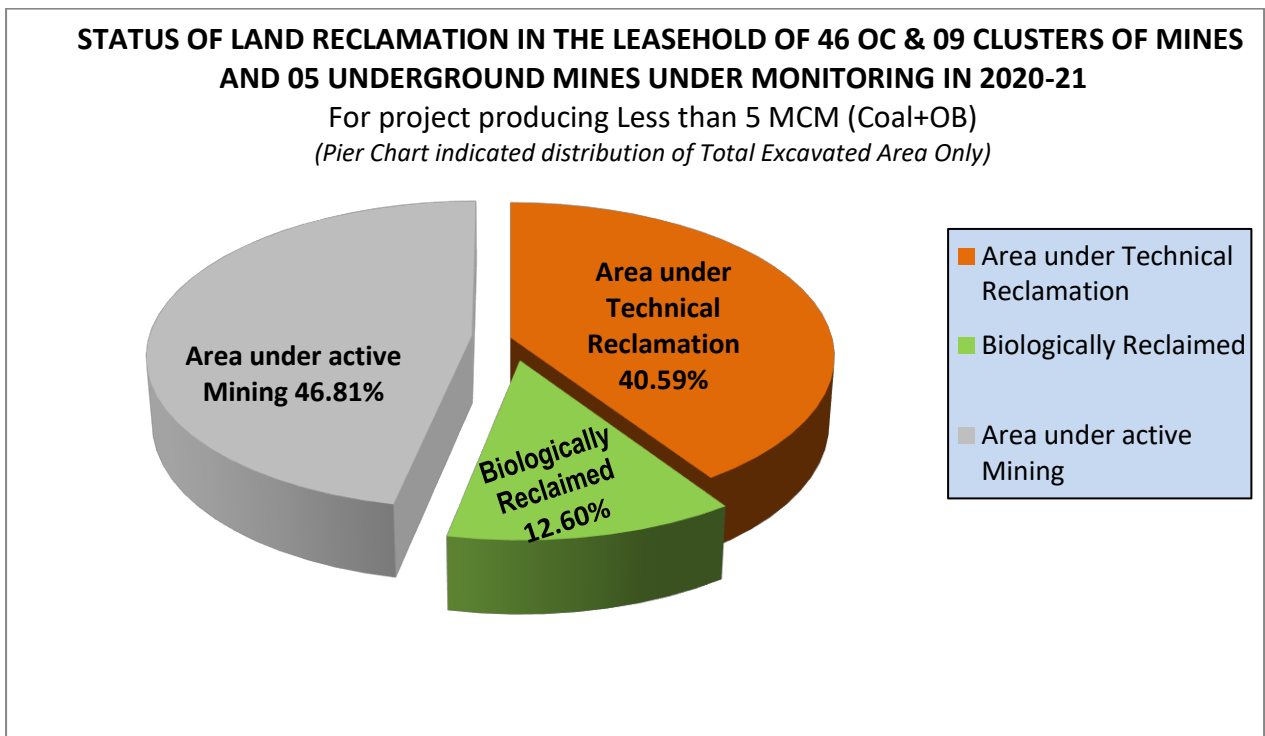


Fig. 2 : Pie Chart indicating Land Reclamation Status in 2020-21

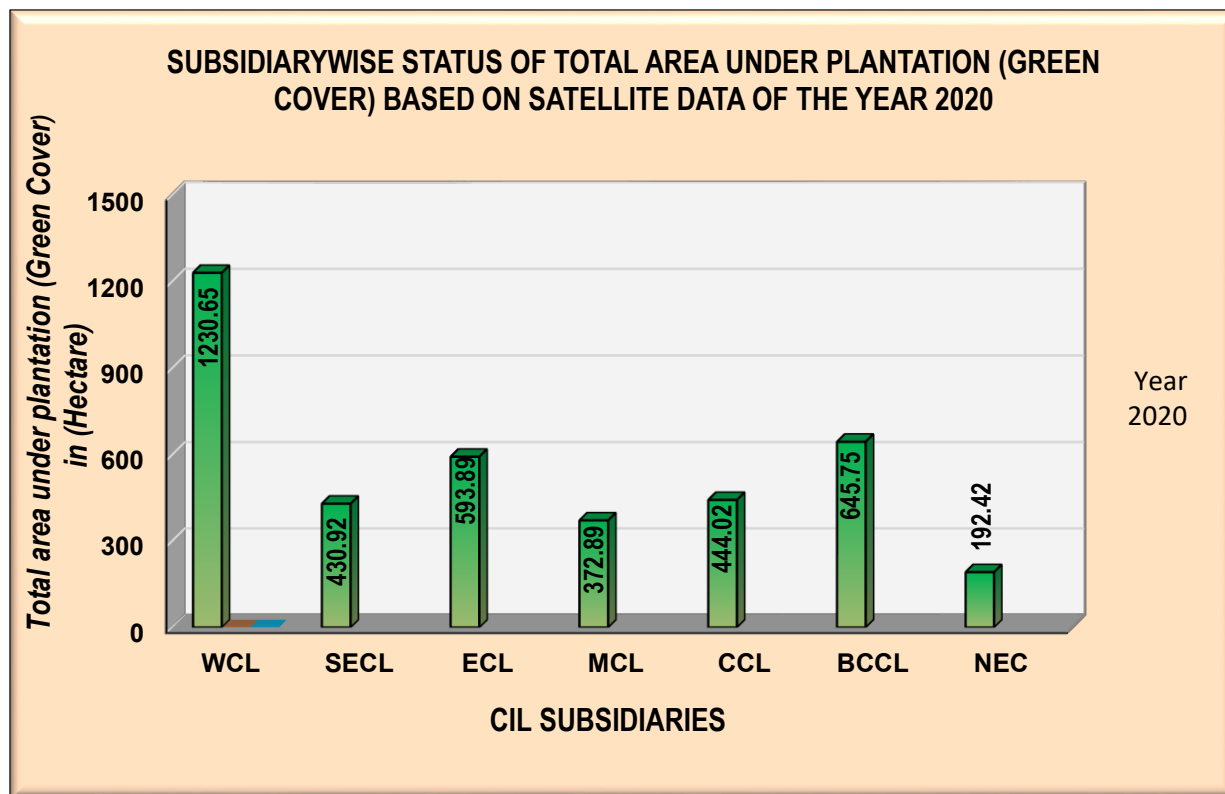


Figure- 3

1.0 Background

- 1.1 Land is the most important natural resource which embodies soil, water, flora, fauna and total ecosystem. All human activities are based on the land which is the most scarce natural resource in our country. Mining is a site specific industry and it could not be shifted anywhere else from the location where mineral occurs. It is a fact that surface mining activities do effect the land environment due to ground breaking. Therefore, there is an urgent need to reclaim and restore the mined out land for its productive use for sustainable development of mining. This will not only mitigate environmental degradation, but would also help in creating a more congenial environment for land acquisition by coal companies in future.

Keeping above in view, Coal India Ltd. (CIL) issued a work order vide letter no. CIL/WBP/Env/2009/2428 dated 29.12.2009 to Central Mine Planning & Design Institute (CMPDI), Ranchi, for monitoring land reclamation. status of all the opencast coal mines

having production of more than 5 million m³ per annum (coal + OB taken together per annum) based on remote sensing satellite data, regularly on annual basis for sustainable development of mining. Further, a revised work order was issued vide letter no. CIL/WBP/Env/2011/4706 dated 12.10.2012 from Coal India Limited for the period 2012-13 to 2016-17 which was subsequently followed by another work order vide letter no. CIL/WBP/Env/2017/DP/8477 dated 21.09.2017 from Coal India Limited for the period 2017-18 to 2021-22 for land reclamation monitoring of opencast projects and vegetation cover monitoring of 19 major coalfields. According to this work order, all mines in CIL with output capacity of 5 million cu. m (coal +OB) shall be monitored every year and mines below this capacity shall be monitored at an interval of 3 years. All coalfields in CIL shall also be monitored at an interval of 3 years as per a defined plan. The result of land reclamation status of all such mines to be put on the website of CIL (www.coalindia.in), CMPDI (www.cmpdi.co.in) and the concerned coal companies in public domain. Detailed report to be submitted to Coal India and respective subsidiaries.

- 1.2 Land reclamation monitoring of all opencast coal mining projects would also comply the statutory requirements of Ministry of Environment, Forest & Climate Change (**MoEF & CC**). Such monitoring would not only facilitate in taking timely mitigation measures against environmental degradation, but would also enable coal companies to utilize the reclaimed land for larger socio-economic benefits in a planned way.
- 1.3 CMPDI undertook the above study and the present report is embodying the findings in nutshell carrying out for the 60 projects including 46 opencast mines, 09 cluster of (OC+UG) mines and 05 underground mines of different subsidiaries producing less than 5 million cubic m. coal +OB in the year 2020-21 for baseline data generation / updation of these projects so that progressive changes in the status of land reclamation could be assessed in future.

2.0 Objective

Objective of the land reclamation/restoration monitoring is to assess the area of backfilled, plantation, OB dumps, social forestry, active mining area, settlements and water bodies, distribution of wasteland, agricultural land and forest land in the leasehold area of the project. This is an important step taken up for assessing the progressive status of mined land reclamation and for taking up remedial measures, if any, required for environmental protection.

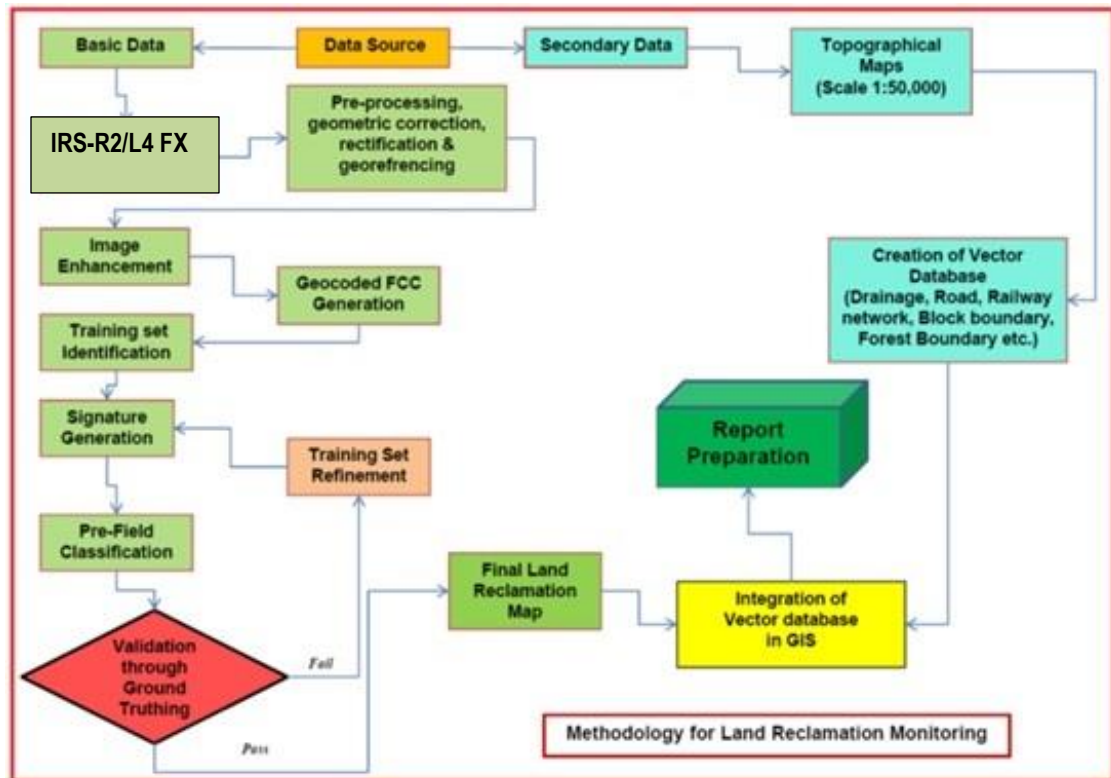


Fig.3: Methodology for Land Reclamation Monitoring

3.0 Methodology

There are number of steps involved between raw satellite data procurement and preparation of final map. National Remote Sensing Centre (NRSC) Hyderabad, being the nodal agency for satellite data supply in India, provides only raw digital satellite data, which needs further digital image processing for extracting the information and map preparation

before uploading the same in the website. Methodology for land reclamation monitoring is given in fig 3. Following steps are involved in land reclamation /restoration monitoring:

3.1 Data Procurement: After browsing the data quality and date of pass on internet, supply order for data is placed to NRSC. Secondary data like leasehold boundary, topo sheets are procured for creation of vector database.

3.2 Satellite Data Processing: Satellite data are processed using ERDAS IMAGINE v2014 s/w digital image processing s/w. Methodology involves the following major steps:

- **Rectification & Georeferencing:** Inaccuracies in digital imagery may occur due to 'systematic errors' attributed to earth curvature and rotation as well as 'non-systematic errors' attributed to satellite receiving station itself. Raw digital images contain geometric distortions, which make them unusable as maps. Therefore, geo-referencing is required for correction of image data using ground control points (GCP) to make it compatible to Sol-topo-sheet.
- **Image enhancement:**
To improve the interpretability of the raw data, image enhancement is necessary. Local operations modify the value of each pixel based on brightness value of neighbouring pixels using ERDAS IMAGINE v 2014 s/w and enhance the image quality for interpretation.
- **Training set selection**
Training set requires to be selected, so that software can classify the image data accurately. The image data are analysed based on the interpretation keys. These keys are evolved from certain fundamental image-elements such as tone/colour, size,

shape, texture, pattern, location, association and shadow. Based on the image-elements and other geo-technical elements like land form, drainage pattern and physiography; training sets were selected/identified for each land use/cover class. Field survey was carried out by taking selective traverses in order to collect the ground information (or reference data) so that training sets are selected accurately in the image. This was intended to serve as an aid for classification.

- **Classification and Accuracy assessment**

Image classification is carried out using the maximum likelihood algorithm. The classification proceeds through the following steps: (a) calculation of statistics [i.e. signature generation] for the identified training areas, and (b) the decision boundary of maximum probability based on the mean vector, variance, covariance and correlation matrix of the pixels. After evaluating the statistical parameters of the training sets, reliability test of training sets is conducted by measuring the statistical separation between the classes that resulted from computing divergence matrix. The overall accuracy of the classification was finally assessed with reference to ground truth data.

- **Area calculation**

The area of each land use class in the leasehold is determined using ERDAS IMAGINE v 2014 s/w.

- **Overlay of Vector data base**

Vector data base created based on secondary data. Vector layer like drainage, railway line, leasehold boundary, forest boundary etc. are superimposed on the image as vector layer in the Arc GIS database.

- **Pre-field map preparation**

Pre-field map is prepared for validation of the classification result

3.3 Ground Truthing:

Selective ground verification of the land use classes are carried out in the field and necessary corrections if required, are incorporated before map finalization.

3.4 Land reclamation database on GIS:

Land reclamation database is created on GIS platform to identify the temporal changes identified from satellite data of different cut-off dates.

4.0 Work Plan

4.1 Total 60 projects including 46 opencast coal mines, 9 cluster of (OC+UG) mines and 5 Underground mines producing less than 5 million cubic m. (Coal + OB together) were taken up for the study during the year 2020-21 based on the R-2, L4FX satellite data, land reclamation /mine closure monitoring was carried out using ERDAS IMAGINE 14.0 version digital image processing s/w and Arc-Info GIS.

4.2 The following are the total list of subsidiary wise 60 projects combine with 05 underground, 09 cluster of (UG+OC) mines and 46 opencast mines producing less than 5 mcm (coal and OB together) annually taken up for land reclamation monitoring based on satellite data of year 2020-21 is given in the Table below:

Subsidiary (No. of Projects)	Opencast ,UG and Cluster of mines producing (Less than 5 million Cu.m. Coal +OB per annum)
WCL (15)	Kolegaon, Bellora-Naigaon, Ghonsa, Ballarpur, Junad Extn, Urdhan, Telwasa, Gauri Expn (A), Bhatadi, Gondegaon, Kolarpimpri, Chhinda, Gauri Deep, Juna-Kunada and Adasa UG to OC.
SECL (09)	Sharda, Baroud, Chhal, Kanchan, Mahan-II, Rajgamar UG, Behraband UG, Saraipalli OC and Bijari OC
CCL (13)	Rohini, Purnadih, Tapin, Jharkhand, Topa, Urimari, North Urimari, New Giddi- C, Govindpur, Khasmahal, Amlo, Selected Dhori and Tarmi
BCCL (05)	Cluster III, Cluster V, Cluster VIII, Cluster IX and Cluster XVII
ECL (07)	Cluster I, Cluster II, Cluster III, Cluster IV, Chitra East, Mohanpur and Hurra –C Opencast projects.
MCL (08)	Lilari OC, Kulda OC, Oreint I & II UG, Orient-III UG, Balanda OC, Nandira UG, Chhendipada OC and Subhadra OC .
NEC (03)	Ledo, Tikak and Tirap OC.
TOTAL (60)	

Subsidiary wise land reclamation status of the above mentioned 60 projects derived from satellite data for the year 2020 are given in the following pages:

CENTRAL COALFIELDS LIMITED

7.0 Land Reclamation Status in Central Coalfields Limited

7.1 Following 13 opencast projects of CCL producing less than 5 million cubic m. (Coal+OB) together, have been taken up for land reclamation monitoring during the year 2020-21 :

- Rohini
- Purnadih
- Tapin
- Jharkhand
- Topa
- Urimari
- North Urimari
- New Giddi -C
- Govindpur
- Khasmahal
- Amlo
- Selected Dhor
- Tarmi

7.2 Project wise Land Reclamation status in CCL is given in Table 7.1 and also shown graphically in Fig 7.1. Area statistics of different land use class present in the mine leasehold of the above projects for the year 2017 are shown in the Table - 7.2. Land use maps derived from satellite data are shown in Plate 7.1 – 7.13. Different land use classes based on satellite data are depicted in Bar Charts in Fig. 7.2 - 7.14.

7.3 Study reveals that out of total mine leasehold area of 6376.05 Hectares of the 13 OC projects of CCL mentioned above taken for this study in 2020-21; total excavated area is 1697.00 Hectares, out of which 239.74 Ha. (14.13%) has been planted (*Biologically Reclaimed*), 702.86 Ha. (41.42%) area is under backfilling (*Technically Reclaimed*) and balance 754.40 hectares (44.45%) is under active mining.

- 7.4** Total area under Land Reclamation in all projects of CCL taken for this study during the year 2020 has increased from 446.45 Ha (36.87%) (Yr.2017) to 942.60 Ha (55.55%) (Yr. 2020). This increase of 496.15 Hectare in area under reclamation includes both 69.54 Ha increase in plantation on backfill (Biological Reclamation) and 426.61 Ha increase in area under backfilling (Technical reclamation).
- 7.5** After analyzing the satellite data of year 2020, it is evident that plantation (Green Cover) carried out on backfilled area, OB dumps as well as under social forestry in all the 13 mines of CCL taken up for study, has reached to 444.02 Ha (6.96%) till now as compared to 374.45 Ha (5.87%) in the Year 2017.
- 7.6** Study indicates that overall all the projects of CCL considered for this study indicate increase or static trend in area under backfilling (Technical Reclamation) with respect to the year 2017, except in Amlo OC where area under technical reclamation has decreased from 49.50 hectare in the year 2017 to 39.51 Hectare in the year 2020 resulting which area under reclamation has decreased from 56.93 Ha to 54.09 Ha. Whereas plantation on backfill in above project has increased from 7.43 Ha (Yr.2017) to 14.58 Ha (Yr.2020) as more area under backfilling has come under plantation on backfill.
- 7.7** After analyzing the satellite data of the year 2017 and 2020, it is evident that total area under plantation (Green cover) carried out on backfill area, OB dumps as well as under social forestry in all the mines of CCL has increased from 374.45 Ha to 444.02 Ha during span of three years. This increase of 69.57 Hectare area of plantation (Green cover) in three year is due to sincere effort of CCL towards mine land reclamation and environment protection.
- 7.8** Decrease of 2.99 Hectare area under biological reclamation in Rohini OC, 3.63 Hectare in New Giddi-C OC, 0.36 Hectare in Govindpur OC and 1.93 Hectare in Khasmahal OC in the span of three year is due to expansion of mining area. Plantation on backfill (Biological Reclamation) in Tapin OC has not been started as yet. However,

Biological Reclamation has increased from 170.20 in the year 2017 to 239.74 Hectare in the year 2020.

- 7.9** In case of Rohini OCP, there is minor decrease in biological reclamation from 45.38 Ha (Yr.2017) to 42.39 Ha (Yr.2020) as backfilling process are being carried out over the planted site.
- 7.10** Out of 13 projects of CCL taken for this study, Khasmahal OCP ranks top for land reclamation (77.60%) followed by Jharkhand OCP (72.57%) and Rohini (71.08%).
- 7.11** This study will again will be carried out after an interval of three years to assess the land reclamation status in the above projects.

