



CENTRAL COALFIELDS LIMITED
(A MINIRATNA CAT-1 COMPANY)
(GOVT. OF INDIA UNDERTAKING)
OFFICE OF THE PROJECT OFFICER, KATHARA
OCP KATHARA AREA
PO: -KATHARA, DIST: -BOKARO, (JHARKHAND)
JHARKHAND-829116



Ref: PO/KTC/ENVIRONMENT/ 3444

Date: 13/12/2023

To,

Speed Post

The Integrated Regional Officer,
MoEF&CC, 2nd floor,
Headquarter- Jharkhand State Housing Board,
Harmu Chowk, Ranchi- 834002

Sub- Submission of Six-monthly EC Compliance (April-2023 to September-2023) and Monitoring reports of Kathara Opencast Project of Kathara Area, CCL for coal production of 1.90 MTPA (Peak).

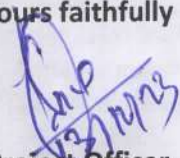
Ref: MoEF EC letter no.- J-11015/482/2008-IA-11(M), EC Identification No.- EC22A042JH147601, Dated 18.10.2022.

Respected Sir,

It is to inform that we are submitting Six monthly EC Compliance (April-2023 to September-2023) report for the conditions stipulated in the Environmental Clearance of Kathara Opencast Project of Kathara Area, CCL with Capacity of 1.90 MTPA (Peak) 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


Project Officer
Kathara OCP

Copy for Kind Information: -

1. The Member Secretary, JSPCB HEC colony, CTI Colony, Sector-3, Dhurwa, Ranchi-834004 (Email-ranchijspcb@gmail.com)
2. Regional Office, JSPCB, H.I.G.-1, Sardar Patel Nagar, Dhanbad-826001 (Email-dhanbadjspcb@gmail.com)
3. The General Manager (Env), CCL Ranchi (Email-envccl@gmail.com)
4. The General Manager, KatharaArea (Email-gmkth.ccl@coalindia.in)
5. The S.O.(Env.), Kathara Area (Email-envcclkta@gmail.com)
6. The Office Copy.

1. Remediation Plan and Natural & Community Resource Augmentation

Plan activity provision: -

SL. No.	Activity Conditions	Activity Details	Compliance
1.	No. 4 of (i) under A of 1 (Water Environment)	Protection & Development of Damodar Riverbank: Development & Beautification of Damodar River Banks along with construction of picnic spots, approach road & pathways, chhath ghat, shed, river side plantation etc at Khetko, Asnapani, near CPP colony and Jhirki Basti.	Preparation of DPR for Development & Beautification of Damodar river banks along with construction of picnic spots, approach road & pathways, chhath ghat, shed, riverside plantation etc. at Khetko, Asnapani, near CPP colony and Jhirki basti for Kathara OCP KTA CCL. under PMC services. Submission of offer reg. is received from CMPDI & is under process. Attached as Annexure-I
2.	No. 4 of (i) under A of 2 (Water Environment)	Additional Water Sampling and analysis of Ground water and Surface water quarterly at 6 locations (4 Ground water a Bandh Basti, jhirki Basti, Asnapani Tola and Kathara. Basti and 2 surface water locations- u/s and d/s of Damodar River)	Work related to Water Sampling and analysis of Ground water and Surface water quarterly at 6 locations (4 Ground water a Bandh Basti, jhirki Basti, Asnapani Tola and Kathara. Basti and 2 surface water locations- u/s and d/s of Damodar River) has been granted to CMPDI and report of Monitoring started on Quarterly basis from Dec 2022. The report of analysis for DEC'22, March'23 and June,23 is attached. Attached as Annexure-II
3.	No. 4 of (i) under A of 1 (Land & Ecology)	Development of ecological park (creation and maintenance) in 19.10 ha Kathara Area	Memorandum of Understanding (MoU) between CCL and WAPCOS Limited for Development of Ecological Park at Nine different areas of CCL is attached as Annexure- III
4.	No. 4 of (i) under A of 2 (Land & Ecology)	Distribution of fruit bearing Saplings like Amla, Guava, Mango, Lichi etc. to nearby villagers.	Work order 2800 fruits bearing saplings like Amla, guava, Mango etc. PO/KTC/ENV/Work Order/2023-24/ 198 dated -02.12.2023 is awarded and under process and 1000 Nos of fruit bearing Saplings like Amla, Guava, Mango, Lichi etc. distributed to nearby villagers during November,2022 is Attached as Annexure- IV Photo- 52 & 53 is attached.
5.	No. 4 of (i) under A of 3 (Land & Ecology)	Providing colour coded bin (30 L) in nearby schools & hospitals in buffer zone.	Colour coded bin (30 L) in nearby schools & hospitals in buffer zone was procured and distributed to nearby in buffer zone is attached as Annexure- V. Photo- 47, 48,50.
6.	No. 4 of (i) under A of 4 (Land & Ecology)	Setting up of Vermi composting plant for treating Bio-degradable waste generated from nearby habitation.	Requisition for required work already communicated to Civil department HoD. Proposal will be initiated from Civil dept soon and is under process.
7.	No. 4 of (i) under A of 5 (Land & Ecology)	Awareness programme to conservation of flora-fauna & e-waste disposal	Work has been executed for Awareness programme to conservation of flora-fauna & e-waste disposal on dated-26.05.2023 for 1st Year work. Attached as Annexure- VI

8.	No. 4 of (i) under A of 1 (Air&Noise Environment)	Periodic Health Camps to monitor the respiratory and E&T health status in village Jhirki Basti, Bandh Basti and Asnapani Tola.	Requisition for required work already communicated to medical department HoD. Proposal will be initiated soon.
9.	No. 4 of (i) under A of 2 (Air & Noise Environment)	Additional avenue Plantation (creation and maintenance) along with gabion protection on roads from filter plant to Asnapani More via khetko (Total length 1.50 kms)	The work has been taken in FY 2022-23 vide AOW no. CCL/HoD(Envt.)/GA/W.O./23-Plantation/Hzb.East/2023/926 dtd 14.03.2023 Jarangdih Patch-A, Jarangdih Patch-B, Jarangdih Patch-C, Jarangdih Patch-D (award copy of plantation work enclosed) which are all along the newly diverted road as specified location and is attached as Annexure- VII .
10.	No. 4 of (i) under A of 3 (Air & Noise Environment)	Repair and periodic maintenance of public road near Bandh Basti, Asnapani Tola and Kathara Basti.	Requisition for required work already communicated to Civil department HoD. Proposal will be initiated from Civil dept soon.
11.	No. 4 of (i) under A of 1 (Socio-Economic)	Skill development training Program including Motor Driving, Sewing, Nursing & skill development programmed by Central Institute of Plastics Engineering & Technology (C1PET)	Proposal will be initiated soon.
12.	No. 4 of (i) under A of 2 (Socio-Economic)	Fogging machine in near by villages of command area of CCL	Proposal regarding Fogging machine in nearby villages of command area of CCL is initiated by Civil deptt and is under process.
13.	No. 4 of (i) under A of 3 (Socio-Economic)	Organizing Training Sessions for sports and conducting Football League.	For first year activity, proposal will be initiated soon and work will be carried out accordingly.
14.	No. 4 of (i) under A of 4 (Socio-Economic)	Additional awareness programs on Environmental protection.	Work has been executed for Additional awareness programs on Environmental protection on dated-26.05.2023 for 1st Year work and is attached as Annexure-VIII .
15.	No. 4 of (i) under A of 5 (Socio-Economic)	Development of Community centre at Kathara Area.	Requisition for required work already communicated to Civil department and is under process.
16.	No. 4 of (i) under B of 1 (Natural Resource Augmentation)	Total 05 nos. of Rainwater Harvesting cum Groundwater recharge structures to be installed on rooftop of public buildings in Bandh Basti, Jhirki Basti and Kathara Basti	Proposal has been initiated from civil dept. vide E-Office No.- 968705 Dated-18.01.2023 and is under process.
17.	No. 4 of (i) under B of 2 (Natural Resource Augmentation)	Distribution of Solar Lantern in command areas of CCL (500 numbers)	Distribution of Solar Lantern in command areas of CCL (500 numbers) is done and is attached as Annexure- IX. Photo- 45, 46.
18.	No. 4 of (i) under B of 1 (Community Resource Augmentation)	Procurement, operation & maintenance of High Speed Fully Automatic Sanitary Pad Making Machine for nearby villages in command area of Kathara.	02 nos. of Procurement, operation & maintenance of High Speed Fully Automatic Sanitary Pad Making Machine for nearby villages in command area of Kathara is done and is attached as Annexure- X.

19.	No. 4 of (i) under B of 2 (Community Resource Augmentation)	Battery Operated Handicapped Tricycle distribution to Divyangs of command area of Kathara (20 Numbers)	Proposal for Battery Operated Handicapped Tricycle distribution to Divyangs of command area of Kathara (20 Numbers) is initiated and is under process.
20.	No. 4 of (i) under B of 3 (Community Resource Augmentation)	Distribution of Bench, Desk, Table, Chair, Books and Almirah etc. to various schools of Kathara Area.	Proposal will be initiated soon for distribution of Bench, Desk, Table, Chair, Books and Almirah etc. to various schools of Kathara Area.
21.	No. 4 of (i) under B of 4 (Community Resource Augmentation)	Special vaccination drives for children's vaccines, Covid vaccine etc. in nearby villages in collaboration with state govt.	Requisition for required work already communicated to medical department HoD. Proposal will be initiated soon.
22.	No. 4 of (i) under B of 5 (Community Resource Augmentation)	Providing smart classes at DAV Schools (Swang & Kathara)	04 nos. of Interactive Board & Accessories for providing smart classes at DAV Schools (Swang & Kathara) was procured and distributed is attached as Annexure- XI Photo-48,49,50.
23.	No. 4 of (i) under C	Penalty estimated as recommendation of EAC:	COMPLIED
24.	No. 4 of (ii)	Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 2033 lakhs. Therefore, based on bank guarantee submitted to SPCB vide no. BO No. 0089NDLO00030123 dated 30.09.2022 for an amount of Rs. 2033/Lakhs, and penalty amount of Rs. 411 Lakhs to Member Secretary, JSPCB through Demand Draft vide DD no. 960699 dated 30th September 2022, the project proponent shall have to implement the Remediation plan and Natural and Community Resource Augmentation plan.	Noted and Implementation for required activity in Remediation plan and Natural and Community Resource Augmentation plan is in process.
25.	No. 4 of (iii)	Remediation plan shall be completed in within three years from date of issue of EC only. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.	Noted and is being followed.
26.	No. 4 of (iv)	PP shall comply all the non-compliance and partial compliance of EC dated 8 th January dated 2014, highlighted by IRO Ranchi vide its certified Compliance report dated 4 th May 2022 within certain timelines.	The Environment Clearance (EC) with capacity of (0.96 MTPA Normative 1.90 MTPA Peak) was granted by MoEF&CC vide their Letter No. J-11015/482/2008-IA-11(M), dated-8th January 2014 in respect to Kathara OCP, Kathara Area, CCL. IRO, MoEF&CC, Inspected the site in respect to Kathara Opencast Mines on dated 07.02.2023 to verify the status of Compliance report dated 4th May 2022 and project has submitted the relevant supporting documents for compliance and its status of compliance is

			provided in IRO Report Submitted to MoEFF &CC, New Delhi vide File No.-103-440/14/EPE/995 Dated-22.03.2023.
27.	No. 4 of (v)	Further proposal of expansion/amalgamation of mine shall only be considered only when full compliance of existing as well as this EC conditions along with compliance of Remediation plan and Natural & Community Resource Augmentation plan for amount Rs. 2033 lakhs only are accomplished.	Noted and its compliance is under process.
28.	No. 4 of (vi)	PP shall implement in-pit conveyor system with silo loading facility till railway siding within 2 years (March 2024) and no road transportation shall be allowed beyond this time.	Requisition for required work already communicated to E&M department. Proposal has been initiated vide E-office No.-910199 Dated-16.11.2022 and is under process.
29.	No. 4 of (vii)	PP to submit the tree implementation plan along the roadside of transportation route including mine periphery area within 2 months from date of issue of EC to IRO, MoEF&CC. A detailed report with GIS images of every 3 months subsequently be submitted in every six-monthly report to justify the adequate tree plantation.	1. Letter has been Submitted to kind office of IRO, MoEF&CC Kind regarding this EC Condition vide ref No.-PO/KTV/ENVIRONMENT/6714 Dated-23.03.2023 2. Proposal has initiated vide E-office-1088970, DATED-16.05.2023 for "GIS images of the tree implementation along the roadside of transportation route including mine periphery area of every 3 months to justify the adequate tree by CMPDIL or any other suitable govt. reputed agency.
30.	No. 4 of (viii)	PP to earmark additional Rs. 605.50 lakh to address the issues arose during public hearing, which should be implemented as per the timeline mentioned in ADS rely on Vide letter GM/E&F/2022/249 dated 19.04.2022. Plan in this regard should be submitted within 3 months to IRO, MoEF&CC.	The required activities mentioned in ADS rely on Vide letter GIWE&F/2022/249 dated 19.04.2022 is attached as Annexure- XII and its implementation is under process.
31.	No. 4 of (ix)	PP shall submit a capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara Mine to Forest Department within six months of issue of this letter.	We have submitted a capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs for 1 st year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara Mine to the DFO, Bokaro vide Ref No.-PO/KTC/Forest/2023/3312 Dated-24.11.2023 and is attached as Annexure- XIII
32.	No. 4 of (x)	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.	No Objection Certificate (NOC) for Ground Water Abstraction has been granted by Ministry of Jal Shakti (GoI), DoWR, RD&GR, CGWA vide NOC No.-CGWA/NOC/MIN/ORIG/2022/16352 dated-19th Sept, 2022 in respect to Kathara OCP, Kathara Area, CCL.
33.	No. 4 of (xi)	The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2 nd August 2017 in	1. Statutory requirements in respect to Kathara OCP are as follows: (i) Project Report Approval-The CCL Board has approved vide letter no.-

	<p>Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.</p>	<p>CS/BM/390/2012/269 dated-29.10.2012.</p> <p>(ii) Mining Plan and Mine Closure Plan- The CCL Board has approved vide letter no.-CS/BM/485/2020/214 dated-29.05.2020.</p> <p>(iii) DGMS Working Permission- Working permission has been obtained from DGMS, Koderma vide Letter No.-314 dated-28/02/2012.</p> <p>(iv) DGMS Blasting Permission- Blasting permission has been obtained from DGMS, Koderma vide Letter No.-1636 dated-09/10/2013.</p> <p>(v) Seam Opening Permission- Seam Opening Permission has been obtained from Office of Coal Controller, vide letter No.-CC/14/CCO/98/CS & CC/Tech/re-OP.Perm/kathara colliery/CCL/ 14-15' on dated-05.01.1984 & 21.08.2014 respectively.</p> <p>(vi) Mining Lease copy- Mining Lease Issued by Ministry of coal & mines vide letter no-18016/5/2002-CA for period of 30 years beyond the lease period.</p> <p>2.Matter is under sub-Judice vide File No.PCA-38029/5/2018-PCA.</p> <p>(i) The order has been passed by joint Secretary, Ministry of Coal (Gol) in this regard as mentioned in Para 12(ii) which is stated as follows <i>"The execution of the 33 notices, as per the annexure, is stayed in exercise of power under rule 55(5) of Mineral Concession Rules, 1960 read with section 30 of the MMDR Act, till further order. Further, no coercive action shall be taken against the Applicants by the Respondents pursuant to the impugned demand notices, including discontinuation of issuance of transit challans for the dispatch of coal."</i></p> <p>Further RA No. 14 of 2018-PCA is related to Kathara OCP.</p> <p>(ii) Undertaking by the undersigned to comply Judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.</p> <p>For Compliance, the letter in details was sent to the Member Secretary, JSPCB from project vide letter no.-PO/KTC/ENV/2022/2447 Dated-28.11.2022 and is attached as Annexure- XIV</p>
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34.	No. 4 of (xii)	State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No.114 of 2014 in the matter of Common Cause versus Union of India and Ors.	Will be followed as per the notification/order/guideline from the said authorities in this regard.
35	No. 4 of (xiii)	PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year	Work has been awarded to M/S CSIR-NEERI, Nagpur regarding third party independent expert agency for monitoring/auditing of compliance of EC conditions and is attached as Annexure- XXXVI.
36	No. 4 of (xiv)	No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly.	Noted and is being followed
37	No. 4 of (xv)	PP shall implement additional (if already existing) 50 bed capacity hospital within in 2 years in the nearest town of project area within 10 km buffer zone.	Proposal will be initiated soon.
38	No. 4 of (xvi)	Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.	03 Nos. of 28 KL of mobile water sprinklers with mist spray has been deployed to to arrest the fugitive dust emission. NIT for Providing of Sprinkler Network from entrance of checkpost of quarry to Viewpoint of Kathara OCP under Kathara Colliery. (Photo – 04,22,23 is attached)
39	No. 4 of (xvii)	Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.	CTO has been obtained from JSPCB Ranchi vide letter no - JSPCB/HO/CTO-13707404/2022/1689, Dated-03.12.2022 In respect to Kathara OCP.
40	No. 4 of (xviii)	PP shall install online water quality monitoring system for checking the quality of mine water and display outside main gate of colliery before discharge from its settling pond.	Requisition for required work already communicated to E&M department and is under process.
41	No. 4 of (xix)	State Government/SPCB to take action against the Project Proponent under the provision of Section 19 of the E(P) Act.	PP is liable to follow the guidelines/Order/Notification of SPCB office.
42	No. 4 of (xx)	In pursuance to the Ministry's OM dated 30.09.2020, Project Proponent shall take up the activities for community development under EMP.	Is under process
43	No. 4 of (xxi)	PP shall submit the yearly status of mine closure activity to be pursued for final mine closure and furnish the detail to the respective IRO in April, 2023	The work will be followed as per approved mining plan & mine closure plan and is being attached as Annexure- XV. Implementation status of Reclamation measures with respect to project is attached as Annexure- XVI.

44	No. 4 of (xxii)	PP must obtain 4.5-starrating of MoC in the year 2022-23 and report shall he submitted to IRO.	Will be ensured
45	No. 4 of (xxiii)	Periodical health check-up shall be conducted to monitor the impact of heavy metals present in core zone & buffer zone air quality and also to prepare an action plan to reduce heavy metals concentration and also report to be submitted to concerned regional office of MoEF&CC.	Periodical health check-up is being conducted to monitor against the target of 201 IME/PME, actually conducted 204 IME/PME during 2022 and is being attached as Annexure- XVII . Report on monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc present in Ambient air is being carried out by CMPDI, a NABL accredited laboratory.
46	No. 4 of (xxiv)	PP shall take should be implemented all the activities as per the timeline mentioned in ADS rely on Vide letter GIWE&F/2022/249 dated 19.04.2022. Plan in this regard should be submitted within 3 months to IRO, MoEF&CC.	The required activities mentioned in ADS rely on Vide letter GIWE&F/2022/249 dated 19.04.2022 is attached as Annexure- XII and its implementation is under process.
47	No. 4 of (xxv)	Hon'bie Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January. 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC	The work will be followed as per approved mining plan & mine closure plan and is being attached as Annexure- XV . Implementation status of Reclamation measures with respect to project is attached as Annexure- XVI .

2. Compliance of the Standard EC Conditions: -

S. N.	Conditions	Reply by PP
(a) Statutory compliance		
i.	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the Project.	No forest land has been identified in the project.
ii.	The project proponent shall obtain clearance from the National Board for Wildlife, if the project applicable.	No Wildlife Sanctuaries fall within 10 Km boundary of the project. DFO certificate attached as Annexure- XVIII
iii.	The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The	Wildlife Management Plan for Schedule-1 and breakup of proposed activities with budgetary with budgetary provision submitted to the DFO, Bokaro vide ref No.-GM/KTA/PS/22/2022/02 Dated-04.04.2022 and is attached as Annexure- XIX

	implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area)	
iv.	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/Committee.	CTO has been obtained from JSPCB Ranchi vide letter no - JSPCB/HO/CTO-13707404/2022/1689, Dated- 03.12.2022 In respect to Kathara OCP, Kathara Area,CCL.
v.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority.	No Objection Certificate (NOC) for Ground Water Abstraction has been granted by Ministry of Jal Shakti (GoI), DoWR, RD&GR, CGWA vide NOC No.- CGWA/NOC/MIN/ORIG/2022/16352 dated- 19thSept,2022 in respect to Kathara OCP, Kathara Area, CCL.
vi.	Solid/hazardous waste generated in the mines needs to address in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016	An application for grant of Hazardous Waste Certification is applied vide application no. 16671647 to JSPCB, Ranchi, Jharkhand and is under process.
vii.	The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India. Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project	Will be followed as per the notification/guideline from the said authorities.
(b) Air quality monitoring and preservation		
i.	Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO and NO. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.	<ol style="list-style-type: none"> 1. Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM10, PM2.5, SO and NO. 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. 2. Online ambient air quality monitoring stations also be installed nearby GM Office, Kathara Area. 3. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out by CMPDI, a NABL accredited laboratory on Quarterly basis. <p>(Copy of QE March'23 and Sept'23 report on Ambient Air/Water Quality monitoring of Pollutants by CMPDI is attached as Annexure-XX) (Photo - 15,16 is attached)</p>
ii.	The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25 September 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry / Regional Office and to the CPCB / SPCB.	Monitoring report on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other is being done by CMPDI, a NABL accredited laboratory on Quarterly basis. (Copy of QE March'23 and Sept'23 report on Ambient Air/Water Quality monitoring of Pollutants by CMPDI is attached as Annexure-XX)
iii.	Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks / conveyors. Effective control measures such as regular	Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks Noted and is being done. (Photo - 03,13 is attached)

	water / mist sprinkling / rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM ₁₀ / PM _{2.5}) such as haul road, loading / unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central / State Pollution Control Board.	03 Nos. of 28 KL of mobile water sprinklers with mist spray has been deployed to to arrest the fugitive dust emission at haul road, loading / unloading and transfer points. (Photo – 04,22,23 is attached) Award of Work for Providing of Sprinkler Network from entrance of checkpost of quarry to Viewpoint of kathara OCP under Kathara Colliery is attached as Annexure- XXI
iv.	The transportation of coal shall be carried out as per the provisions route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a bypass road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.	Noted and is being followed.
v.	Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining " PUC certificate from the authorized pollution testing centres.	Noted and is being followed.
vi.	Coal stockpile / crusher / feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt - conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.	Dust suppression at coal stockpile is done through 28 KL of mobile water sprinklers in regular basis. Award of Work for Providing of Sprinkler Network from entrance of checkpost of quarry to Viewpoint of kathara OCP under Kathara Colliery is attached as Annexure- XXI . Drills is being wet operated. (Photo – 04,12,22, 23 is attached)
vii.	Coal handling plant shall be operated with effective control measures w.rt. various environmental parameters. Environmentally friendly sustainable technology should be implemented for mitigating such parameters.	Not applicable.
viii.	Major approach roads shall be black topped and properly maintained.	Major approach roads is black topped and properly maintained.
(C) Water quality monitoring and preservation		
i.	The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act , 1974 Coal Industry Standards vide GSR 742 (E) dated 25 th September , 2000 and as amended from time to time by the Central Pollution Control Board .	Noted
ii.	The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J - 20012 / 1 / 2006-1A.11 (M) dated 27 th May , 2009 issued by Ministry of Environment . Forest and Climate Change shall also be referred in this regard for its compliance.	Noted and is being followed.
iii.	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease as by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring of ground water levels shall be carried out four times a year i.e. Pre – monsoon, Monsoon Post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly as MOEFCC/RO.	Adequate numbers of wells are available in nearby colonies as well as in different basti around the mine lease for monitoring of ground water level. Currently, one piezometer is being available and maintained at Regional Substation, Kathara (Photo – 14 is attached) and Proposal for construction of one new piezometer is being initiated from Civil deptt Vide E-office NO.- 877704 dated-07.10.2022 . The monitoring of ground water levels carried are as:

		Substation (piezometer reading)	Water level measured from surface (depth in Mtr.)			
			June'22	Sept' 22	Dec'22	March'23
			15	10	11	13
			The ground water quality is being monitored by CMPDI on Quarterly basis & its report QE for Dec'22 and March'23 is attached as Annexure- II			
iv.	Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment Forest and Climate Change/Regional Office.		Monitoring of water quality upstream and downstream of water bodies shall be carried out through CMPDI on Quarterly basis. The report is attached as Annexure- II			
v.	Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.		Ground water is not being used for any purpose of the mine. Two rainwater harvesting plants has been constructed at PO Office and additional 04 nos. rainwater has been installed at ground surface at different locations like area hospitals, Club at kathara near by the project. (Photo -10,11 attached)			
vi.	Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper setting of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.		<ol style="list-style-type: none"> 1. Garland drains of appropriate dimension are provided around the excavated area and cleaning of garland drain (LENGTH-3000M, WIDTH- 1.2 M AND DEPTH- 0.9 M) is being done and maintained. (Photo -34, 35 is attached) 2. The adequate mine sump capacity is being designed to collect mine water. Mine water is being used for industrial purposes such as pithead Kathara washery, haul road sprinkling and firefighting etc. (Photo -04, 05,06,07,08,09,12,22,23 attached) 3. Siltation pond has been constructed for silt arrest and maintained properly. (Photo -07, 08 is attached) 4. Retaining wall/Toe wall constructed around the OB Dump. (Photo - 02, 36, 37,38,40 is attached). Construction for toe wall along OB dump No.-06 towards Damodar River Side is under process and is attached as Annexure- XXII. 5. Massive plantation, distribution of sapling/ plants to nearby villagers and spreading of seed balls to create grassing & vegetation were done over the OB dump, along the approach road, riverbed and vacant places of an area of 161.24 Ha and also monsoon plantation work is being executed for an area of 10 Ha. towards the south direction of OB dump by the Divisional Forest Officer, Hazaribagh during 2023-24. 6. Records of 1000 Nos. of Fruits bearing Sapling distribution to nearby Villagers during 2022-23. Seed Balls for Three-Tier Plantation at Slopes of OB for 10 Ha is being executed for FY-2023-24. 			