Table - 7.1

Project wise Land Reclamation Status in Opencast Projects of Central Coalfields Ltd. based on the Satellite data of the year 2020

(Area in Hectare)

Sl. No.	Project	Total Leasehold Area		Plantation								Area under Active Mining		Total Excavated Area		Total Area under Plantation (% Green Cover Generated in Leasehold)		Total Area under Reclamation	
				Technical Reclamation		Biological Reclamation		Other Plantations											
				Area under Backfilling		Plantation on Excavated / Backfilled Area		Plantation on External Over Burden Dumps		Social Forestry, Avaneue Plantation Etc.									
1	2	3		4		5		6		7		8		9 (=4+5+8)		10 (=5+6+7)		11(=4+5)	
		2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020	2017	2020
1	Rohini	258.17	258.17	65.76	122.03	45.38	42.39	1.55	0.11	5.44	0.00	53.02	66.89	164.16	231.31	52.37	42.50	111.14	164.42
				40.06%	52.76%	27.64%	18.33%					32.30%	28.92%			20.29%	16.46%	67.70%	71.08%
2	Purnadih	756.00	756.00	0.00	40.71	0.00	8.58	0.06	3.01	0.15	0.15	109.40	95.40	109.40	144.69	0.21	11.74	0.00	49.29
				0.00%	28.14%	0.00%	5.93%					100.00%	65.93%			0.03%	1.55%	0.00%	34.07%
3	Tapin	503.00	503.00	0.00	61.75	0.00	0.00	18.88	16.97	4.71	4.69	73.29	75.48	73.29	137.23	23.59	21.66	0.00	61.75
				0.00%	45.00%	0.00%	0.00%					100.00%	55.00%			4.69%	4.31%	0.00%	45.00%
4	Jharkhand	323.88	323.88	24.73	91.21	28.85	38.25	11.34	0.33	2.48	2.48	57.13	48.93	110.71	178.39	42.67	41.06	53.58	129.46
				22.34%	51.13%	26.06%	21.44%					51.60%	27.43%			13.17%	12.68%	48.40%	72.57%
5	Topa	520.91	520.91	0.00	20.89	0.00	3.75	25.88	43.81	14.24	14.22	67.18	55.71	67.18	80.35	40.12	61.78	0.00	24.64
				0.00%	26.00%	0.00%	4.67%					100.00%	69.33%			7.70%	11.86%	0.00%	30.67%
6	Urimari	1443.50	1443.50	24.16	91.58	25.03	48.80	7.56	0.06	37.59	42.67	81.97	63.74	131.16	204.12	70.18	91.53	49.19	140.38
				18.42%	44.87%	19.08%	23.91%					62.50%	31.23%			4.86%	6.34%	37.50%	68.77%
7	North Urimari	667.73	667.73	0.00	49.89	0.00	15.85	10.15	1.14	0.00	0.00	70.83	131.88	70.83	197.62	10.15	16.99	0.00	65.74
				0.00%	25.25%	0.00%	8.02%					100.00%	66.73%			1.52%	2.54%	0.00%	33.27%
8	New Giddi-C	210.32	210.32	17.97	31.22	13.97	10.34	2.69	3.02	6.47	5.83	26.72	26.78	58.66	68.34	23.13	19.19	31.94	41.56
				30.63%	45.68%	23.82%	15.13%					45.55%	39.19%			11.00%	9.12%	54.45%	60.81%
9	Govindpur	274.95	274.95	23.36	66.56	17.86	17.50	5.16	2.03	0.00	0.22	69.50	60.02	110.72	144.08	23.02	19.75	41.22	84.06
				21.10%	46.20%	16.13%	12.15%					62.77%	41.66%			8.37%	7.18%	37.23%	58.34%
10	Khasmahal	280.00	280.00	26.23	33.23	23.84	21.91	6.78	8.81	7.14	7.14	15.48	15.92	65.55	71.06	37.76	37.86	50.07	55.14
				40.02%	46.76%	36.37%	30.83%					23.62%	22.40%			13.49%	13.52%	76.38%	77.60%
11	Amla	247.59	247.59	49.50	39.51	7.43	14.58	15.27	15.27	1.53	1.53	26.02	39.62	82.95	93.71	24.23	31.38	56.93	54.09
				59.67%	42.16%	8.96%	15.56%					31.37%	42.28%			9.79%	12.67%	68.63%	57.72%
12	Selected Dhori	300.00	300.00	22.01	31.22	0.00	5.94	4.92	16.53	0.11	0.11	92.38	48.92	114.39	86.08	5.03	22.58	22.01	37.16
				19.24%	36.27%	0.00%	6.90%					80.76%	56.83%			1.68%	7.53%	19.24%	43.17%
13	Tarmi	590.00	590.00	22.53	23.06	7.84	11.85	12.62	12.62	1.53	1.53	21.62	25.11	51.99	60.02	21.99	26.00	30.37	34.91
				43.34%	38.42%	15.08%	19.74%					41.58%	41.84%			3.73%	4.41%	58.42%	58.16%
	TOTAL	6376.05	6376.05	276.25	702.86	170.20	239.74	122.86	123.71	81.39	80.57	764.54	754.40	1210.99	1697.00	374.45	444.02	446.45	942.60
				22.81%	41.42%	14.05%	14.13%					63.13%	44.45%			5.87%	6.96%	36.87%	55.55%

(% is calculated with respected to Excavated Area as applicable)

Note : In reference of the above Table, different parameters are classified as follows :

1. Area under Biological Reclamation includes areas under plantation done on backfilled area only.
2. Area under Technical Reclamation includes area under barren backfilled only
3. Area under Active mining includes coal quarry site, quarry filled with water etc.
4. Social Forestry and Plantation on external OB dump are not included in Biological Reclamation and are put under separate categories as shown in the table.
5. (%) calculated in the above table is in respect of total excavated area except for "Total area under plantation" where % is in terms of leasehold area.

PROJECTWISE STATUS OF LAND RECLAMATION IN CCL FOR THE YEAR 2020

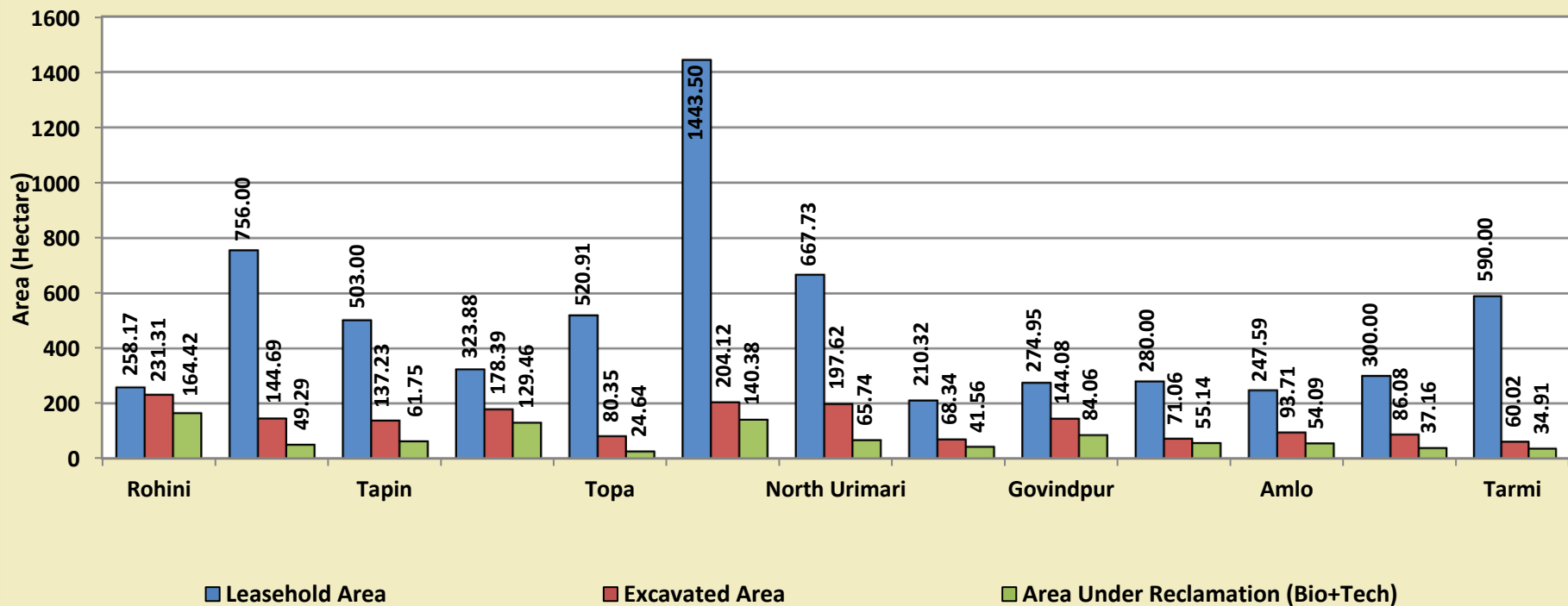
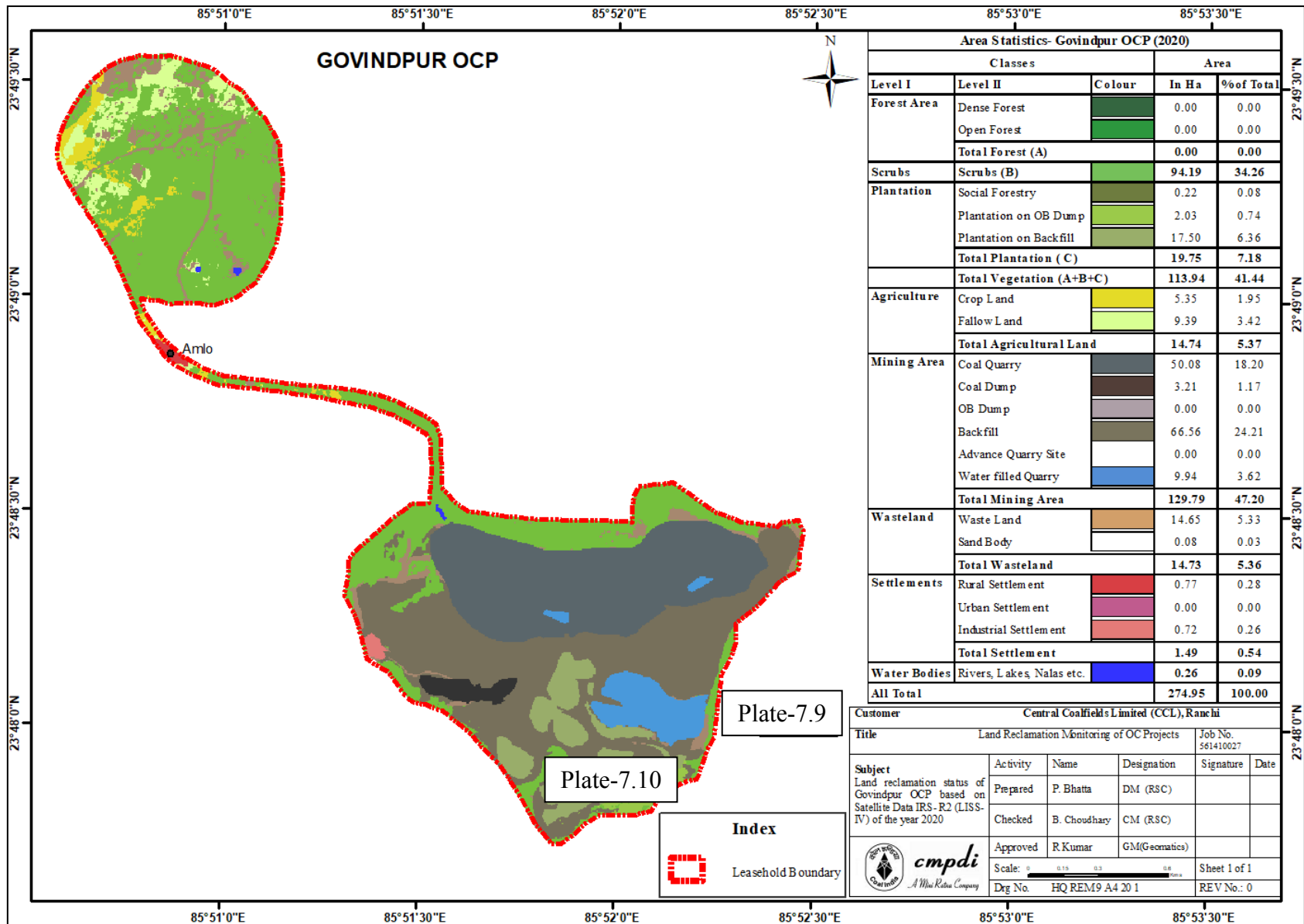


Figure7.1: Land Reclamation status in OC Projects producing less than 5m.cm (Coal+OB) of CCL in the year 2020




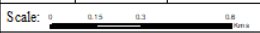
Area Statistics- Govindpur OCP (2020)				
Classes			Area	
Level I	Level II	Colour	In Ha	%of Total
Forest Area	Dense Forest		0.00	0.00
	Open Forest		0.00	0.00
	Total Forest (A)		0.00	0.00
Scrubs	Scrubs (B)		94.19	34.26
Plantation	Social Forestry		0.22	0.08
	Plantation on OB Dump		2.03	0.74
	Plantation on Backfill		17.50	6.36
	Total Plantation (C)		19.75	7.18
Total Vegetation (A+B+C)			113.94	41.44
Agriculture	Crop Land		5.35	1.95
	Fallow Land		9.39	3.42
	Total Agricultural Land		14.74	5.37
Mining Area	Coal Quarry		50.08	18.20
	Coal Dump		3.21	1.17
	OB Dump		0.00	0.00
	Backfill		66.56	24.21
	Advance Quarry Site		0.00	0.00
	Water filled Quarry		9.94	3.62
Total Mining Area			129.79	47.20
Wasteland	Waste Land		14.65	5.33
	Sand Body		0.08	0.03
	Total Wasteland		14.73	5.36
Settlements	Rural Settlement		0.77	0.28
	Urban Settlement		0.00	0.00
	Industrial Settlement		0.72	0.26
	Total Settlement		1.49	0.54
Water Bodies	Rivers, Lakes, Nalas etc.		0.26	0.09
All Total			274.95	100.00

Plate-7.9

Plate-7.10

Index

 Leasehold Boundary

Customer Central Coalfields Limited (CCL), Ranchi					
Title Land Reclamation Monitoring of OC Projects				Job No. 561410027	
Subject Land reclamation status of Govindpur OCP based on Satellite Data IRS-R2 (LIS-IV) of the year 2020	Activity	Name	Designation	Signature	Date
	Prepared	P. Bhatta	DM (RSC)		
	Checked	B. Choudhary	CM (RSC)		
	Approved	R. Kumar	GM(Geomatics)		
Scale: 				Sheet 1 of 1	
Drg No. HQ REM9 A4 20 1				REV No. : 0	



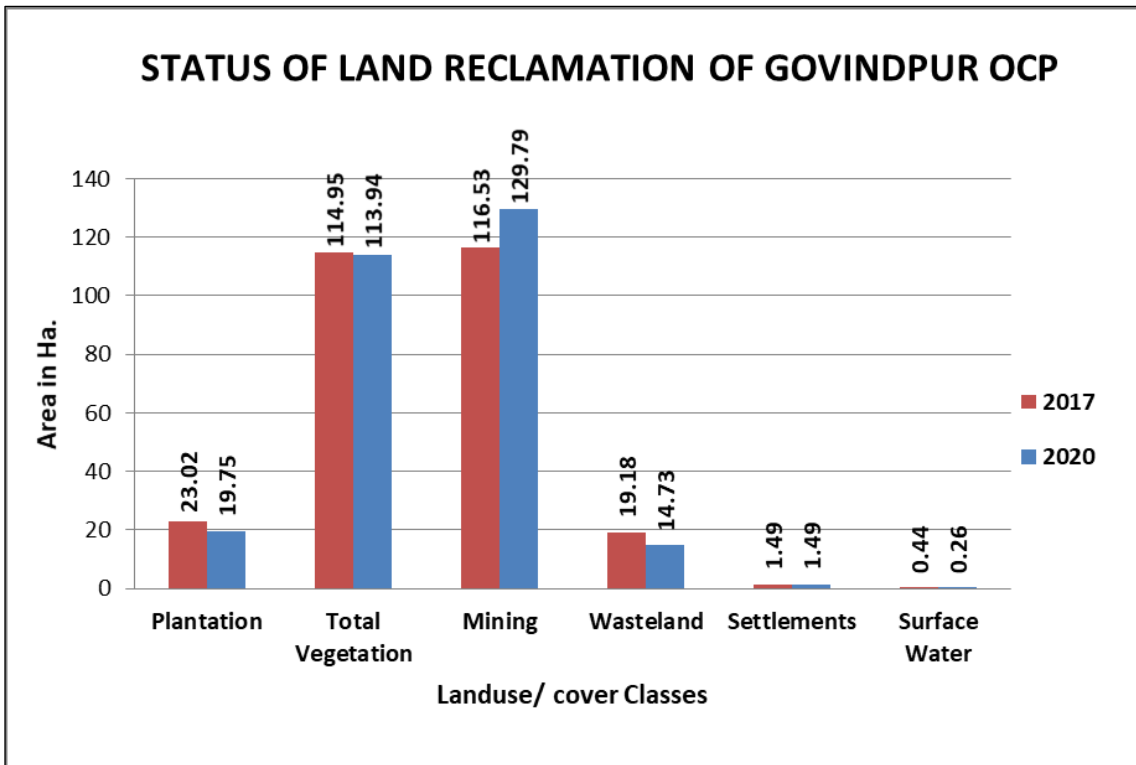


FIGURE – 7.10

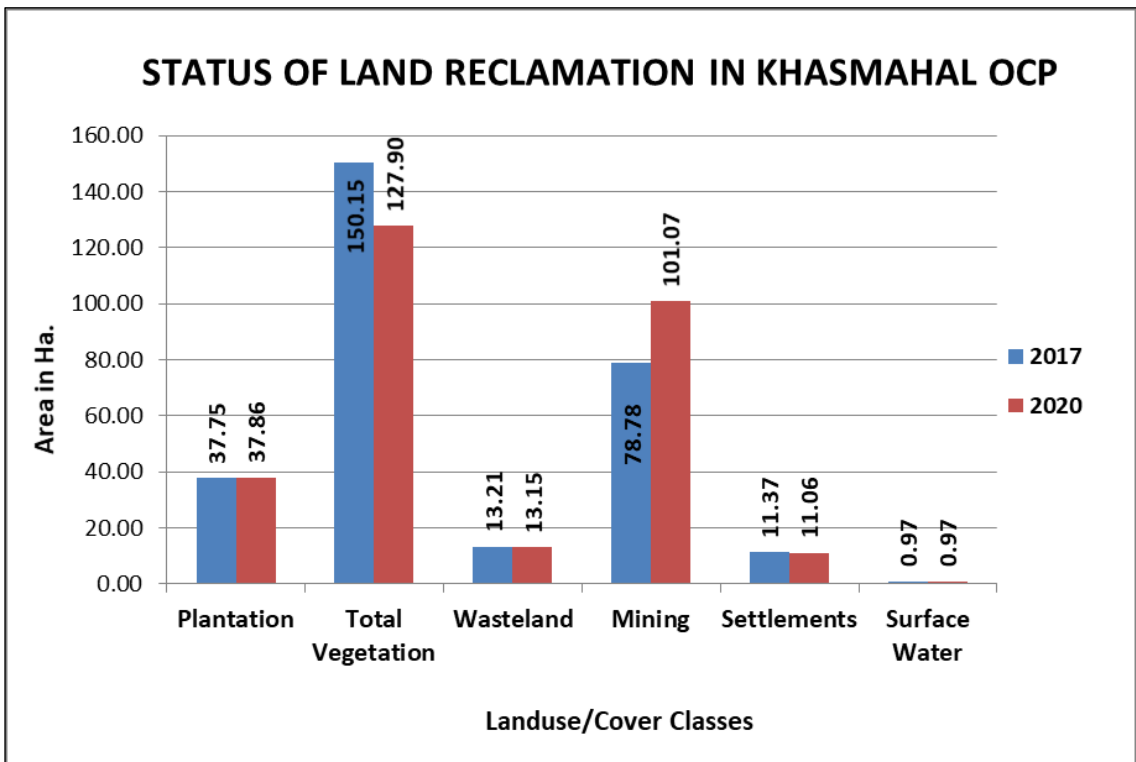


FIGURE – 7.11



Photo7.8: Plantation on Backfill Dump in North Urimari OCP



Photo7.9: Plantation under social forestry in Govindpur OCP

TEST REPORT

03/23 Test Report No. 1935	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results:-

Area : Kathara **Project:** Govindpur Phase II OCP **Stations:** Zero point of Gvp ph II OCP

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10} + >\text{PM}_{10}$)TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	07/01/23-08/01/23	16-01-2023	16/01/23-27/01/23	214	156	65	< 25	< 6	East Sunny
Jan-23 2nd FN	24/01/23-25/01/23	01-02-2023	01/02/23-10/02/23	269	103	49	< 25	< 6	East Sunny
Feb-23 3rd FN	12/02/23-13/02/23	16-02-2023	16/02/23-27/02/23	211	103	53	< 25	< 6	East Sunny
Feb-23 4th FN	24/02/23-25/02/23	01-03-2023	01/03/23-16/03/23	140	74	38	< 25	< 6	East Sunny
Mar-23 5th FN	06/03/23-07/03/23	16-03-2023	16/03/23-31/03/23	167	78	39	< 25	< 6	East Sunny
Mar-23 6th FN	25/03/23-26/03/23	01-04-2023	01/04/23-13/04/23	215	104	56	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

Authorized Signatory

TEST REPORT

03/23 Test Report No. 1936	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results:-

Area : Kathara **Project:** Govindpur Phase II OCP **Stations:** Project Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10} + >\text{PM}_{10}$)/TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	08/01/23-09/01/23	16-01-2023	16/01/23-27/01/23	231	122	52	< 25	< 6	East Sunny
Jan-23 2nd FN	25/01/23-26/01/23	01-02-2023	01/02/23-10/02/23	245	135	66	< 25	< 6	East Sunny
Feb-23 3rd FN	13/02/23-14/02/23	16-02-2023	16/02/23-27/02/23	220	117	49	< 25	< 6	East Sunny
Feb-23 4th FN	25/02/23-26/02/23	01-03-2023	01/03/23-16/03/23	175	85	42	< 25	< 6	East Sunny
Mar-23 5th FN	07/03/23-08/03/23	16-03-2023	16/03/23-31/03/23	213	90	40	< 25	< 6	East Sunny
Mar-23 6th FN	27/03/23-28/03/23	01-04-2023	01/04/23-13/04/23	192	91	57	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 1937	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results:-

Area : Kathara **Project:** Govindpur Phase II OCP **Stations:** Lahariantand Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}^+ > PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	08/01/23-09/01/23	16-01-2023	16/01/23-27/01/23	184	88	42	< 25	< 6	East Sunny
Jan-23 2nd FN	25/01/23-26/01/23	01-02-2023	01/02/23-10/02/23	223	84	48	< 25	< 6	East Sunny
Feb-23 3rd FN	13/02/23-14/02/23	16-02-2023	16/02/23-27/02/23	135	69	28	< 25	< 6	East Sunny
Feb-23 4th FN	25/02/23-26/02/23	01-03-2023	01/03/23-16/03/23	136	69	28	< 25	< 6	East Sunny
Mar-23 5th FN	07/03/23-08/03/23	16-03-2023	16/03/23-31/03/23	121	62	36	< 25	< 6	East Sunny
Mar-23 6th FN	27/03/23-28/03/23	01-04-2023	01/04/23-13/04/23	131	67	37	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By

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TEST REPORT

03/23 Test Report No. 1938	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results:-

Area : Kathara **Project:** Govindpur Phase II OCP **Stations:** Kamatia Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in $\mu\text{g}/\text{m}^3$)					Wind Direction (from) & Weather
				Total Particulate Matter ($\text{PM}_{10}^{+>\text{PM}_{10}}$)TPM	Particulate Matter (PM_{10})	Particulate Matter ($\text{PM}_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	08/01/23-09/01/23	16-01-2023	16/01/23-27/01/23	248	92	48	< 25	< 6	East Sunny
Jan-23 2nd FN	25/01/23-26/01/23	01-02-2023	01/02/23-10/02/23	211	96	53	< 25	< 6	East Sunny
Feb-23 3rd FN	13/02/23-14/02/23	16-02-2023	16/02/23-27/02/23	205	96	54	< 25	< 6	East Sunny
Feb-23 4th FN	25/02/23-26/02/23	01-03-2023	01/03/23-16/03/23	159	74	36	< 25	< 6	East Sunny
Mar-23 5th FN	07/03/23-08/03/23	16-03-2023	16/03/23-31/03/23	185	84	44	< 25	< 6	East Sunny
Mar-23 6th FN	27/03/23-28/03/23	01-04-2023	01/04/23-13/04/23	211	83	46	< 25	< 6	East Sunny

Note:

1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 1939	Job No. 094322160	Year	FY2022-23
Type of Sample:	Noise	Quarter Ending	Mar-23
Customer	CCL		
Testing/ Sampling Protocol:	'The noise pollution (Regulation and Control), Rules,2000, LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results:-

Area : **Kathara** **Project:** **Govindpur Phase II OCP**

Station Name	Noise Level dB(A) Leq					
	Jan-23 1st FN	Jan-23 2nd FN	Feb-23 3rd FN	Feb-23 4th FN	Mar-23 5th FN	Mar-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	07-01-2023	24-01-2023	12-02-2023	24-02-2023	06-03-2023	25-03-2023
1. Zero Point of Gvp ph II OCP	48.2/38.1	50.2/46.1	51.7/49.4	51.8/49.5	50.2/46.1	51.1/42.1
Date of recording	08-01-2023	25-01-2023	13-02-2023	25-02-2023	07-03-2023	27-03-2023
2. Lahariatand Village	46.6/36.3	52.0/47.2	52.4/50.6	51.9/49.4	52.0/47.2	52.1/46.1
Date of recording	08-01-2023	25-01-2023	13-02-2023	25-02-2023	07-03-2023	27-03-2023
3. Kamatia Village	47.6/37.3	49.5/45.2	52.6/50.7	51.8/49.6	49.5/45.2	50.1/45.1

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	Limits in dB(A) Leq	
	Day Time 6.00 AM to 10.00 PM	Night Time 10.00 PM to 6.00 AM
Industrial Area	75	70
Commercial Area	65	55
Residential area	55	45
Silence Zone	50	40

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TEST REPORT

03/23 Test Report No. 1940	Job No. 094322160	Year	FY2022-23
Type of Sample:	Effluent Water	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	MOEF -SCH-VI STANDARDS, Class 'A', LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results:-

Area: Kathara **Project:** Govindpur Phase II OCP **Stations:** Workshop Effluent

Analysis Results of FN Effluent Water							
Parameters →				COD	O & G	pH value	TSS
Detection Limit				4	2	0.2	10
MOEF -SCH-VI, STANDARDS, Class 'A'				250	10	5.5 to 9.0	100
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	Value in mg/l, except pH			
Jan-23 1st FN	14/01/23	16/01/23	16/01/23-31/01/23	264	8.21	7.9	387
Jan-23 2nd FN	23/01/23	01/02/23	01/02/23-15/02/23	136	3.12	7.7	197.8
Feb-23 3rd FN	15/02/23	16/02/23	16/02/23-28/02/23	108	5.74	8	234.7
Feb-23 4th FN	28/02/23	01/03/23	01/03/23-15/03/23	300	5.72	7.9	502
Mar-23 5th FN	11/03/23	16/03/23	16/03/23-31/03/23	84	5.7	8.1	147
Mar-23 6th FN	31/03/23	03/04/23	03/04/23-13/04/23	72	3.2	8.1	184
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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TEST REPORT

03/23 Test Report No. 1941	Job No. 094322160	Year	FY2022-23
Type of Sample:	Surface Water	Quarter Ending	Mar-23
Customer	CCL	Date of Receipt:	16-01-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.01.23-11.04.23
Testing/ Sampling Protocol:	LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results:-

Area :	Kathara	Project:	Govindpur Phase II OCP
Stations:		Date of Sampling:	
	1. Intake of Filter Plant		13-01-2023
	2. Konar River U/S near Filter Plant		13-01-2023
	3. Konar River D/S near Ganibudih Basti		13-01-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l, Max	<0.002	<0.002	<0.002		0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l, Max	2.6	<2.0	<2.0		2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l, Max	<0.0004	<0.0004	<0.0004		0.0004	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl), mg/l, Max	8	6	6		2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02	<0.02		0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Dissolved Oxygen, min.	7	7.7	7.3		0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F) mg/l, Max	0.37	0.37	0.38		0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l, Max	<0.01	<0.01	<0.01		0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l, Max	<0.04	<0.04	<0.04		0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l, Max	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO ₃), mg/l, Max	1.58	1.19	1.28		0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.4	8.3	8.3		1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	<0.001	<0.001	<0.001		0.001	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l, Max	<0.0005	<0.0005	<0.0005		0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO ₄) mg/l, Max	14	10	14		2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l, Max	113	112	116		25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l, Max	24	23	31		10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l, Max	<0.005	<0.005	<0.005		0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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TEST REPORT

03/23 Test Report No. 1942	Job No. 094322160	Year	FY2022-23
Type of Sample:	Drinking Water	Quarter Ending	Mar-23
Customer	CCL	Date of Receipt:	16-01-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	16.01.23-11.04.23
Testing/ Sampling Protocol:	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results:-

Area : Kathara
Stations:

Project:

Govindpur Phase II OCP
Date of Sampling:

1. Well at Officer Colony
2. Well at Swang Basti
3. Well at Ganjudih Basti
4. Well at Khurgarha Village

13-01-2023
13-01-2023
13-01-2023
13-01-2023

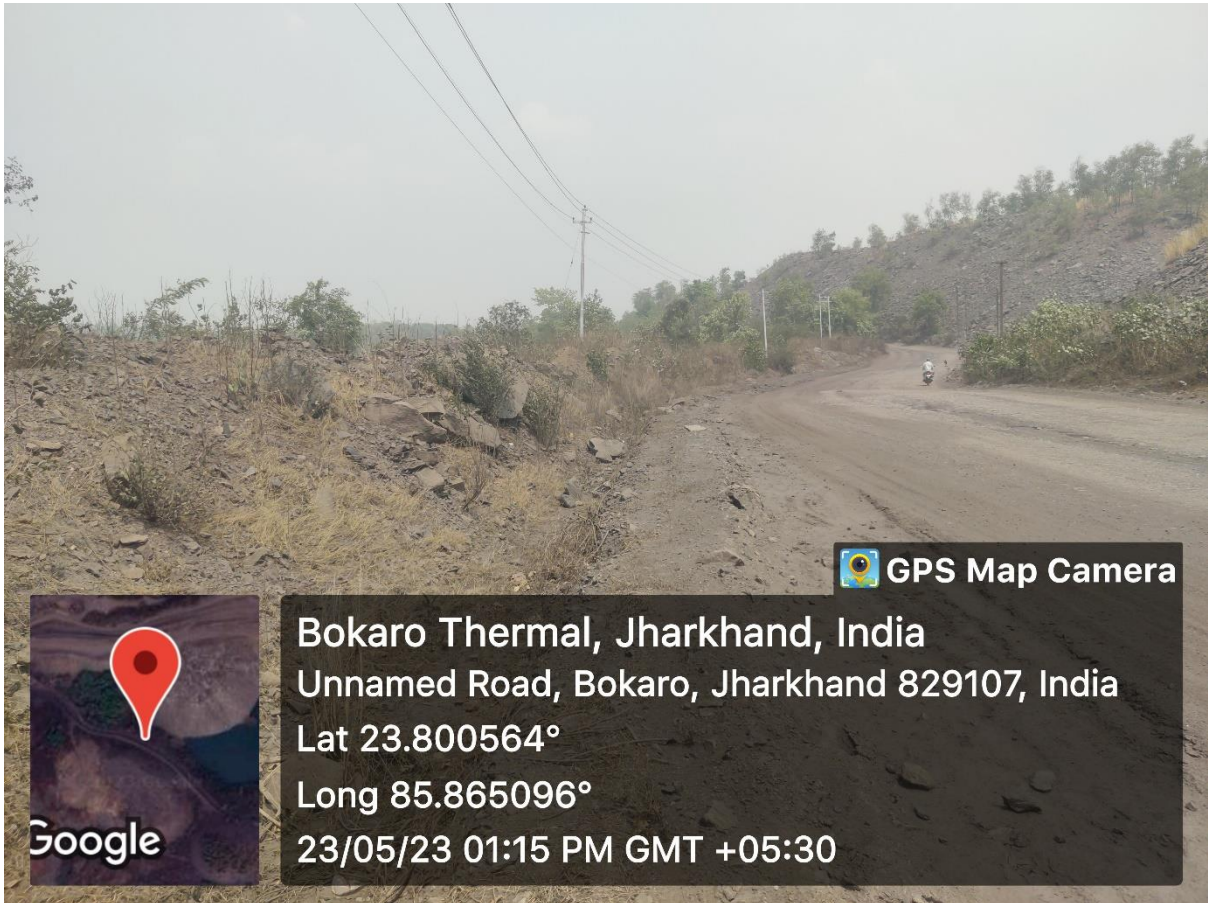
Sl. No	Parameter	Sampling Stations				Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3	4			
1	Boron (as B), mg/l, Max	<0.2	<0.2	<0.2	<0.2	0.20	0.5	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l, Max	<0.0004	<0.0004	<0.0004	<0.0004	0.0004	0.003	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l, Max	78.4	81.6	72	68.8	1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	48	52	58	52	2.00	250	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02	<0.02	<0.02	0.02	0.05	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F) mg/l, Max	0.89	0.97	0.81	0.77	0.02	1.0	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l, Min	0.04	0.03	0.05	0.06	0.02	0.2	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l, Max	<0.04	<0.04	<0.04	<0.04	0.04	1.0	IS 3025 /53: 2003, R : 2009 AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l, Max	<0.001	<0.001	<0.001	<0.001	0.001	0.01	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l, Max	<0.01	<0.01	<0.01	<0.01	0.01	0.1	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l, Max	<0.003	<0.003	<0.003	<0.003	0.003	0.02	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO ₃), mg/l, Max	38.16	34.71	38.61	31.45	0.5	45	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	8	8.1	7.9	8.1	1.0	6.5 to 8.5	IS-3025/11:1983, R-1996, Electrometric Method
15	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	<0.001	<0.001	<0.001	<0.001	0.001	0.001	APHA, 23rd Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l, Max	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.01	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO ₄) mg/l, Max	129	137	97	89	2.00	200	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (c _a CO ₃), mg/l, Max	148	156	172	164	4.00	200	IS-3025/23:1986,R: 2009, Titration Method
19	Total Arsenic (as As), mg/l, Max	<0.002	<0.002	<0.002	<0.002	0.002	0.01	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l, Max	<0.002	<0.002	<0.002	<0.002	0.002	0.05	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l, Max	511	532	496	477	25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (c _a CO ₃), mg/l, Max	308	324	316	308	4.00	200	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU, Max	1	1	1	1	1.0	1	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l, Max	<0.005	<0.005	<0.005	<0.005	0.005	5.0	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

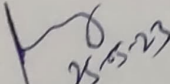
Authorized Signatory

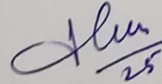
Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested
2) This Report cannot be reproduced in part or full without written permission of the management.
3) This is computer generated report and requires no signature.

PHOTOGRAPHS OF GARLAND DRAIN



Details of PPEs distributed in last three years				
Sl No.	Items	2020-21	2021-22	2022-23
1	Dust Mask	800	nil	nil
2	Mining Shoe	629	851	643
3	Helmet	17	350	270
4	Fluorescent Jacket	0	590	0
5	Life Jacket	5	0	10
6	Goggles	400	400	0
7	Ear Plug	100	0	0
8	Electric Hand Gloves	50	0	30
9	Industrial Hand Gloves	0	0	250
10	Safety Belt	10	0	0
11	Welding Screen	1	5	0
12	Gum Boot	0	46	36


25/05/23
Manager
Govindpur Ph-II OCP


25/05/23
Safety Officer
Govindpur Ph-II OCP

11/01/23 9939189245 Sanyal (M)

FORM "O"

(See Rule 29 F (2) and 29L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29B
(TO BE ISSUED IN TRIPLICATE)**



7151014241723
Certificated No.

DOB 02/01/1965

DA 7/3/1990

Certified that Shri/Shrimati Ram Kr. Tiwari Staff Ranadhar
employed as Fitter in mine, Form B No. has
been examined for an initial/periodical* medical examination. He/She* appears to be
years of age. The findings of the examining authority are given in the attached sheet. It is considered that
Shri/Shrimati* Ram Kr. Tiwari

Dr. Rohini

- (a)* is medically fit for any employment in mines.
- (b)* is suffering from and is medically unfit for
 - (i) any employment in mine, or
 - (ii) any employment below ground, or
 - (iii) any employment or work.....
- (c)* is suffering from and should get this disability* cured/controlled and should
be again examined within a period of months. *He/She will
appear for re-examination with the result of test of
appear for examination with the result of test of
*and the opinion of specialist from
He/She* may be permitted / not permitted to carry on his duties this period.



Ram Kr. Tiwari
19/01/23

Rohini
19/01/23
Signature of the examination authority

Rohini
(M: Sanyal)
Name and designation in Block Letters

Place: CMO
Date: 19/01/2023

* Delete whatever is not applicable.
** One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the
Manager or the mine concerned by registered post and the third copy shall be retained by the examining authority.

Report of the Examination Authority

(To be filled in for every medical examination whether initial or periodical or re-examination after cure/control of disability
Annexure to Certificate No. as a result of medical examination
On

Identification mark.....

राम कुमार तिवारी
Left thumb impression of the candidate

1. General development
 2. Height..... 164..... Cms.
 3. Weight..... 50..... Kg.

4. Eyes :
 (i) Visual actuality - Distant vision (with or without glasses)
 Right eye..... 6/6..... Left Eye..... 6/6 *Myd*
 (ii) Any organic disease of eyes
 *(iii) Night blindness
 *(iv) Colour blindness
 (v) Squint
 (*To be tested in special cases)

5. Ears :
 (i) Hearing : Right ear..... *r*..... Left ear..... *l*
 (ii) Any organic diseases

6. Respiratory system :
 Chest measurement
 (i) After full inspiration..... 96..... cms. *te - 93006*
 (ii) After full expiration..... 92..... cms. *de - 64/34/01/01/00*
Hb - 13.0

7. Circulatory system :
 Blood Pressure *138/96*
 Pulse *88*
 8. Abdomen :
 * Tenderness
 * Liver
 * Spleen
 * Tumour
ESR - 05
RhABO - 'O' + m
BScr - 92 g/dl
Ch - 129
Ug - 111
Ser - 0.74

9. Nervous System :
 * History of Fits or epilepsy
 * Paralysis
 * Mental Health

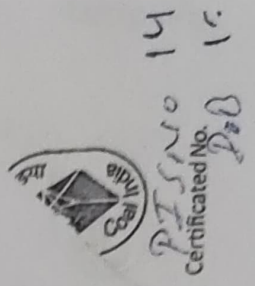
10. Locomotor System
 11. Skin
 12. Hernia
 13. Hydrocle
 14. Any other Abnormality

15. Urine :
 * Reaction
 * Albumin
 * Sugar *1 ml*

16. Skiagram of chest : *m*
 17. Any other test considered necessary by the examining authority
 18. Any opinion of specialist considered necessary :

Date : *13/1/23*
 Place : *md*
Blazer of J. Port

P. P. 1
13/1/2023
 Signature of the Examining



9122707868

2301000008874

Date 11/1/2023

FORM "O"

CMP Ph II ACP



(See Rule 29 F (2) and 29L)

REPORT OF MEDICAL EXAMINATION UNDER RULE 29B

(TO BE ISSUED IN TRIPLICATE)**

PIC No. 77645216

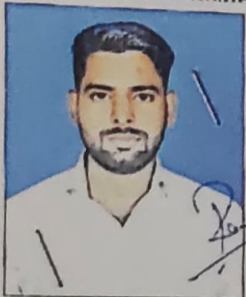
DOB. 12/8/1994

DOT - 30/10/2020

Dr. Rishabh

Certified that Shri/Shrimati Sunil Kumar Sharma employed as SO in _____ mine, Form B No. _____ has been examined for an initial/periodical* medical examination. He/She* appears to be _____ years of age. The findings of the examining authority are given in the attached sheet. It is considered that Shri/Shrimati* Sunil Kumar Sharma

- (a) is medically fit for any employment in mines.
 - (b) is suffering from _____ and is medically unfit for
 - (i) any employment in mine, or
 - (ii) any employment below ground, or
 - (iii) any employment or work _____
 - (c) is suffering from _____ and should get this disability* cured/controlled and should be again examined within a period of _____ months. *He/She will appear for re-examination with the result of test of _____ appear for examination with the result of test of _____ *and the opinion of _____ specialist from _____
- He/She* may be permitted / not permitted to carry on his duties this period.



[Signature]
11/1/2023

[Signature]
11/1/2023

Signature of the examination authority

PAHUL PRASAD

(in Block Letters)

Name and designation in Block Letters

Place: enid
Date: 11/1/23

* Delete whatever is not applicable.
** One copy of the certificate shall be handed over to the person concerned and another copy shall be sent to the Manager or the mine concerned by registered post and the third copy shall be retained by the examining authority.