		(Photo-13,24,25,26,27,28,29,30,31,32,41,42,43,44 is attached) Details are enclosed as annexure -XXIII.
vii.	Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).	Presently, two rainwater harvesting plants has been constructed at PO Office and additional 04 nos. rainwater has been installed at ground surface at different locations like area hospitals, Club at kathara near by the project. There are 4 nos. ponds available nearby the basti/Villages around the project. (Photo – 10,11 is attached)
viii.	Industrial wastewater generated from CHP, workshop and other wastewater, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP/STP needs to be provided.	<ol style="list-style-type: none"> ETP is being operated and maintained at Workshop. Modernization of ETP works tender done vide NIT No.- KTC/PE(E&M) /E-Tender/23-24/51 Dated-05.08.2023 & Copy attached as Annexure- XXIV). Soak pit system is being used at colonies. Apart from it the construction of Sewage treatment plant is in pipeline as reconnaissance of site has been done. Work Order for "<i>Construction of 1 No. New Sewage Treatment Plant at Kathara Govindpur along with associated Sewerage Network & Intermediate Pumping Stations</i>" was issued vide WO No.: 11.51. Q7FA/WTP_STP_DETTP/01C/9870 Dated 22/02/2023 (copy enclosed as Annexure-XXV) As per clause no. 04 of above WO, the time of completion is 12 months and 06 months for trail run of the STP from issue of work order. (Photo – 18,09,20,21 is attached)
ix.	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads. green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Mine water is being used for industrial purposes such as pithead Kathara washery, haul road sprinkling and firefighting etc. The drains are being regularly desilted particularly after monsoon and maintained properly.
x.	The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/Gol Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law	<ol style="list-style-type: none"> "Surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, for implementation in the project" is attached as Annexure- XXVI It will be followed regarding surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report.
xi.	The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation/ water resource department in the state government.	Riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan is being prepared and attached as Annexure- XXVI.
xii.	The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah	There is no alter major water channels around the site. Work has been executed regarding providing stone Revetment up to HFL Level along the Damodar

	flowing near or adjacent to the mine The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side. stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.	riverbank besides the OB Dump and is attached as Annexure- XXVII. PHOTO- 51 is attached.
xiii.	Garland drains (of suitable size, gradient and length) around the critical areas i.e., mine shaft and low-lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the arca adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff.	Cleaning of garland drain (LENGTH-3000M, WIDTH- 1.2 M AND DEPTH- 0.9 M) is being done and maintained. (Photo – 34,35 is attached) The adequate mine sump capacity is being design to collect mine water. Mine water is being used for industrial purposes such as pithead Kathara washery, haul road sprinkling and firefighting etc. (Photo –04,05,06,07,08,09,12,22,23 attached)
xiv.	The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.	Mine water is being used for industrial purposes such as pithead Kathara washery, haul road sprinkling and firefighting etc. Cleaning of garland drain (LENGTH-3000M, WIDTH- 1.2 M AND DEPTH- 0.9 M) is being done and maintained properly. (Photo – 34,35 is attached)
(d) Noise and Vibration monitoring and prevention		
i.	Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.	Is being followed. Noise level monitoring is being done by CMPDIL, a NABL accredited laboratory (Copy of QE Dec'22, QE March'23 and Sept'23 attached as Annexure-XXVIII. Workers engaged in blasting and drilling operations, operation of HEMM, etc are being provided with personal protective equipments (PPE) like ear plugs/muffs. Copy of PPE distributed by the Project attached as annexure- XXIX.
ii.	Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.	Controlled blasting techniques is being followed. Electronic Detonator is done to control noise and ground vibrations. Ground vibrations are recorded during each blast and the results come within the limits. To reduce fly rocks, muffling blasting is done. Copy for Permission for controlled Blasting from DGMS is attached as Annexure-XXX Copy of Ground Vibration reports attached as Annexure-XXXI)
iii.	The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.	Noise level monitoring is being done by CMPDIL, a NABL accredited laboratory (Copy of QE Dec'22 and QE March'23 attached as Annexure-XXVIII).
(e) Mining Plan		
i.	Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.	Is being followed.
ii.	Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).	Is being followed.
iii.	No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The	Noted

	Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.	
iv.	Underground workplace environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.	Not Applicable
v.	No change in mining method i.e. UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).	Noted
vi.	Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.	Environmental and ecosystem restoration is a conscious effort in the Kathara Area. The Kathara area is aware of the Importance of environmental issues and tries to the extent possible to restore the environment and Nature to its original pristine condition. To promote Green Initiatives taken by Gol, Kathara Area has installed 50 KW of solar system apart from its CIL submitted Green Energy Commitment letter to MNRE for developing 1000 MW Solar Power Projects For implementation of these projects Cl. has signed a MoU with Solar Energy Corporation of India (SECI).
(f) Land reclamation		
i.	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).	Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey is carried out in every three years for monitoring land use pattern by CMPDI and is under process.
ii.	The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27 th August, 2009 and subsequent amendments.	Noted and will be followed at time mine
iii.	The entire excavated area, backfilling, external OB dumping (including topsoil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern. which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.	Agreed and will be followed.
iv.	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden,	No fly ash is generated.

	backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	
v.	Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.	Agreed and will be complied.
vi.	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	Noted
vii.	Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27 th August, 2009 and subsequent amendments.	Noted
viii.	Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3d November 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling or stowing of mines, Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.	No fly ash is generated.
ix.	Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.	Noted and will be monitored on regular basis.
x.	The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.	Noted
(g) Green Belt		
i.	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna,	1. Wildlife Management Plan for Schedule-1 and breakup of proposed activities with budgetary provision

	<p>if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.</p>	<p>submitted to the DFO, Bokaro vide ref No.- GM/KTA/PS/22/2022/02 Dated-04.04.2022 and is attached as Annexure- XIX.</p> <ol style="list-style-type: none"> 2. Massive plantation, distribution of sapling/ plants to nearby villagers and spreading of seed balls to create grassing & vegetation were done over the OB dump, along the approach road, riverbed and vacant places of an area of 161.24 Ha and also monsoon plantation work is being executed for an area of 10 Ha. towards the south direction of OB dump by the Divisional Forest Officer, Hazaribagh during 2023-24. 3. Records of 1000 Nos. of Fruits bearing Sapling distribution to nearby Villagers during 2022-23. Seed Balls for Three-Tier Plantation at Slopes of OB for 10 Ha is being executed for FY-2023-24. <p>(Photo-13,24,25,26,27,28,29,30,31,32,41,42,43,44 is attached) Details are enclosed as annexure -XXIII.</p>
<p>ii.</p>	<p>Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.</p>	<ol style="list-style-type: none"> 1. Massive plantation, distribution of sapling/ plants to nearby villagers and spreading of seed balls to create grassing & vegetation were done over the OB dump, along the approach road, riverbed and vacant places of an area of 161.24 Ha and also monsoon plantation work is being executed for an area of 10 Ha. towards the south direction of OB dump by the Divisional Forest Officer, Hazaribagh during 2023-24. 2. Records of 1000 Nos. of Fruits bearing Sapling distribution to nearby Villagers during 2022-23. Seed Balls for Three-Tier Plantation at Slopes of OB for 10 Ha is being executed for FY-2023-24. <p>(Photo-13,24,25,26,27,28,29,30,31,32,41,42,43,44 is attached) Details are enclosed as annexure -XXIII.</p>
<p>(h) Public hearing and Human health issues</p>		
<p>i.</p>	<p>Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six monthly basis.</p>	<p>Adequate illumination is provided in all mine locations (as per DGMS standards) and is being monitored through luxmeter and its report is attached as Annexure- XXXII.</p>
<p>ii.</p>	<p>The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.</p>	<p>Periodical health check-up is being conducted to monitor against the target of 201 IME/PME, conducted 204 IME/PME during 2022 and its records are maintained accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 04 of personnel identified from workforce engaged in active mining operations & conducted health check-up of pneumoconiosis occupational diseases during 2022. Copy enclosed as Annexure- XVII.</p>


iii.	Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.	Protective respiratory devices are being provided to departmental as well as outsourced employees and Standard Operating Procedures (SOPs) have been made of maximum activities related to safety & health aspects. Accordingly, Copy of SOPs are distributed to persons engaged in mining activities as well as delivered to them through safety talk, personal counselling & displaying safety video clipping.
iv.	Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/ Central Government, as applicable.	Noted and is being followed.
v.	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29 th October'2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area	Noted and will be followed.
vi.	Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.	During 2022, 137 nos. of departmental workmen and 05 nos. of contractual workmen has been given Refresher training as per safety norms specified by DGMS to ensure high safety standards in mines. Copy enclosed as Annexure- XVII .
vii.	Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.	Every 02 years, 2 litres water bottles are provided to all work person employed in mining operation. For supply of drinking water to persons, 02 Aqua guard is in operation continuously. (Photo – 33)
(i) Corporate Environment Responsibility		
i.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.	Corporate Environmental policy for Central Coalfields Limited, based on Corporate Environmental policy (ECP)of Coal India Limited duly approve by the Board of Directors. Copy enclosed as Annexure -XXXIII.
ii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	The hierarchy of environment cell is as follows: a. HQ Level 1. Director → GM(E&F) →→ b. Area Level 1. Area GM → Area Env. Officer →→ c. Unit Level Project Officer → Unit Nodal Officer (Env) → Supervisor → Workers (Photo – 39)

iii.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.	<p>Financial provisions for the implementation of the EMP along with item wise and year wise expenditure in respect to environment are as:</p> <ol style="list-style-type: none"> 1. Estimate Capital Expenditure on Environmental protection Measures as per RCE,2012 Approved by board, CCL. 2. Environmental Cost Benefit Analysis as per EIA & EMP, April 2022 3. Proposed Environmental Monitoring Cost as per EIA & EMP, April 2022 and monitoring report in respect to kathara ocp is being done by CMPDI on quarterly basis. 4. Estimated Capital cost of Environmental control Measures as per EIA & EMP, April 2022 5. Proposed Air and Water Pollution Control Measures as per EIA & EMP, April 2022 6. Work done regarding Garland drain & fencing work during FY 2017-18 to 2022-23, Work regarding Tyres Washing platform in respect to kathara colliery is under process. and In FY22-23, plantation work of an area 15.8 Ha over slopes of OB and 1.5Km along road from PO Office to substation (Kathara) has been executed by state forest deptt. Hazaribagh and during 2023-24, the work of 10 Ha plantation has been awarded to State Forest deptt., Hazaribagh. Details are attached in Annexure- XXXIV.
iv.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Self-environmental audit conducted, followed and monitored at CCL, HQ and Area Level is attached as Annexure-XXXV.
(j) Miscellaneous		
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	The information regarding environmental clearance grant for project along with the environmental conditions has been made public in two local newspapers of the District or State, by prominently advertising it and it is also displayed in Central coalfields Limited website permanently. Newspaper advertisement is enclosed as Annexure-XXXVII.
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	The information of the environmental clearance grant to the project has been given to the Heads of local bodies, Panchayats and Municipal Bodies is being attached as Annexure- XXXVIII.
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Noted and is being followed.
iv.	The project proponent shall monitor the criteria pollutants level namely, PM10. SO, NOx (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient	Noted

	location for disclosure to the public and put on the website of the company.	
v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Noted and will be followed.
vi.	The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29 th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'	Noted and will be followed.
vii.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The latest report 2022-23 of Environment Statement has also been submitted to JSPCB vide our letter no. PO/KTC/ENVIRONMENT/2566 dated 30.09.2023.
viii.	The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.	Complied. It has been informed to your kind office at time of Commencement of Mining operations vide letter No.- PO/KTC/ENV/2022/2516 Dated-03.12.2022. (Copy attached as Annexure-XXXIX)
ix.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted and is being followed.
x.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agreed
xi.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.	Noted
xii.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986	Noted
xiii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted
xiv.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted and will follow direction/ order issued by the ministry.
xv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Noted
xvi.	The above conditions shall be enforced, inter-alia under the provisions of the Waste (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act 1981, the Environment	Noted

	(Protection) Act, 1986 , Hazardous and Other Wastes (Management an Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India High Courts and any other Court of Law relating to the subject matter.	
5.	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.	Noted and is being done.
6.	The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any furth condition for environmental protection. The Ministry or any other competent authority ma stipulate any further condition for environmental protection.	CTO has been obtained from JSPCB Ranchi vide letter no - JSPCB/HO/CTO-13707404/2022/1689, Dated- 03.12.2022 In respect to Kathara OCP, Kathara Area,CCL.
7.	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.	Noted
8.	The coal company/project proponent shall be liable to pay the compensation against t illegal mining, if any, and as raised by the respective State Governments at any point of time. terms of the orders dated 2 August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/20 in the matter of 'Common Cause Vs Union of India & others.	Noted
9.	The concerned State Government shall ensure no mining operations to commence till entire compensation for illegal mining, if any, is paid by the project proponent through respective Department of Mining & Geology, in strict compliance of the judgment of Hon Supreme Court.	Will be followed as per the notification/guideline/order from the said authorities.
10.	This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.	Noted

Yours faithfully

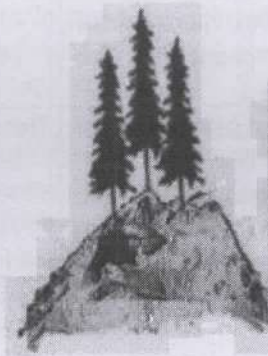


**Project Officer
Kathara OCP**



Please find the official E-mail on dated 13.12.2023 sent through ccl.projectoffice.ktc@gmail.com for attachments of followings in respect of Kathara OCP, Kathara Area, CCL:

- A. Copy of EC Compliance
- B. Photographs (01 to 53) as stated above.
- C. Annexures (I to XXXIX) as stated above.



**Save Paper.
Save Trees.
Save the World.**

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-01 (Stone support of slope with wire-mesh)



Photo-02 (Retaining/Toe wall along the OB Dump)



Photo-03 (Coal transportation covered with tarpaulin)



Photo-04 (Mobile Tanker with mist spray)



Photo-05 (1000 GPM Pump at Damodar for supply of water to Jhirki and nearby villages)



Photo-06 (Pond near Bandh Basti)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23

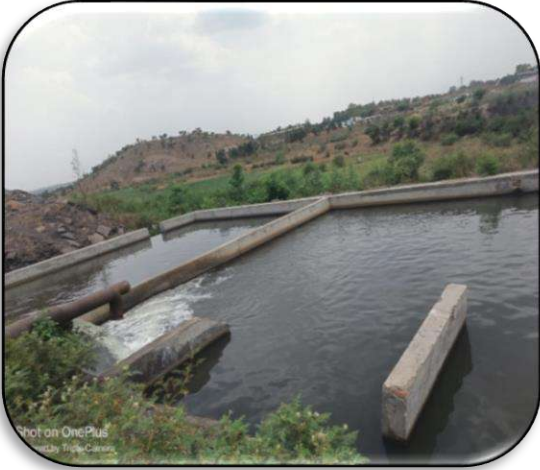


Photo-07 (Settling tank)



Photo-08 (Settling tank)



Photo-09 (Mine-sump)



Photo-10 (Rainwater harvesting at PO Office)



Photo-11 (Rainwater harvesting at PO Office)



Photo-12 (Wet Drilling)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23

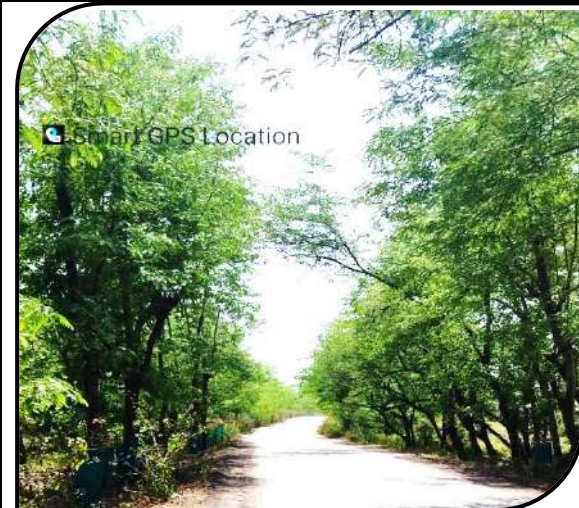


Photo-13 (Green belt and blacktop transportation road)



Photo-14 (Piezometer at Regional Substation)



Photo-15 (CAAQMS Installed at Kathara Area)



Photo-16 (PM10 Installed at Pit head Washery)



Photo-17 (Top Soil)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-18 (ETP at Workshop)

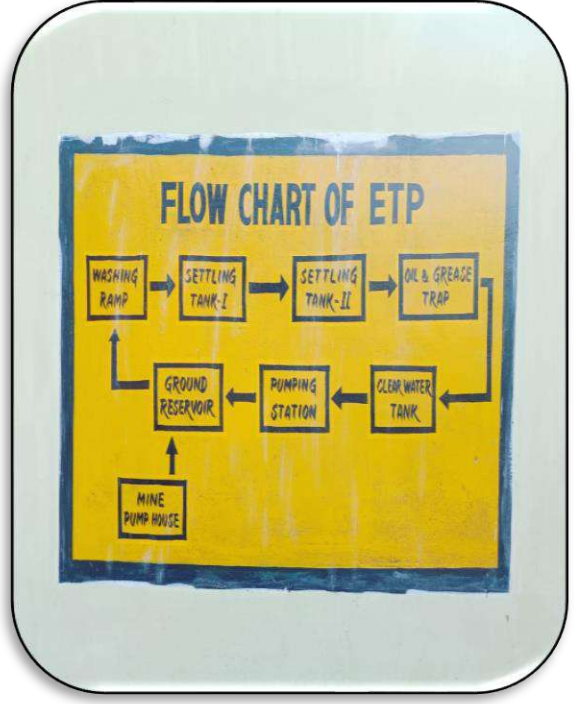


Photo-19 (Flow chart of ETP)



Photo-20 (Covered Hazardous Waste Pit)



Photo-21 (Burnt Oil collection Drum)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-22 (Fixed Sprinkler at Washery Bunker)



Photo-23 (Fixed Sprinkler at Washery Bunker)



Photo-24 (Plantation at GM Office, Kathara Area during 2022-23)



Photo-25 (Plantation at GM Office, Kathara Area during 2022-23)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-26 (Plantation in way to project Via Regional Substation during 2022-23)



Photo-27 (Plantation in way to project Via Regional Substation during 2022-23)



Photo-28 (Plantation on OB Dump near pit Office)



Photo-29 (Plantation on OB Dump near View point)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-30 (Plantation on OB Dump in way to Workshop)



Photo-31 (Plantation on OB Dump in way to Workshop)



Photo-32 (Plantation on OB Dump in way to Workshop)



Photo-33 (Aqua guard at pit office for drinking water)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23

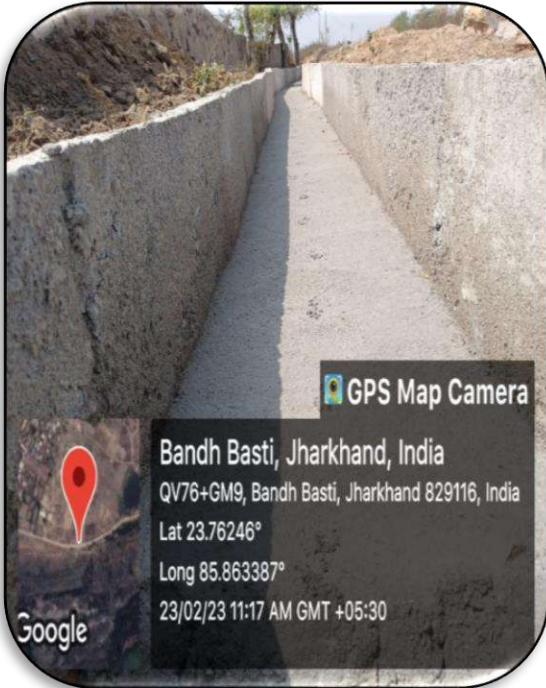


Photo-34 (Garland drain)

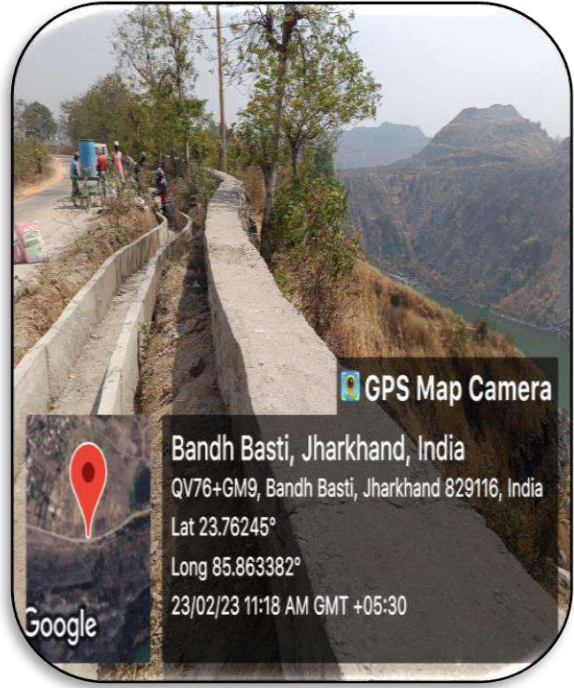


Photo-35 (Garland drain)



Photo-36 (Retaining/Toe wall along the OB Dump)

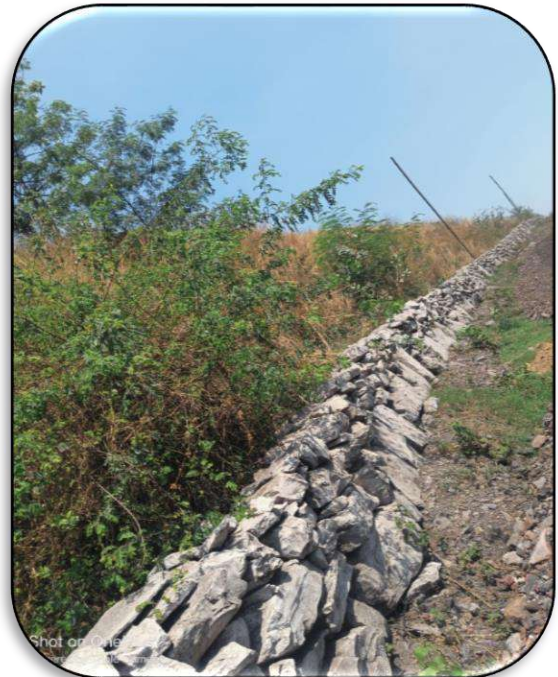


Photo-37 (Retaining/Toe wall along the OB Dump)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23

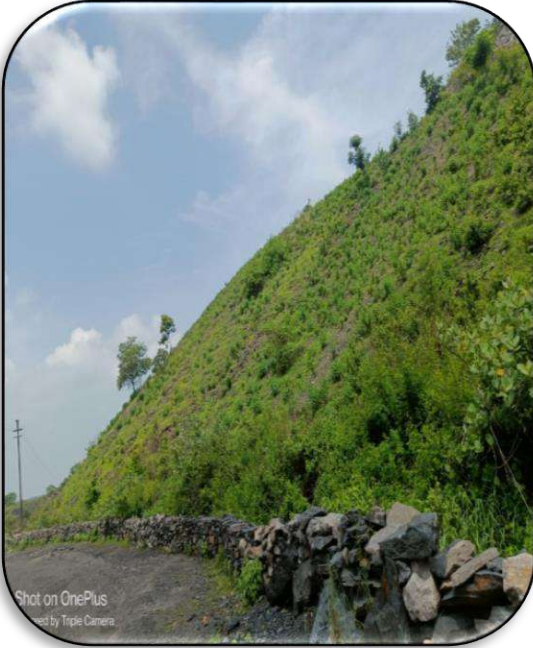


Photo-38 (Retaining/Toe wall along the OB Dump towards south-east)

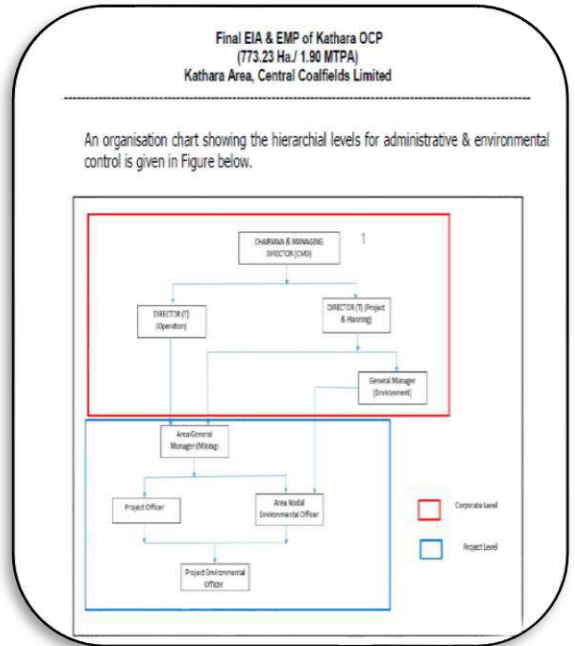


Photo-39 (Hierarchy of environment cell)



Photo-40 (Retaining/Toe wall along the OB Dump in east side)



Photo -41 (River side plantation)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo-42 (plantation done on OB dump slope towards southern side during FY 2023-24)



Photo- 43 (plantation done on OB dump slope towards southern side during FY 2023-24)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23

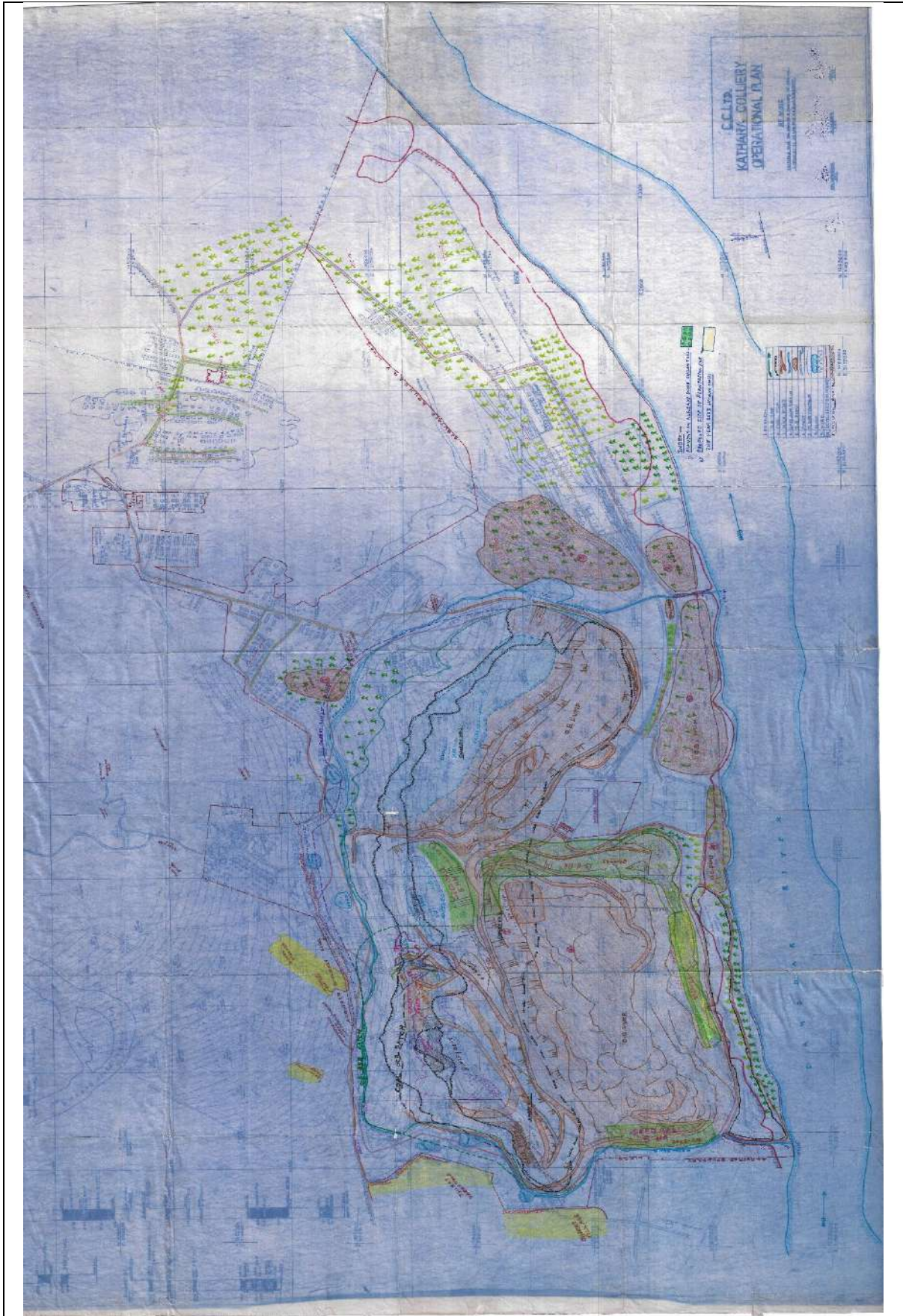


Photo- 44 (Surface plan showing plantation done in details)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo -45 (Distribution of Solar Lantern under NCRAP)



Photo -46 (Distribution of Solar Lantern under NCRAP)



Photo -47 (Distribution of Dustbins under NCRAP)



Photo -48 (Trueview Panel display 75inch for distribution)



Photo -49 (Transportation of NCRAP items from Store)



Photo -50 (Meeting at Office with Nearby mukhiya, Panchayat for Distribution for items under NCRAP)

Photographs of Kathara OCP for the Six-Monthly EC Compliance of September '23



Photo -51 (Stone Revetment along Riverside)



Photo -52 (Disribution of fruits bearing Sapling under NCRAP)



Photo -53 (Disribution of fruits bearing Sapling under NCRAP)



cmpdi
A Mini Ratna Company



सन्ड्रल माइन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार का एक लोक उपक्रम)
गोन्दवाना प्लेस, कान्के रोड, रांची - 834 031, झारखण्ड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Gondwana Place, Kanke Road, Ranchi - 834 031, Jharkhand (INDIA)
CORPORATE IDENTITY NUMBER - U14292.JH1975GOI001223

स्पीड पोस्ट / ई-ऑफिस द्वारा

पत्रांक : सीएमपीडीआई/बी.डी./बी (सिविल)/E- 880777 /I-16034

दिनांक :28.10..2022

To,

**General Manager (Environment),
Central Coalfields Ltd.,
Darbhanga House, Ranchi.**

विषय : Preparation of DPR for Development & Beautification of Damodar river banks along with construction of picnic spots, approach road & pathways, chhath ghat, shed, riverside plantation etc. at Khetko, Asnapani, near CPP colony and Jhirki basti for Kathara OCP KTA CCL. under PMC services. - Submission of offer reg.

महोदय,

This has reference to your e-file no. **861011** pertaining to the subject cited above.

We are submitting our proposal for the subject assignment consisting of Scope of Services, Time schedule, Consultancy fee, Terms of Payment etc. as detailed below, for your kind consideration and acceptance.

1.0 SCOPE OF SERVICES

The scope of services of CMPDI shall be "Preparation of DPR for Development & Beautification of Damodar river banks along with construction of picnic spots , approach road & pathways , chhath ghat, shed, riverside plantation etc. at Khetko, Asnapani, near CPP colony and Jhirki basti for Kathara OCP KTA CCL", which includes the following activities:

- Preparation of architectural scheme based on functional requirements.
- Preparation of Detailed Architectural and construction drawings for Development & Beautification of Damodar river banks along with construction of picnic spots, approach road & pathways, chhath ghat, shed, riverside plantation etc. at Khetko, Asnapani, near CPP colony and Jhirki basti for Kathara OCP KTA CCL all infrastructures, Landscaping, Horticulture etc. as required by the client including all required service arrangements after field surveying and geotechnical testing as per requirement.
- Preparation of Detailed Bill of Quantities including framing of specifications for total project and estimation of costs on the basis of latest CPWD Delhi SOR for Scheduled Items or as per requirement of client, Prevalent Market Rate analysis with quotations for unscheduled items along with BOQ for a single contract including all Civil, Electrical and other required services and development works as per the requirement of CCL , which should also be as per Civil Engineering Manual (CEM) of CIL and requirement of local state (i.e. Jharkhand Govt.).
- Preparation of NIT based on MCEW of CIL, Tender document including scope of work towards completion of the project in all respect on behalf of CCL, Assisting to Evaluation of Tenders and Assisting to award of work by CCL.

2.0 TIME SCHEDULE

The subject assignment would be completed within 3½ months from the 'Zero' date as per the following details-

Sl.No.	Activities	Time Schedule
A.	Submission of architectural Scheme	
i.	Engagement of Technical expertise/Consultant by QCBS	45 days from the Zero date.

Contd.....P/2



वेब साईट/Website : www.cmpdi.co.in

P/2

ii.	Detailed investigation	Surveying, Geotechnical	30 days
iii.	Architectural scheme and its presentation including normative Scheme cost		45 days
B.	Submission of DPR including Detailed Architectural & construction drawings and estimate		
i.	Architectural and construction drawings including estimate		45 days from date of approval of scheme by CCL.

The 'Zero' date for this assignment would be the date of receipt of Work Order or date of receipt of required inputs, whichever is later.

3.0 SCHEDULE OF CHARGES

SI No	Particulars	<5 crores of Project	≥ 5 crores & < 8 crores of Project	≥ 8 crores & <15 crores of Project
Stage -I	Consultancy charges towards Preparation of architectural Scheme including survey, soil testing and normative estimate.	1.5 % of scheme cost or Rs. 3 Lakhs whichever is maximum + GST applicable	1.25% of scheme cost or Rs. 7.5 Lakhs whichever is maximum + GST applicable	1% of scheme cost or Rs. 10 Lakhs whichever is maximum + GST applicable
Stage -II	Consultancy charges towards preparation of DPR including Detailed Architectural and construction drawings and estimate.	4.5% of DPR cost or Rs. 9 Lakhs, whichever is maximum + GST applicable	3.5% of DPR cost or Rs. 22.5 Lakhs, whichever is maximum + GST applicable	3.0% of DPR cost or Rs. 28 Lakhs, whichever is maximum + GST applicable

4.0 PAYMENT TERMS

The Advance bills shall be raised by CMPDI as Running Account bill as follows:

1	Architectural scheme preparation	100% of payment on schedule of charges given in para 3.0 of stage-I	To be paid by CCL	On submission of Scheme & on approval of competent authority of CCL
2.	Draft DPR	75% of payment on schedule of charges given in para 3.0 of stage-II	To be paid by CCL	Provisionally accepted by GM(HOD(ENV), CCL
3	FINAL DPR	25% of payment on schedule of charges given in para 3.0 of stage-II	To be paid by CCL	Accepted & Approved by competent authority of CCL

Contd.....P/3

P/3

5.0 SCHEME COST, DETAILED PROJECT REPORT (DPR) COST, ACTUAL COMPLETION COST

“Scheme Cost ” would be the cost estimate prepared on the basis of latest available CPWD Plinth Area Rates (PAR), prevalent market rates for those items not available in the CPWD PAR, as per CCL requirement. The scheme cost shall include Cost towards field surveying with TLS or any other Survey Instruments, Contour drawings, geotechnical tests as per requirement, preparation of schematic architectural drawings, preparation of normative estimate. It shall be taken for the purpose of schedule of payment as approved by the competent authority of CCL

“Detailed Project Report (DPR) Cost” would include cost of Preparation of Architectural/Structural/Electrical/Developmental/Service related design/drawings for construction purpose and all other allied works as well as detailed estimation as prescribed under the scope of work in para 1.0.

Note : The following charges will be directly paid by CCL and will not be reckoned under consultancy charges of CMPDI:

- i. Charges, if any, levied by local authorities for approval of plans and services and for issue of "completion" / No objection certificate for occupation of works on completion, if any required.
- ii. Charges, if any, levied by local authorities/Providers of services such as water supply, drainage, sewerage for shifting relocation of utilities as well as their disconnection/connection.
- iii. Cost of litigation, if any, with third party or individual organization to remove legal barrier in the execution of works.
- iv. Cost of testing of materials/workmanship for items for which contractor is not required to pay in terms of provisions in the works contracts.

6.0 OBLIGATIONS OF CCL

- i. CCL shall provide land boundaries to make proper survey, geotechnical investigation.
- ii. CCL shall provide proper accommodation/transportation in the colony for architectural consultant or CMPDI personnel, if available.
- iii. CCL shall provide their requirement of infrastructure/development works to be undertaken to the architectural consultants/CMPDI representatives.
- iv. Competent approval of deliverables as per cl no. 3 above.
- v. Making available the site of work free from all encumbrances including legal. In case of any dispute on the project, it should be settled/cleared by CCL on which CMPDI shall not take any accountability/responsibility of the same.
- vi. Providing authenticated ownership documents of the land for submission to local bodies, if required at any stage.

7.0 FORE CLOSURE OF AGREEMENT

CCL shall adequately compensate CMPDI, if CCL decides to drop the proposal after substantial preliminary work has been done by CMPDI on the Project. The compensation of such cases shall be in actual work done as per para 2.0, 3.0 & 4.0 or actual ED consumption of CMPDI @ applicable ED charges and actual charges incurred by consultants/expertise, laboratory, testing charges etc as mutually agreed by GM/HOD(ENV) of CMPDI & CCL.

Contd.....P/4

P/4

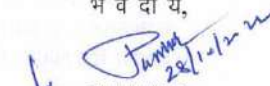
8.0 RESOLUTION OF DISPUTES

Any disputes/differences arises between CMPDI and CCL, the decision of Chairman CIL is final and binding on the both the parties.

We request you to kindly send your acceptance at your earliest to enable us to take up the assignment.

धन्यवाद एवं सदैव अपनी सर्वोत्तम सेवाओं के आश्वासन सहित !

भ व दी य,


महाप्रबन्धक
(व्यवसाय विकास)

सादर सूचनार्थ प्रतिलिपि :

- : Dir.(T/P&P), CCL, Ranchi
- : Dir.(T/ES), CMPDI, Ranchi
- : TS to CMD, CMPDI, Ranchi
- : GM(P&P), CCL, Ranchi
- : GM(Civil), CMPDI, Ranchi
- : RD, RI-III, CMPDI, Ranchi

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

11/22 Test Report No. 01	Job No. 094322160	Year	2022-23
Type of Sample:	Surface Water	Quarter Ending	Dec.' 22
Customer	CCL	Date of Receipt:	02/01/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	02/01/2023-09/01/23
Testing/ Sampling Protocol	LQR 33		
Remarks & Observation:	Samples received in 5 ltr plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : Kathara
Stations:

1. U/S of Damodar River
2. D/S of Damodar River

Project: Kathara OCP
Date of Sampling:
31-12-2022
31-12-2022

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	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l, Max	<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	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl), mg/l, Max	14	12			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen, min.	7.8	7.9			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F) mg/l, Max	0.90	0.92			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l, Max	<0.01	<0.01			0.01	APHA, 23rd Edition, Diphenylcarbohydrazide, 2017
9	Iron (as Fe), mg/l, Max	<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	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO ₃), mg/l, Max	0.80	1.58			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	8.2	7.8			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	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
14	Selenium (as Se), mg/l, Max	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO ₄) mg/l, Max	106	126			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l, Max	280	315			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l, Max	57	68			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l, Max	<0.005	<0.005			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

Checked BY

Authorized Signatory

Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested
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3) This is computer generated report and requires no signature.

ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

11/22 Test Report No. 02	Job No. 094322160	Year	2022-23
Type of Sample:	Drinking Water	Quarter Ending	Dec.' 22
Customer	CCL	Date of Receipt:	02/01/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	02/01/2023-09/01/23
Testing/ Sampling Protocol	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltr plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

**Area : Kathara
Stations:**

**Project: Kathara OCP
Date of Sampling:**

1. Bandh Basti
2. Jhirki Basti

**31-12-2022
31-12-2022**

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2				
1	Boron (as B), mg/l, Max	<0.20	<0.20		0.20	0.5	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l, Max	<0.0004	<0.0004		0.0004	0.003	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l, Max	22.4	38.4		1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	46	60		2.00	250	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02		0.02	0.05	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F) mg/l, Max	0.66	0.65		0.02	1.0	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l, Min	0.08	<0.02		0.02	0.2	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l, Max	<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	0.01	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l, Max	<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	0.02	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO ₃), mg/l, Max	0.5	14.47		0.5	45	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable	Agreeable		Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.3	7.3		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	APHA, 23rd Edition, 4-Amino Autipyrine, 2017
16	Selenium (as Se), mg/l, Max	<0.0005	<0.0005		0.0005	0.01	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO ₄) mg/l, Max	62	80		2.00	200	APHA, 23rd Edition, Turbidity Method, 2017
18	Total Alkalinity (c _a CO ₃),mg/l, Max	96	80		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	0.01	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l, Max	<0.002	<0.002		0.002	0.05	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l, Max	305	344		25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (c _a CO ₃), mg/l, Max	152	172		4.00	200	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU, Max	5	5		1.0	1	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l, Max	<0.005	<0.005		0.005	5.0	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

Checked BY

Authorized Signatory

Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested
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ENVIRONMENT LABORATORY, CMPDI (HQ), RANCHI

TEST REPORT

11/22 Test Report No. 03	Job No. 094322160	Year	2022-23
Type of Sample:	Drinking Water	Quarter Ending	Dec.' 22
Customer	CCL	Date of Receipt:	02/01/2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	02/01/2023-09/01/23
Testing/ Sampling Protocol	IS:10500 Drinking Water Standards, LQR 33		
Remarks & Observation:	Samples received in 5 ltr plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

**Area : Kathara
Stations:**

**Project: Kathara OCP
Date of Sampling:**

3. Asnapani Tola
4. Kathara Basti

31-12-2022
31-12-2022

Sl.No	Parameter	Sampling Stations			Detection Limit	IS:10500 Standards	Standard / Test Method
		3	4				
1	Boron (as B), mg/l, Max	<0.20	<0.20		0.20	0.5	APHA, 23rd Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l, Max	<0.0004	<0.0004		0.0004	0.003	APHA, 23rd Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l, Max	73.6	28.8		1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	102	26		2.00	250	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02		0.02	0.05	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F) mg/l, Max	0.82	0.70		0.02	1.0	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l, Min	0.02	0.05		0.02	0.2	APHA, 23rd Edition, DPD Method, 2017
8	Iron (as Fe), mg/l, Max	<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	0.01	APHA, 23rd Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l, Max	<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	0.02	APHA, 23rd Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO ₃), mg/l, Max	0.80	0.5		0.5	45	APHA, 23rd Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable	Agreeable		Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.4	7.5		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	APHA, 23rd Edition, 4-Amino Autipyrine, 2017
16	Selenium (as Se), mg/l, Max	<0.0005	<0.0005		0.0005	0.01	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO ₄) mg/l, Max	162	79		2.00	200	APHA, 23rd Edition. Turbidity Method, 2017
18	Total Alkalinity (CaCO ₃), mg/l, Max	96	56		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	0.01	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l, Max	<0.002	<0.002		0.002	0.05	APHA, 23rd Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l, Max	488	285		25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric Method
22	Total Hardness (CaCO ₃), mg/l, Max	312	144		4.00	200	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU, Max	1	5		1.0	1	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l, Max	<0.005	<0.005		0.005	5.0	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

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TEST REPORT

03/23 Test Report No. 1906	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:** Kathara OCP
Stations: 1. Damodar U/S of Mine **Date of Sampling:** 13-01-2023
 2. Damodar D/S of Mine 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	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l, Max	2.2	<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	APHA, 23rd Edition AAS-GTA Method, 2017
4	Chlorides (as Cl), mg/l, Max	18	16			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l, Max	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Dissolved Oxygen, min.	7.4	7.6			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F) mg/l, Max	0.56	0.52			0.02	APHA, 23rd Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l, Max	<0.01	<0.01			0.01	APHA, 23rd Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l, Max	<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	APHA, 23rd Edition AAS-GTA Method, 2017
11	Nitrate (as NO ₃), mg/l, Max	5.14	4.29			0.50	APHA, 23rd Edition, UV - Spectrophotometric, 2017
12	pH value	7.6	7.9			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	APHA, 23rd Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l, Max	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO ₄) mg/l, Max	96	91			2.00	APHA, 23rd Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l, Max	239	234			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l, Max	18	14			10.00	IS 3025 /17:1984, R : 1996, Gravimetric Method
18	Zinc (as Zn), mg/l, Max	<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. 1907	Job No. 094322160	Year	
Type of Sample:	Drinking Water	Quarter Ending	
Customer	CCL	Date of Receipt:	
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	
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 **Project:** Kathara OCP
Stations: 1. Bandh Basti
 2. Jhirki Basti
 3. Asnapani Tola
 4. Kathara Basti
Date of Sampling:

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	73.6	75.2	70.4	48	1.60	75	IS-3025/40:1991, EDTA
4	Chloride (as Cl), mg/l, Max	42	102	28	54	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	0.54	0.92	0.34	0.76	0.02	1.0	APHA, 23rd Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l, Min	<0.02	<0.02	<0.02	<0.02	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	1.99	0.68	0.97	0.70	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	7.2	7.3	7.5	7.4	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	71	127	21	29	2.00	200	APHA, 23rd Edition, Turbidity Method, 2017
18	Total Alkalinity (c _a CO ₃), mg/l, Max	244	364	292	292	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	467	679	373	439	25.00	500	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (c _a CO ₃), mg/l, Max	320	540	304	332	4.00	200	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU, Max	1	2	1	2	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)

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TEST REPORT

09/23 Test Report No. 1906	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Sep-23
Customer	CCL	Date of Receipt:	17-07-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	17.07.23-06.10.23
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
Stations:

Project: Kathara OCP
Date of Sampling:

1. Damodar U/S of Mine
2. Damodar D/S of Mine

04-07-2023
04-07-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	2	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 24th Edition AAS-GTA Method, 2017
4	Chlorides (as Cl ⁻), mg/l	12	12			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	6.1	6.4			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F ⁻) mg/l	0.58	0.55			0.02	APHA, 24th Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 24th Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 24th Edition AAS-GTA Method, 2017
11	Nitrate (as NO ₃ ⁻), mg/l	1.35	1.72			0.50	APHA, 24th Edition, UV - Spectrophotometric, 2017
12	pH value	6.6	7			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C ₆ H ₅ OH), mg/l	<0.001	<0.001			0.001	APHA, 24th Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO ₄ ⁻²) mg/l	42	42			2.00	APHA, 24th Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	231	248			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	20	23			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	0.006	0.010			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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TEST REPORT

09/23 Test Report No. 1907	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Sep-23
Customer	CCL	Date of Receipt:	17-07-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	17.07.23-06.10.23
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	Project:	Kathara OCP
Stations:		Date of Sampling:	
	1. Bandh Basti		04-07-2023
	2. Jhirki Basti		04-07-2023
	3. Asnapani Tola		04-07-2023
	4. Kathara Basti		04-07-2023

Sl. No	Parameter	Sampling Stations				Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3	4			
1	Boron (as B), mg/l	<0.20	<0.20	<0.20	<0.20	0.20	0.5, Max	APHA, 24th Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004	<0.0004	<0.0004	<0.0004	0.0004	0.003, Max	APHA, 24th Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	33.6	33.6	35.2	33.6	1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl ⁻), mg/l	12	16	18	18	2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	0.02	<0.02	<0.02	<0.02	0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F ⁻) mg/l	0.58	0.57	0.58	0.54	0.02	1.0, Max	APHA, 24th Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02	<0.02	<0.02	<0.02	0.02	0.2, Min	APHA, 24th Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04	0.06	<0.04	<0.04	0.04	0.3, Max	IS 3025 /53: 2003, R : 2009 AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001	<0.001	<0.001	<0.001	0.001	0.01, Max	APHA, 24th Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01	0.02	<0.01	<0.01	0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003	<0.003	<0.003	<0.003	0.003	0.02, Max	APHA, 24th Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO ₃ ⁻), mg/l	1.35	1.38	1.35	1.31	0.5	45, Max	APHA, 24th Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.93	8.11	7.97	7.99	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	<0.001	<0.001	<0.001	<0.001	0.001	0.001, Max	APHA, 24th Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO ₄ ²⁻) mg/l	74	75	77	77	2.00	200, Max	APHA, 24th Edition, Turbidity Method, 2017
18	Total Alkalinity (CaCO ₃), mg/l	96	88	80	72	4.00	200, Max	IS-3025/23:1986.R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002	<0.002	<0.002	<0.002	0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002	<0.002	<0.002	<0.002	0.002	0.05, Max	APHA, 24th Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	235	231	233	226	25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (CaCO ₃), mg/l	152	140	136	128	4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	<1	1	<1	<1	1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	0.009	<0.005	0.012	0.011	0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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CENTRAL COALFIELDS LIMITED

(A MINIRATNA CAT-1 COMPANY)

(GOVT. OF INDIA UNDERTAKING)

OFFICE OF THE GENERAL MANAGER

KATHARA AREA

PO:-KATHARA, DIST:-BOKARO, (JHARKHAND)
JHARKHAND-829116



Ref: GmKATH/PS/25/2023-24/193

Date: 01.11.2023

To,
M/S WAPCOS Limited
New Delhi.

Sub: Delay in Commencement of Construction of Eco-Park at Sawang

Ref: M/S Kumar Enterprises & Co. work order no. WAP/Ropeways/LOA/2023-2024/07/06 dtd 12.07.2023

Dear Sir,

This is to bring your attention to matter of utmost concern regarding the delay in the commencement of the construction of the Eco-Park at Sawang. The work order for the construction of the Eco-Park at Sawang was given by M/S WAPCOS Limited to M/S Kumar Enterprises & Co. vide letter no. **WAP/Ropeways/LOA/2023-2024/07/06 dated 12.07.2023**. The work order states that the work shall be started within 10 days of issuance of the award letter. Regrettably, M/S Kumar Enterprises & Co. has failed to initiate the construction work within the stipulated timeframe specified in the work order.

It is imperative that this project progresses as per the agreed schedule to meet our environmental obligations and uphold our commitments. It is our shared responsibility to ensure that the construction of the Eco-Park is initiated. Therefore, we would appreciate your prompt attention and expedition to this matter to urge M/S Kumar Enterprises & Co. to commence the work as soon as possible.

In light of the importance of this project, you are kindly requested to leverage your expertise and resources to resolve this matter at the earliest.

Thanking You

Encl: 1. Work order issued by M/s MECON Limited to M/s Kumar Enterprises & Co.

Yours faithfully,


General Manager
Kathara Area

Copy to:

1. General Manager (Civil), CCL Ranchi
2. HOD (Env.), CCL Ranchi
3. Staff Officer (Civil), Kathara Area
4. Office copy



वापकोस लिमिटेड
WAPCOS LIMITED
(भारत सरकार का उपक्रम)
जल शक्ति मंत्रालय
(A Government of India Undertaking)
Ministry of Jal Shakti



No. WAP/Ropeways/LOA/2023-2024/07/06

Dated: 12/07/2023

M/s Kumar Enterprises & Co.

First floor, Plot no. - 560/A Opp. of Sidhu Kanhoo Park,
College Road, Hatma, Ranchi 834008 (Jharkhand)

Sub: Award of Work for "Development of Ecopark at Kathara, Distt. Bokaro, Jharkhand"- reg.

Ref: 1. Tender No.: WAP/Ropeways/2023-24/07 dated 13/06/2023.

Sir,

With reference to the subject cited above and submission of the bid by your firm against tender document under reference, we are pleased to inform you that the work for the "Development of Ecopark at Kathara, Distt. Bokaro, Jharkhand" is hereby awarded to your firm as per your financial quote of Rs. 3,35,00,000.00 excluding applicable GST.

Works	Awarded cost of work
Development of Ecopark at Kathara, Distt. Bokaro, Jharkhand	Rs. 3,35,00,000.00 excluding applicable GST

1. You are requested to submit the Performance Guarantee @3% of tendered value as per the form enclosed in the tender document before signing of the agreement within 15 days of the date of acceptance of the letter of award and sign the Contract Agreement.
2. The NIT document accepted by you along with all related correspondences / corrigendum / addendum at the time of bidding process shall form a part of this letter of award and agreement.
3. The work shall be started within 10 days of the issuance of this letter of award.
4. The time is essence of the project and the project must be completed within stipulated period of time. Accordingly, planning of resources and working with sufficient manpower shall be ensured.

This letter of award is being issued to you in duplicate. You are requested to return the duplicate copy of the letter of award immediately duly signed and stamped as a token of your unequivocal acceptance and confirmation of the same.

Thanking You,

Yours faithfully,

(Prabhakar Sati)
CS-II (Ropeways)



4th Floor, Plot No. 57, SKV House, Sector - 18, Gurugram - 122 015, (Haryana) INDIA

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CIN : U74899DL1969GOI005070



सत्यमेव जयते

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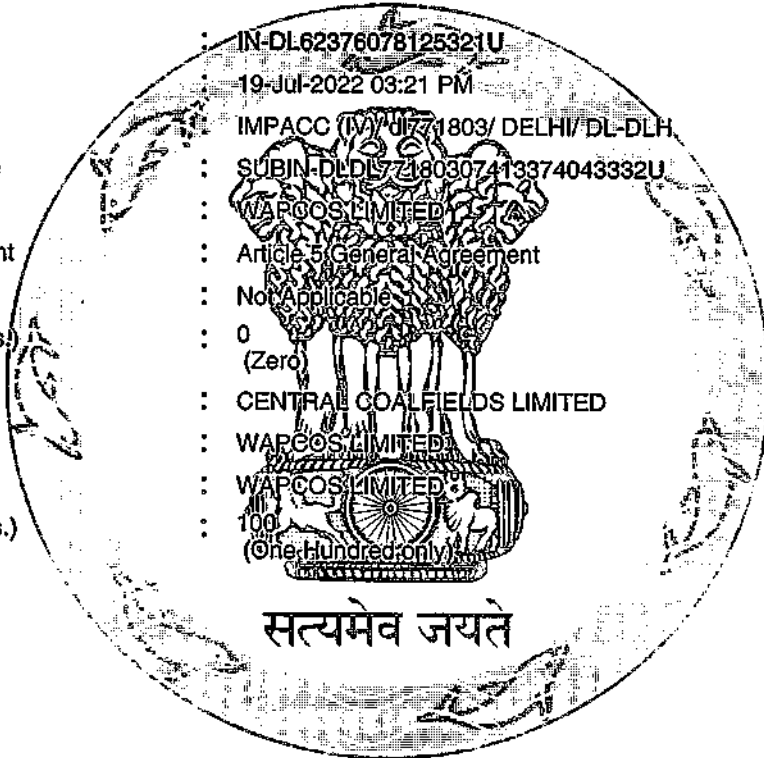
Government of National Capital Territory of Delhi

₹100

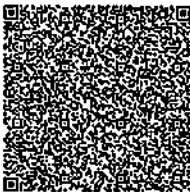
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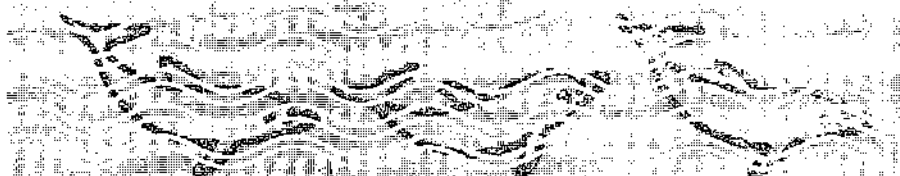
Certificate No.	: IN-DL62376078125321U
Certificate Issued Date	: 19-Jul-2022 03:21 PM
Account Reference	: IMPACC (IV) 01771809/ DELHI/ DL-DLH
Unique Doc. Reference	: SUBIN-DL62376078125321U
Purchased by	: WAPCOS LIMITED
Description of Document	: Article 5 General Agreement
Property Description	: Not Applicable
Consideration Price (Rs.)	: 0 (Zero)
First Party	: CENTRAL COALFIELDS LIMITED
Second Party	: WAPCOS LIMITED
Stamp Duty Paid By	: WAPCOS LIMITED
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



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₹100



Please write or type below this line. IN-DL62376078125321U

Statutory Alert

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Director (Tech/P&P)
Rancho



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is entered into 21st of July 2022.

BETWEEN

Central Coalfields Limited (herein referred to as 'CCL' which expression shall unless excluded or repugnant to the context or meaning thereof mean and include its successors in interest and assigns) of the ONE PART.

AND

WAPCOS LIMITED having its registered office at Kailash, 5th Floor, 26 K.G.Marg, Cannought Place, New Delhi – 110 001 India (herein referred to as 'Project Management Consultant/ PMC/ WAPCOS LIMITED ' which expression shall, unless excluded or repugnant to the context or meaning thereof mean and include its successors in interest and assigns) of the OTHER PART.

CCL & WAPCOS LIMITED may be referred to individually as 'Party' and collectively as 'Parties' wherever the context so requires.

Whereas 'WAPCOS LIMITED.' have agreed to undertake the work of **DEVELOPMENT OF ECO-PARKS AT (NINE) DIFFERENT AREAS OF CCL** for 'CCL' on Project Management Consultant (PMC) basis.

Now, therefore it is agreed between the Parties that:

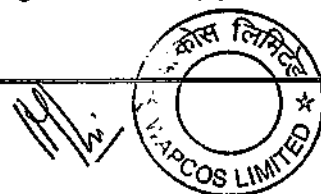
1. Assigning of Work by CCL' to 'WAPCOS LIMITED.:

- 1.1 CCL will provide all relevant available documents related to Land, Site Details, functional and space requirements Layout Plans etc for facilitating Project Execution by 'Project Management Consultant'
- 1.2 Project Management Consultant' shall appoint competent Architectural and Engineering (A & E) Consultant commensurate with size and nature of the work after following due process.

2. Approval of Detailed Project Report (DPR)/ Preliminary Estimate (PE)

- 2.1 'Project Management Consultant' shall prepare Detailed Project Report (DPR)/ Estimate (E) consistent with their norms & standards in accordance to the scope of work as stipulated in NIT for all 09 sites after detailed field survey, containing Milestones and commensurate activities to be accomplished against each Milestone & Baseline Programme in the form of CPM Network depicting clearly Dates of Start and Completion of the work and submit it to 'CCL' along with all relevant input information, documents and Drawings etc. for approval of 'CCL',


Director (Tech/P & P)
CCL, Ranchi



within 4 (four) weeks of execution of MoU. 'Project Management Consultant' shall use C.P.W.D. Analysis of Rates for Delhi (DSR) for framing the DPR/ PE. Non - DSR Items shall be incorporated in the Detailed Estimates only when these are not either readily available in DSR. CCL shall accord approval to DPR/ PE containing Milestones and commensurate activities to be accomplished against each Milestone & Baseline Programme in the form of CPM Network and issue Administrative Approval (A/A) in about 4 (four) weeks of its submission by 'Project Management Consultant'.

- 2.2 On receipt of the A/A and E/S, the 'Project Management Consultant' shall prepare and accord Technical Sanction (TS) to detailed and coordinated design of all the Architectural, Civil, Electrical, Mechanical, Horticulture and any other services included in the scope of the sanction and of the Detailed Cost Estimates containing the detailed specifications and quantities of various items prepared on the basis of the schedule of rates maintained by CPWD or other Public Works Organizations.

3. Release of Funds, Payment of Bills

- 3.1 'Project Management Consultant' has agreed to charge Rs. 3,07,98,000.00 inclusive of GST for carrying out the assigned Work.
- 3.2 CCL shall release Initial Deposit of 10% of the approved preliminary estimate amount to 'Project Management Consultant' on submission of Corporate Guarantee as initial advance which shall be deposited by the PMC in a Flexi Bank Account.
- 3.3 The expenditure incurred thereafter towards carrying out the works of the projects shall be adjusted from the initial advance. When 80% of the initial advance is utilized, the PMC shall submit the utilization certificate. Further advance as per utilization certificate will be paid / released to the PMC to make total advance 10% of the approved Detailed Project Report (DPR) cost. The procedure of release of fund shall be repeated whenever 80% of the total advance paid to the PMC is utilized and utilization certificate is submitted by the PMC.

The utilization certificate should be supported by authenticated documents including statement of priced quantities executed and payments made to the various persons / parties including contractors / sub-contractors / agencies / vendors engaged by the PMC for the project cost (excluding GST) plus the proportionate service charges (i.e. 5.08%) due to the PMC for the part of work executed by them. Agency charges shall not be paid on GST rather on actual cost of the work. GST on actual cost of the work will be payable extra. While submitting utilization certificate, 'Project Management Consultant' will also submit a comprehensive report on progress of physical completion of various activities and Milestones vis-a-vis earlier planned activities/ Milestones for the overall completion of the specific work mutually decided between CCL &


Director (Tech/P&P)
CCL, Ranchi

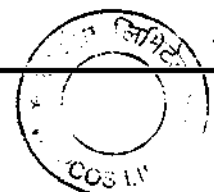


- 'Project Management Consultant' for enabling CCL to keep effective check on utilization of fund as well as physical progress of the work.
- 3.4 The fund subsequent to Initial Deposits shall be released by CCL to 'Project Management Consultant' within 4 (four) weeks of submission of request by 'Project Management Consultant' along with all documents as described in Clause - c above. As per the monitoring of physical and financial progress indicators, CCL will take necessary steps for recoument of the expenditure incurred on the basis of the Fund Utilization Certificate.
- 3.5 If any fund requirement is specifically made by 'Project Management Consultant' after the work has been assigned to 'Project Management Consultant' for undertaking pre-construction activities related to the Project Execution etc., the same shall be released by CCL within 2 (two) weeks of such specific demand provided the amount is within ceiling limit of Rs 25 (twenty-five) lakh. The amount so released to 'Project Management Consultant' shall be adjusted from Initial Deposit amount.
- 3.6 'Project Management Consultant' shall intimate CCL about any excess expenditure likely to be incurred over and above the approved Projected Cost and also about possibility of time overruns, as soon as it comes to the knowledge along with reasons and justifications thereof for necessary approvals from CCL before continuing/ incurring the extra/ additional expenditure.
- 3.7 The 'Project Management Consultant' shall be responsible for certifying and making payment of Bills of the Contractors/ Agencies engaged by them and make available Final Statement of Accounts in Standard Format to CCL & also provide copies of Final Bills for all Contract Packages and other expenditure incurred related to Project Construction after the Completion of the Work. In addition, may CCL ask for any other details from 'Project Management Consultant' regarding Utilization of Fund at any stage, Detailed Estimates, Technical Sanctions, Award of Works, Running Bills etc., the same shall be provided by 'Project Management Consultant' readily.
- 3.8 The CCL shall settle compensation/ levies, if so required to be paid based on recommendation by 'Project Management Consultant' related to the Project works, under Workmen's Compensation Act or any other Act or Law of the Central or the State Government.

4. Execution of Work

- 4.1 The 'Project Management Consultant' shall obtain necessary Statutory Approvals/ Permission/ Clearances/ Certificates from the concerned Local Bodies & Statutory Authorities like District Authorities, Municipal Corporation, Panchayati Raj Institutions, Town Planning Board, Electricity Board/ Fire Department, State/ Central Pollution Control Boards, State/ Central Environmental Authorities, Forest and Wild-life authorities etc (for e.g. removal of

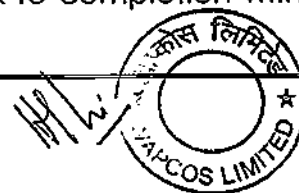
Director (Tech/P & I)
CCL, Ranchi



trees, re-locating utilities; conversion of railway level crossings, laying of railway sidings needed by the work; rehabilitation and resettlement of persons affected by the work; traffic control; mining of earth and stone; interfering protected monuments; blasting permission, environmental/ forest/ wild-life clearances; and shifting of religious shrines etc) to start the work have been obtained. CCL shall be responsible for providing all assistance to 'Project Management Consultant' in this process.

- 4.2 Works shall not be awarded by 'Project Management Consultant' to contractors till all statutory approvals/ certificates/ permissions required for taking up the work, are in place.
- 4.3 CCL shall make the work site available free from encumbrances to 'Project Management Consultant'. CCL shall also ensure Availability of auxiliary services - like roads, power, water, solid & liquid waste disposal system, street lighting and other civic services. 'Project Management Consultant' shall provide necessary support in this process.
- 4.4 'Project Management Consultant' shall permit CCL to inspect or monitor the works, either itself or through Third party as and when it desires for assessing actual progress and quality of construction and any other aspects.
- 4.5 CCL shall provide security clearance and ensure free access for 'Project Management Consultant' staff/ Employees and their workers working at Work site in case these are required. 'Project Management Consultant' shall provide necessary support in this process.
- 4.6 'Project Management Consultant' shall ensure adequate availability of men & material by their contractors.
- 4.7 'Project Management Consultant' shall ensure that it's Contractor(s) implement required Health, Safety & Environmental (HSE) practices at the Construction Sites and they also comply with all statutory obligations related to workmen deployed at the Construction Site. 'Project Management Consultant' will act as Principal Employer in respect of all Statutory Obligations related to workmen deployed at the site in execution of the work.
- 4.8 CCL shall permit and facilitate to the 'Project Management consultant' all utilities required for construction e.g. drawl of Ground Water, obtaining electricity connection, putting up Labour Camps/ Huts inside the available space for facilitating construction by contractors engaged by 'Project Management Consultant'. 'Project Management Consultant' shall provide necessary support in obtaining permission, if any, of Local Bodies in this regard. The cost in this regard borne by CCL, if any, should not be duplicated as reimbursement by the 'Project Management Consultant'.
- 4.9 As soon as the work is allocated, 'Project Management Consultant' shall prepare and submit to CCL an Integrated Programme Chart for the execution of work showing clearly all activities from the start of work to completion with details of


Director (Tech/P & P)
CCL, Ranchi



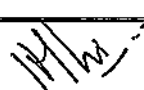
manpower and other input information required for the fulfilment of the timelines given therein. 'Project Management Consultant' will intimate CCL, Project Team, both on - site and off-site, Starting from Chief Engineer to Junior Engineer associated with execution of the work. The Programme Chart should inter-alia include descriptive note explaining sequence of the various activities, CPM Network Milestones etc. This will form Base Line Programme and the subsequent progress of the work shall be reviewed with reference to this during periodic Progress Review Meeting preferably monthly. Any increase in time period from the Base Line Value shall be construed as Time Overrun.

- 4.10 'Project Management Consultant' shall be responsible for providing Physical Progress Reports to CCL in the form of CPM (Critical Path Method) Network on monthly basis for reviewing of the progress of the work vis - a vis Base Line Programme and taking all necessary remedial actions, after taking into account CCL observations made in respect of quality and progress of the work during the monthly/ periodic Project Review Meetings. To ensure timely completion of work as per mutually agreed time-schedule/ milestones and within agreed Cost.
- 4.11 'Project Management Consultant' shall also be responsible for providing to CCL Financial Progress Reports of the project and up to date Expenditure incurred on the work on monthly basis along with Certificate of Utilization of Fund against Fund earlier released to 'Project Management Consultant' by CCL.
- 4.12 'Project Management Consultant' shall be responsible for total Project Management including day-to-day supervision of works, maintenance of all project records and executing the works as per prescribed guidelines, their own Works Manual, Codes, Books of Specifications etc and also in accordance with relevant and extant provisions of General Financial Rules (GFR), 2017.

5. Project Management, Cost and Time Control

- 5.1 'Project Management Consultant' shall implement a system of 'Project Team Concept' with dedicated group of Engineers under single and unified command for implementation of projects from concept to completion and call tenders in packages as per suitability of site conditions for better management. 'Project Management Consultant' shall be obliged to adopt all the above said measures to successful completion of the works within Approved Cost and agreed Time period.
- 5.2 'Project Management Consultant' shall be responsible for managing the Project from concept to commissioning effectively and efficiently to ensure desired/ proportionate pace of progress and completion of work is achieved progressively vis-à-vis approved Plans & Specifications and in Terms and Conditions of the MOUs and mutually agreed milestones and timelines and approved cost, taking with due diligence all required pro-active remedial measures including provision of stringent and elaborate enforceable Clauses to this effect and also making


Director (Tech/P&P)
CCL, Ranchi



time as the essence of contract' in the Bid and Contract Documents. 'Project Management Consultant' shall provide for clauses in the contract and established procedure to recover liquidated damages from their contractors/ agencies. The liquidated damages recovered from the contractors for delay, if any, shall be credited to CCL in the project accounts.