Report of the Examination Authority

(To be filled in for every medical examination whether initial or periodical or re-examination after cure/control of disability Annexure to Certificate No. _____ as a result of medical examination On _____)

Identification mark _____

[Signature]
Left thumb impression of the candidate

1. General development
2. Height..... 1.54 Cms.
3. Weight..... 6.7 Kg.

4. Eyes :
(i) Visual actuality - Distant vision (with or without glasses)
Right eye..... 6/6 Left Eye..... 6/6
(ii) Any organic disease of eyes
*(iii) Night blindness
*(iv) Colour blindness
(v) Squint
(*To be tested in special cases)

5. Ears :
(i) Hearing : Right ear..... N Left ear..... N
(ii) Any organic diseases

6. Respiratory system :
Chest measurement
(i) After full inspiration..... 88 cms.
(ii) After full expiration..... cms.

7. Circulatory system :
Blood Pressure - 112/80
Pulse - 87

8. Abdomen :
* Tenderness
* Liver
* Spleen
* Tumour

9. Nervous System :
* History of Fits or epilepsy
* Paralysis
* Mental Health

10. Locomotor System
11. Skin
12. Hernia
13. Hydrocele
14. Any other Abnormality

15. Urine :
* Reaction
* Albumin
* Sugar

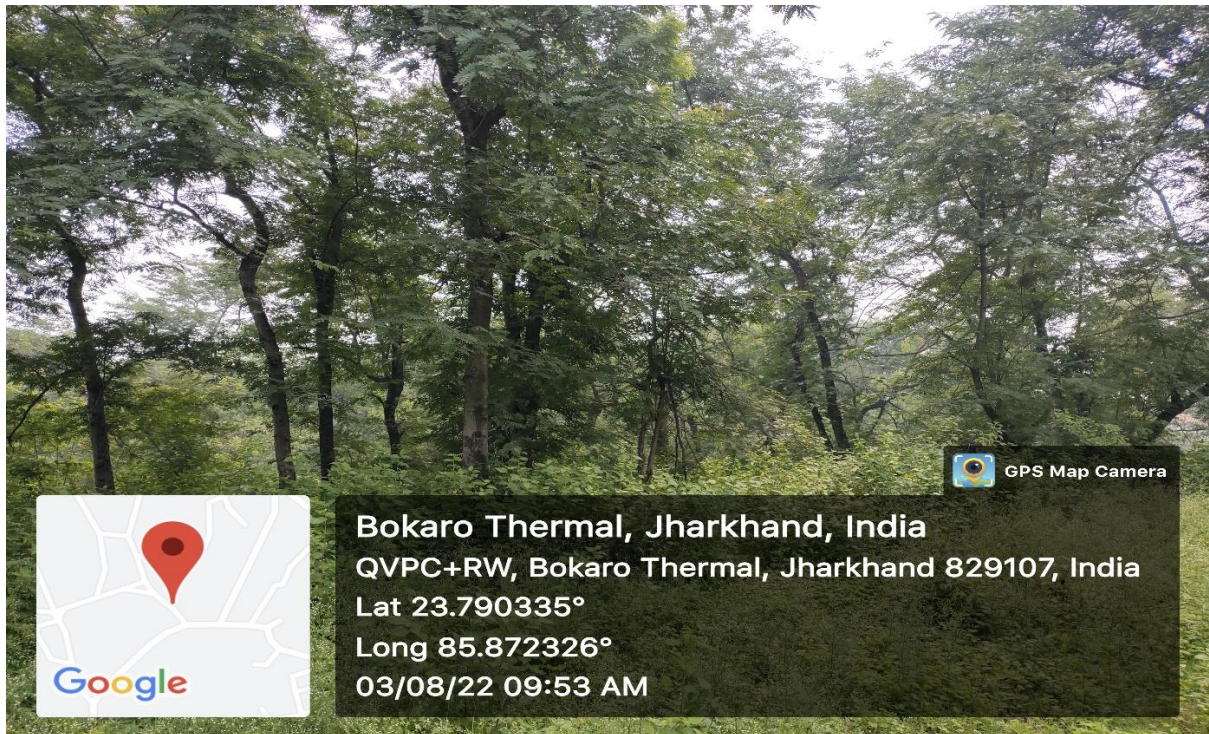
16. Skiagram of chest :
17. Any other test considered necessary by the examining authority
18. Any opinion of specialist considered necessary :

Date : 11/1/2023
Place : emj

Signature of the Examining
11/1/2023



PLANTATION





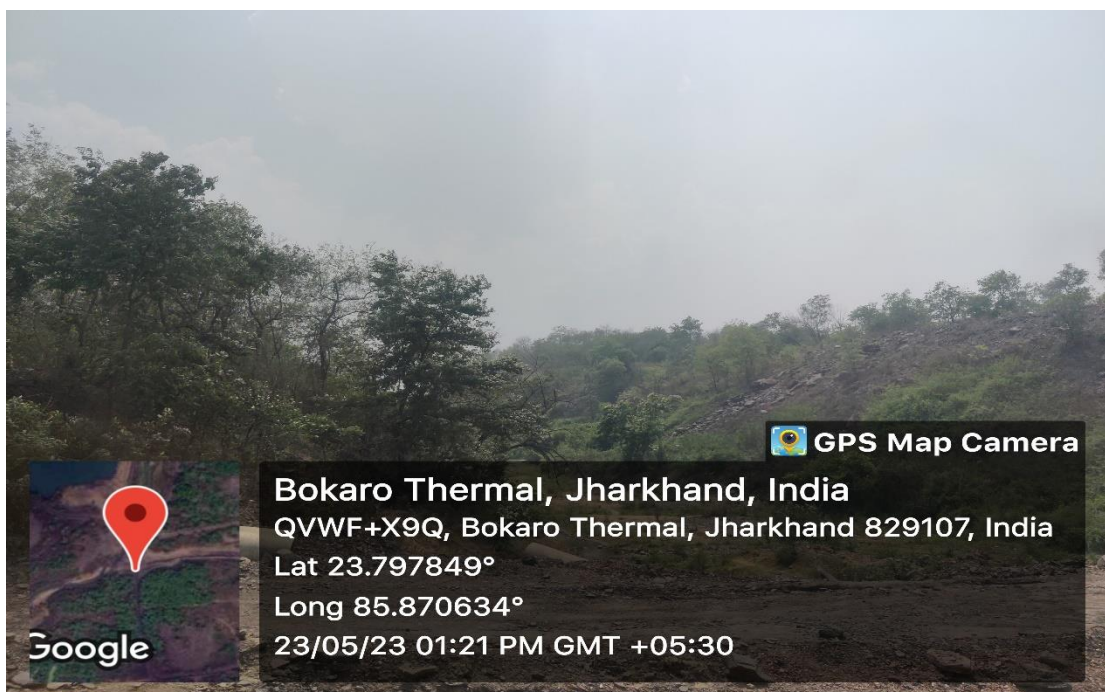
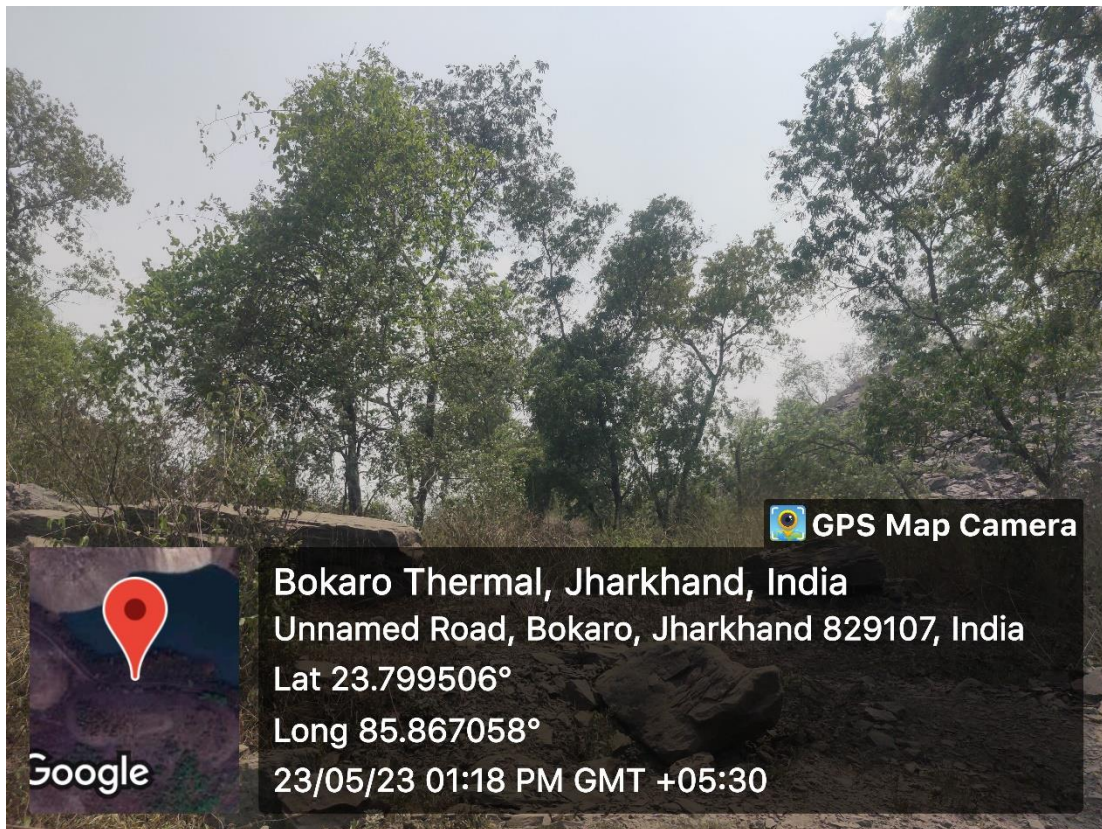
PHOTOGRAPHS OF CATCH DRAIN




TOE WALL



PHOTOGRAPHS OF PROGRESSIVE AFFORESTATION





 GPS Map Camera

Gumia, Jharkhand, India

RV34+37H Jhula Bridge, Sawang, River Konar,, Gumia, Jharkhand

829111, India

Lat 23.801825°


Long 85.854046°

23/05/23 01:36 PM GMT +05:30



Google



 GPS Map Camera

Bokaro Thermal, Jharkhand, India

Unnamed Road, Bokaro, Jharkhand 829107, India

Lat 23.798768°

Long 85.87054°

23/05/23 01:20 PM GMT +05:30



Google

PHOTOGRAPHS OF GRASSING & VEGETATION ON OB DUMP



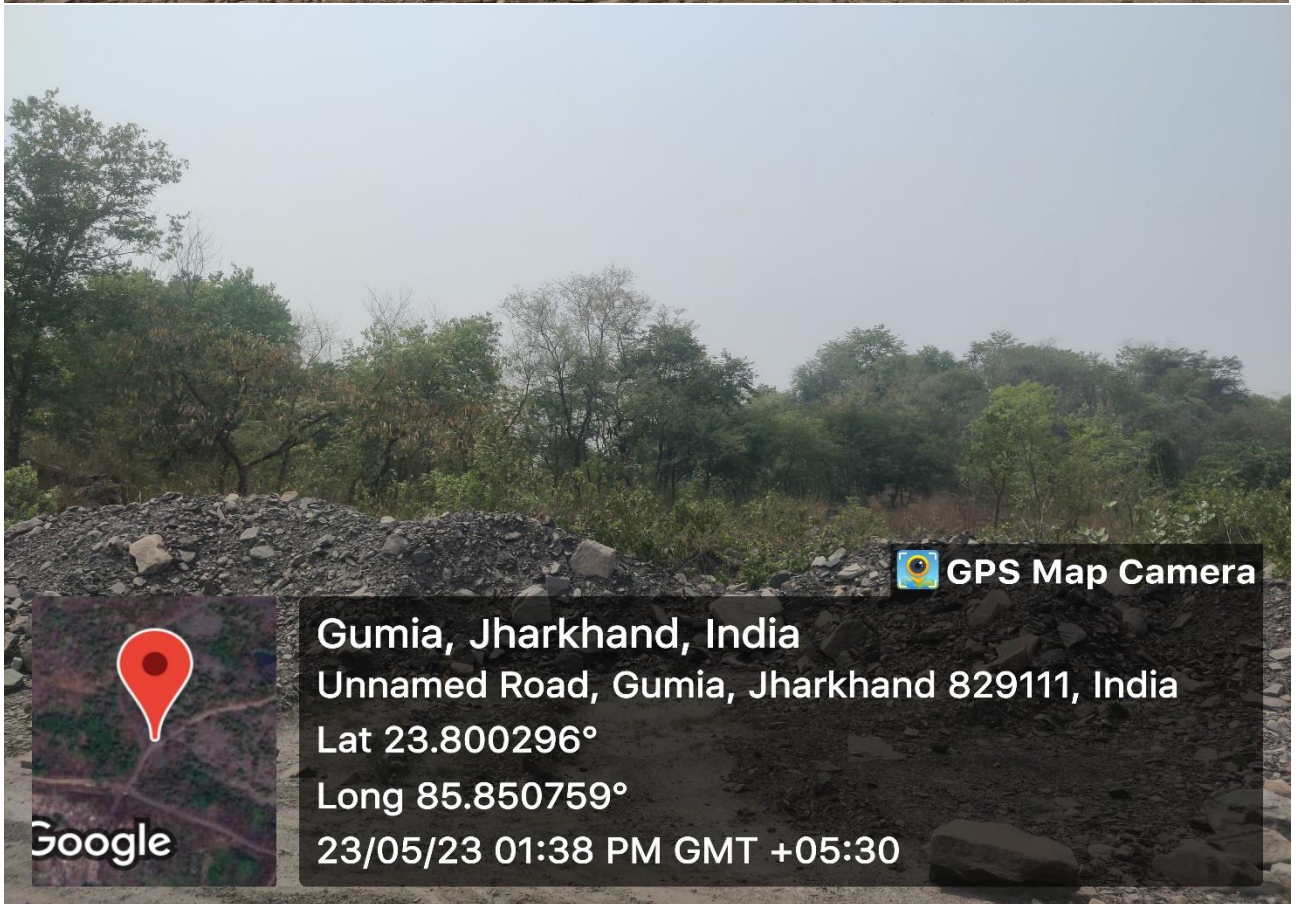



 GPS Map Camera

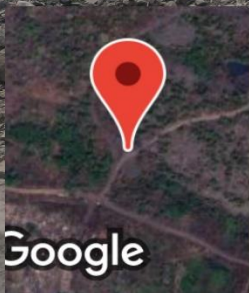


Google

Bokaro Thermal, Jharkhand, India
Unnamed Road, Bokaro, Jharkhand 829107, India
Lat 23.798799°
Long 85.870556°
23/05/23 01:20 PM GMT +05:30



 GPS Map Camera



Google

Gumia, Jharkhand, India
Unnamed Road, Gumia, Jharkhand 829111, India
Lat 23.800296°
Long 85.850759°
23/05/23 01:38 PM GMT +05:30

RAIN WATER HARVESTING



MINE CLOSURE REPORT

FOR

**GOVINDPUR PHASE-II OPEN CAST
PROJECT
(1.2 MTY)**

(CENTRAL COALFIELDS LIMITED)



AUGUST 2011

Regional Institute – III
Central Mine Planning & Design Institute Ltd.
(A Subsidiary of Coal India Ltd.)
Gondwana Place, Kanke Road
Ranchi-834008, Jharkhand

INTRODUCTION

1.1 About the Mine

Govindpur OCP was worked earlier. Upper Kargali seam was planned and worked under the name of Govindpur OCP. The same report was expanded to include the underlying Bermo seam under the name of Govindpur Expansion OCP.

The present Govindpur Ph-II OCP was planned as a new project to extract coal up to the lower most opencastable seam (i.e. Karo-VI seam) including area already worked in Govindpur OCP & Govindpur Expansion OCP. Total leasehold area of Govindpur Ph-II OCP includes both virgin and worked area. **The name Govindpur Ph-II is incidental as in Ph-I, the upper seams of Kargali and Bermo have already been worked under the name of Govindpur OCP & Govindpur Expansion OCP (Not as Govindpur Ph-I OCP).**

History of Mine

The PR of this project was prepared as a new project. The report proposed to exploit the upper Karo Group of seams (Seam VI to XI) based on the "Geological Report on Coal Exploration Govindpur North Block, East Bokaro Coalfield" prepared in Dec 2001 and the area south of Bermo Seam incrop upto 180 m depth line on Seam-VI floor in the south, bounded on the east by Mantico Nalla and on the west by Borrea Fault (F7-F7). This is a sector not covered in the geological report of Gobindpur North block (2001), and has now been defined for including additional reserves south of the original limits of Gobindpur North block.

Govindpur Ph-II Opencast Project is a new mine and a Draft Project Report was prepared in Feb 2008 to produce 0.8 MTY of coal from the Govindpur North sub-block of Govindpur Block in East Bokaro Coalfield. Further reserves from an area to the south of the incrop of Bermo seam has been added to the reserve of Govindpur North Block and the capacity of the PR enhanced to 1.2 MTY.

Karo group of seams is proposed to be exploited in Govindpur Ph II OCP. It is a huge source of non-coking coal. This reserve of 19.53 MT non-coking coal lies below the patches of forest and non-forest land. Hence, unless the forest land above the coal seams is released, the coal seams cannot be exploited. Mining being site specific it is not possible to divert the operations to non-forest land.

The PR of Govindpur Ph-II OCP (1.20 MTPA normative capacity and 1.50 MTPA highest achievable capacity) was placed before the 364th meeting of Board of Directors of CCL held on 23.12.2009. After detailed deliberation, the Board approved the Project Report of Govindpur Ph-II OCP envisaging departmental coal extraction and OB removal at an estimated additional capital investment of Rs.96.16 Crores.

1.1.1 Name of mine owner / company

Project----- Govindpur Ph-II OCP

Area----- The projects under consideration, i.e. Govindpur Phase-II OCP is administratively under Kathara Area of CCL headed by General Manager, Kathara Area. Geologically, it falls in East Bokaro Coalfield in Bokaro District of Jharkhand.

Company-----Central Coalfields Limited

Mine Owner---Director (Technical)(Operation), CCL

1.1.2 Address for Communication

Project----- Govindpur Ph-II OCP

Nearest Railway station ----- Govindpur Ph-II OCP is well connected by rail. The Gomoh- Barkakana loop line of East-Central Railway is about 2 km from the Project. BTPS Railway Station is the nearest railway station.

District----- Bokaro.

State-----Jharkhand.

1.1.3 Location of mine:

Project----- Govindpur Ph-II OCP

Area----- Kathara area

Latitude----- 23° 48' 30" and 23° 49' 30" North.

Longitude----- 85° 51' 15" and 85° 52' 45" East

Included in Survey of India Toposheet No. 73E/13 of Scale 1:50000.

1.1.4 Date of start & Life of mine:

Date of start of production----- 1989-90

Total life of mine as per PR ----- 20 years

Estimated remaining life of mine (as on 01.04.11) ----- 19 years

1.1.5 Total Lease Area of the mine :----- 274.95 Ha

1.1.6 Communication

Govindpur Ph-II OCP is well connected by rail and road. The Gomoh-Barkakana loop line of East-Central Railway is about 2 km from the Project. BTPS Railway Station is the nearest railway station. The Project is about 80 km from Hazaribagh and about 130km from Ranchi, via Ramgarh - Tenughat Dam road.

The Sawang colliery was connected to this Project by a seasonal causeway over Konar River, which was washed away. It is proposed to construct a bridge over Konar River at the same place.

1.1.7 Topography of the area

The lease area of Govindpur Phase-II OCP is slightly rolling with gentle southerly slope. The maximum elevation is 318m above MSL and minimum 231 & 240 m along the flanks of Konar river & Montico Nala respectively. The Project lies in the catchment area of Konar river & Montico Nala. The Konar river which is perennial in nature flows in the south easterly direction and forms the western boundary of the project. The Montico nala flows in the southern direction and joins the Konar river at some distance to the south of the block. Konar river joins the easterly flowing Bokaro river at the south central part of the area and thereafter finally joins the master drainage Damodar river in further south east of the block. Several small seasonal nalas originating from the uplands traverse the area and flow towards Bokaro river, Konar river and the Damodar river. The HFL of the Konar river and Montico Nala have been recorded as 232.7 m and 234.95 m above MSL. The drainage pattern of the area is mostly dendritic.

1.2 Reasons for Closure

To restore the disturbed area after extraction of planned quantity of coal, to the acceptable limit of local community and regulatory authority.

1.3 Need of mine closure planning

1.3.1 Mining activities leave long lasting impacts on the landscape, ecology and on local inhabitants. These activities disturb the delicate environmental and social equilibrium that exists in its area of influence. Hence, it becomes imperative on part of the mine operator to restore the equilibrium in the mine affected area that existed in the pre-mining period. Thus, any mining venture must have adequate closure plan, aimed at rehabilitation of disturbed area, which should be acceptable to local community as well as regulatory authority.

1.3.2 Mine closure encompasses rehabilitation process designed to restore physical, chemical and biological quality disturbed by the mining activities. Mine closure is not just something that happens at the end of a mine's life rather mine closure is an ongoing series of decisions and activities beginning in the pre-mining stage of mine and ending with a sustainable site that can be returned to the community.

1.3.3 Thus, a Mine closure plan needs to define the liabilities, responsibilities and authorities of the different agencies like the mine management, other regulatory bodies, Central and State Governments after mine closure. Various objectives of the advance mine closure planning are as follows:

- a. To allow productive and sustainable after-use of the site, which is acceptable to the mine owner and the regulatory authority
- b. To protect public health and safety
- c. To eliminate environmental damage and thereby encourage environmental sustainability
- d. To minimize adverse socio-economic impacts of mining activities
- e. To protect the flora and fauna of the area affected by the mining
- f. Effective use of the assets created in course of mining

1.3.4

Primarily, the mine closure activities are planned in two stages. The initial plan identifies the activities required to be executed as the mining activities progress after the inception of the Project. These activities may undergo subtle changes depending upon the actual site condition during implementation. Finally, a detailed closure plan is to be prepared 4-5 years before the actual closure time of the mine depending upon the existing parameters at that point of time.

Plans Enclosed

The following surface plans have been enclosed along with this mine closure report plan:

- a. Pre mining Land use plan of core zone
- b. Quarry & Dump Plan at the end of mining.
- c. Post mining land use plan with reclamation.

Financial Provisions

Mine Closure activities would be a constant exercise for the mine which would begin with the commencement of mining operations and continue till post closure. The mine closure activities would naturally entail certain expenditures, which will have to be borne by the mine operator.

2.1 Revenue expenditures

This would cover the activities which are being executed along with normal mining operation and would continue to be executed in course of execution of the Project. The cost of progressive mine closure activities is already part of the project cost.

2.2 Expenditures to be incurred just prior to actual mine closure and in the post closure period

2.2.1 As per MOC guidelines, a corpus escrow account @ Rs. 6.0 lakhs per Ha of the property leasehold shall be opened with the coal controller organization to meet the expenses of final mine closure. Thus the total expenditure on this front may be calculated in following manner:

The cost expenditure after closure of mine will be met from the corpus escrow account deposited by the mine operator. However, the additional amount beyond the escrow account will be provided by the mine operator after estimating the final mine closure cost five years prior to mine closure (as per the mine closure guideline).