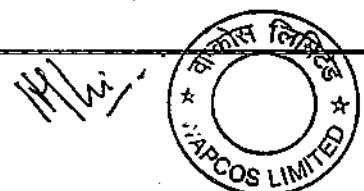
5.3 The approved Initial Project Cost & Timeline should not exceed during execution of the Project except for reasons like increase in cost index during construction period, revised specifications or extra work over approved estimate carried out at the request of CCL etc. In case of either increase in earlier approved cost or timeline, detailed reasons and justifications, based on verifiable facts and figures, shall have to be provided by 'Project Management Consultant' along with comprehensive proposals for revision in earlier approved Project Cost & Timeline, which shall be intensively examined by CCL in consultation with 'Project Management Consultant' before approval is accorded to their proposals. No additional expenditure over and above the earlier approved Project Cost shall be incurred by 'Project Management Consultant' without prior approval of CCL. Upward Revisions in either Cost or Timeline should be an exception rather than a rule and for achieving this objective, all required efforts shall be made by 'Project Management Consultant'

5.4 At any time, if appears to 'CCL that the actual progress of the work does not conform to the approved programme referred above and intimated to 'Project Management Consultant' by 'CCL, detailed reasons and justifications for such delays shall have to be provided by 'Project Management Consultant', which shall be examined by CCL to re-Schedule the Programme, if any. Progress Review Meetings preferably monthly shall be held between 'Project Management Consultant' and CCL for reviewing the progress of works based on Baseline Programme/ Milestones etc. and also for resolving co-ordination issues, if any including fixing priority of some works, facilities and services for their early completion and handing over to CCL for putting item to use for intended purpose. A&E Consultants may also participate. 'Project Management Consultant' will also designate a nodal officer in respect of specific work for coordinating with CCL and A & E Consultant. Such designated nodal officer shall be suitably empowered and authorized to take decisions in work related issues so that delays are minimized for achieving timely completion of work.

6. Disputes, Enquiries and Queries

6.1 'Project Management Consultant' must be responsible for observing due diligence and shall adopt all possible measures at various stages of work execution so as to avoid Arbitration/ Litigation and other hindrances to ensure timely completion of work in optimum cost and time in hassle free environment.


Director (Tech/P & P)
CCL, Ranchi



- 6.2 'Project Management Consultant' shall be responsible for defending all Arbitration and Court Cases arising out of execution at any point of time till the works end so as to safeguard the interest of management of CCL. Further, 'Project Management Consultant' shall examine the Arbitration Award/ Decree of Court or Law/ liability imposed by appropriate authority in 'Project Management Consultant' and shall forward the same along with a comprehensive report on the circumstance leading to the Arbitration/ Court Cases alongwith the reasons and justification as to why an appeal against such awards/ decree was not considered necessary, while briefing out details of the award and clear cut recommendations. The decision of the competent authority in 'Project Management Consultant' to accept The award or challenge the same in a Court of Law will be binding on the 'Procuring Entity'.
- 6.3 CCL shall settle and pay the final claims which may be decreed by a Court of Law, Tribunal or by award of an Arbitration in relation-to the-deposit work, based on recommendations of 'Project Management Consultant'.
- 6.4 'Project Management Consultant' shall be responsible for redressing and complying with the observations of CTE/ CVC, Auditors, Statutory Authorities, Local Bodies, Municipal Corporation etc. pertaining to the work under intimation to CCL. Providing all work related information promptly to CCL for replying to Parliament Questions, queries from various Constitutional & Statutory Authorities.

7. Completion and Handing-over of Completed Work and Facilities

- 7.1 'Project Management Consultant' shall obtain work Completion/ Occupancy Certificates & Clearances for completed Work and Facilities before handing over the same to CCL for putting them to functional use. CCL shall provide all assistance in this process.
- 7.2 'Project Management Consultant' shall hand over to CCL or its Authorized Representative completed Work including all Services and Facilities constructed in accordance with the Approved Plans, Specifications fulfilling all techno-functional requirements agreed with CCL along with Inventory, As built - Drawings, Maintenance Manual/ Standard Operating Procedure (SOP) for Equipment and Plants, all clearances /Certificates from Statutory Authorities, Local Bodies etc.
- 7.3 On completion of the work, a Project Completion Report (PCR) shall be submitted by 'Project Management Consultant' duly bringing out the Final Project Completion Cost, Total Time period taken to complete the work and also completed Project Components as against the approved Cost, Time and Project Components. The PCR shall be submitted along with Final Project Accounts including return of unspent balance amount to CCL within one month of settlement of final bills of the contractors/ other agencies deployed on the work by 'Project Management Consultant'.


Director (Tech/P & P)
CCL, Ranchi



8. Termination of MoU

8.1 If CCL decides to terminate this MOU or decides to drop/ abandon the work after substantial preliminary work has been done by 'Project Management Consultant' on the work, both 'Project Management Consultant' and CCL shall mutually decide the loss incurred by 'Project Management Consultant' for payment by the latter to the former. In case of abandonment of project/ work by CCL during construction stage, 'CCL shall pay to 'Project Management Consultant', after determining the value of the works, goods and contractors documents and any other sums due to them for work executed in accordance with the MOU, to help liquidate only such liabilities as were squarely needed towards construction/ consultant agencies engaged on the work, in a fair and reasonable manner.

9. Force Majeure:

The PMC shall not be considered in default if delay in completion of the work occurs due to cause beyond its control such as acts of God, natural calamities, civil wars, fire, strike, frost, floods, riots and acts of unsurpassed power. The PMC shall notify 'Client' in writing within ten days from the date of such occurrence. In the event of delay due to such causes, the completion schedule will be extended for a length of time equal to the period of force majeure.

PMC shall not hold responsible any contractor/ agency for the delay/ stoppage of work due to force majeure conditions like natural calamities, civil disturbance, war, etc. and for losses suffered if any, by the Client on this account. The PMC shall also not be able in any way to bear such losses and no compensation of any kind whatsoever will be payable by the PMC to The Client. Suitable force majeure clause shall be incorporated in all the agreement entered into by the PMC with the contractors/ agencies.

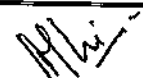
10. Miscellaneous

10.1 Disputes between CCL and 'Project Management Consultants': As dispute resolution mechanism for implementation of the provisions of this MoU, at the first instance the issues involved shall be brought before General Manager (Civil)/HoD of CCL and concerned Representative of 'Project Management Consultant' for their resolution. In case, however, disputes/ differences between the parties do not get resolved, the matter shall be escalated to higher level in CCL, and 'Project Management Consultant', who shall be above the level of CE in the respective organizations. They shall submit a comprehensive report and recommendation to CCL and 'Project Management Consultant' for facilitating final decision in the matter.

10.2 Individual and joint responsibilities of the Parties shall be as per clauses mentioned above.

10.3 If differences still persist, the settlement of the dispute shall be resolved in the following manner:

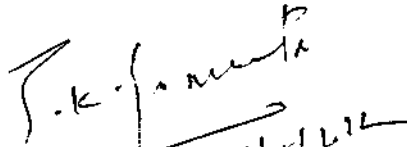

Director (Tech/P & P)
CCL, Ranchi



In the event of non-resolution of the dispute the same shall be referred to Alternative Mechanism for Resolution of CPSEs Disputes (AMRCD) as mentioned in the DPE OM No. dated 22-05-2018. The provisions of Arbitration Act, 1996 shall not be applicable to the arbitration under this clause. The award of the AMRCD shall be binding upon the parties to the dispute provided.

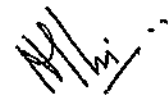
- 10.4 No amendment in Terms & Conditions of the MoU shall be valid and effective unless it is in writing and duly signed by authorised representatives of CCL and 'Project Management Consultant'. Each party shall give due consideration to any proposal for amendment/ modification made by other party with proper justifications thereof.
- 10.5 Provisions, if any, made in respect of deposit works in 'Project Management Consultant's Works Manual or Codes shall stand modified to the extent of the stipulations made in this MoU for execution of CCL works by 'Project Management Consultant'.

For Central Coalfields Limited



Director Technical (Project & Planning)
Central Coalfields Limited
CCL, Ranchi

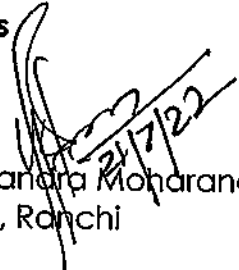
For WAPCOS Limited



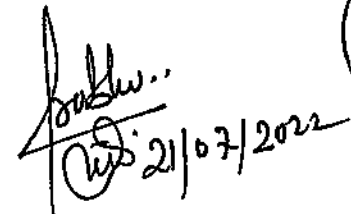
Senior Executive Director (D & RE)
WAPCOS Limited

अमिताभ त्रिपाठी / Amitabh Tripathi
Sr. Executive Director (D&RE)
वापकोस लिमिटेड / WAPCOS LIMITED
भारत सरकार का वाकम / A Govt. of India Undertaking
एन.सी. सेक्टर - 18, गुरुग्राम - 122015 (हरियाणा)
Sector - 18, Gurugram-122015 (Haryana)

Witnesses



Alok Chandra Moharana, GM(C)
CCL HQ, Ranchi



Prabhakar Sati, ACS
WAPCOS Limited, Gurugram



Date: 21.07.2022
Place: Ranchi, Jharkhand



CENTRAL COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
OFFICE OF THE PROJECT OFFICER
KATHARA COLLIERY



POST:-KATHARA DIST. - BOKARO, JHARKHAND 829116

Ref.No.:- PO/KTC/ENV/Work Order/2023-24/198

Dated :- 02.12.2023

WORK ORDER

To
M/s. Rafique Shoe House,
Main Road Gomia
Bokaro, Jharkhand-829111
Email: rafique.shoe@gmail.com
Mob. No. 9955144842

VENDOR PAN:AJT6610H
VENDOR GST NO:20AJT6610H1Z4
ACCOUNT NO. :-34935702223
BANK NAME :- STATE BANK OF INDIA
COAL INDIA VENDER ID :- 10035232

Ref:- Tender Notice No.:- PO/KTC /ENV/E-tender/ 2023-24/165 dated 05.09.2023
Award No. :- PO/KTC/ENV/AOW/23-24/192 Dated :- 14.11.2023

All works to be best of its kind carried on subject to the condition quoted on back no portion of the work to be considered as accepted or approved until such is notified in writing by the superintendent of colliery or colliery manager or until the final bill of the entire work is paid

Name of work:- "Work of Grafted fruit bearing sapling Plants of more than 04 feet in length in Kathara Colliery.

Description of work	Remarks
Enclosed Bill of Quantity Rs. 86412.50	Estimate has been approved by the Project Officer, Kathara Colliery and fund certified by the AFM. Kathara Area vide his dairy no. C&B/RFC/23-24/Environmental Expenses/15 dated 09.08.2023
C.GST @ 100% x 9% Rs. 7777.13	
S.GST @100% x 9% Rs. 7777.12	
Grand total Rs. 101966.75	
3% Performance Security Money i.e Rs. 1360/- has been deposited vide B.D .No. 428938 dated 21/11/2023 and APSM Rs. 9680.00/- deposited vide B.D. No.428937 dtd. 21/11/2023.	TCR has been approved by the Project Officer, Kathara Colliery and fund certified by the AFM, Kathara Colliery vide his dairy no. C&B/RFC/23-24/Environmental Expenses/20 dated 07.11.2023

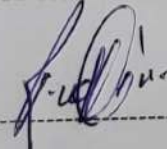
Completion time:- The period of completion of work shall be 10 (Ten) days which will be commence after Ten days of issue of Award of work or from the next day of actual handing over the site whichever is earlier.

Guarantee: The party has to furnish a guarantee certificate for workmanship for a period of 06 (six) months from the date of completion and acceptance of the work


Inspection: - Final inspection of all the work done by the contractor will be carried out by Nodal Officer (Env.), Kathara Colliery or his authorized representative.

Materials: - All to be supplied by the contractor

ACCEPTPTTEED


-----contractor

APPROVED

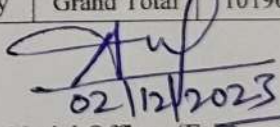

02/12/2023
Nodal Officer (Env.)
Kathara Colliery

Bill of quantity for the work Work of Grafted fruit bearing sapling Plants of more than 04 feet in length in Kathara Colliery, PO/(KTC)/Nodal Officer/E-Tender/2023-24/165, Dated 05.09.2023, E- Tender ID :- 2023_CCL_288003_1, CCL Tender ID No – 91900.

Award No.- PO/KTC/Safety/e-Tender/Award of work/23-24/192

Dated :- 14.11.2023

Sl. No.	Item Description	Quantity	Units	BASIC RATE In Figures (in Rs.)	Value (InRs.)
1	2	3	4	5	6
1.01	Mango	600	Nos	35.00	21000.00
1.02	Guava	500	Nos	30.00	15000.00
1.03	Amla	500	Nos	29.32	14660.00
1.04	Pomegranate	500	Nos	30.00	15000.00
1.05	Lemon	250	Nos	34.21	8552.50
1.06	Bael	250	Nos	28.00	7000.00
1.07	Jackfruits	200	Nos	26.00	5200.00
1.08	Mango	600	Nos	35.00	21000.00
					86412.50
				Add: SGST on (100% of quoted value) @ 9%	7777.13
				Add:CGST on (100% of quoted value) @ 9%	7777.12
(Rupees One Lakhs One Thousand Nine Hundred Sixty Six & Paise Seventy Five) only				Grand Total	101966.75


02/12/2023
Nodal Officer (Env)
Kathara Colliery

Kathara OCP, Kathara Area, CCL

Fruits bearing plants Distribution Record (2022-23)

① कोरिया उन्नी पंचायत - मुखिया श्री कमेश्वर महले
200 पीछा पात किचे (K. malik)
25/11/22

मुखिया
ग्राम पंचायत कोरिया उन्नी
प्रखण्ड-वेरसे (वि. 70)

② कोरिया दक्षिणी - मुखिया श्री. म. नरुलता देवी
200 पीछा पात किचे
नरुलता देवी

③ वाँधि पंचायत - पंचायत समिती पन्थु देव थारुव
200 पीछा पात किचे

Ch. meherdeo paaw
पंचायत समिती सदस्य
ग्राम पंचायत वाँधि
प्रखण्ड मोमिका (बोकारो)

④ कथारा पंचायत - मुखिया पुनक देवी

250 पीछा पात किचे
K. K.
मुखिया देवी
ग्राम पंचायत कथारा
प्रखण्ड-गोमिया, बोकारो (झारखण्ड)

1. वसंता कुंभिकार - परिमोजना पदाधकारी - 5 पैसे

2. गोपालसिंह मोना - एका प्रबंधक 5 पैसे

3. अवनीश कुमार दिवाकर - सेपरीकारिका - 5 पैसे

4. मंगोज भादव - गोरशरीमा - 10 पैसे

5. विन्नामनी मनी नामक - मजदूर - 10 पैसे

6. कुल प्रसाद मंडल - कारिक प्रबंधक - 10 पैसे

7. कलक सिन्हा - एका 10 पैसे

8. मंगोष मंडल - एकराडा - 10 पैसे

9. मंडीप मंडल - यलका - 10 पैसे

10. रामु मंडल - जारंगडीह - 10 पैसे

Central Coalfields Limited
A Miniratna Company
Office of the Project Officer, Kathara Colliery
PO: Kathara: Dist: Bokaro

Ref.No. KTC/Bill/Store/2023-24/3104

Dated 07/11/2023

To
The Area Finance Manager (KTA),
Kathara.


Sub.: Submission of bill in favour of M/s M. J. Enterprises for Rs.
1,54,357.68 only.

Dear Sir,

Enclosed please find herewith the bill No. 23-24/MJE-060 dtd. 23.09.2023 against the procurement OF "of Foot operated Bio-Medical pedal Waste Bin BMW 30 LTR (Blue 85, Red 85, Green 85 & yellow 85) at Kathara Colliery for a amount of Rs. 154357.68 (Rupees One lakh fifty four thousand three hundred fifty seven & paise sixty eight) only duly accepted and necessary audit and payment to M/s M. J. Enterprises, Mohali, Punjab - 160062.

Enclosure: As above.

Yours faithfully


06/11/2023

Dy. Manager (M)
Depot Officer
Kathara Colliery

Vendor - 10094446
PR - 1300103529
PO - 5800204006
GRN - 9301625156
DAK - 3231073842
MIR7 - 3300931729

Vendor - 10094446
PR - 1300103529
PO - S800204006
ERN - 9301625156
DAK - 3231073842
MIR1 - 3306931729

Gross Amt Rs. 130811.60
CGST 9% Rs. 11773.04
SGST 9% Rs. 11773.04

Rs. - 154357.68

L-D. O.Sy. - (2) 854.00

Net Rs. - 153703.68


Dy. Manager (F)
Kathara Colliery


PROJECT OFFICER
Kathara Colliery

GSTIN : 03BHXPJ9467K1ZG

TAX INVOICE

M. J. ENTERPRISES

Plot No. 29, JLPL Industrial Area, Sector, 82, Mohali-160062 (Punjab)
email : mjenterprises.supply@gmail.com

Invoice No. : 23-24/MJE-060
Date of Invoice : 23-09-2023
Place of Supply : Jharkhand (20)
Reverse Charge : N

GR/RR No. :
Transport : Manual
Vehicle No. :
Station :

Billed to :
Central Coalfields Limited
Unit Store Kathara Colliery CCL,
P.O. Kathara, Bokaro,
Jharkhand-829116

Shipped to :
Central Coalfields Limited
Unit Store Kathara Colliery CCL,
P.O. Kathara, Bokaro,
Jharkhand-829116

Party Mobile No : 7004268783
State : Jharkhand (20)
GSTIN / UIN : 20AAACC7476RHZT

Party Mobile No : 7004268783
State : Jharkhand (20)
GSTIN / UIN : 20AAACC7476RHZT

Order No. :

S.N.	Description of Goods	HSN/SAC Code	Qty.	Unit	Price	Amount(₹)
1.	Foot Operated Pedal Bin BMW 30 Liter Blue 85, Red 85, Green 85, Yellow 85	3924	340.00	Pcs.	384.74	1,30,811.60
						1,30,811.60
Add : IGST @ 18.00 %						23,546.09
Add : Rounded Off (+)						2.31
Grand Total 340.00 Pcs. ₹						1,54,360.00

Tax Rate	Taxable Amt.	IGST Amt.	Total Tax
18%	1,30,811.60	23,546.09	23,546.09

Rupees One Lakh Fifty Four Thousand Three Hundred Sixty Only

Bank Details : Bank A/c No. 20650510001110 IFSC :- UCBA0002065
Bank Name :- UCO Bank, Branch :- Sector 70, Mohali

Terms & Conditions

- E. & O.E.
- Goods once sold will not be taken back.
 - Interest @ 18% p.a. will be charged if the payment is not made within the stipulated time.
 - Subject to 'Punjab' Jurisdiction only.

Receiver's Signature :


03/11/2023

For M. J. ENTERPRISES
SHIVALI
JINDAL
Authorized Signatory
Digitally signed by SHIVALI
JINDAL
Date: 2023.11.02 14:23:30
+05'30'



SHIV SHAKTI LOGISTICS

Plot No. 12, Shanta Gulab Industrial Park, Karvad - 396195, Dist. Valsad (Gujarat)

Store
28/9/2023
Office
At Saroli At. Choryasi Village, Saroli, Taluka Chorasi Dist. Surat
Kathara Colliery
Dep. Valsad (Gujarat)

EXPRESS CARGO SERVICE
Email : shivshaktilogistics009@rediffmail.com
Vapi Office : 95379

Surat Office Add. Godown No. 78, Shajanand Park Saroli, Taluka Chorasi Dist. Surat
Surat Office : 9831207064 9998207064

AT OWNER'S RISK

Truck No.: MH19CY8892
Type of Veh.: 22 Ft
GST NO : 24AEZFS 50.88 P1ZQ
PAN NO : AEZFS 50.88 P

CONSIGNMENT NOTE
No. 041
Date: 24/09/23.....

Door Delivery
From Vapi
To Bokaro

White : Consignee Copy
Yellow : Consignor Copy
Green : Lorry Copy
Pink : Office Copy

Consignor's Name & Add. M/S Enterprises, Plot No. 29, 36 PL Industrial Area, Sector-02, Mohali-160062.
Consignee Name & Add. M/S Central Collieries Limited, Unit Store Kathara Colliery CCL, Ro Kathara, Bokaro
GST No.: 03BHX P59467K1ZG
GST No.: 20 AAACC7476RHZT

No. of Packages	Said to Contains	Weight		Freight	Amount
		Actual Wt. Kgs.	Charged Wt. Kgs.		
<u>(43)</u>	<u>Box - Root operated Pedal</u>			Rate	<u>70</u>
				Sur Ch.	<u>B</u>
				Risk Ch.	<u>Br</u>
				St. Ch.	
				Hamali	
				Other Ch.	
				TOTAL	

28/09/23
Depot Officer
Kathara Colliery

Eway bill No.: 34/660609294-5/10/23
Inv. No.: 23-24/MSE-060
Value Rs. 154360.00

Receivers Signature & date with rubber stamp

For Shiv Shakti Logistics

Ran

Subject to VAPI jurisdiction

(Consignee's Representative)



CENTRAL COALFIELDS LIMITED
(A MINIRATNA CAT-1 COMPANY)
(GOVT. OF INDIA UNDERTAKING)
OFFICE OF THE PROJECT OFFICER, KATHARA OCP
KATHARA AREA
PO: -KATHARA, DIST: -BOKARO, (JHARKHAND)
JHARKHAND-829116



Ref: PO/KTC/Extension/2534

Date: 28/09/2023

Sub: Extension of Delivery till 30.09.2023 against Gem Contract No. 511687718360863 dt. 21.08.2023, for Supply of Plastic Dustbins

Procurement of 340 nos. of Foot operated pedal bin or Bucket for bio-medical waste collection was processed through GEM Portal vide Bid No. GEM/2023/B/3541587. The contact note for 340 nos. Foot operated pedal bin or Plastic dustbins for bio-medical waste collection was placed on **M.J Enterprises, Mohali, Punjab- 160068**. As per contract, the delivery of the materials was to be completed by 20.09.2023. The supplier has made request vide Ref No.- GEM/Dustbin/CCL-Bokaro dated- 23.09.2023 for extension of delivery order for 10 days till 30.09.2023 (Copy enclosed). The details are given below: -

Purchase Order No. & Date	Delivery was to be completed	Delivery Extension Required (10 DAYS)
Gem Contract No. 511687718360863 dt. 21.08.2023	20.09.2023	21.09.2023 to 30.09.2023

Delivery extension of above items has been accepted and extended for further 10 days till 30.09.2023 with imposition of LD Charges.

This issues with approval of competent authority.


28/9/2023
Depot Officer
Kathara OCP



संयुक्त कोयला लिमिटेड
Central Coalfields Limited
'MINIRATNA' CATEGORY-1 COMPANY
(A Subsidiary of Coal India Limited)
कार्यालय परियोजना पदाधिकारी, कथारा कोलियरी
Office of the Project Officer, Kathara Colliery
पत्रालय: कथारा, जिला: बोकारो
PO: Kathara, Dist.: Bokaro, झारखंड
Jharkhand 829116



Ref.No.KTC/PO/ENV.Expenses/San./2023/ 2005

Dated:- 21.08.2023

Sanction Order

It is to convey the sanction of the Project Officer, Kathara Colliery/ The GM (KTA), Kathara for the amount of Rs. 1, 54, 360/- (Rupees One Lakh Fifty Four Thousand Three Hundred Sixty) only.

For towards the providing colour bin (30 L) in nearby schools and hospital in buffer zone for compliance of Grant of EC Conditions in respect of Kathara OCP, Kathara Area CCL.

In favour of M.J.Enterprises.