The progressive mine closure will deal the land reclamation as per the calendar plan of project report. The cost of progressive land reclamation is already part of the project cost. Therefore, the escrow account for mine closure will deal only the final mine closure.

The detail of escrow account

The total mine lease area is **274.95** Ha, so the corpus based on August, 2009 rate is Rs. 1649.70 Lakh @ Rs. 6.0 Lakh/Ha of lease area. The wholesale price index in August, 2009 and April, 2011 is 129.60 and 152.10 respectively. So the current value of corpus is Rs. $1649.70 \times \frac{152.10}{129.60}$ Lakh, which comes to Rs. 1936.11 lakh. Since this is an operating/existing mine, this corpus is to be divided by balance life of mine. The balance life of the mine is 19 years. So, by dividing by 19 years, the annual corpus comes to Rs. 101.90 Lakh. This amount is to be deposited in escrow account every year with 5% escalation.

Year	Amount in Lakh (Rs.)
1 -2011	101.9
2	107.00
3	112.34

Year	Amount in Lakh (Rs.)
4	117.96
5	123.86
6	130.05
7	136.56
8	143.38
9	150.55
10	158.08
11	165.98
12	174.28
13	183.00
14	192.15
15	201.76
16	211.84
17	222.43
18	233.56
19	245.23
Total	3111.92

As per above an amount will be deposited every year up to the last year of mine life. The amount calculated by the above formula shall be deposited every year by CCL in the Escrow amount opened with the Coal Controller organization in a scheduled Bank. An agreement, outlining detailed terms and conditions of operating the said Escrow Account shall be executed amongst CCL, the Coal Controller and the commercial Bank.

However the additional amount beyond the escrow account, if any estimated later on, will be provided by the mine operator after estimating the final mine closure cost five years prior to mine closure (as per the mine closure guideline).

The details of Mine Closure Cost

The above escrow account will meet the cost of different activities of Mine Closure cost which is given in the table below:

SL. NO.	ACTIVITY	% OF TOTAL MINE CLOSURE COST	AMOUNT IN LAKH (RS.)
A	Dismantling of Structures		
	Service Buildings	0.20	6.22
	Residential Buildings	2.67	83.09
	Industrial structures like CHP, Workshop, field sub-station etc.	0.30	9.34
B	Permanent Fencing of mine void and other dangerous area		
	Random rubble masonry of height 1.2 metre including levelling up in cement concrete 1:6:12 in mud mortar	1.50	46.68

SL. NO.	ACTIVITY	% OF TOTAL MINE CLOSURE COST	AMOUNT IN LAKH (RS.)
C	Grading of highwall slopes		
	Levelling and grading of highwall slopes	1.77	55.08
D	OB Dump Reclamation		
	Handling/ Dozing of external OB Dump in to mine void	88.66	2759.03
	Bio-reclamation including soil spreading, plantation and maintenance	0.40	12.45
E	Landscaping		
	Landscaping of the clear land for improving its esthetic	0.30	9.34
F	Plantation		
	Plantation over area obtained after dismantling	0.50	15.56
	Plantation around the fencing	0.20	6.22
	Plantation over the cleared off external OB Dump	0.02	0.62
G	Monitoring/ Testing of paramaters for three years		
	Air Quality	0.22	6.85
	Water Quality	0.20	6.22
H	Enterpreneurship Development (Vocational/ skill development training for sustainable income of affected people	0.26	8.09
I	Miscellaneous and other mitigative measures	2.00	62.24
J	Manpower cost for supervision	0.80	24.90
	TOTAL	100.00	3111.92

Time Schedule

The closure of mines evolves environmental, technical, social aspect and financial assurance for implementing the post closure activities as per guidelines of Ministry of Coal. The post closure implementing activities will run for three years. The following activities will be implemented as per bar chart.

S.N	Activities	Time Frame	Half Yearly					
			1	2	3	4	5	6
1.	Preparation of Survey & Disposal Report	1 month	■					
2.	Slope Stability study for high walls and internal backfilled dumps	1 month	■					
3.	Disposal of P&M including HEMM, CHP, W/S, Siding	2 and half years	■	■	■	■	■	
4.	Backfilling of mined out Area (OC)	2 years	■	■	■	■		
5.	Dismantling of Industrial structure	2 years	■	■	■	■		
6.	Grading & dozing of high walls for OC	2 years	■	■	■	■		
7.	Fencing of quarry	2 years	■	■	■	■		
8.	Clearing of Coal Stock and Infrastructural Area.	2 years	■	■	■	■		
9.	Disposal / Dismantling of Residential colony	2 & 1/2 years	■	■	■	■	■	
10.	Plantation & landscaping on backfilled area.	3 years	■	■	■	■	■	■
11.	Plantation over cleaned land of Infrastructure.	from 2 nd year			■	■	■	■
12.	Environmental Monitoring	3 years	■	■	■	■	■	■

The manpower for implementing the above activities with time bound manner have been provided in the subsequent chapter with cost details.

NOTE : The progressive mine closure will be done as per the calendar plan of the OC project for technical and biological reclamation of dumps and internal voids.

CENTRAL COALFIELDS LIMITED
DARBIHANGA HOUSE, RANCHI

Sub: Forwarding Minutes of the 385th (No.2 of 2012) Meeting of the
Board of Directors held on 24.02.2012.

Extracts from the minutes of the above meeting, in respect of following item, is appended below.

Item No.4(16): Proposal seeking approval of Mine Closure Plan of 15 Projects of CCL (Financial assurance).

The Board noted that the "Mine Closure Plans" for 15 mines have been prepared as per the guidelines issued by Ministry of Coal, Government of India.

The Board further noted the following-

- For financial assurance for mine closure, CCL shall open an Escrow Account with any scheduled bank, with the Coal Controller Organization (on behalf of the Central Govt.) as exclusive beneficiary.
- When implementation of the final mine closure scheme is undertaken by the mine owner starting five years before the scheduled closure of mining operations, the Coal Controller may permit withdrawals (4 years before final mine closure date) from the Escrow Account proportionate to the quantum of work carried out, as reimbursement.
- The withdrawn amount each year shall not exceed 20% of the total amount deposited in the account.
- The corpus for mine closure has to be generated as per this guideline @ ₹ 1.0 Lakh / Ha of lease area in case of underground mines & ₹ 6.0 Lakh / Ha of lease area in case of opencast mines.
- The base date for this rate is August, 2009 which has to be escalated at the time of preparation of mine closure plan on the basis of Wholesale Price Index issued from Ministry Of Finance from time to time.
- Annual closure cost is to be computed considering the total leasehold area at the above mentioned rates (evaluated at the time of preparation of mine closure plan on the basis current WPI) and dividing the same by the balance life of the mine in case of operating / existing mines. An amount to the annual cost is to be deposited each year throughout the life of the mine compounded @ 5% annually.

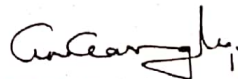
Keeping in view of the above, after detailed deliberation, the Board approved the proposal as brought out in the agenda, of Mine Closure Plans of following 15 mines with corresponding funds as mentioned below to facilitate generation of fund for Escrow Account with Coal Controller Organization on behalf of the Central Government-


	Name of Projects	Proposed fund for Mine Closure (Cumulative) (in ₹ Lakh)
1	Jarangdih UGP	814.70
2	Jarangdih OCP	1332.00
3	Karma OCP	2685.80
4	Urimari Exp. OCP	2097.14
5	Ashok Expn OCP	13849.67
6	Govindpur P-II CP	3111.92
7	KDH OCP	7818.80
8	Purnadih OCP	10406.70
9	Karo OCP	9742.16
10	Rohini OCP	2227.26
11	Piparwar OCP	9664.67
12	Tetariakhar OCP	1895.90
13	Dakra OCP	2395.86
14	Tapin OCP	3345.78
15	Churi-Benti UGP	1164.10
	GRAND TOTAL	72552.47

(₹ Seven Twenty Five Crore Fifty Lac & Forty Seven Thousand only)

The CGM (P&P) in consultation with the Finance department of CCL shall take necessary action in this regard.

It is requested kindly to take necessary action on the decision, wherever necessary, under intimation to this office.


(C.V.N. Gangaram)
Company Secretary.


GM(E&P)

U.O.No.CS/BM/385/2012/ 193

Date: 01-03-2012



पश्चिमबङ्ग पश्चिम बंगाल WEST BENGAL

P 527836

AMENDED AGREEMENT

ESCROW ACCOUNT AGREEMENT BETWEEN

Central Coalfields Limited (Coal Mining Company) for its Govindpur.P-II OCP (Name of Coal Block/Mine) with Coal Controller's Organization & Bank.

This Escrow Account Agreement is made at Kolkata on 5th day of August 2013 amongst

1) Central Coalfields Limited (a company registered under the Indian Companies Act, 1956 having its registered office at Darbhanga House, Ranchi - 834001 and branch office at _____, hereinafter called a mining company or lessee or mine owner which expression shall unless repugnant to the subject or context thereof includes, its successors and permitted assigns.

AND

2) Coal Controller's Organisation, Government of India, Ministry of Coal having its office at 1, Council House Street, Kolkata, and branch office at Dhanbad, Ranchi, Bilaspur, Nagpur, Kothagudam, Sambalpur & Asansol hereinafter called the Coal Controller's Organization which expression shall unless repugnant to the subject or context thereof include its, successors and permitted assigns.

AND

3) United Bank of India, a body corporate constituted under the Banking Companies (Acquisition & Transfer of Undertakings Act, 1970) having its H.O. at 11, Hemanta Basu Sarani, Kolkata-700001 & Branch Office at Ranchi Branch, Post Box No.94, Main Road, Ranchi - 834001 hereinafter called the "Escrow Agent" which expression shall, unless repugnant to the subject or context thereof include its, successors and assigns.

Each of the parties mentioned hereinabove, hereinafter collectively referred to as parties and individually as party.

CENTRAL COALFIELDS LIMITED
DARBHANGA HOUSE
RANCHI

कृते, युनाइटेड बैंक ऑफ इंडिया
For & on behalf of
For UNITED BANK OF INDIA
रौंकी शाखा/Ranchi Branch
राहायक महाप्रबंधक
General Manager

अ. आचार्य/A. ACHARYA
कोयला नियंत्रक/Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय/Ministry of Coal
१, काउन्सिल हाउस स्ट्रीट/1, Council House Street
कोलकाता-700001/Kolkata - 700 001

Whereas :

- 1) As per the guidelines of the Ministry of Coal, Government of India all Coal Mine owners who are operating Coal Mines are required to obtain a Mine Closure Plan within a period of One year from the day when the original guidelines came into effect (i.e. 27th August, 2009) and from the date of publishing of the amended guidelines i.e. 7th January, 2013 for those mine owners who have not yet complied to the same failing which the Government will take action as appropriate.
- 2) The Coal Mine Owners who have been accorded approval of mining Plan/Project Reports without the Mine Closure Plans as per the guidelines framed by the Ministry of Coal, Govt. of India, are required to prepare and obtain the approval of Mine Closure Plan as per guidelines of the said Ministry of Coal, Government of India, within a period of one year of the day when the original guidelines coming into effect (i.e. 27th August, 2009).
- 3) The money to be deposited every year by the said Mining Company is **the annual Mine closure cost as approved by the Ministry of Coal and which is to be verified** by the Coal Controller's Organization as per the guidelines of the Ministry of Coal, Govt. of India, (at the price level of August, 2009 which will be reviewed on the basis of the wholesale price index) on a yearly basis in the Escrow A/c to be opened by the said Coal Mine owners with any Scheduled Bank with Coal Controller's Organization (on behalf of the Central Government) as exclusive beneficiary as per the guidelines of the Ministry of Coal.
- 4) Up to 80% of the total deposited amount including interest accrued in the Escrow Account may be released after every 5 years in the line with the periodic examination of the closure plan as per clause 3.1 of the annexure of the guidelines. The amount released should be equal to the expenditure incurred in the Progressive Mine Closure in the past 5 years or 80% whichever is less. The balance amount at the end of the Final Mine Closure shall be released to the Mine Owners/Leaseholder on compliance of all provisions of closure plan duly signed by the Lessee to the effect that said closure of mine complied all statutory rules, regulations, orders made by the Central or State Government, statutory organizations, court etc. and duly certified by the Coal Controller.
- 5) If the Coal Controller has reasonable grounds for believing that the protective, reclamation and rehabilitation measures as envisaged in the approved mine closure plan in respect of which financial assurance was given has not been or will not be carried out in accordance with mine closure plan, either fully or partially, the Coal controller shall give the mine owner a written notice of his intention to issue the orders for forfeiting the sum assured at least thirty days prior to the date of the order to be issued after giving an opportunity to be heard.
- 6) It is also stipulated in the guidelines of the Ministry of Coal, Govt. of India, that an agreement outlining the details of terms and conditions of opening and operating the Escrow Account/arrangements is to be executed amongst Mining Companies, Coal Controller's Organization & the concerned Bank for giving effect to the same.
- 7) Parties now have agreed to establish an Escrow Account/Arrangements and engage an Escrow Agent to act in connection with the said deposits and withdrawal in the said Escrow account on the terms and conditions contained herein.

Whereas **Central Coalfields Limited** Company, (the Mining Company) has approached **United Bank of India**, a scheduled Bank under Schedule II of the RBI Act, 1934 for opening such Escrow Accounts and **United Bank of India** has agreed for the same.

CENTRAL COALFIELDS
RANCHI

वृत्ते, युनाइटेड बैंक ऑफ इंडिया
For & on behalf of
For UNITED BANK OF INDIA
रांची शाखा/Ranchi Branch

सहायक महाप्रबंधक
Asstt. General Manager

5/8/13
श्री. अशोक ए. अर्वा
कायदा नियंत्रक / Coal Controller
भारत सरकार / Government of India
कायला भवन/Ministry of Coal
१, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700001 / Kolkata - 700 001

NOW, IT IS HEREBY AGREED BY AND AMONGST THE PARTIES AS FOLLOWS:

Appointment of Escrow Agent:

- i) The parties (Other than the Escrow Agent) hereby appoint United Bank of India, as Escrow Agent to act subject to and in accordance with the terms and conditions set out in this agreement.
- ii) The Escrow Agent shall not be personally liable in any manner whatsoever to any party for any acts it may do or omit to do hereunder as Escrow Agent or for any loss, harm, damage cost or expenses of any kinds suffered by any person, party or entity as a consequence of the action or inaction of the Escrow Agent other than for its gross negligence or willful disregards of the terms of the agreements.
- iii) In its performance of its duties under this agreement, the Escrow Agent shall be entitled to rely upon any documents, instruments, or signature believed by it in good faith to be genuine & signed by an authorized signatory of any parties hereto and shall not be required to investigate the truth or accuracy of any statement contained in such document or instrument. The Escrow Agent may assume that any person purporting to give any notice in accordance with the provision hereof has been duly authorized to do so.
- iv) The party shall jointly and severally indemnify & hold harmless the Escrow Agent from and against all claims, actions, demands, liabilities, proceedings or judgments which the Escrow Agent may incur or suffer or may be brought against Escrow Agent and from and against all losses, costs, charges, liabilities, and expenses reasonably incurred in connection with the performance by the Escrow Agent of its duties under or in connection with this agreement save where there is gross negligence or willful misconduct or willful disregard of the terms of this agreement and the part of the Escrow Agent.
- v) The Escrow Agent will act in terms of the agreement, only if sufficient funds are available in the escrow account for discharging its obligation as Escrow Agent.

Establishment of Escrow Account

- i) The Mining Company shall open an Escrow Account (Fixed Deposit, any type) with United Bank of India (Bank name) under the title "Mine-Closure Escrow A/c No. 0059101073632", the Coal Controller's Organization being the exclusive beneficiary. The Coal Controller will have the authority to write to the Bank to freeze operation in the said Escrow A/c without the concurrence of the mining company & the said decision of the Coal Controller will be binding on the mining company and mining company cannot have any objection on the same.
- ii) The opening, operation of Escrow Account, deposit and withdrawal of money from the said account shall be in accordance with this agreement.
- iii) The parties agree (other than the Escrow Agent) that all rights, title and interest in and to the Escrow Account shall be vested in the Escrow Agent and shall be in trust for the parties.
- iv) The Escrow Account will be operated as per direction of Coal Controller by the authorized

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For & on behalf of
FOR UNITED BANK OF INDIA
राँची शाखा/Ranchi Branch

2/05/13
सहायक महाप्रबंधक
Asstt. General Manager

5/8/13
श. आचार्य A. ACHARYA
कोयला नियंत्रक / Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय / Ministry of Coal
२, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
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signatories of the Company.

- v) For any avoidance of the doubts it is made clear that all money held by the Escrow Agent/Designated Bank shall not be considered as part of the personal assets of the Escrow Agent/Designated Bank.
- vi) In the event of any deviation in the withdrawals, the parties shall communicate the same in writing to the Escrow Agent.
- vii) Tax will be deducted at source as per Income Tax Act. Without discontinuing Mine Escrow Account till the life of the mine, the total deposited amount including interest in Escrow Account will be renewed / reinvested after three years and this amount may continue with same bank or other bank as selected by mining company in consultation with Coal Controller. Up to 80% of the total deposited amount including interest accrued in the Escrow Account may be released after every 5 years in the line with the periodic examination of the closure plan as per clause 3.1 of the annexure of the guidelines. The amount released should be equal to the expenditure incurred in the Progressive Mine Closure in the past 5 years or 80% whichever is less. The balance amount at the end of the Final Mine Closure shall be released to the Mine Owners/Leaseholder on compliance of all provisions of closure plan duly signed by the Lessee to the effect that said closure of mine complied all statutory rules, regulations, orders made by the Central or State Government, statutory organizations, court etc. and duly certified by the Coal Controller.
- viii) Funds: Interest will be paid at the offered rate at the time of opening the Escrow Account.
- ix) Income Tax: Tax will be deducted at source as per Income Tax Act. The Mining Company shall not charge the funds kept in the term deposits in escrow accounts by way of assignment / lien / hypothecation to secure any loan/advance/credit facilities taken / to be taken by the mining Company. The deposits created out of funds of Escrow account automatically be renewed for a further period of one year on due date if the Escrow Agent do not receive any instruction from the Coal Controller to the contrary.

Operation of Escrow Account.

Deposit

- i) The Escrow Account shall continue as a debit freeze account subject to withdrawal of 80% of total deposited amount including interest accrued in the Escrow Account after 5 years of every deposit in line with the periodic examination of the closure plan. The balance amount shall be released to the mine owner/leaseholder at the end of the final Mine Closure on compliance of all provision of closure Plan.
- ii) The Central Coalfields Limited (Mining Company) shall cause deposit in such "Escrow Account" in the following manner on yearly basis as would be communicated by the Coal Controller from time to time to it.
- a) The payment shall be made by RTGS/NEFT/DEMAND DRAFT/PAY ORDER.
- b) Around Six lakhs per hectare of the total project area in case of OC mines at current price level (August, 2009) subject to modification based on the wholesale price Index (WPI) as notified by the Government of India from time to time.
- c) One lakh per hectare for UG project area, at current price level of (August, 2009) subject to modification based on the wholesale price Index as notified by the Government of

CENTRAL COAL
BARBIL
RAJ

05.08.13

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For & on behalf of
For UNITED BANK OF INDIA
राँची शाखा/Ranchi Branch
सहायक महाप्रबंधक/
Ass'tt. General Manager

Dr. SHARMA, ACHARYA
आयता नियंत्रक/Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय / Ministry of Coal
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- India from time to time.
- d) Annual Closure Cost is to be computed on the total Project Area over and above the aforesaid rate per hectare and dividing the same by the entire life of the mine in years for new projects and balance life of mine in years for operating /existing mines is to be deposited each year by the said company (**Central Coalfields Limited**, the mining company) throughout the life of the mine compounded at the rate of 5% annually.
 - e) An amount equal to the annual cost is to be deposited each year throughout the life of the mine compounded at the rate of 5% annually.
 - f) Mine closure plan which have already been approved earlier on the basis of lease hold area, the project proponents are required to recalculate the closure cost on the basis of total project area and submit a certificate stating that amount in Escrow Account would be deposited as per re-calculated amount.
 - g) The Closure Cost may change subject to Government of India's Notification from time to time.
 - h) If the Mine owners fail to deposit the annual amount required to be deposited, the Government can withdraw the mining permission.
 - i) It is to be clearly understood that the fund so generated are towards the security to cover the cost of closure in case the mine owner fails to complete the relevant closure activities. The prime responsibility of mine closure shall always lie with the mine owner, and in case the funds so generated are found to be insufficient to cover the cost of final mine closure, the mine owner shall undertake to provide the additional fund equivalent to the gap in funding before five years of Mine Closure failing which it may be recovered by such other methods as the competent authority may deem fit in this regard.

Withdrawal.

Withdrawal/transfer from Escrow Account shall be in accordance with the water fall mentioned herein below:

- (1) To allow the mine owners by way of reimbursement up to 80% of the total deposited amount including interest accrued in the Escrow Account after every 5 years of every deposit in line with the periodic examination of the closure plan as per clause 3.1 of the Annexure of the Guidelines.
- 2) The balance amount shall be released to mine owner/lease holder at the end of the final mine Closure on compliance of all provision of closure plan. The compliance report should be duly signed by the lessee and certify that the said closure of mine complied all statutory rules, regulations, orders made by the Central or State Government, statutory organizations, court etc. and certified by the Coal Controller. Provided that if all the above criteria is not completed within the period specified in mine closure plan the amount in the Escrow Account shall be forfeited.