This has been concurred in by the associate finance of the Project/Area vide BC. No. C&B/RFC/23-24/KTC/Environmental Expenses/16 Dated.10.08.23.
E office no.-1003741


21/08/2023
Nodal officer (Env.)
Kathara Colliery

Distribution:-

1. AFM (KTA), Kathara.
2. Dy.Manager (F) Kathara Colliery.

सेन्ट्रल कोलफील्ड्स लिमिटेड
(मिनिरत्न कंपनी)
(कोल इण्डिया लिमिटेड की अनुषंगी
कंपनी)



Central Coalfields Limited
(A Mini Ratna Company)
(A subsidiary of Coal India Limited)

Office of the Project Officer, Kathara Colliery, Post- Kathara, Bokaro -829116

Ref No.: CCL/KTC/NCRAP/LPC/2023-24/ 755

Date : 26/05/2023

To,
Equall Enterprises,
Block Colony, Phusro Bazar,
Bokaro-829144

Subject:- Supply of various items for Awareness Programme on flora-fauna and e-waste disposal
Ref. No. - CCL/KTC/NCRAP/LPC/2023-24/323 dated 21.04.2023

Dear Sir,

Your order has been accepted and we are pleased to place an order for supply of various items for Awareness Programme on flora-fauna and e-waste disposal as per details and 'Terms and Conditions' given hereunder:-

1. Scope of Supply:-

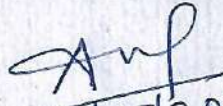
S. No.	Item Description	Qty. (in Nos.)	Offered Rate (incl. GST)	Total
1	Banner	1500 Sq. Ft.	Rs. 17.50/Sq. Ft	Rs. 26250.00
2	Standees	20 Nos.	Rs. 1435.00/pc	Rs. 28700.00
3	Posters – A4 Size	100 Nos.	Rs. 58.00/pc	Rs. 5800.00
4	Posters – A3 Size	100 Nos.	Rs. 116.00/pc	Rs. 11600.00
5	Stickers (5" * 8")	200 Nos.	Rs. 15.40/pc	Rs. 3080.00
6	Caps	250 pc	Rs. 59.00/pc	Rs. 14750.00
7	Jute Bags	100 Nos.	Rs.138.00/pc	Rs. 13800.00
8	Shield	3 Sets	Rs. 2900.00/pc	Rs. 8700.00
9	Water Bottle (1/2 litres)	18 Nos.	Rs. 595.00/pc	Rs. 10710.00
10	Stationary Kit	18 Nos.	Rs. 448.00/pc	Rs. 8064.00
11	Tiffin Box	18 Nos.	Rs. 296.00/pc	Rs. 5328.00
12	Certificates	54 Nos.	Rs. 33.00/pc	Rs. 1782.00
13	Snacks Packet	100 Nos.	Rs. 40.00/pc	Rs. 4000.00
14	Water (1/2 Litre)	100 Nos.	Rs. 8.00/pc	Rs. 800.00
15	Cardboard with Printed Slogans	40 Nos.	Rs. 24.00/pc	Rs. 960.00
16	Colour Print of Photos	100 Nos.	Rs. 19.00/pc	Rs. 1900.00
17	Report Printing (A4 Size)	200 Nos.	Rs. 9.50/pc	Rs. 1900.00
SUM TOTAL				Rs. 148124.00

- Total Price:** Rs. 1,48,124.00 (Rupees One Lakh Forty Eight Thousand One Hundred Twenty Four only).
- Basis of Price :** F.O.R. Destination and Firm Price(s).
- Delivery Period :** Immediate (within 15 Days from the issuance of supply order).
- Payment :** Within 21 Days and receipt and acceptance of materials by E-Payment only, for which complete bank details in all respect has to be furnished along with the bill/sale invoice.
- Consignee :** Dy. Manager(Min.)/ Nodal Officer (Env.), Kathara Colliery
- Paying Authority :** The Area Finance Manager, Kathara Area.

8. **Warranty/Guarantee:** The tenderer shall give a guarantee / warranty for satisfactory performance of the supplied material for appeared of 12 months from the date of fitment.
9. **Lowest Price Certificate :** Bidder must certify that prices quoted against the tender are the lowest and is the same as applicable to other Government Departments/ Undertakings/ Other Organisations.
10. **Bank Details:** You should indicate your Bank details - Bank's Name and Branch, Account Number etc. Payment shall be made by "Electronic Fund Transfer" (EFT) or e-payment. You are therefore requested to indicate EFT No. and other relevant details in your offer / bill(s).
11. All documents submitted should be self-attested with seal of the company.
All other terms and conditions as per CCL Standard norms.

We enclose herewith two copies of supply orders, one copy of which should be returned to us duly stamped & signed by you as a token of acknowledgement and acceptance of the order immediately after receipt of order failing which it will be assumed that you have accepted the order for execution of supply.

On Behalf of Project Officer, Kathara Colliery


26/05/2023

Dy. Manager(Min.)/
Nodal Officer (Env.),
Kathara Colliery

Budget Certified vide B.C. No.
C&B/RFC/23-24/Advance
Action Budget/KTC/
Environmental Expenses/02
dated 17.05.23

(E-1016182)

CENTRAL COALFIELDS LIMITED

Annexure- VII

DARBHANGA HOUSE : RANCHI

Ref:CCL/HoD(Envt)/GA/W.O./23-Plantation/Hzb.East/2023/ 9 26 .

Dated:14.03.2023

AWARD OF WORK

To,
The Divisional Forest Officer,
Hazaribagh East Forest Division, Hazaribagh.

Sub: Award of plantation work to DFO, Hazaribagh East Forest Division, Hazaribagh, Govt. of Jharkhand for plantation in Kathara, Jarangdih, SDOCM and Karo OCM of Kathara, Dhori and B&K area of CCL.

Ref: Our letter no. CCL/ HOD (Envt)/2023-Plantation/2023/ 851 dated: 31.01.2023 & CCL/HOD(Envt)/2023-Plantation/2023/ 866 dated: 15.02.2023 and your letter no.516 dated 21/28.02.2023.

Dear Sir,

This is to convey that competent authority has accepted the above mentioned estimate/scheme for a total value of Rs. 19484548.00 only (Rs. one crore ninety four lakh eighty four thousand five hundred forty-eight only) for carrying out plantation work over 29.649Ha & 1.50 Km land comprising of 76122 nos. saplings of mixed native species in Kathara, Jarangdih, SDOCM and Karo OCM of Kathara, Dhori and B&K area of CCL, as per the estimate/scheme submitted to CCL based on office order no.38 dated 31.03.2002 of CCF (Development), office order no. संख्या- 01/ योब- 10/2014- 22 दिनांक 19.06.2018 of PCCF (Development) & office order no. संख्या- 01/ योब- 10 /14 II-04 dated 20.01.18 of additional principal chief conservator of forest(Development), Govt. of Jharkhand, minimum labour wages Rs.334.14 /Man days , Government of Jharkhand effective from 01.10.2022 & letter no.134 dated 05.02.2009 by DFO, Hazaribagh Afforestation Division. The detailed breakup of the works and cost thereof are as follows:

Amount in Rs.

Sl. No.	Name of Area	Area (ha.)	Adv. Work 2022-23	Comp. Work 2023-24	1st year maint. 2024-25	2nd year maint. 2025-26	Total
1	Kathara OCP	10.00	1933919.00	811974.00	388772.00	261356.00	3396021.00
2	Jarangdih OCP	5.75	995785.00	503119.00	277969.00	204705.00	1981578.00
3	Jarangdih OCP Patch-A	3.00	922251.00	303271.00	206273.00	168048.00	1599843.00
4	Jarangdih OCP Patch-B	2.75	845397.00	285103.00	199755.00	164716.00	1494971.00
5	Jarangdih OCP Patch-C	2.27	702398.00	250221.00	187241.00	158317.00	1298177.00
6	Jarangdih OCP Patch-D	3.00	948565.00	303271.00	206273.00	168048.00	1626157.00
7	Karo OCM Patch-I	1.175	464715.00	170645.00	158693.00	143721.00	937774.00
8	Karo OCM Patch-II	0.954	408213.00	154585.00	152931.00	140776.00	856505.00
9	Karo OCM Patch-III	0.75	362130.00	139760.00	147613.00	138056.00	787559.00
10	Dhori SDOCM Along Tisri Nallah from Karipani to Railway crossing & Near KPS weigh bridge	1.50km (2000 Plants)	2415146.00	1185021.00	952898.00	952898.00	5505963.00
	Total	29.649 ha & 1.50Km	9998519.00	4106970.00	2878418.00	2500641.00	19484548.00

Continued overleaf

Scheme of plantation, spread over 4 years, will be as follows:

Details of Work	Value of works	Plantation Area (in Ha)/Length in Km	Nos. of Plants
Advance work 2022-23	9998519.00	29.649 Ha & 1.50Km	74122 + 2000
Completion Work 2023-24	4106970.00		
1 st Year Maintenance Work 2024-25	2878418.00		
2 nd Year Maintenance Work 2025-26	2500641.00		
Total	19484548.00	29.649 Ha & 1.50Km	74122+2000=76122

The MoU between Hazaribagh East Forest Division, Hazaribagh and CCL, effective from 23.11.2013, shall be the guideline for implementation of the scheme. The amount as "Advance" to be released from time to time as per the stipulation of the MoU and shall be in accordance with the work order only and shall in no case exceed the amount as stipulated against each work component. Amount released shall be utilized for specific work head and not diverted to any other work component. Forest Department shall submit expenditure vouchers as stipulated in the MoU and the vouchers shall indicate the work component head against which vouchers are submitted.

Adjustment, if any, in the advance amount released during execution of work, the same shall be adjusted from subsequent release of fund. In case of revision in labour wages during the period of scheme a revised estimate shall be submitted to CCL for acceptance enclosing there with a copy of the State Government notification required as per MoU.

You are requested to take physical possession of the site for execution of the work from the concerned Project officer and start the work immediately with intimation to this office.

Yours faithfully,

Raj
14/03/23
HoD (Envt.)
CCL, Ranchi

- Encl: (i). Copy of the MoU
(ii). Copy of the approved scheme/ estimate
(iii). Copy of the format for joint inspection

Copy forwarded for kind information:

CCL:

1. Director Tech(P&P),D(F),CCL.
2. CVO,CCL.
3. TS to CMD,CCL.
4. GM (Kathara,Dhori &B&Karea).-The expenditure occurred against this work will be charged against mine closure.
5. GM(Finance-I/C), CCL.
6. Chief Manager(F)/(P&P),CCL
7. Dy.GM Finance (XP/HQ),CCL
8. Area Finance Manager, (Kathara , Dhori & B&K area).
9. Project Officer Kathara,Jarangdih ,Karo,SDOCM OCP with a copy of MoU, Scheme/estimate &Joint Inspection format.
10. Area Env.officer Kathara , Dhori& B&K area: with a copy of MoU, Scheme/estimate & joint inspection format.
- 11.HoD (Envt.). CCL HQ Ranchi

Forest Department:

1. RCCF, Hazaribagh Region,Hzb
2. CF, Territorial Circle,Hazaribagh

Labour Department:

1. Asst.Labour.Commissioner,Hazaribagh

सेन्ट्रल कोलफील्ड्स लिमिटेड
(मिनिरत्न कंपनी)
(कोल इण्डिया लिमिटेड की अनुषंगी
कंपनी)



Central Coalfields Limited
(A Mini Ratna Company)
(A subsidiary of Coal India Limited)

Office of the Project Officer, Kathara Colliery, Post- Kathara, Bokaro -829116

Ref No.: CCL/KTC/NCRAP/LPC/2023-24/ 756

Date: 26/5/2023

To,
Equall Enterprises,
Block Colony, Phusro Bazar,
Bokaro-829144

Subject:- Supply of various items for Additional Awareness Programme on Environmental Protection

Ref. No. - CCL/KTC/NCRAP/LPC/2023-24/324 dated 21.04.2023

Dear Sir,

Your order has been accepted and we are pleased to place an order for supply of various items for Additional Awareness Programme on Environmental Protection as per details and 'Terms and Conditions' given hereunder:-

1. Scope of Supply:-

S. No.	Item Description	Qty. (in Nos.)	Offered Rate (incl. GST)	Total
1	Banner	1500 Sq. Ft.	Rs. 17.50/sqft	Rs. 26250.00
2	Standees	10 Nos.	Rs. 1435.00/pc	Rs. 14350.00
3	Posters – A3 Size	100 Nos.	Rs. 116.00/pc	Rs. 11600.00
4	Stickers (5" * 8")	100 Nos.	Rs. 15.40/pc	Rs. 1540.00
5	Stickers (5" * 4")	200 Nos.	Rs. 7.70/pc	Rs. 1540.00
6	Caps	100 pc	Rs. 59.00/pc	Rs. 5900.00
7	Shield	3 Sets	Rs. 2900.00/set	Rs. 8700.00
8	Water Bottle (1/2 litres)	18 Nos.	Rs. 595.00/pc	Rs. 10710.00
9	Stationary Kit	18 Nos.	Rs. 448.00/pc	Rs. 8064.00
10	Tiffin Box	18 Nos.	Rs. 296.00/pc	Rs. 5328.00
11	Certificates	54 Nos.	Rs. 33.00/pc	Rs. 1782.00
12	Colour Print of Photos	100 Nos.	Rs. 19.00/pc	Rs. 1900.00
13	Report Printing (A4 Size)	100 Nos.	Rs. 9.50/pc	Rs. 950.00
SUM TOTAL				Rs. 98614.00

- Total Price:** Rs. 98,614.00 (Rupees Ninety Eight Thousand Six Hundred Fourteen only).
- Basis of Price :** F.O.R. Destination and Firm Price(s).
- Delivery Period :** Immediate (within 15 Days from the issuance of supply order).
- Payment :** Within 21 Days and receipt and acceptance of materials by E-Payment only, for which complete bank details in all respect has to be furnished along with the bill/sale invoice.
- Consignee :** Dy. Manager(Min.)/ Nodal Officer (Env.), Kathara Colliery
- Paying Authority :** The Area Finance Manager, Kathara Area.
- Warranty/Guarantee:** The tenderer shall give a guarantee / warranty for satisfactory performance of the supplied material for appeared of 12 months from the date of fitment.

9. **Lowest Price Certificate** : Bidder must certify that prices quoted against the tender are the lowest and is the same as applicable to other Government Departments/ Undertakings/ Other Organisations.
10. **Bank Details**: You should indicate your Bank details - Bank's Name and Branch, Account Number etc. Payment shall be made by "Electronic Fund Transfer" (EFT) or e-payment. You are therefore requested to indicate EFT No. and other relevant details in your offer / bill(s).
11. All documents submitted should be self-attested with seal of the company.

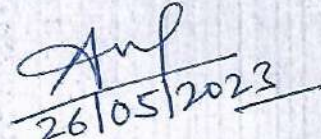
All other terms and conditions as per CCL Standard norms.

We enclose herewith two copies of supply orders, one copy of which should be returned to us duly stamped & signed by you as a token of acknowledgement and acceptance of the order immediately after receipt of order failing which it will be assumed that you have accepted the order for execution of supply.

On Behalf of Project Officer, Kathara Colliery

Budget Certified vide B.C. No.
C&B/RFC/23-24/Advance
Action Budget/KTC/
Environmental Expenses/03
dated 17.05.23

(E-1016183)


26/05/2023
Dy. Manager(Min.)/
Nodal Officer (Env.),
Kathara Colliery

Contract | अनुबंध



Contract No | अनुबंध क्रमांक: GEMC-511687739145176

Generated Date | अनुबंध तिथि: 07-Jul-2023

Bid/RA/PBP No. | बोली/आए/पीबीपी संख्या: [GEM/2023/B/3277369](#)

Organisation Details संगठन विवरण	Buyer Details खरीदार विवरण
Type प्ररूप: Central PSU Ministry मंत्रालय: Ministry of Coal Department विभाग: Materials Management Organisation Name संगठन का नाम: Central Coalfields Limited Office Zone कार्यालय क्षेत्र: Central Coalfields Limited	Designation पद: Dy Manager Mining Contact No. संपर्क नंबर: 93865-97422- Email ID ईमेल आईडी: anishk.diwakar@nic.in GSTIN जीएसटीआईएन: - Address पता: Unit Store Kathara Colliery CCL, P.O. Kathara, BOKARO, JHARKHAND-829116, India

Financial Approval Detail वित्तीय स्वीकृति विवरण	Paying Authority Details भुगतान प्राधिकरण विवरण
IFD Concurrence आईएफडी सहमति: No Designation of Administrative Approval प्रशासनिक अनुमोदन का पदनाम: Project Officer, Kathara Colliery Designation of Financial Approval वित्तीय अनुमोदन का पदनाम: Area Finance Manager, Kathara Area	Role: PAO Payment Mode भुगतान का तरीका: Offiine Designation पद: Asst Mgr Finance Email ID ईमेल आईडी: jp.nsingh@nic.in GSTIN जीएसटीआईएन: 20AAACC7476RHZT Address पता: GM Office Kathara Area CCL District. Bokaro 829113, Bokaro, JHARKHAND-829116, India Payments shall be made to the seller within 21 days of issue Payment Timelines भुगतान समयसीमा: भुगतान of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10-days time as provided in clause 12 of GeM GTC)

Seller Details विक्रेता विवरण	
GeM Seller ID जेम विक्रेता आईडी: BJTQ210004169061 Company Name कंपनी का नाम: M/S EASTERN ENGINEERING WORKS Contact No. संपर्क नंबर: 09031712948 Email ID ईमेल आईडी: dkreew@gmail.com Address पता: AT + PO - JARIDIH BAZAR, JARIDIH BAZAR, JARIDIH BAZAR, BERMO, Bokaro, JHARKHAND-829114, - MII Status एमआईआई स्थिति: True MSME verified एमएसएमई सत्यापित: No MSME Registration number एमएसएमई पंजीकरण संख्या: UDYAM-JH-01-0011622 MSE Social Category एमएसई सामाजिक श्रेणी: OBC MSE Gender एमएसई लिंग श्रेणी: Male GSTIN जीएसटीआईएन: 20AGPPR6628A1ZJ	

*GST / Tax invoice to be raised in the name of | जिसके नाम के पक्ष में GST/TAX इनवॉइस पेश किया जाएगा - Consignee

Delivery Instructions | वितरण निर्देश: NA

Product Details उत्पाद विवरण						
#	Item Description आइटम विवरण	Ordered Quantity आइटम विवरण	Unit इकाई	Unit Price (INR) इकाई मूल्य (INR)	Tax Bifurcation (INR) कर विभाजन (INR)	Price (Inclusive of all Duties and Taxes in INR) मूल्य (INR) में सभी शुल्क और कर सहित
1	Product Name उत्पाद का नाम: Unbranded Solar Study Lamp with Yes Battery Brand ब्रांड: NA Brand Type ब्रांड प्रकार: Unbranded Catalogue Status कैटलॉग की स्थिति: Catalogue not verified by OEM Selling As कैसे बेचा जा रहा है: Reseller not verified by OEM Category Name & Quadrant श्रेणी का नाम और चतुर्थांश: Solar Lamp (Solar Study Lamp) (Q3) Model मॉडल: solar lamp(NISHICA) HSN Code एचएसएन कोड: HSN not specified by seller	500	pieces	1,245	NA	622,500
Total Order Value कुल ऑर्डर मूल्य (in INR)						622,500

Consignee Detail परेषिती विवरण						
S.No क्र.सं.	Consignee परेषिती	Item वस्तु	Lot No. लॉट नंबर	Quantity मात्रा	Delivery Start After दैनिक के बाद डिलीवरी शुरू	Delivery To Be Completed By वितरण पूरा कब

					करना है	तक करना है
1	Designation पद : - Email ID ईमेल आईडी : anishk.diwakar@nic.in Contact संपर्क : 93865-97422- GSTIN जीएसटीआईएन : - Address पता : Unit Store Kathara Colliery CCL, P.O. Kathara, BOKARO, JHARKHAND-829116, India	Unbranded Solar Study Lamp with Yes Battery	-	500	07-Jul-2023	06-Aug-2023

Product Specification for Unbranded Solar Study Lamp with Yes Battery

Specification विनिर्देश	Sub-Spec उप-विनिर्देश	Value मूल्य
GENERIC	Solar Study Lamp shall conform to MNRE specification (Off-grid Solar Applications Scheme 2016-17)	Yes
	Model of Solar Study Lamps	Model II
	The Solar lamp is designed to provide 4-5 hours of study light every day throughout the year	Yes
	Mobile Phone Charging in emergency to charge Mobile phone battery up to 1000 mAh capacity The Mobile phone battery should be charged preferably during day time	Yes for Model II with USB port
CONSTRUCTIONAL	PV Module (The PV module must have a minimum specified capacity at an appropriate voltage for charging of battery used, under the standard test conditions (STC) of measurement)	5 Wp under STC FOR Model II
	Battery	Lithium-Ferro Phosphate of 3.2V, 2000 mAh
	"Light Source dispersed beam, soothing to eyes with the use of proper optics and diffuser (Luminous performance: Minimum 150 Lumens per watt)"	1 Watt White-LED luminaire
	Light Output Study lamp should deliver minimum Lux at over an area of 1.5 feet Diameter from a height of 1.0 foot Minimum Lux when measured at the periphery of 45 centimetres diameter from a height of 30 centimetres	Minimum 150 Lux
PV MODULE	Indigenously manufactured PV modules should be used in the Solar Study Lamp	Yes
	The PV module should have crystalline silicon solar cells and should have humidity, freeze, thermal cycling and damp heat tests certificate conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory	Yes
	There should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun	Yes
	A foil/ strip containing the following details should be fixed inside on the module so as to be clearly visible from the front side (a) Name of the Manufacturer and/ or distinctive Logo (b) Model and/ or Type No (c) Serial No (d) Year of manufacture	Yes
	A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module	Yes
BATTERY	Rechargeable Lithium-Ferro Phosphate (LiFePO4)	Yes
	Battery Capacity (in mAh)	2000 mAh
	Battery voltage (in Volt)	3.2 Volt
	Number of charge-discharge cycles: >2000	Yes
	Permissible Depth of Discharge (D o D): Up to 85%	Yes
	Battery should conform to the latest BIS/ International standards	Yes
LIGHT SOURCE	The colour temperature of White-LED(s) used in the system	5500 deg K to 6500 deg K
	White-LED(s) should not emit ultraviolet light	Yes
	The light output from the White- LED should be constant throughout the duty cycle	Yes
ELECTRONICS	Charging should be with 'MPPT' type micro controller based charger	Yes
	Efficiency of the electronic system	>=85%
	Electronics should have temperature compensation for proper charging of the battery throughout the year	Yes
	Idle current	</=1 mA
	The PCB containing the electronics should be capable of solder free installation and replacement	Yes
	Necessary lengths of wires/ cables, switches suitable for DC use and other protections should be provided	Yes
	The system should have two indicators, green (charging under preogress) and red (indicate the battery "Load Cut Off" condition)	Yes
ELECTRONIC PROTECTION	No Load Protection, Battery overcharge and deep discharge protection	Yes
	The load reconnect should be provided at around 80% of the battery capacity status	Yes
	Battery reverse polarity, Short circuit, Reverse flow of current protection	Yes
	During the charging, lamp cannot be switched "ON"	Yes
	Warranty for complete Solar Study Lamp (in years)	5 Years
	Warranty for battery	5 Years

WARRANTY	The Warrantee/ Guarantee Card to be supplied with the Solar Study Lamp must contain the details of the system supplied	Yes
	OPERATION and MAINTENANCE MANUAL including IESNA LM-80 report of White LEDs as per MNRE (Off-grid Solar Applications Scheme 2016-17	Yes
CERTIFICATION	Availability of Type Test Report from Central Govt/NABL/ILAC accredited lab to prove conformity to specification	Yes
	Storage battery and PV Modules shall comply with BIS CRS as on date as applicable	Yes

Note | टिप्पणी: Seller has given an undertaking that it has made arrangements for getting the stores from an authorized distributor / dealer / channel partner of the OEM of the offered product. At the time of delivery of goods, Seller will provide necessary chain documents (in the form of GST Invoice) to prove that the supplied goods are genuine and are being sourced from an authorized distributor / dealer / channel partner of the OEM. In case of any complaint about genuineness of the supplied products, Seller shall be responsible for providing genuine replacement supplies.

Buyer Defined Additional Specification for | खरीदार परिभाषित अतिरिक्त विशिष्टता के लिए Unbranded Solar Study Lamp with Yes Battery

Specification विनिर्देश	Value मूल्य
Battery	Lithium-Ferro Phosphate of 3.2V, 2000 mAh
"Light Source dispersed beam, soothing to eyes with the use of proper optics and diffuser (Luminous performance: Minimum 150 Lumens per watt)"	1 Watt White-LED luminaire
Light Output Study lamp should deliver minimum Lux at over an area of 1.5 feet Diameter from a height of 1.0 foot Minimum Lux when measured at the periphery of 45 centimetres diameter from a height of 30 centimetres	Minimum 150 Lux
Warranty for Lamp & Battery	5 Years

Corrigendum | शुद्धिपत्र

1. **Extended Upto** | तक बढ़ाया गया : 2023-04-04 17:00:00
2. **Extended Upto** | तक बढ़ाया गया : 2023-04-17 16:00:00

ePBG Detail | ईपीबीजी विवरण

Advisory Bank सलाहकार बैंक :	NA
ePBG Percentage(%) ईपीबीजी प्रतिशत (%) :	NA

Terms and Conditions | नियम और शर्तें

1. General Terms and Conditions-

- 1.1 This contract is governed by the [General Terms and Conditions](#), conditions stipulated to this Product/Service as provided in the Marketplace.
- 1.2 This Contract between the Seller and the Buyer, is for the supply of the Goods and/ or Services, detailed in the schedule above, in accordance with the General Terms and Conditions (GTC) unless otherwise superseded by Goods / Services specific Special Terms and Conditions (STC) and/ or BID/Reverse Auction Additional Terms and Conditions (ATC), as applicable

2. Buyer Added Bid Specific Terms and Conditions-

2.1 Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

2.2 Buyer Added Bid Specific ATC:

Buyer uploaded ATC document [Click here to view the file](#).

2.3 Buyer Added Bid Specific ATC:

Buyer Added text based ATC clauses

Technical Specifications:

GENERIC

Solar Study Lamp shall conform to M NRE specification (Off-grid Solar Applications Scheme 2016-17)	Yes
Model of Solar Study Lamps	Model II

The Solar lamp is designed to provide 4-5 hours of study light every day throughout the year

Yes

Mobile Phone Charging in emergency to charge Mobile phone battery up to 1000 mAH capacity The Mobile phone battery should be charged preferably during day time

NA for Model I

CONSTRUCTIONAL

PV Module (The PV module must have a minimum specified capacity at an appropriate voltage for charging of battery used, under the standard test conditions (STC) of measurement)

2.5 Wp under STC for Model I

Battery

Lithium-Ferro Phosphate of 3.2V, 2000 mAh

"Light Source dispersed beam, soothing to eyes with the use of proper optics and diffuser (Luminous performance: Minimum 150 Lumens per watt)"

1 Watt White-LED luminaire

Light Output Study lamp should deliver minimum Lux at over an area of 1.5 feet Diameter from a height of 1.0 foot Minimum Lux when measured at the periphery of 45 centimetres diameter from a height of 30 centimetres

Minimum 150 Lux

PV MODULE

Indigenously manufactured PV modules should be used in the Solar Study Lamp

Yes

The PV module should have crystalline silicon solar cells and should have humidity, freeze, thermal cycling and damp heat tests certificate conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory

Yes

There should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun

Yes

A foil/ strip containing the following details should be fixed inside on the module so as to be clearly visible from the front side (a) Name of the Manufacturer and/ or distinctive Logo (b) Model and/ or Type No (c) Serial No (d) Year of manufacture

Yes

A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module

Yes

BATTERY

Rechargeable Lithium-Ferro Phosphate (LiFePO4)

Yes

Battery Capacity (in mAh)

2000 mAh

Battery voltage (in Volt)

3.2 Volt

Number of charge-discharge cycles: >2000

Yes

Permissible Depth of Discharge (DOD): Up to 85%

Yes

Battery should conform to the latest BIS/ International standards

Yes

LIGHT SOURCE

The colour temperature of White-LED(s) used in the system

5500 deg K to 6500 deg K

White-LED(s) should not emit ultraviolet light

Yes

The light output from the White- LED should be constant throughout the duty cycle

Yes

ELECTRONICS

Charging should be with 'MPPT' type micro controller based charger

Yes

Efficiency of the electronic system

$\geq 85\%$

Electronics should have temperature compensation for proper charging of the battery throughout the year

Yes

Idle current

≤ 1 mA

The PCB containing the electronics should be capable of solder free installation and replacement

Yes

Necessary lengths of wires/ cables, switches suitable for DC use and other protections should be provided

Yes

The system should have two indicators, green (charging under progress) and red (indicate the battery "Load Cut Off" condition)

Yes

ELECTRONIC PROTECTION

No Load Protection, Battery overcharge and deep discharge protection

Yes

The load reconnect should be provided at around 80% of the battery capacity status

Yes

Battery reverse polarity, Short circuit, Reverse flow of current protection

Yes

During the charging, lamp cannot be switched "ON"

Yes

WARRANTY

Warranty for complete Solar Study Lamp (in years)

5 Years

Warranty for battery

5 Years

The Warrantee/ Guarantee Card to be supplied with the Solar Study Lamp must contain the details of the system supplied

Yes

OPERATION and MAINTENANCE MANUAL including IESNA LM-80 report of White LEDs as per MNRE (Off-grid Solar Applications Scheme 2016-17

Yes

CERTIFICATION

Availability of Type Test Report from Central Govt/NABL/ILAC accredited lab to prove conformity to specification

Yes

Storage battery and PV Modules shall comply with BIS CRS as on date as applicable

Yes

2.4 Scope of Supply:

Scope of supply (Bid price to include all cost components) : Only supply of Goods

2.5 Warranty:

Timely Servicing / rectification of defects during warranty period: After having been notified of the defects / service requirement during warranty period, Seller has to complete the required Service / Rectification within 5 days time limit. If the Seller fails to complete service / rectification with defined time limit, a penalty of 0.5% of Unit Price of the product shall be charged as penalty for each week of delay from the seller. Seller can deposit the penalty with the Buyer directly else the Buyer shall have a right to recover all such penalty amount from the Performance Security (PBG). Cumulative Penalty cannot exceed more than 10% of the total contract value after which the Buyer shall have the right to get the service / rectification done from alternate sources at the risk and cost of the Seller besides forfeiture of PBG. Seller shall be liable to re-imburse the cost of such service / rectification to the Buyer.

Note: This is system generated file. No signature is required. Print out of this document is not valid for payment/ transaction purpose.

नोट: यह सिस्टम जनरेटेड फाइल है। कोई हस्ताक्षर की आवश्यकता नहीं है। इस दस्तावेज़ का प्रिंट आउट भुगतान/लेनदेन उद्देश्य के लिए मान्य नहीं है।

Central Coalfields Limited
A Miniratna Company
Office of the Project Officer, Kathara Colliery
PO: Kathara: Dist: Bokaro

Ref.No. KTC/Bill/Depo./2023-24/ 3024

Dated: 02/11/23

To
The Area Finance Manager (KTA),
Kathara.


Sub.: Submission of bill in favour of M/s Ranishi
for Rs. 12,50,000.00 only.

Dear Sir,

Enclosed please find herewith the Invoice No. 07 dtd. 04.08.2023 against the work for "procurement of operation and maintenance of high speed fully automatic sanitary pad making machine for nearby villages in command area of Kathara of KTC, OCP for a amount of Rs. 12,50,000.00 (Rupees Twelve lakhs fifty thousand) only duly accepted and necessary audit and payment to M/s Ranishi, Bokaro

Enclosure: As above.

Yours faithfully


01/11/2023
Dy. Manager (M)
Nodal Officer (Env)
Kathara Colliery

HSN Code - 84799090

PR - 1300102700

PO - 5800203193

GRN - 9301617014

DAK - 3231072763

MIR7 - 3300926159

Supply order no. GEMC-511687733413694

Date 07/July/2023.

Sanctioned. KTC/PO/Emv-Expenses/Gen/2023/1478

LP/OS dt 11/8/23.

date - 23/7/23.

Gross Amount Rs - 1059322.00

CGST 9% - Rs - 95338.98

SGST 9% - Rs - 95338.98

Rs - 1249999.96

L.D. (one access)

0.5% - Rs - 5296.61 (-)

net Rs - 1244703.35

01/11/2023

Dy. Manager (F)
Kathara Colliery

23/7/23
PROJECT OFFICER
Kathara Colliery

Tax Invoice

(ORIGINAL FOR RECIPIENT)

RANISHI
 100, Lohanchal Colony
 Sector - 12, Bokaro Steel City
 Jharkhand-82012
 Ph No 7004803606
 GSTIN/UIN: 20BSFPA7657D1Z7
 State Name : Jharkhand, Code : 20
 E-Mail : ranishi.ei@gmail.com
 Consignee (Ship to)
Dy Manager, Mining & Depot Officer, CCL, Kathara
 Unit Store Kathara, CCL, P.O Kathara, Bokaro,
 Jharkhand-829116
 GSTIN/UIN : 20AAACC7476RHZT
 State Name : Jharkhand, Code : 20

Invoice No. **7** Dated **4-Aug-23**
 Delivery Note
 Reference No. & Date
 Buyer's Order No. **GEMC-511687733413694** Dated **7-Jul-23**
 Dispatch Doc No. Delivery Note Date
 Dispatched through Destination
 Terms of Delivery **7**

Buyer (Bill to)
Dy Manager, Mining & Depot Officer, CCL, Kathara
 Unit Store Kathara, CCL, P.O Kathara, Bokaro,
 Jharkhand-829116
 GSTIN/UIN : 20AAACC7476RHZT
 State Name : Jharkhand, Code : 20

Sl No	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	Sanitary Pad Production Machine		2.00 Nos	5,29,661.00	Nos	10,59,322.00
						CGST 95,338.98
						SGST 95,338.98
						Round Off 0.04
Total						2.00 Nos ₹ 12,50,000.00

Bill Details:
 On Account 12,50,000.00 Dr

Amount Chargeable (in words) **INR Twelve Lakh Fifty Thousand Only** E. & O.E

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
	10,59,322.00	9%	95,338.98	9%	95,338.98	1,90,677.96
Total	10,59,322.00		95,338.98		95,338.98	1,90,677.96

Tax Amount (in words) : **INR One Lakh Ninety Thousand Six Hundred Seventy Seven and Ninety Six paise Only**

Declaration
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

Company's Bank Details
 A/c Holder's Name : **RANISHI**
 Bank Name : **HDFC-CI/Acc-9585**
 A/c No. : **50200058779585**
 Branch & IFS Code : **HDFC BANK, SECTOR 4 & HDFC0000267**

Customer's Seal and Signature

RANISHI
 Proprietor

[Handwritten Signature]
 20/09/2023
 Depot Officer
 Kathara Colliery

This is a Computer Generated Invoice

N6

Central Coalfields Limited
A Miniratna Company
Office of the Project Officer, Kathara Colliery
PO: Kathara: Dist: Bokaro

Annexure-XI

Ref.No. KTC/Bill/Store/2023-24/ 3123

Dated: 08/11/2023

To
The Area Finance Manager (KTA),
Kathara.

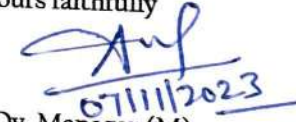
Sub:- Submission of bill in favour of M/s Sai Siddhi
Electronics for Rs. 432000.00 only.

Dear Sir,

Enclosed please find herewith the bill No. 178 dtd.
21.09.2023 against the procurement for "of 04 Nos. True view LCD
Infrared optical 3840X2160 interactive panel accessories for the
purpose to be place at DAV School (Swang & Kathara) under Kathara
Colliery for a amount of Rs. 4,32,000.00 (Rupees Four Lakh Thirty Two
thousand) only duly accepted and necessary audit and payment to M/s
Sai Siddhi Electronics Aurangabad Maharashtra - 431007

Enclosure: As above.

Yours faithfully


07/11/2023
Dy. Manager (M)
Depot Officer
Kathara Colliery

HSN-84714190
Vendor-10094447
PR-1300105924
PO-5800207194
GRN-9301651299
DAK-3231076585
MIR7-3300948369

May be forwarded to concerned for needful.

PO(KTC)

21/10/2023

PO WCC

Depot officer - KTC
Mr. Anand Kumar

Bill Accepted
21/10/2023

DY MGR (F), KTC

- * copy of E-way bill (good permit) is not enclosed.
- * SAP generated DRR is not enclosed.
- * process through SAP.

26/10/2023

Depot officer (KTC)

- ① Copy of E-way bill attached for consideration
- ② SAP generated DRR is not enclosed due to fund transfer issue in SAP. ERN will be enclosed further
- ③ Process through SAP will be done after fund transfer in SAP soon.

DY MGR (F), KTC

28/10/2023

Gross Amount Rs. 366101.72

CGST. 9% - Rs. 32949.15

SGST. 9% - Rs. 32949.15

Total Rs. 432000.02

less - CGST - (-) 1.02

Net Rs. 432000.00

31/10/23

Dy. Manager (F)
Kathara Colliery

PROJECT OFFICER
Kathara Colliery

TAX INVOICE

(ORIGINAL FOR RECORD)

Sai Siddhi Electronics

G-14 KALASHI COMMERCIAL COMPLEX
MARG VIKHROLI (W) MUMBAI-400083
near sapta apt 1, 1 road
near swast bank
Railway station Dahisar (W) 400068
PIN 400068
FINAN 27AMCPS0504M170
State Name: Maharashtra Code 27
Mail: sales@saisiddhielectronics.com

Invoice No 178
e-Way Bill No
Dated 21-Sep-2023
Mode/Terms of Payment
Supplier's Ref.
Other Reference(s) GEM/2023/B/3506669
Buyer's Order No. GEMC-511687702046995
Despatch Document No. 21-Aug-2023
Delivery Note Date
Despatched through
Destination
Terms of Delivery Vendor-10094447

Central Coalfields Limited

Unit Store Kathara Colliery CCL, P.O. Kathara,
BOKARO, JHARKHAND-829116, India
Ashish chakraborty- +91 8340761953
Awanish Kumar, Depot Officer, 8210893626
GSTIN/UIN : 20AAACC7476RHZT
State Name : Jharkhand, Code : 20

Handwritten notes on the left margin:
0000
21/9/23
30/9/23
ATM/8/18
Office of Project Officer
Kathara Colliery
C.C. Unit
No. 2, 186, Date: 05/09/23
4P-24
30/9/23

Sl. No.	Description of Goods	HSN/SAC	Quantity	Rate	per Disc. %	Amount
1	Trueview 75 Inch panel <small>(Android 11.0, 4 GB RAM & 32 GB ROM) (Integrated OPS - Intel Core i5, 8 GB RAM & 256 SSD)</small>	84714190	4 Nos	91,525.43	Nos	3,66,101.72
	Less Output IGST-18% Round Off					65,898.31 (-0.03)

Total 4 Nos ₹ 4,32,000.00
E. & O.E.

Amount Chargeable (in words)
INR Four Lakh Thirty Two Thousand Only

HSN/SAC	Taxable Value	Integrated Tax Rate	Integrated Tax Amount	Total Tax Amount
84714190	3,66,101.72	18%	65,898.31	65,898.31
Total	3,66,101.72		65,898.31	65,898.31

Tax Amount (in words) INR Sixty Five Thousand Eight Hundred Ninety Eight and Thirty One paise Only

Company's PAN AMCPS0504M

Declaration
I/We Herby certify that my/our registration certificate under I/Vat 2002 in force on the date on which sales of goods specified in this Tax Invoice is made by me/us and that the transaction of sales covered by this Tax Invoice has been effected by me/us and its shall be accounted for the turnover of sales while filing of return and the due amount in any payable on the same has been paid or shall be paid

Company's Bank Details
Bank Name State Bank of India
A/c No 30846459212 A/C TYPE CC
Branch & IFS Code CHEMBUR & SBIN0020408
for Sai Siddhi Electronics

By Manager (F) *[Signature]*
This is a Computer Generated Invoice



Handwritten signatures and dates:
ATM
31/07/23
G M KATTA
P. T. O
P. T. O
P. T. O

Part - A Slip

Unique No.	2116 5000 4443
Entered Date	21/09/2023 03:53 PM
Entered By	27AMC PS050 4M1Z0 - SAI SIDDHI ELECTRONICS
Valid From:	Not Valid for Movement as Part B is not entered [1599Kms]
Part - A	
GSTIN of Supplier	27AMCPS0504M1Z0,SAI SIDDHI ELECTRONICS
Place of Dispatch	Aurangabad,MAHARASHTRA-431007
GSTIN of Recipient	20AAA CC747 6RHZT ,CENTRAL COALFIELDS LIMITED
Place of Delivery	BOKARO, JHARKHAND,JHARKHAND-829116
Document No.	178
Document Date	21/09/2023
Transaction Type:	Combination of 2 and 3
Value of Goods	432000.01
HSN Code	84714190 -
Reason for Transportation	Outward - Supply
Transporter	88AAACD8017H1ZX & DTDC EXPRESS LIMITED



211650004443



सेंट्रल कोलफील्ड्स लिमिटेड
Central Coalfields Limited
'MINIRATNA' CATEGORY-1 COMPANY
(A Subsidiary of Coal India Limited)
कार्यालय परियोजना पदाधिकारी, कथारा कोलियरी
Office of the Project Officer, Kathara Colliery
पञ्जाब: कथारा, जिला: बोकारो
PO: Kathara, Dist.: Bokaro, झारखंड
Jharkhand 829116



Dated:- 21.08.2023

Ref.No.KTC/PO/ENV.Expenses/San./2023/ 2004


Sanction Order

It is to convey the sanction of the Project Officer, Kathara Colliery/ The GM (KTA), Kathara for the amount of Rs. 4, 32, 000/- (Rupees Four Lakh Thirty Two Thousand) only.

For towards the providing smart classes at DAV Schools (Sawang & Kathara) for compliance of Grant of EC Conditions in respect of Kathara OCP, Kathara Area CCL.



In favour of Siddhi Electronics.

This has been concurred in by the associate finance of the Project/Area vide BC. No. C&B/RFC/23-24/KTC/Environmental Expenses/17 Dated.14.08.23.
E office no.-1033241


21/08/2023
Nodal officer (Env.)
Kathara Colliery

Distribution:-

1. AFM (KTA), Kathara.
2. Dy.Manager (F) Kathara Colliery.

 <p>एक महारत्न कंपनी A Maharatna Company</p>	CENTRAL COALFIELDS LIMITED (Govt. of India Undertaking) <i>A miniratna Cat-I Company</i> Darbhanga House, Ranchi-834001	
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पत्रांक: GM/E&F/2022/ 249

दिनांक: 19.04.2022

To,
Member Secretary (Coal Mining)
Ministry of Environment Forest and Climate Change,
Govt. of India
Indira Paryavaran Bhawan
3rd Floor, Vayu Wing, Jor Bagh Road
New Delhi-03

Subject: Submission of Additional Details Sought (ADS) for considering the proposal for Environmental Clearance for Kathara Opencast Project (1.9 MTPA) in an area of 773.23 Ha of M/s Central Coalfields Limited; located in village: Kathara, Block- Bermo, District- Bokaro, Jharkhand – Reg.

Ref No: 1) Proposal No: IA/JH/CMIN/179534/2020
2) MoM of 27th(A) EAC (Coal Mining Projects) held on 03.03.2022

Respected Sir,

This has reference to the above subject. The proposal of Environmental Clearance of Kathara Opencast Project was submitted vide proposal no: IA/JH/CMIN/179534/2020 and it was considered in the 27th (A) EAC (Coal Mining Projects) held on 03.03.2022. The Expert Appraisal Committee (EAC) has sought additional details in respect of the proposal as per the minutes issued on 13.03.2022.

The reply of additional details of Kathara OCP is being submitted along with all relevant annexures & photographs for further consideration and perusal.

As such, it is requested to accept the reply to the additional details sought and consider the proposal in the ensuing EAC meeting scheduled on 25-26.04.2022.

Enclosed: Detailed reply of additional details along with relevant annexures & photographs

Yours faithfully,


 (Soumitra Singh)

GM(E&F)

Central Coalfields Limited

Ranchi

Reply to the observation of EAC in respect of Kathara OCP as sought during EAC meeting held on 03.03.2022

SN	OBSERVATION of EAC	COMPLIANCE
i	PP shall revise damage assessment and its remedial action plan for violation on account of excess production on following points:	The damage assessment and its remedial action plan has been revised and the point-wise compliance is submitted below:
a.	PP has obtained EC for this project on 8/01/2014 for an ML area of 798.21 ha which was valid upto 07/01/2017 and whereas the present proposal is for 773.23 ha. It needs proper explanation for the reduced area.	<ol style="list-style-type: none"> 1. The prior environment clearance of Kathara OCP was issued on 08.01.2014 for an area of 792.81 Ha. As per the EC letter, the existing washery was included in the Infrastructure head of EC granted to the Kathara OCP. 2. Subsequently, a fresh proposal of setting up of New Kathara Coking Coal Washery was submitted to MoEF&CC on 12.10.2018. Accordingly, ToR was issued on 15.03.2019. 3. During appraisal of the proposal of New Kathara Coking Coal Washery, Expert Appraisal Committee (EAC), MoEF&CC directed that area proposed for washery shall be kept outside the mine plan of Kathara OCP. 4. Accordingly, a revised mining plan and mine closure plan of Kathara OCP in an area of 773.23 Ha was prepared excluding the area of existing and New Kathara Washery. The revised mine plan & mine closure plan was approved on 04.05.2020. MoM of EAC & approval of mining plan is enclosed at <u>Annexure-I.</u> MoEF&CC has granted EC to New Kathara Coking Coal Washery on 15.01.2021. 5. As per the direction of MoEF&CC, a fresh proposal for consideration of Kathara OCP for ToR was made on 17.10.2020 on the basis of the revised mine plan & mine closure plan in an area of 773.23 Ha only. <p>As such the area of the project is revised from earlier 792.81 Ha to 773.23 Ha.</p>
b.	The total production under violation shall be considered from 08/01/2017 to January 2022 and accordingly damage calculation to be revised.	The damage calculation has been revised considering the total production under violation during the period-08.01.2017 to January 2022. The revised DAR and NCRAP is being attached as <u>Annexure-II.</u>
c.	Economic benefit accrual shall be revisited and certified by finance department.	The certified copy of Economic benefit accrual is enclosed as <u>Annexure-III.</u>
d.	Air Environment-Damage: The emissions shall be considered for all the violation years, without comparison/base year and shall be revised accordingly.	The emission & damage calculation has been revised for all the violation years and is provided in Section: 13.3.3.2 of the revised DAR and NCRAP at <u>Annexure-II.</u>
e.	Water: The rates for GW shall be revised as per CGWA Notification of Sept 2020 for abstraction as well as compensation.	The rate for GW has been revised as per CGWA Notification of Sept 2020 for abstraction as well as compensation. The details are provided in Section:13.3.3 of the revised DAR and NCRAP at <u>Annexure-II.</u>
f.	Surface water rates shall be revised as per the deficiency in provision of SW structures.	The surface water rates has been revised as per the deficiency in provision of SW structures. The details are provided in Section:13.3.3 of the revised DAR and NCRAP at <u>Annexure-II.</u>
g.	The activities enumerated under Remediation, NRAP and CRAP shall be revised based on the need based survey and further shall be specific, monitor-able besides revising the target period for two years.	1. The activities under Remediation, NRAP and CRAP has been revised & is made specific along with monitorable timelines. The activity proposed are based on the socio-economic assessment carried out

SN	OBSERVATION of EAC	COMPLIANCE
		during Baseline data generation, issues raised during public hearing and consultation with local stakeholders. 2. The proposed activities shall be completed in three years.