Duties of Escrow Agent

Escrow Agent shall:

- i) Keep proper books of accounts relating to Escrow Account maintained by the agent.
- ii) Provide Statement of Accounts to the parties at such frequencies which will be evolved by consensus amongst the **Central Coalfields Limited** (mining company),

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सहायक महाप्रबंधक
Asstt. General Manager

05.08.13

ज. आचार्य A. ACHARYA
कोयला नियंत्रक/Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय/Ministry of Coal
य, काउन्सिल हाउस स्ट्रीट/1, Council House Street
कोलकाता-700009/Kolkata - 700 009

the Coal Controller's Organization and Escrow Agent.

- iii) Not to allow any payment out of the Escrow account in respect of money deposited without the approval of the Coal Controller's Organization except in the manner stated hereinabove.
- iv) Act in accordance with the agreement.
- v) Irrevocably and absolutely waive all present and future rights to make or exercise any claims or demands, any rights of counter-claim, lien/set-off and all other present or future rights against the balance amount standing to the credit of the Escrow account, to make any withholding or balancing of any accounts or to effect any transfers without the approval of the Coal Controller's Organisation.
- vi) Irrevocably and absolutely waive all present and future rights to combine or consolidate any other non-Escrow Account of any offices anywhere with the Escrow Agent or the designated Bank.
- vii) As promptly, as is reasonably practical, after receipt of any reasonable written request from the parties provide such information to such parties regarding the amounts available in the Escrow Accounts and balances there under.

Termination/Resignation of Escrow Agent.

- i) The obligation of the Escrow Agent under this agreement shall end on the final payment of the amount under the aforesaid scheme.
- ii) The Escrow Agent may resign from its appointment as an Escrow Agent subject to the Escrow Agent giving 30 Business days prior notice in writing to the other parties. The Escrow Agent shall deal with the Escrow Account in accordance with the provisions of the Escrow Agreement and continue to be bound by the terms and conditions hereof until the Coal Controller's Organization identify a successor.
- iii) The Escrow Agent may be removed by the Coal Controller's Organisation on giving 30 days notice to the Escrow Agent. In case the Coal Controller's Organization fails to identify a successor Escrow Agent within the above-mentioned 30 days', the Escrow Agent, United Bank of India(Bank Name), shall by itself appoint a successor as Escrow Agent.
- iv) If the Escrow Agent resigns or removed in accordance with the agreement, then Coal Controller's Organisation shall appoint a successor as Escrow Agent in consultation with the Coal Mining Company.
- v) If the Escrow Agent resigns or is replaced pursuant to this agreement, such Escrow Agent shall do all necessary acts for the transfer of the Escrow account to the successor Escrow Agent.
- vi) The fees for the service rendered if any by the Escrow Agent shall be in accordance with the letter to be exchanged between the Escrow Agent, the Coal Controller's Organisation and Coal Mining Company.

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For & on behalf of
For UNITED BANK OF INDIA
रांची शाखा/Ranchi Branch

सहायक महाप्रबंधक
Asstt. General Manager

5/8/13
M. JAYANTA DEBBARMA
कायला नियंत्रक/ Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय / Ministry of Coal
1, काउन्सिल हाउस स्ट्रीट/1, Council House Street
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Amendment of the Agreement

- i) This agreement may be altered, amended, modified or revoked by an instrument in writing signed in original by Coal Controller as and when required.

Notices

All notices or other communications to be given under this agreement shall be made in writing to:

- i) **Central Coalfields Limited (Mining Company),**
Address. Darbhanga House, Ranchi -834001
Tel: 0651-2360123/0606/5998
Fax: 0651-2360012
- ii) **Coal Controller Organization,**
Address. 1, Council House Street, Kolkata.
Tel: 033-22489613-16
Fax:03322482459
- iii) **United Bank of India,**
Address. Ranchi Branch, Post Box No. 94, Main Road. Ranchi-834001
Tel: 0651-2204266/3320
Fax:0651-2204266

Governing Law & Jurisdiction

- i) This agreement shall be governed by and interpreted in accordance with Indian Law and shall be subject to the exclusive jurisdiction of the courts at Kolkata.

Whole Agreement & Variation

- i) This agreement together with the schedules hereto contains the whole agreement between the parties relating to the rights and obligations in relation to the subject matter of the agreement.

Invalidity

- i) If any term or provision in this agreement is held to be illegal or unenforceable in whole or in part, under any enactment or rule of law, such term or provision or part to that extent will be deemed not to form part of this agreement, but the enforceability of the remainder of the agreement will not be affected.

Counterparts

- i) This agreement may be entered into in any number of counterparts and the parties of it on separate counterpart each of which when so executed and delivered will be in original, but all the counterparts will together constitute one and the same instrument.

No Waiver

CENTRAL COALFIELDS
DARBHANGA
RANCHI

05.08.13

कृते, युनाइटेड बैंक ऑफ इंडिया
For & on behalf of
For UNITED BANK OF INDIA
रैंची शाखा/Ranchi Branch
सहायक महाप्रबंधक
Asstt. General Manager

5/8/13
श्री आचार्य/A. ACHARYA
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1, काउंसिल हाउस स्ट्रीट/1 Council House Street
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i) No failure to exercise or delay in exercising any right or remedy under this agreement by any party will operate as a waiver of any other right or remedy hereunder, nor will any single or partial exercise of such right or remedy preclude any further exercise thereof or of any other right or remedy which such party may have in this agreement.

Rights Cumulative

i) The rights and remedies provided herein are cumulative and not exclusive of any rights and remedies provided by law in equity or otherwise.

Rights of Third Parties

i) For the avoidance of doubts, this agreement does not and shall not confer rights upon a person which is not a party to this agreement.


In witness of which the parties have executed the agreement on 5th day of August 2013 as mentioned above.

SIGNED AND DELIVERED BY


(Central Coalfields Limited)

By
Name: **P.K Guin**
Designation: **CGM(Project and Planning)**

SIGNED AND DELIVERED BY

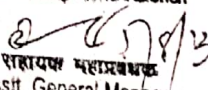

(Coal Controller Organisation)
K. GUPTA
कोयला नियंत्रक / Coal Controller
भारत सरकार / Government of India
कोयला मंत्रालय / Ministry of Coal
१, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-७००००१ / Kolkata - 700 001

By
Name:
Designation:

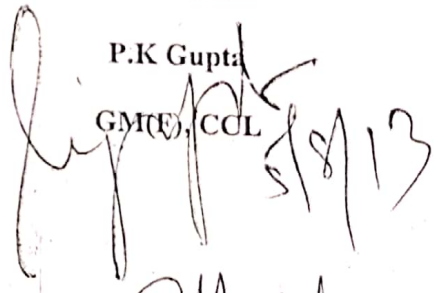
SIGNED AND DELIVERED BY

(United Bank of India)

By
Name : **J.SUR**
Designation :

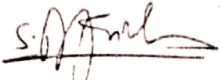
कृते, युनाइटेड बैंक ऑफ इंडिया
For & on behalf of
For UNITED BANK OF INDIA
रौंसी शाखा/Ranchi Branch

सहायक महाप्रबंधक
Asstt. General Manager

WITNESSES


P.K Gupta
GM(C), CCL

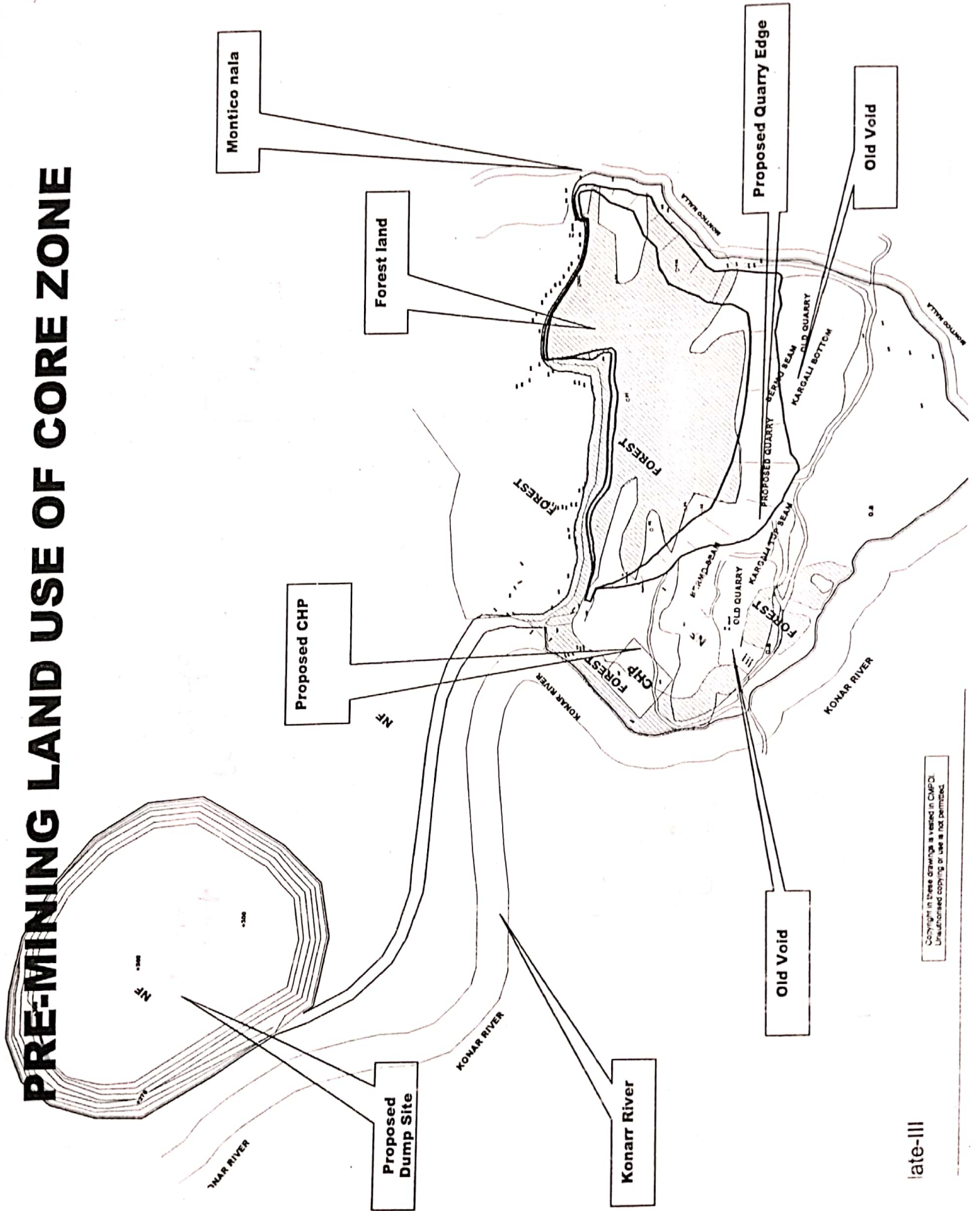
के. गुप्ता / K. GUPTA

उप सहायक कोयला नियंत्रक / By Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक का कार्यालय / Office of the Coal Controller
१, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-७०० ००१ / Kolkata-700 001


S. P. KILSAN
मुख्य प्रबंधक / CHIEF MANAGER
विपणन विभाग / Marketing Deptt.
युनाइटेड बैंक ऑफ इंडिया, प्र.का.
UNITED BANK OF INDIA, H.O.

5/8/13

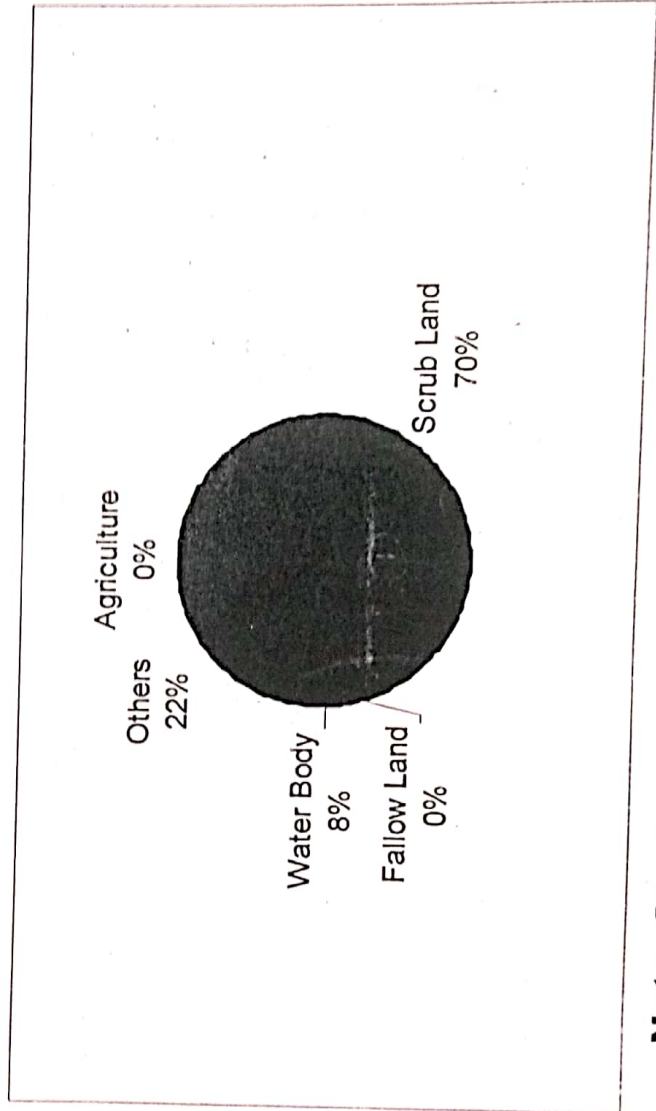
PRE-MINING LAND USE OF CORE ZONE



late-III

PRE-MINING LAND USE OF CORE ZONE

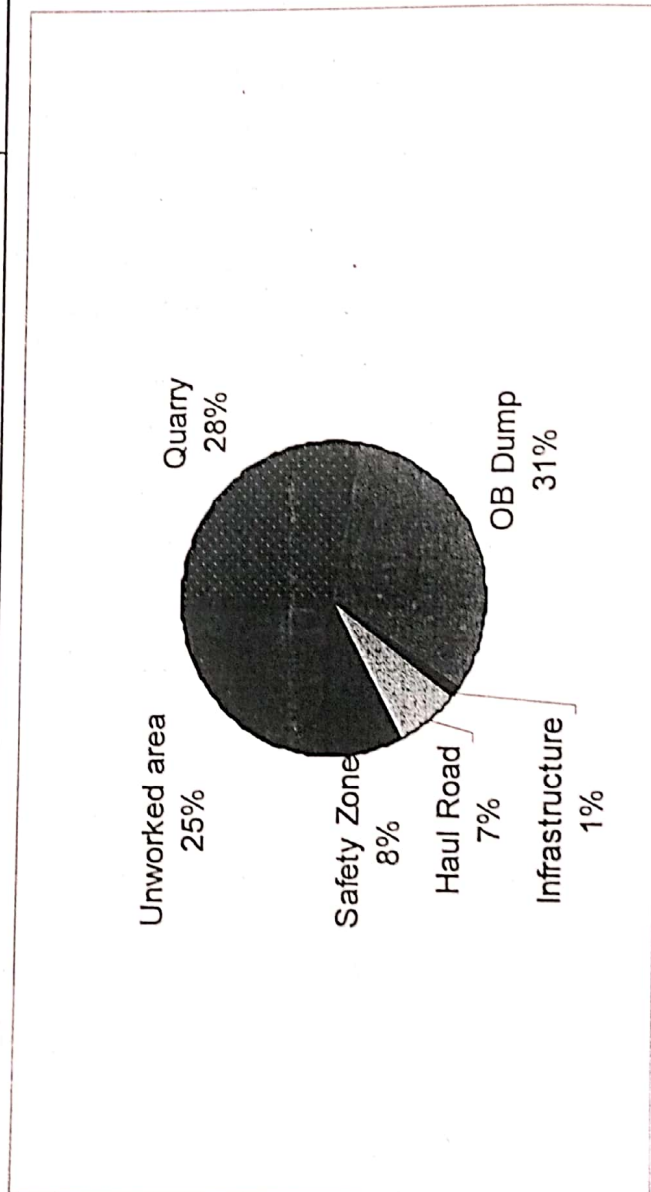
Class of land use	Area	
	Ha	%
Agriculture	0.00	0.00
Scrub Land	193.25	70.00
Fallow Land	0.00	0.00
Water Body	21.43	8.00
Others (mining)	60.27	22.00
Total	274.95	100.00



Note: Scrub land includes 70.13 Ha forest land.

PROPOSED LAND USE PATTERN DURING MINING

Description	Forest Land (Ha)	Non-Forest Land (Ha)	Total Land (Ha)
Quarry	49.82	26.60	76.42
OB Dump	0.00	87.00	87.00
Infrastructure	2.00	1.12	3.12
Haul Road	6.70	12.60	19.30
Safety Zone	1.95	19.35	21.30
Old worked area	9.66	58.15	67.81
Total	70.13	204.82	274.95



FINAL STAGE DUMP & QUARRY PLAN

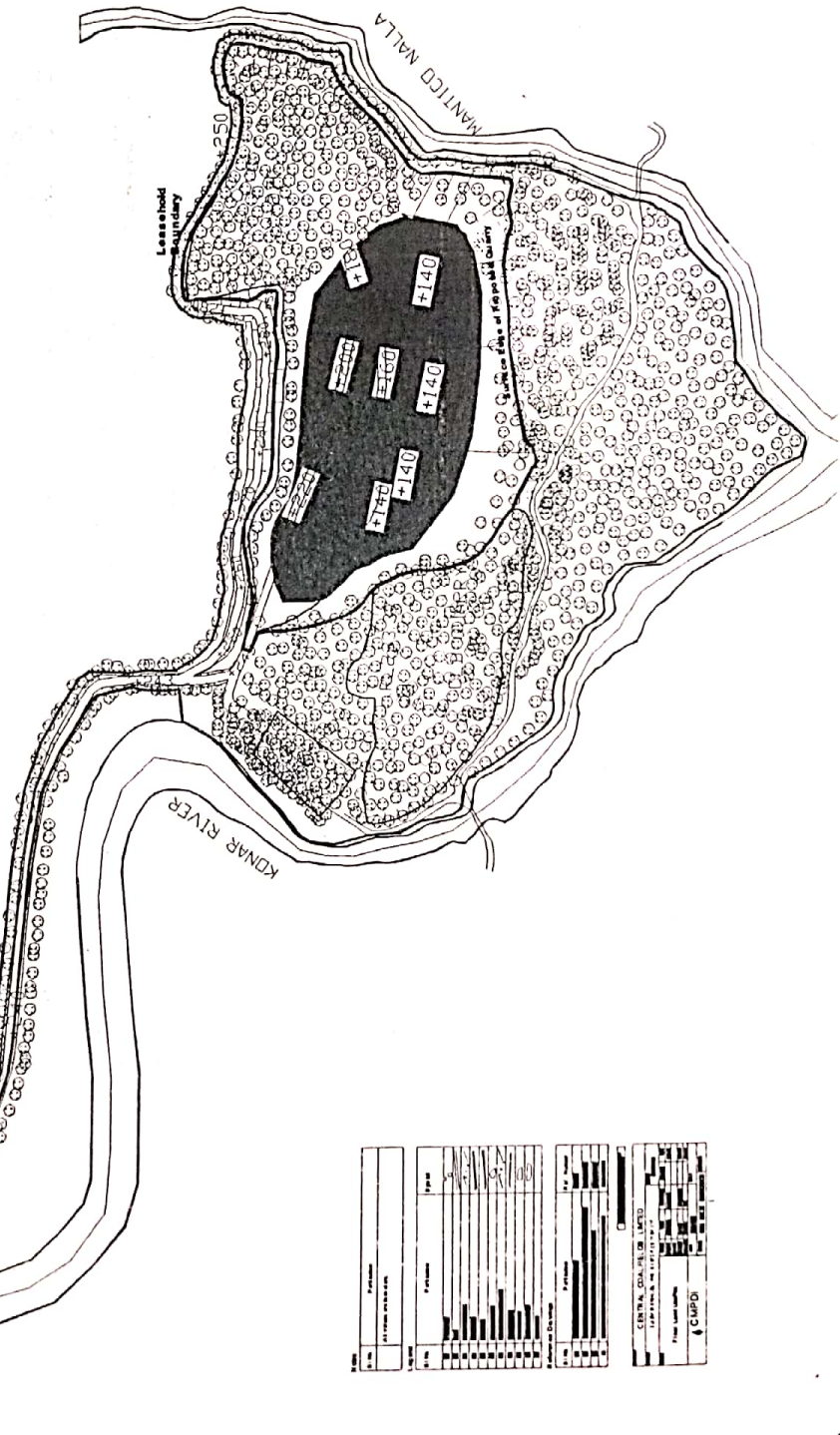
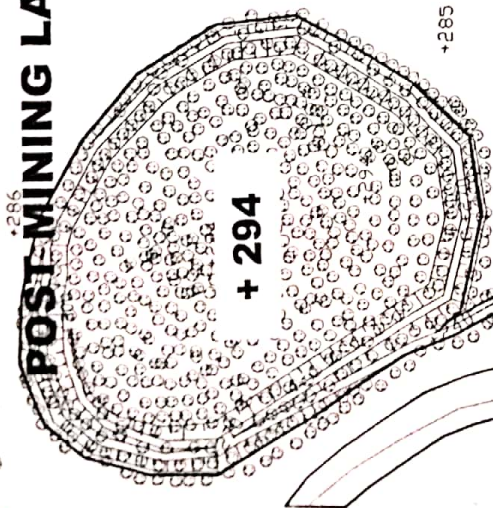


Plate-VI

No.	Description	Date	By

DRAWN BY		CHECKED BY		DATE	

POST-MINING LANDUSE PLAN WITH RECLAMATION



GENERAL INFORMATION	
Scale	1:1000
Projection	UTM
Zone	48N
Datum	WGS 84
Units	Meters
Author	Central Coalfields Ltd.
Date	2010
Revision	01
Drawn by	CLP/DO
Checked by	
Approved by	
Scale	1:1000
Projection	UTM
Zone	48N
Datum	WGS 84
Units	Meters
Author	Central Coalfields Ltd.
Date	2010
Revision	01
Drawn by	CLP/DO
Checked by	
Approved by	

POST MINING LANDUSE OF CORE ZONE WITH ENVIRONMENTAL MANAGEMENT

S No.	Description	Land-use (Ha)					Total
		Plantation	Water Body (Lagoon)	Public use	Landscaped Quarry Batter		
1	External OB Dump	87.00	0.00	0.00	0.00	87.00	
2	Internal OB Dump	16.53	0.00	0.00	0.00	16.53	
3	Backfilled Excavation	6.00	34.12	0.00	19.77	59.89	
4	Roads	0.00	0.00	19.30	0.00	19.30	
5	Built-up (Infrastructure)	3.12	0.00	0.00	0.00	3.12	
6	Safety Zone & Green belt	89.11	0.00	0.00	0.00	89.11	
	Total	201.76	34.12	19.30	19.77	274.95	

Note: 5.04 lakh trees would be planted over 201.76 Ha of land out of the lease area of 274.95 Ha.

11080-5783

JH10BR-5504

B.L.A

Date 04-2023

Sl.No	Vehicle No.	Reg. Date	Fitness	Tax	Insb.	Pucc	Permit
1.	JH09ANS781	05/12/18	25/11/24	25/15/23	23/02/24	15/8/23	28/1/24
2.	JH10AP5061	14/11/14	17/10/23	10/7/23	18/10/23	10/7/23	5/7/24
3.	JH09US208	3/6/13	15/9/23	2/6/23	6/7/23	20/6/23	10/8/24
4.	JH09Y6451	11/11/14	21/12/23	10/5/23	28/7/23	1/2/23	NA
5.	JH01CN2320	1/9/17	22/9/23	11/7/23	30/5/23	20/8/23	30/1/28
6.	JH09AH8347	9/11/17	2/11/23	25/6/23	26/8/23	21/9/23	20/11/23
7.	JH09AH3959	9/11/17	26/11/23	25/6/23	30/5/23	1/4/23	13/10/23
8.	JH09AP2667	22/3/19	24/2/25	14/6/23	27/2/24	1/12/23	3/4/24
9.	JH09AP1135	22/3/19	20/1/25	14/6/23	27/2/24	1/12/23	3/4/24
10.	JH09AB3542	8/12/15	10/12/23	7/6/23	7/12/23	28/7/23	14/3/26
11.	JH09AC2565	23/3/16	14/3/25	22/6/23	11/2/24	21/6/23	25/5/24
12.	JH09AF2388	11/4/17	20/3/25	20/6/23	23/8/24	21/9/23	26/5/28
13.	JH09Y5851	11/11/14	17/10/23	30/4/23	16/1/24	3/4/22	26/3/25
14.	JH09AK6115	2/12/18	2/2/24	11/5/23	2/3/24	20/2/24	19/3/28
15.	JH09AB9141	4/12/15	26/2/25	3/6/23	29/12/23	23/8/23	22/1/26
16.	JH09AB7812	30/12/15	19/4/24	29/6/23	15/4/24	17/4/23	31/5/28
17.	JH09AB8343	24/11/15	2/11/23	23/5/23	13/10/23	21/3/23	22/12/25
18.	JH10AM6285	15/1/14	31/8/23	14/7/23	28/8/23	28/2/22	19/10/24
19.	JH02AJ5889	9/12/15	15/12/23	24/5/23	28/8/23	13/6/22	
20.	JH10AW8243	3/12/15	26/11/23	2/6/23	02/11/23	25/11/22	30/12/25
21.	JH10AWS822	2/11/15	28/10/23	12/5/23	8/11/23	7/7/23	11/12/25
22.	JH10AY9296	16/3/16	4/3/24	4/6/23	28/9/23	7/7/23	4/4/26
23.	JH02AN2983	7/10/16	8/10/23	29/6/23	14/10/23	13/6/23	18/11/26
24.	JH10AK3445	20/6/13	6/9/23	19/6/23	2/6/23	8/9/23	
25.	JH09AA1418	15/10/15	24/6/23	29/6/23	27/10/23	26/9/23	26/11/25
26.	—	—	—	—	—	—	—
27.	OD09P5287	3/12/21	2/12/23	30/6/23	23/11/22	10/3/24	4/12/26
28.	OD09G1556	31/8/17	1/8/24	30/6/23	20/10/23	7/8/23	31/8/22
29.	JH10CA9196	17/2/23	16/3/25	16/6/23	8/3/24	16/3/24	20/3/28
30.	JH10CA9426	17/3/23	16/3/25	16/6/23	8/3/24	16/3/24	20/3/28

S/No.	Vehicle No.	Reg. date	Fitness	Tax	Ins.	PUC	Permit
31	JH10CA3514	17/3/23	16/3/25	16/6/23	8/3/24	16/3/24	20/3/28
32	JH10CA2597	17/3/23	16/3/25	16/6/23	8/3/24	16/3/24	20/3/28
33	JH10CA7844	17/3/23	16/3/25	16/6/23	8/3/24	16/3/24	20/3/28
34	JH10CA7734	8/4/23	7/4/25	7/7/23	28/3/24	7/4/24	23/4/28
35	JH10CA6694	8/4/23	7/4/25	7/7/23	28/3/24	7/4/24	23/4/28
36	—	—	—	—	—	—	—

~~25/07/23~~

1. JH09AC1029
2. JH10AP8140

PHOTOGRAPHS OF VEHICLES USED FOR TRANSPORTATION WITH TARPAULIN



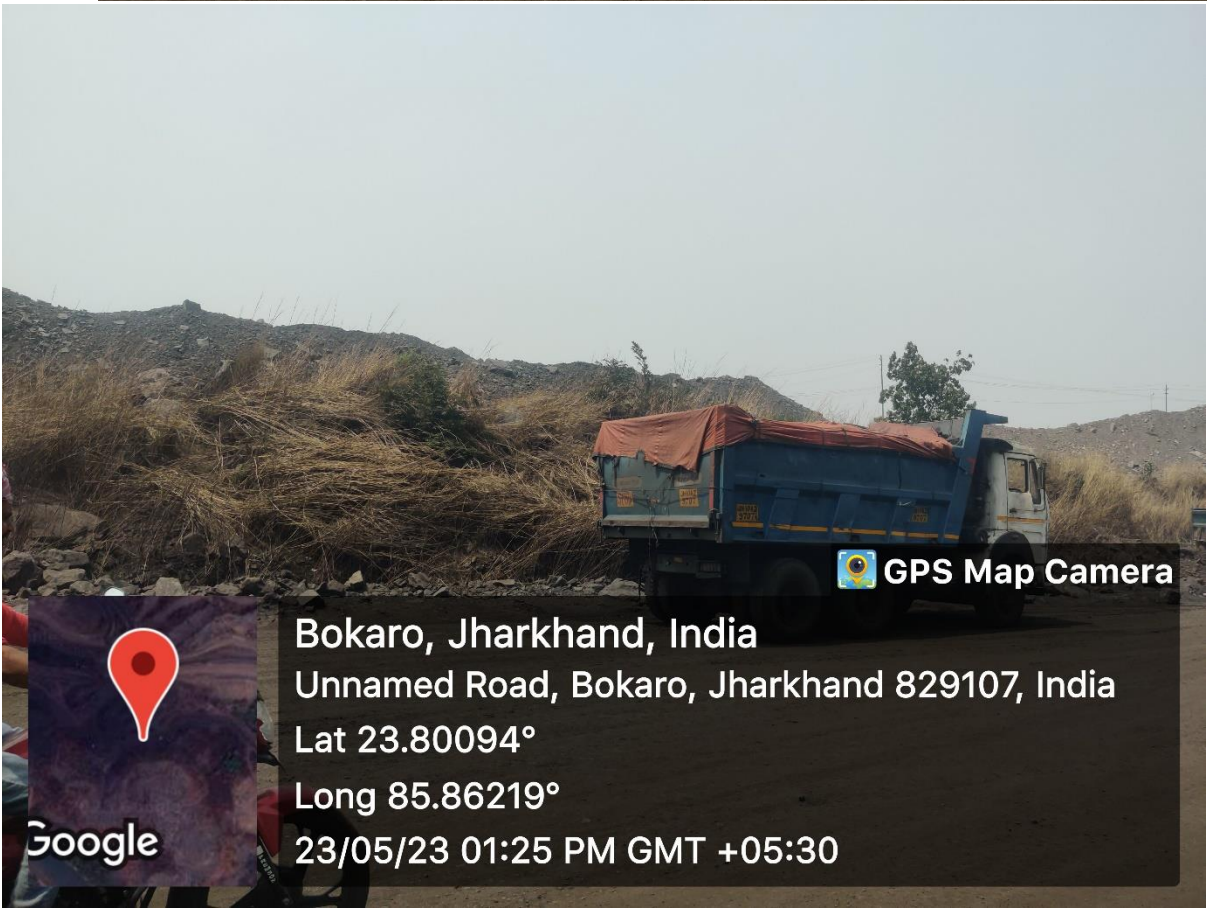


GPS Map Camera

Bokaro, Jharkhand, India
Unnamed Road, Bokaro, Jharkhand 829107, India
Lat 23.800911°
Long 85.862136°
23/05/23 01:25 PM GMT +05:30

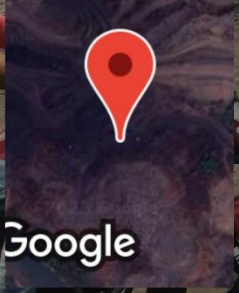


Google



GPS Map Camera

Bokaro, Jharkhand, India
Unnamed Road, Bokaro, Jharkhand 829107, India
Lat 23.80094°
Long 85.86219°
23/05/23 01:25 PM GMT +05:30



Google

Item wise expenditure on Environment protection measure in respect of Govindpur Ph-II OCP

FY Year	Expenditure (Rs in Lakhs)	Activities																		
2019-20	23.17	Distribution of Saplings to the Employees, Supply of items like alum and bleaching powder in filter plant, Waste management at Colony, Construction of Toe wall & Garland Drain, Cleaning of Hume Pipe of Dala Bridge & Konar River bridge, Cleaning of ETP tank and repairing of drain near HEMM washing platform, Disinfectants like bleaching powder, soap solution through tractor mounted spray at colony																		
2020-21	34.79	Seed Ball, Distribution of Saplings to the Employees, Rain water harvesting, Supply of items like alum and bleaching powder in filter plant, Waste management at Colony, Construction of Toe wall & Garland Drain																		
2021-22	20.65	Distribution of Saplings to the Employees, Piezometer bore well, Supply of items like alum and bleaching powder in filter plant, Waste management at Colony, Construction of Toe wall & Garland Drain																		
2022-23	62.70	<table border="1"><thead><tr><th>Exp in Lakhs</th><th>Activity</th></tr></thead><tbody><tr><td>3.20</td><td>Construction of Piezometer</td></tr><tr><td>9.00</td><td>Toe wall with Garland drain</td></tr><tr><td>20.00</td><td>Construction of ETP</td></tr><tr><td>4.50</td><td>Fencing and regular cleaning of ETP</td></tr><tr><td>16.50</td><td>Colony Drains Cleaning</td></tr><tr><td>8.50</td><td>Installation of Sprinkler</td></tr><tr><td>1.00</td><td>Annual Maintenance of Filter Plant (water treatment plant)</td></tr><tr><td>62.70</td><td>Total</td></tr></tbody></table>	Exp in Lakhs	Activity	3.20	Construction of Piezometer	9.00	Toe wall with Garland drain	20.00	Construction of ETP	4.50	Fencing and regular cleaning of ETP	16.50	Colony Drains Cleaning	8.50	Installation of Sprinkler	1.00	Annual Maintenance of Filter Plant (water treatment plant)	62.70	Total
Exp in Lakhs	Activity																			
3.20	Construction of Piezometer																			
9.00	Toe wall with Garland drain																			
20.00	Construction of ETP																			
4.50	Fencing and regular cleaning of ETP																			
16.50	Colony Drains Cleaning																			
8.50	Installation of Sprinkler																			
1.00	Annual Maintenance of Filter Plant (water treatment plant)																			
62.70	Total																			

lm
27/6/22

Project Engineer (Civil)
Govindpur Ph-II OCP

No. J-11015/490/2008-IA.II (M)
Government of India
Ministry of Environment, Forests & Climate Change
IA Division (Coal mining)

Indira Paryavaran Bhawan,
Jorbagh Road,
New Delhi-110003
Dated: 24th December, 2014

To,

General Manager (Env. & Forests)
M/s Central Coalfields Ltd.,
Darbhanga House,
RANCHI

Sub.: Expansion (Under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 2.20 MTPA to 2.50 MTPA in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha); Latitude 23° 48' 30" to 23° 49' 30" N and Longitude 85° 51' 15" to 85° 52' 45" E) of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand. - Environmental Clearance - reg.

Sir:

This is with reference to letter no. DGM(E&F)/2013/130 dated 12.02.2014 with the application and subsequent letter no. dated 20.02.2014; 01.09.2014, 12.09.2014 and 25.11.2014 for Environmental Clearance for Expansion under 7(ii) of EIA Notification 2006 for the above-mentioned project.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance for Expansion (Under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 2.20 MTPA to 2.50 MTPA) in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha; Latitude 23° 48' 30" to 23° 49' 30" N and Longitude 85° 51' 15" to 85° 52' 45" E) of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand. The proposal was considered in the 21st EAC meeting held on 18th -19th September, 2014. The proponent has informed that:

- It was noted that EC was granted for Govindpur Ph-II Opencast Project is an operating coal mine under Kathara Area of CCL, which was started after obtaining Environmental Clearance vide letter no J-11015/490/2008-IA.II(M) dated 18.01.2011 for a normative capacity of 1.20 MTPA & peak capacity of 1.50 MTPA within lease area of 274.95 Ha. Now application submitted under 7(ii) of EIA Notification, 2006 for expansion.
- Environmental Clearance for Expansion (Under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 1.5 MTPA to 1.875 MTPA in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha; of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand was granted vide letter no. J-11015/490/2008-IA.II (M) dated 20th May, 2014.
- Applied under one time production capacity expansion of upto 50% in the existing operation as per office memorandum No.J-11015/30/2004- IA.II (M) dated 07.01.2014.
- The latitude and longitude of the project are 23° 48' 30" to 23° 49' 30" N and 85° 51' 15" to 85° 52' 45" E respectively.
- The land usage of the project will be as follows:

Govindpur_EC_Expansion_7(ii)

Page 1 of 11

Rana Singh
मुखिया

ग्राम पंचायत-स्वांग दक्षिण,
प्रखण्ड-गोमिया (बोकारो)

नारायण देवी
मुखिया

ग्राम पंचायत-हजारी
प्रखण्ड-गोमिया(बोकारो)

शिव कर्मा
मुखिया

ग्राम पंचायत-स्वांग उत्तरी
प्रखण्ड-बेनिया, जिला-बोकारो

a. Pre mining land use (in Ha.)

Sl.No.	Particulars	Total land (in Ha)
1	GMK Land	45.00
2	Tenancy land	101.67
3	Forest Land to be diverted for mining purpose	58.52
4	Forest Land in safety zone (undisturbed) to be diverted	1.95
	GMK & Tenancy Land acquired earlier but not to be disturbed now	67.81
	TOTAL	274.95

b. Post Mining land use (in Ha.)

S No.	Description	Land-use (Ha)				Total
		Plantation	Water Body	Public use	Landscaped Quarry Batter	
(Lagoon)						
1	External OB Dump	87.00	0.00	0.00	0.00	87.00
2	Internal OB Dump	12.03	4.50	0.00	0.00	16.53
3	Backfilled Excavation	6.00	35.21	0.00	18.68	59.89
4	Roads	0.00	0.00	19.30	0.00	19.30
5	Built-up (Infrastructure)	3.12	0.00	0.00	0.00	3.12
6	Unworked Area & Safety Zone	89.11	0.00	0.00	0.00	89.11
	Total	197.26	39.71	19.30	18.68	274.95

c. Core Area Land Use (in Ha)

S No.	Land use category	15th Year	20th Year
1	Quarry & Internal Dump	76.42	Mine Lagoon 35.21
			Plantation On Internal Dump 12.03
			Lagoon at Internal Dump Lower Benches 4.50
			Plantation 6.0
			Batter 18.68
2	OB Dump	87.00	Plantation
3	Infrastructure/ Workshop/ CHP	3.12	Plantation after dismantling
4	Road	19.30	Public Use
5	Unworked Area & Safety Zone	89.11	Plantation
	Total	274.95	-

- vi. The total geological reserve is 29.62 MT. The mineable reserve 19.53 MT, extractable reserve is 19.53 MT. The per cent of extraction would be 65.93 %.
- vii. The coal grade is E grade. The stripping ratio is 1.47 m³/tone. The average Gradient is 160 – 230. There will be seven composite seams with thickness ranging from 1.0 m to 23.00 m.
- viii. The total estimated water requirement is 910 m³/day. The level of ground water ranges from 3.77 m to 6.00 m. A void of area 39.71 ha at a depth of average 60-70 m (maximum 100 m) is proposed to be converted into a water body.

- ix. The Method of mining would be Opencast with Shovel – Dumper Combination.
- x. There are one external OB Dumps covering an area 87 ha. With the height upto 60 m. The quantity will be 24.00 Mm³ out of total OB of 28.66 million m³. There is one internal dumps covering an area 16.53 ha. with the height upto 1.0 agl. The quantity will be 4.66 m³. The final void area 35.21 ha with a depth of 100 m.
- xi. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xii. The **life of mine** is 8 Years.
- xiii. **Transportation:** Coal transportation in pit by dumper, Surface to Siding by trucks and siding to loading by wagon.
- xiv. There is no R & R involved. There are no PAFs.
- xv. **Cost:** Total capital cost of the project is Rs. 142.11 Crores. CSR Cost Rs. 5.00 per tonne. R&R Cost Rs 252.52 Crores. Environmental Management Cost (Rs. 43.33 Crore; Revenue expenditure Rs. 19.15 per tonne of coal produced).
- xvi. **Waterbody:** River: The south-easterly flowing Konar river marks the western limit of mining area and also forms the main drainage of the area. It lies more than 400m away from mine edge. Nallah: Montico nallah flowing from north to south marks the eastern limit of mine and joins Konar River towards South of the Project. It is 60-70 m away from mine edge.
- xvii. **Approvals:** Ground water clearance has not been obtained. Board's approval obtained on 23.12.2009. Mining plan approval obtained on 23.12.2009. Mine Closure Plan obtained on 23.12.2009.
- xviii. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xix. **Forestry issues:** The total forest land is 193.25 ha. The proponent does not have FC for 45.083 ha. FC has been granted for diversion of 148.167 Ha of forest land vide No. 8-28/2003-FC, dated 02.03.2009 by MoEF.
- xx. Total **afforestation** plan shall be implemented covering an area of 197.26 ha at the end of mining. Green Belt over an area of 89.11 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxi. There are no **court/violation** cases pending with the project proponent.

3. The RO has submitted compliance report vide, letter no. 106-102/EPE dated 15.07.2013, and subsequently vide letter no. 103-392/08/EPE dated 21.02.2014. as desired by the EAC. The Proponent has submitted the final certified compliance to EC conditions vetted by RO, Bhubaneswar, MOEF vide letter no. 103-392/08/EPE dated 21.02.2014. Detailed action plan along with the budgetary provision has been submitted which are as following:

- i. Sumps are created to take care of entire catchments area. The sump capacity is 12.75 lakh cub mtr. Adequate time is given for settlement of silt. Every year sump is being shifted as quarry progresses. Sump dimension: 500m x 60m and 600m x 75m.
- ii. The collected water is being utilized for watering the mine area, roads, green belt development. Regular drain cleaning is being done approximate expenditure = 2.50 lakh before break of monsoon
- iii. Garland drains in appropriate dimensions are being maintained. Sump capacity (mentioned above) is adequate for proper settling of silt materials.
- iv. Length of garland drains = 300 mtrs. Total expenditure = Rs.2 lakh; Toe wall (Expenditure: Rs. 17.90 lakhs) has been constructed and 200m Toe wall (Expenditure: Rs.8.49 lakhs) is under construction.
- v. Stone pitching (Expenditure: Rs.3.18 lakhs) has already been done to check run-off and siltation based on the rainfall data.
- vi. Mineral (Coal) is transported from mine to Jarangdih Railway Siding by black topped road (9.10 Km). Green belt, 30m wide all along the transportation road is maintained by

- afforestation.
- vii. Proposal for Pipradih Railway Siding is under process.
 - viii. One water sprinkler each of 28 kl & 10 kl already deployed in the Project. Fund provision made / committed: Rs. 17.00 lakh.
 - ix. Wet drilling is undertaken.
 - x. Control blasting is under taken under supervision of the blasting officer, proper blast design is prepared to control ground vibration and arrest fly rocks and boulders. Blasting is done with the use of shock tubes.
 - xi. The density of plantations under taken is 2500 plants per ha. So far 314.53 ha. of area has already been planted in the nearby areas. Plantations, as stipulated, will be under taken time to time. Total plantation = 314.53 ha. (including area of Sawang Colliery) and 24 km along road. Species of plants are sisam, gambhar, bakain, mahua, bambu, karange, sal, kathal, mango etc. However after post mining stage afforestation shall be done on backfilled areas, ext. OB dump etc.
 - xii. A provision for an amount of Rs. 31.12 Crore has been approved for Mine closure plan for Govindpur Ph-II OCP.
 - xiii. No ground water (bore well) is used for mining operations.
 - xiv. Rain water harvesting structures including check dams for recharge of ground water is under process. An estimate of Rs. 2.56 lakhs has been proposed for rainwater harvesting. There is no requirement of additional water for mining purpose.
 - xv. The details of seasonal variation of water level changes at individual wells have not been submitted. Project also has not constructed any new peizometers for monitoring ground water levels. No details regarding water quality parameters have been submitted.
 - xvi. A water treatment plant of 0.6 MGD caters to colony demand.
 - xvii. The capacity is proposed to be increased to 0.8 MGD.
 - xviii. Water is supplied to nearby villages by pipe line and hired water tanker by the project authority. In addition to this 02(two) nos. deep boring also has been done for the purpose of water supply.
 - xix. At colony sewage is treated by septic tank and soak-pit method. An adequate treatment is being done at workshop for which ETP has been functioning and clear water is recirculating for washing
 - xx. Efforts will be made to reschedule completion of STP to about 450 days to comply with the observation of EAC on 27.02.2014
 - xxi. established periodical medical examination system with occupational health check facilities initial medical examination for occupational diseases is done at the time of new recruitment and periodical medical examination of 1/5 total manpower is done every year.
 - xxii. Compensation paid to land losers as per approved CIL R&R policy.
 - xxiii. Rs. 5/te. of coal is earmarked for CSR for life of project. The total proposed expenditure of CSR is 1.50 crore during year 2013-14.
 - xxiv. CMPDI environmental laboratory is monitoring the environmental parameters of all CCL projects. The lab. is pursuing for its accreditation through NABL and final audit which was due in Feb'14 was conducted by NABL on 22nd & 23rd February, 2014. Accreditation is awaited. Final Audit has been done.
 - xxv. Independent environment officers be appointed/ engaged for monitoring environmental activities.
 - xxvi. Details of the environmental laboratory submitted along with its NABL accreditation.

4. Out of the total area of 274.95 ha, the total forest land is 193.25 ha. The proponent does not have FC for 45.083 ha. FC has been granted for diversion of 148.167 Ha of forest land vide MoEF letter no. 8-28/2003-FC, dated 02.03.2009. Therefore the total area that should be granted EC is for 229.867 ha i.e. (274.95 ha - 45.083 ha = 229.867). The extent of forest land in the project is 193.25 ha. In this regard, you



are required to follow the guidelines issued by the FC Division of the Ministry of Environment & Forests vide no. 11-362/2012-FC dated 01-02-2013 "Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act 1980. Submission of proposals to obtain forest land located within the mining lease and grant of environment clearance to mining projects" addressed to the Principal Secretary (Forests), Principal Secretary (Environment) of all the States/UT Govts. and copy to concerned Government Departments/Organisations which prescribes, inter-alia, the following:

" (iii) As regards Environment Clearance (EC) cases of existing mining operations, where approval under the FC Act for the full forest area in the mining lease area is not available, granting of EC may be considered and the following process will be adopted for processing such cases:

- a. Grant of EC may be considered only for the non-forest area plus the forest area within the mining lease for which FC is available. No mining activities will be allowed in forest area for which the FC is not available; and
- b. The project proponent will seek and obtain approval under the FC Act for diversion of the entire forest land located within the mining lease within a period of two years from the date of issue of these guidelines, failing which the mining lease area will be reduced to the non-forest area plus the forest area for which the project proponent has been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, the project proponent will need to get a revised mining plan approved from the competent authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed." 3

However, diversion of forest land shall not be done under the paragraph (iii) (b) of the guidelines of FC dated 01.02.2013 in view of the Supreme Court's Order dated 27.01.2014 which stayed paragraph (iii) (b) of the Guidelines of FC Division dated 01.02.2013 till further orders. Para (iii) (b) is not being prescribed in view of the Supreme Court's Order dated 27.1.2014.

5. The proposal was reconsidered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 21st EAC meeting held on 18th -19th September, 2014 for granting Environmental Clearance. The Ministry of Environment, Forests & Climate Change hereby accords environmental clearance for the above-mentioned **Expansion (under 7(ii) of EIA Notification, 2006) of Govindpur Ph-II OC Coal Mining Project of (from 2.20 MTPA to 2.50 MTPA in an ML area of 229.867 ha (274.95 ha - 45.083 ha = 229.867 ha; Latitude 23^o 48' 30'' to 23^o 49' 30'' N and Longitude 85^o 51' 15'' to 85^o 52' 45'' E) of M/s Central Coalfields Ltd. dist. Hazaribag, Jharkhand** under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/Circulars thereto subject to the compliance of the terms and conditions mentioned below. Grant of EC is accorded only for the non-forest area plus the forest area within the mining lease for which FC is available. No mining activities will be allowed in forest area for which the FC is not available.

A. Specific Conditions:

- i. Grant of EC is only for the non-forest area plus the forest area within the mining lease for which FC is available. No mining activities will be allowed in forest area for which the FC is not available. Para (iii) (b) of the guidelines of FC Division dated 01.02.2013 is not being prescribed in view of the Supreme Court's Order dated 27.1.2014.
- ii. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.



- iii. No mining operations shall be undertaken in 45.083 ha of forestland until prior clearance has been obtained under the provisions of FC Act, 1980.
- iv. Mining shall be carried out as per statuette from the streams/nallahs flowing within the lease and maintaining a safe distance from River Konar flowing along the lease boundary.
- v. No washery shall be established within the ML without prior environment clearances from this Ministry.
- vi. Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of green belt.
- vii. The commitment and action plan submitted by the proponent shall be complied within one year from the date of the issue of the EC and report be submitted to the MoEF. The EAC shall review the compliance report.
- viii. Fixed sprinkler system shall become operational from June 2014.
- ix. The proponent shall ensure that colony people are supplied with treated drinking water.
- x. Piezometers should be installed and made functional by June, 2014.
- xi. The Sewage Treatment Plant shall be operational in 300 days from the issue of the EC.
- xii. The baseline survey and evaluation of projects for CSR be completed within one year.
- xiii. Monitoring of land use pattern shall be carried out and report submitted within one year.
- xiv. Monitoring of AAQ shall be done every month and report be submitted to the SPCB and the RO, MoEF concerned.
- xv. PM_{2.5} shall be monitored from April 2014.
- xvi. Environment Officers exclusively for environment related works be posted for monitoring and mitigation purpose.
- xvii. Coal transportation in pit shall be by dumper, Surface to Siding by trucks and siding to loading by wagon.
- xviii. The production of coal shall be within the same Mining Lease area.
- xix. The OB shall be completely re-handled at the end of the mining.
- xx. Final mine void depth will not be more than 40 m. The void area will be converted into waterbody. The rest of the area will be back filled upto the ground level and covered with about a meter thick top soil and put to use.
- xxi. Garland drains shall be provided.
- xxii. The land after mining shall be brought back for agriculture purpose.
- xxiii. Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.
- xxiv. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xxv. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xxvi. Dust mask to be provided to everyone working in the mining area.
- xxvii. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xxviii. People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.
- xxix. The mining area should be grounded by green belt having thick closed thick canopy of the tree cover.
- xxx. The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- xxxi. There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
- xxxii. OB shall be stacked at one earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until



- the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.
- xxxiii. Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.
- xxxiv. Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- xxxv. Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- xxxvi. Drills shall be wet operated.
- xxxvii. The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
- xxxviii. Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- xxxix. A Progressive afforestation plan shall be implemented covering an area of 197.26ha at the end of mining, which includes reclaimed External OB dump area (87 ha), Internal OB dump area (18.03 ha), industrial infrastructure (3.12 Ha), and Green belt (89.11 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.
- xl. An estimated total 28.66 Mm³ of OB will be generated during the entire life of the mine. Out of which 24.00 Mm³ of OB will be dumped in one external OB Dumps an earmarked area covering 87 ha of land with height of 60 m. 4.66 Mm³ of will be one internal OB dump in covering an area of 16.53 ha with height of 0-10m above ground level. The maximum height of external OB dump for hard OB 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 MOEF and its Regional Office on yearly basis.
- xli. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
- xl.ii. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.
- xl.iii. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
- xl.ii. No groundwater shall be used for mining operations. Rainwater harvesting structures including check dams for recharge of ground water shall be erected within and around the ML in case the water table shows a declining trend. Additional water if any required during mining operations shall be met from mine sump water or from rainwater.
- xl.ii. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xl.ii. Of the total quarry area of 76.42 ha. the backfilled quarry area of 18.03 ha shall be reclaimed with plantation and a void of 39.71 ha at a depth of 30-40 m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.

- xlvi. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.
- xlvii. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xlix. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
- i. Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
 - ii. A project specific R&R prepared for the project shall be implemented. R&R for a cost of not less than Rs. 252.52 lakhs crores shall be completed within an agreed time schedule. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
 - iii. For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its concerned Regional office
- liii. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.
- liv. The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
- lv. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.
- lvi. Corporate Environment Responsibility:
- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

B. General Conditions

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.
- ii. No change in the calendar plan of production for quantum of mineral coal shall be made.
- iii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. Location of the stations shall be decided based

on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.

- iv. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.
- v. 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.
- vi. Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- viii. Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.
- ix. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
- x. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
- xi. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- xii. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
- xiii. The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the Ministry of Environment, Forests & Climate Change at <http://envfor.nic.in>.
- xiv. A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
- xv. A copy of the environmental clearance letter shall be shall 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's Office for 30 days.
- xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀, PM_{2.5}, SO₂ and NO_x(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.

- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. The Environmental statement for each financial year ending 31 March in For –V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF & CC by e-mail.

6. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

7. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

8. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

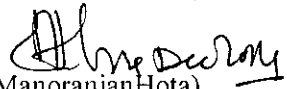
9. The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

10. This EC supersedes the earlier ECs, vide letter nos. J-11015/490/2008-IA.II (M) dated 18.01.2011 for an expansion in production from 1.20 MTPA to 1.50 MTPA in mining lease area of 274.95 ha and J-11015/490/2008-IA.II (M) dated 20.05.2014 for expansion in production from 1.5 MTPA to 1.875 MTPA in mining lease area of 229.867 ha.

11. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

12. 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 also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

13. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.


(Dr. Manoranjan Hota)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.

2. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A/3 Chandrashekar pur, Bhubaneswar 751023.
4. Member-Secretary, Jharkhand State Pollution Control Board, TA Building, HEC Complex, PO Dhurwa, Ranchi.
5. Member-Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi 110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. Dr. R.K. Garg, Advisor, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg, Laxmi Nagar, New Delhi.
8. District Collector, Hazaribag, Government of Jharkhand.
9. IG (Wild life), Ministry of Environment, Forests & Climate Change, New Delhi
10. Monitoring File 11. Guard File 12. Record File. 13. Notice Board


(Dr. Manoranjan Hota)
Director

ENVIRONMENTAL STATEMENT

OF

GOVINDPUR -PH-II OCP

MARCH 2023

CENTRAL COALFIELDS LIMITED



EXECUTIVE SUMMARY

E-1 This Environmental Statement Report has been prepared as per gazette notification no. G.S.R. 329 (E) dated 13th March 1992 laid down by Ministry of Environment & Forest. The Environmental Audit has been subsequently renamed to "Environmental Statement" vide MOEF gazette notification no. G.S.R. 386 (E) dated 22nd April 1993.

E-2 The Govindpur Phase II OC of Central Coalfields Limited is situated in the East Bokaro Coalfields in Bokaro dist. of Jharkhand State.

E-3 The Environmental Monitoring was carried out quarterly as per the guide line of Ministry of Environment & Forest (MOEF).

E-4 Ambient air quality was monitored to study the level of air pollution. The main air pollutant is Suspended Particulate Matter (SPM). It is difficult to quantify the amount of air pollutants generated due to mining. However, the results show that SPM, SO_x, NO_x values are generally below permissible limits prescribed by Ministry of Environment & Forest (MOEF).

E-5 Water is not directly used during mining for coal production. It percolates into working area during mining operation. However, water is consumed for other purposes, mainly for domestic supply, industrial supply, and fire fighting and dust suppression.

E-6 The noise levels recorded are generally below permissible limits prescribed by Ministry of Environment & Forest (MOEF). There is no continuous high level sound frequency of impulsive nature.

E-7 Raw materials used in coal mining activities are explosives and POL for machines and automobiles. The consumption is detailed in part-B of Statement Form.

E-8 Hazardous waste is not being produced either from mining operations or from any pollution control facilities except for Over Burden in case of OCP.

E-9 Regular measures are being taken to control air, water & noise pollutions discussed in detail in parts-G, H & I of the Statement Form.

Also, measures will be taken for implementation of the Environmental Management Plan for the project after getting approval of project report.

E-10 This Annual Environmental Statement Report for the year 2022-23, has been prepared as per statutory requirement.

CHAPTER -1
PROJECT DESCRIPTION

1.1 INTRODUCTION

The Govindpur Ph – II OCP of Central Coalfields limited is located in the East Bokaro district of Jharkhand state. The rated capacity of the project is 2.5 MTPA.

1.2 LOCATION & COMMUNICATION :

The Govindpur OCP is located in the East Bokaro Coalfields in Bokaro District of Jharkhand state. The project is connected to the G.T. road at Bagodar by a 60 km all weather metaled road.

The Ramgarh - Dhanbad road is also connected at Petarwar by a 30 Km long metaled road.

The project is about 2 km from Bokaro Thermal railway station on Barkakana - Gomoh loop line of Eastern Railway. The Bokaro thermal Power station is within 2 km towards west of the project.

1.3 SALIENT FEATURES :

At present, Rated capacity of Govindpur Ph –II OC is 2.5 MTPA. The mine is operated with shovel-dumper mechanism.

CHAPTER - II
ENVIRONMENTAL STATEMENT FORM -V
Environmental Statement for the financial year ending March'2021

PART – A

- (i) Name and Address of the mine. : GOVINDPUR PHASE II OCP
: PROJECT OFFICER
Place : Govindpur colliery
Post : Govindpur colliery
Distt : Bokaro, JHARKHAND
- (ii) Industry Category : Primary.
- (iii) Production Capacity : OC - 2.5 MTPA as per EC vide letter
No. J-11015/490/2008-IA-II(M) dated 24.12.2014 for a peak capacity 2.5 MTPA
production during year 2022-23 is 1.137 MT
- (iv) Date of last Env. Statement Report : The last Env. Statement Report was
submitted for the year 2021-22

PART - B

WATER AND RAW MATERIAL CONSUMPTION

I. Water consumption (M³/ day)

Mining		
a	Haul road dust suppression	150
b	Workshop	55
c	Fire fighting	210.8
d	Others (service building etc.)	25
Domestic		
a	Domestic including service and welfare building	2800

WATER CONSUMPTION PER UNIT OF PRODUCT

Name of Product	Water Consumption per Unit of Product	
	During financial year (2021-22)	During financial year (2022-23)
1. ROM Coal	1.28 cum/te	1.04 cum/te

II. RAW MATERIAL CONSUMPTION :

Sl.No.	Name of raw material	Name of products	Consumption of raw material (per unit of output)	
			During the financial year (2021-22)	During the financial year (2022-23)
1	Explosives(Kg.)		852470.65	2239336.20
2	POL(Ltr.)		2909805	2969272

PART - C

POLLUTION GENERATED

(PARAMETERS SPECIFIED IN THE CONSENT ISSUED)

Pollutions	Quantity of pollution generated	Percentage variation from prescribed standards with reasons
WATER	Water discharged from: (a) Mine- 5000 cum /day (b) Workshop- Nil	The analysis results reveal that all of the parameters are below the limits prescribed by MOEF.
AIR	It is difficult to quantify the amount of air pollutants. The main air pollutant is suspended particulate matter (SPM).	Ambient air quality results show that SO ₂ , NO _x , & SPM level are well within prescribed standards.

PART - D
HAZARDOUS WASTES

(As specified under Hazardous Waste/Management and Handling Rules, 1989)

Hazardous Wastes	Total quantity	
	During the financial year (2021-22)	During financial year (2022-23)
a) From process	Burnt oil- 24650 ltr Batteries- 21 Oil filters-238	Burnt oil-29335 Batteries-49 Oil filters -622
b) From pollution control facilities	Nil	Nil

NOTE: The entire process of coal mining, handling and dispatch do not produce any hazardous wastes.

PART - E
SOLID WASTES

	Total Quantity (in M m ³)	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
a) From process (Mining) Overburden	1.304 Mm ³	2.954 Mm ³
b) From pollution control facilities	Nil	Nil
c) Quantity recycled or reutilized	The entire volume of O.B. material is being used partly for back-filling and partly stacked in OB Dump.	The entire volume of O.B. material is being used partly for back-filling and partly stacked in OB Dump.

PART - F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF CONCENTRATION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE THE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES

1. Landfill site: OB used as a landfill site for burying of filters.
2. Regional store : Burnt oil and batteries are transported to regional store
Hazardous waste is not being produced either from mining operation or from any pollution control facilities. During opencast mining, overburden and top soil are produced as solid wastes temporarily as these materials are used for land reclamation.

The overburden material is more or less homogeneous comprising mainly sand, silt, clay and gravel. Overburden generated during 2022-23 was **2.954 Million cubic meter**.

PART – G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON COST OF PRODUCTION

In order to carry out mining in an eco-friendly manner, following pollution control measures have been implemented:-

1.0 AIR POLLUTION CONTROL MEASURES :

The following measures have been taken to control air pollution:

- (i) Sprinkling of water in transportation of coal, haul roads and other roads.
- (ii) Vehicular emissions is kept under control and regularly monitored. Record of PUC certificates is maintained.
- (iii) Vehicles used in transporting the mineral is covered with tarpaulins and optimally loaded.
- (iv) All drills are wet operated.
- (v) Blasting operations are carried out under congenial weather condition, i.e. avoiding temperature inversion, etc.
- (vi) Green belt has been developed near mine and in leasehold area.
- (ii) Water sprinkling on coal stock by fixed water sprinkler.
- (iii) All necessary precautions are taken during drilling, blasting, loading and transporting operations.

2.0 WATER POLLUTION CONTROL MEASURES:

The following measures have been taken to control water pollution from the mine:

- (i) ETP has been constructed for treating water from workshop. The water is being utilized again in workshop after treatment and zero water discharge technology.
- (ii) The mine water is discharged on wasteland after passing through a lagoon which acts as a settling pond.
- (iii) A system of open drain exists within the leasehold area to collect the storm runoff from paved area, road, roof top, etc. & lead them to natural drains directly.
- (iv) Garland drain is provided around the quarry to collect the surface run-off. This also prevents storm water to enter into the quarry area.
- (v) The catch drains have been constructed around the foot of the O.B. dumps in order to collect surface run-off water from the dumps and convey them to settling ponds.
- (vi) Colony and other service buildings are provided with septic tank and soak pit. Also, water is supplied after filtration and disinfection for domestic use.

3. NOISE POLLUTION CONTROL MEASURES:

- (i) Plantation barriers have been developed around residential locations & are proposed around other noise prone area.
- (ii) Efforts are being made to keep HEMMs properly maintained so as to produce least noise.
- (iii) Blasting operation is carried out between 12.30 PM to 3.00 PM.
- (iv) Use of HEMMs with sound proof cabin.
- (v) Ear plugs/ muffs are provided to workers engaged in blasting and drilling operations etc. as per requirement.

4.0. MEASURES FOR RECLAMATION OF LAND

- (i) The entire volume of O.B. material is being used partly for back-filling and partly stacked in OB Dump. At the end of mining operation, some de-coaled area will remain empty, which would be used for storing rain water.
- (ii) The presence of such a water body will help in increasing the moisture content of soil of adjacent area and ultimately it would promote the growth of vegetation.

PART - H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION

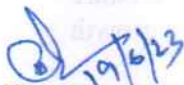
The following are the additional investment proposal for environmental protection:


- i. The environmental monitoring of the project will be continued quarterly as per guidelines of MOEF.
- ii. All residential quarters constructed for the Project has been provided with septic latrines and effluents are disposed off in soak pits. The capital investment for this purpose has not been assessed separately.
- iii. The air and water consent is taken from Jharkhand State Pollution Control Board, Ranchi each year.
- iv. Environmental statement report is prepared for each financial year ending 31st March.

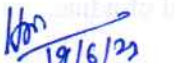
PART - I


ANY OTHER PARTICULARS IN RESPECT OF ENVIRONMENTAL PROTECTION AND ABATEMENT OF POLLUTION


1. The Environmental monitoring is carried out quarterly for the project by CMPDI as per the guide lines of the Ministry of Environment & Forest (MOEF).
2. The Environmental Statement for the project is prepared yearly.
3. Ambient air quality, quality of effluent discharged from the mine and noise level all conform to the prescribed limits.

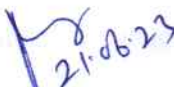

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GVP Ph-II OCP



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Nodal Officer (E&F)
GVP Ph-II OCP


19/06/23
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Project Engineer (E&M)
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Project Engineer (Exc)
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21.06.23
Manager
GVP Ph-II OCP


21.06.2023
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