Meeting with Mukhya of nearby villages

h.	Water balance for STP and ETP shall be revised and submitted and water conservation plan to be drawn.	1. The water balance for STP & ETP has been revised and resubmitted at <u>Annexure-IV</u> . 2. The water conservation plan is provided in the revised EIA/EMP.
i.	Provision of RWH structures in the colony shall be submitted	1. Roof top rain water harvesting system has been provided at P.O. Office of Kathara OCP and in about 100 quarters in the residential colonies of Kathara area. 2. Moreover, it has been proposed in the EIA-EMP to construct 03 additional RWH structures worth Rs. 25 Lakh at 03 locations (Pit Office, Mine Rescue Station and Kathara Rest House). The proposed action plan is given below:

SN	Work	Location	Tentative Cost (in Rs Lakhs)	Expected Date of start of Work	Expected Date of completion of Work
1	Rain Water Harvesting	1. Pit Office 2. Mine Rescue Station 3. Kathara Rest House	25	June-22	Sep-22



Rain Water Harvesting system at Kathara PO Office

j.	Compliance status of municipal solid waste generated, as per SWM Rules 2016, shall be	a) The CCL colonies and establishments fall under bulk waste generator or waste generator category. At
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SN	OBSERVATION of EAC	COMPLIANCE
	submitted.	<p>present, total waste is being collected through an outsourcing agency for disposal at a landfill site.</p> <p>b) A vermi-composting plant for treatment of bio-degradable waste generated from colonies & nearby habitations is proposed under NCRAP at a cost of Rs 45 Lakhs.</p> <p>c) It is proposed to carry out awareness programs for disposal of e-waste in command area of Kathara.</p> <p>d) The tentative waste generated from the colonies of CCL is given below:</p>

Location	Total No. of Houses/ office Buildings	Estimated no.of People	Per capita MSW to be generated in kg/head/day	Total Waste to be generated in kg/day
Residential Colony	794	3176	0.3 kg/capita/day	952.8
Office	3	750	0.5 kg/day/employee	375
Total MSW to be Generated in kg/day				1327.8
<i>Source: Municipal Solid Waste Management Manual By CPHEEO</i>				

k.	Cost saved due to the above a/c for the violation years shall be added to CRAP and likewise cost saved EMP also.	Assessment of EMP cost saved during the period of violation has been assessed and 3% of the total cost saved has been accounted in CRAP. Revised DAR and NCRAP is being attached as <u>Annexure-II.</u>
i.	Penalties as per SOP of violation shall be submitted apart from damage assessment and natural remediation measures.	<ol style="list-style-type: none"> It is submitted that the project has not exceeded the EC capacity of 0.96 / 1.9 MTPA till 2016-17 since grant of EC or coal production of 1993-94 (0.9 MTPA) afterwards. The mine was also operated within the same project area of 773.23 Ha. The Form-I of Kathara OCP was submitted on 17.10.2020 & ToR of Kathara OCP was issued on 27.04.2021. Accordingly, it is submitted that the process of regularization of violation of Kathara OCP has started prior to the issuance of SOP of violation. Also, the coal production of the mine is stopped since 01.01.2022 due to non-renewal of CTO as per the ToR letter issued on 27.04.2021. It is therefore requested that penalty as per SOP of violation may be waived for this specific case.
ii	The total damage cost mentioned in the EIA report is 359.59 Lakhs; Total fund proposed for remediation measures 34,799,000, Total cost proposed for Natural & Community Resource Augmentation Measures is 7,200,000, which is to be revised as per recommendation mentioned above	The activities under Remediation, NRAP and CRAP has been revised as per the recommendation. Revised DAR and NCRAP is being attached as <u>Annexure-II.</u>
iii	PP shall submit Status of Credible action taken by Project Proponent by State Government.	<ol style="list-style-type: none"> Jharkhand State Pollution Control Board (JSPCB) has been requested vide letter no: HOD(Env.)/2021/1097 Dated: 15.11.2021 for taking necessary action in this regard. Member Secretary, JSPCB has directed Regional Officer, Dhanbad to take necessary action. The letter is attached at <u>Annexure-V.</u>
iv	PP also to provide IRO Certified Compliance Report of previous EC dated 08 January, 2014	The office of IRO, MoEF&CC, Ranchi was requested vide letter no GM-Env & Forest/2022/209 dated 01.04.2022 to carry out inspection and provide certified compliance report. The letter is attached at <u>Annexure-VI.</u> Inspection is expected shortly.
v	Status of Wild Life Conservation approval may be	1. The wild-life conservation plan of Kathara OCP has

SN	OBSERVATION of EAC	COMPLIANCE
	providing along with clarification of budget reflected in Form-2 @ Rs.80 lacs vs Rs.34 lacs given presentation.	<p>been submitted to Divisional Forest Officer, Bokaro. The receiving of Wildlife Conservation Plan for Schedule-I species is enclosed at Annexure-VII.</p> <p>2. As per Form-II uploaded earlier on 26.10.2021, the total fund provision of Rs 85 Lakhs has been made. However, the fund provision was revised and in the Form-II uploaded on 28.02.2022, a capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project was proposed.</p> <p>3. The breakup of proposal activities along with budgetary provisions is given below:</p>

SN	Description	Amount in Lakhs (Rs)
A	Capital cost	
1	Afforestation program	Covered in EIA & EMP
2	Artificial nests, feeding and watering arrangement for birds	5.00
3	Construction of water holes & check dams etc.	10.00
	Sub Total amount	15.00
B	Revenue expenditure / Year	
1	Afforestation program	Covered in EIA & EMP
2	Food facility for animals (Grass land development)	2.00
3	Drinking water arrangement by tanker	2.00
4	Protection arrangements for animals (Fencing, alongwith operation and maintenances)	3.00
5	Training program for villagers	2.00
6	Awareness program, Sign boards, cultural program to create awareness for flora & fauna	1.00
7	Rescue center for animals	1.00
8	Man Power for protection (4 persons)	3.00
9	Financial assistance for wild animals' health care	1.00
10	Artificial nests, feeding & watering arrangement (Pots) for birds	2.00
11	Habitat for grazing animals will be developed at suitable location in consultant with Panchayat	2.00
	Sub Total amount	19.00
	Grand total	34.00

vi	PP shall submit action plan for plantation along peripheral boundary with allocated budget and timeline.	<ol style="list-style-type: none"> 1. Plantation of approx. 140.6 Ha has been carried out on vacant/undisturbed land in the past including 20 Ha of green belt & Safety zone has been carried out till date. 2. The action plan for plantation along peripheral boundary & other areas is given below with allocated budget & timeline. 3. The proposed green belt plan is attached at Annexure-VIII.
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Year	Green Belt & Safety Zone	Backfilled Area	External Dump	Reclaimed OB dump and Embankment	Vacant/ Undisturbed Land*	Total		Cost to be incurred in Rs. Lakhs
	Area (Ha)	Area (Ha)	Area (Ha)	Area (Ha)	Area (Ha)	Area (Ha)	Trees (000)	
Plantation carried out till date	20	0	5	50	65.6	140.6	351500	
Y1	12.5	0	0	0	0	12.5	31250	375

SN	OBSERVATION of EAC				COMPLIANCE				
Y2	12.5	0	0	0	0	12.5	31250	375	
Y3	0	0	0	12	0	12	30000	42	
Y4	0	0	0	12.09	0	12.09	30225	42.315	
Y5	0	0	15	0	0	15	37500	52.5	
Y6	0	0	15	0	0	15	37500	52.5	
Y7	0	0	0	0	0	0	0	0	
Y8	0	0	0	0	0	0	0	0	
Y9	0	20	0	0	0	20	50000	70	
Y10	0	20	15	0	0	35	87500	122.5	
Y11	0	20	15	0	0	35	87500	122.5	
Y12	0	25	0	0	0	25	62500	87.5	
Post Closure Y1	0	25	0	0	0	25	62500	87.5	
Post Closure Y2	0	25	20	0	0	45	112500	157.5	
Post Closure Y3	0	25.9	24.53	0	0	50.43	126075	176.505	
Total Plantation to be carried out	25	160.9	104.53	24.09	0	314.52	786300	1763.32	
Grand Total	45	160.9	109.53	74.09	65.6	455.12	1137800	1763.32	



Plantation carried out on peripheral boundary & Road side plantation

vii	PP to give proof of grievance cell like creation link in web portal and whatsapp number for local people. Awareness program to be done in this regard among the local people.	<p>a) A grievance cell has been created in CCL. The link is given below: https://www.centralcoalfields.in/ccl_cmplnt/</p> <p>b) For registering complaint in Samadhan, Whatsapp no.</p>
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SN	OBSERVATION of EAC	COMPLIANCE
		is 7091093753 and Toll free no. is 18003456501
viii	PP shall provide proof of installation of CAAQMS with picture and online data linked with CPCB and SPCB and further data of piezometer should be shown.	CAAQMS & piezometer has been installed & the photographs are shown below:
		
	Installed CAAQMS at Kathara	Piezometer at Kathara Colliery
ix	PP shall provide drone survey to substantiate environment compliance	Drone Survey to substantiate environment compliance has been carried out. The details are being submitted separately through electronics means.
x	PP shall provide the receiving of Wildlife Conservation Plan for Schedule-I species and breakup of the proposed activities with budgetary provision submitted to the DFO.	Compliance submitted in reply of Point No: v
xi	PP to provide Protection measures for the streams/nallahs from the lease area to Damodar river. The PP must take inputs by other consultant (third party) regarding the river conservation plan of Damodar River.	The detailed river & stream conservation plan is enclosed at Annexure-IX.
xii	Time bound action plan with budgetary provision for commitment made on the issues raised during public hearing in EIA EMP report also	The time-bound action plan with budgetary provisions for commitment made on the issues raised in Public Hearing is enclosed at Annexure-X.
xiii	Plan of action and allocated fund for maintenance and services to provide drinking water pipeline with fittings to the nearby villages with installed RO for 10 years.	<p>The time-bound action plan to provide drinking water pipeline with fittings to the nearby villages with installed RO is given below:</p> <ul style="list-style-type: none"> a) Construction of borewells with solar power operated submersible pumpset, pump house, recharge pit etc for drinking water at Asnapani. (Work Awarded: Timeline- FY 22-23) b) Construction of Bore Wells each with Solar Power operated Submersible pump set, pump house, Recharge Pit etc. for drinking water in Khetko, Hazari, Sadam Purvi, Pipra Tola (Work Awarded: Timeline- FY 22-23) c) Construction of Bore Wells each with Solar Power operated Submersible pump set, pump house, Recharge Pit etc. for drinking water in different locations of Kathara Area. (Under Tender Stage: Timeline – FY22-23) d) Construction of borewells with solar power operated submersible pumpset, pump house, recharge pit etc for drinking water at Bandh Basti (Under Tender Stage: Timeline – FY 22-23) c) 2 pumps of 1000 GPM capacity are deployed for


SN	OBSERVATION of EAC	COMPLIANCE
		<p>domestic water to Jhirki, Yadav tola, Asna pani and Bandh Basti located near project. The annual cost of operation, repair & maintenance of water supply system is approximately 56 Lakhs/annum.</p> <p>e) Water filter plants for the purpose of water supply to nearby villages is already under construction under DMFT scheme by State Govt.</p> <p>The copy of NIT & workorders are enclosed at <u>Annexure-XI.</u></p>
xivv	PP must provide the plan of action and allocated fund for maintenance and services to provide solar street light in the nearby villages and village roads	<p>1. 60-watt LED street light (250 numbers) have been installed at various junctions and community centers in nearby villages in FY 2021-22. The copy of workorder is enclosed at <u>Annexure-XII.</u></p> <p>2. Additional Provision for providing solar lights in nearby villages under CSR for FY 2022-23 has been made. The action plan is given below:</p>

SN	Work	Location	Tentative Cost (in Rs Lakhs)	Expected Date of start of Work	Expected Date of completion of Work
1	Solar lights lights in nearby villages under CSR for FY 2022-23	Bandh Basti Jhriki Basti	9	Aug-22	Oct-22



60-watt LED street light installed near Kathara OCP

xv	PP must furnish the photograph of road constructed from Muslin Tola to Yadav Tola.	The road from Muslim Tola to Yadav Tola is under construction for for a length of approximately 1.1 KM.			
SN	Work	Length (in meter)	Tentative Cost (in Rs Lakhs)	Expected Date of start of Work	Expected Date of completion of Work
1	Construction of Road from Muslim Tola to Yadav Tola	1100	23	April-22	June-22
xvi	Time bound action plan with budgetary provision for commitment for the construction of new bridge at Swang which has been damaged due to which the local persons have to take a diversion of 2 KM.	The iron bridge at Swang has been repaired at a cost of Rs 1.53 Lakhs. The workorder is enclosed at <u>Annexure-XIII.</u> The photograph is shown below:			

SN	OBSERVATION of EAC	COMPLIANCE
		
Iron Bridge repaired near Swang at an cost of Rs 1.53 Lakhs in April-22		
xvii	PP to submit the revised EIA/ EMP report with revised Form-2 by breakup of activity proposed in CER	The text of EIA/EMP report & Form-II is enclosed at <u>Annexure-XIV & Annexure-XV.</u>



CENTRAL COALFIELDS LIMITED
 (A MINIRATNA CAT-1 COMPANY)
 (GOVT. OF INDIA UNDERTAKING)
 OFFICE OF THE PROJECT OFFICER, KATHARA OCP
 KATHARA AREA
 PO: -KATHARA, DIST: -BOKARO, (JHARKHAND)
 JHARKHAND-829116



Ref No. PO/KTC/Forest/2023/ 3312

Date: 24/11/2023

To,
 The Divisional Forest Officer,
 Bokaro Steel City, Purulia Road,
 Bokaro
 E-Mail- dfobokaro@gmail.com

Sub: - Submission of payment details of capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara OCP as per grant of EC.

Ref No.-Your Letter No. 791 Dated- 21.03.2023

Respected Sir,

This is for your kind information that Environment Clearance (EC) with capacity of 1.90 MTPA (Peak) was granted by MoEF&CC vide their Letter No. J-11015/482/2008-IA-11(M), EC Identification No.- EC22A042JH147601, dated-18th October,2022 in respect to Kathara OCP, Kathara Area, CCL, **As per Grant of EC Conditions [No. 4 of (ix)]- "PP shall submit a capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara Mine to Forest Department within six months of issue of this letter"**.

For compliance of above conditions, we are submitting the details of payment done as per the above ref letter regarding capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara OCP as per grant of EC as follows:

SI. NO	DETAILS	Amount (in Rs.)	DD NO.	CHALLAN No.	GRN No.
1.	Capital cost for the balance life of the project	15,00,000/-	827125 Dated 08.11.2023	56 Dated- 24.11.2023	2320289522
2.	Revenue cost for the 1 st Year	19,00,000/-	827092 Dated 30.10.2023	55 Dated- 24.11.2023	2320288781

Therefore, It is requested to kindly provide the confirmation of payment made to this office. This is for your kind information and needful action.

Thanking you

Enclosure:

1.Copy of e-challan payment at SBI Bank, Chas Court Area.

Yours faithfully

Copy for Kind Information: -

1. The General Manager, Kathara Area (Email- gmkt.h.ccl@coalindia.in)
2. The AFM, Kathara Area (Email- envccclka@gmail.com)
3. Office Copy

[Handwritten Signature]
 Project Officer
 Kathara OCP
 Kathara Colliery



e-Challan
Finance Department, Government of Jharkhand

5301



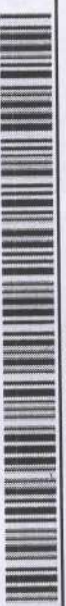
Receiving Dept: Forest, Environment and Climate Change Department

Valid Up To :- 03/12/2023

Remitter's Copy of Dept

GRN:-2320286781

Date:- 24/11/2023 12:08:28



Receiving Office:- BKRFOR001-D F O, BOKARO-DIST FOREST OFFICE, BOKARO

District :- Bokaro
Year:- 24/11/2023
Deposit Treasury:- Bokaro
to :- 24/11/2023

Head(8782) Amount ₹

Head Details 878200103010101 1900000.00

FOREST REMITTANCES

Net Payable Amount:- ₹ 1900000.00

Nineteen Lakh Rupees And Zero Paise Only

For Treasury Use Only(Bokaro)

Challan No and Date: 55 24/11/2023

Identity Proof(Tin(Commercial Tax)) - 20042205379

PAN No:- NA

Remitter Name:- CENTRAL COALFIELDS LIMITED

Address :- KATHARA COLLIERY, BOKARO, 829128

Remarks :- SBI, Chas Court Area Deposit Work

Treasury Officer Signature is not required.

FOR USE IN TREASURY LINK BANK

CHEQUE/DD :- 827092/30.10.2023

Scroll No and (Date) :- 5301

Bank Name :- SBI, BOKARO, CHAS COURT AREA

Note :- Bank Official are requested to update the receipt Online before Stamping.

Signature & Seal of Bank

SBI, Chas Court Area Deposit Work
FOR USE IN TREASURY LINK BANK
24 NOV 2023
SUSMITA ASH
PF ID-1023180

Use seprate page Cut from here



e-Challan
Finance Department, Government of Jharkhand

5301



Receiving Dept: Forest, Environment and Climate Change Department

Valid Up To :- 03/12/2023

Remitter's Copy

GRN:-2320286781

Date:- 24/11/2023 12:08:28



Receiving Office:- BKRFOR001-D F O, BOKARO-DIST FOREST OFFICE, BOKARO

District :- Bokaro
Year:- 24/11/2023
Deposit Treasury:- Bokaro
to :- 24/11/2023

Head(8782) Amount ₹

Head Details 878200103010101 1900000.00

FOREST REMITTANCES

Net Payable Amount:- ₹ 1900000.00

Nineteen Lakh Rupees And Zero Paise Only

For Treasury Use Only(Bokaro)

Challan No and Date: 55 24/11/2023

Identity Proof(Tin(Commercial Tax)) - 20042205379

PAN No:- NA

Remitter Name:- CENTRAL COALFIELDS LIMITED

Address :- KATHARA COLLIERY, BOKARO, 829128

Remarks :- SBI, Chas Court Area Deposit Work

Treasury Officer Signature is not required.

FOR USE IN TREASURY LINK BANK

CHEQUE/DD :- 827092/30.10.2023

Scroll No and (Date) :- 5301

Bank Name :- SBI, BOKARO, CHAS COURT AREA

Note :- Bank Official are requested to update the receipt Online before Stamping.

Signature & Seal of Bank

SBI, Chas Court Area Deposit Work
FOR USE IN TREASURY LINK BANK
24 NOV 2023
SUSMITA ASH
PF ID-1023180



e-Challan
Finance Department, Government of Jharkhand

Receiving Dept: Forest, Environment and Climate Change
Department



Valid Up To :- 03/12/2023

Remitter's Copy of Dept

GRN:-2320289522

Date:- 24/11/2023 12:20:22



Receiving Office:- BKRFOR001-D F O, BOKARO-DIST FOREST OFFICE,
BOKARO

District:- Bokaro

Deposit Treasury:- Bokaro

Year:- 24/11/2023

to :- 24/11/2023

Head(8782)

Amount ₹

Head Details 878200103010101

FOREST REMITTANCES

1500000.00

Net Payable Amount:-
Fifteen Lakh Rupees And Zero Paise Only

₹ 1500000.00

For Treasury Use Only(Bokaro)

Challan No and Date: 56 24/11/2023

Identity Proof(Tin(Commercial Tax)) - 20042205379

PAN No:- NA

Remitter Name:- CENTRAL COALFIELDS LIMITED

Address :- KATHARA COLLIERY, BOKARO, 829128

Remarks :-

Deposit Work

Treasury Officer Signature is not required.

FOR USE IN TREASURY LINK BANK

CHEQUE/DD :-

Scroll No and (Date) :-

Bank Name :- SBI, BOKARO, CHAS COURT AREA

Note:- Bank Official are requested to update the receipt online before stamping.

827185108112023
Cash Received/Transfer
24 NOV 2023
SBI Court Area B. (6550)
PF ID-1023180

Signature & Seal of Bank

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e-Challan
Finance Department, Government of Jharkhand

Receiving Dept: Forest, Environment and Climate Change Department



Valid Up To :- 03/12/2023

Remitter's Copy

GRN:-2320289522

Date:- 24/11/2023 12:20:22



Receiving Office:- BKRFOR001-D F O, BOKARO-DIST FOREST OFFICE,
BOKARO

District:- Bokaro

Deposit Treasury:- Bokaro

Year:- 24/11/2023

to :- 24/11/2023

Head(8782)

Amount ₹

Head Details 878200103010101

FOREST REMITTANCES

1500000.00

Net Payable Amount:-
Fifteen Lakh Rupees And Zero Paise Only

₹ 1500000.00

For Treasury Use Only(Bokaro)

Challan No and Date: 56 24/11/2023

Identity Proof(Tin(Commercial Tax)) - 20042205379

PAN No:- NA

Remitter Name:- CENTRAL COALFIELDS LIMITED

Address :- KATHARA COLLIERY, BOKARO, 829128

Remarks :-

Deposit Work

Treasury Officer Signature is not required.

FOR USE IN TREASURY LINK BANK

CHEQUE/DD :-

Scroll No and (Date) :-

Bank Name :- SBI, BOKARO, CHAS COURT AREA

Note:- Bank Official are requested to update the receipt online before stamping.

827185108112023
Cash Received/Transfer
24 NOV 2023
SBI Court Area B. (6550)
PF ID-1023180

Signature & Seal of Bank

9547



CENTRAL COALFIELDS LIMITED
(A MINIRATNA CAT-1 COMPANY)
(GOVT. OF INDIA UNDERTAKING)
 OFFICE OF THE PROJECT OFFICER, KATHARA OCP
 KATHARA AREA
 PO: -KATHARA, DIST: -BOKARO, (JHARKHAND)
 JHARKHAND-829116



Ref No. PO/KTC/ENV/2022/ 2447

Date: 28.11.2022

To,
 The Member Secretary
 Jharkhand State Pollution Control Board
 HEC Colony, CTI Colony, Sector 3, Dhurwa
 Ranchi, Jharkhand, 834004
 Email-ranchijspcb@gmail.com

Sub: Submission of Appeal cum Reply to the query raised in CTO application (Application No. 13707404) dated-27.11.2022 in respect to Kathara OCP.

Dear Sir,

This is for your kind information that CTO application (Application No.-13707404) was applied in respect of Kathara OCP for which query raised on dated 27.11.2022 which are as follows:

S. No.	Grant of EC Conditions	Query details	Reply by PP
1.	04 of (x)	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.	No Objection Certificate (NOC) for Ground Water Abstraction has been granted by Ministry of Jal Shakti (GoI), DoWR, RD&GR, CGWA vide NOC No.- CGWA/NOC/MIN/ORIG/2022/16352 dated-19thSept,2022 in respect to Kathara OCP, Kathara Area, CCL. (Copy attached as Annexure-I)
2.	04 of (xi)	The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.	1.Statutory requirements in respect to Kathara OCP are as follows: (i) Project Report Approval-The CCL Board has approved vide letter no.-CS/BM/390/2012/269 dated-29.10.2012. (Copy attached as Annexure-II) (ii) Mining Plan and Mine Closure Plan-The CCL Board has approved vide letter no.-CS/BM/485/2020/214 dated-29.05.2020. (Copy attached as Annexure-III) (iii) DGMS Working Permission- Working permission has been obtained from DGMS, Koderma vide Letter No.-314 dated-28/02/2012. (Copy attached as Annexure-V) (iv) DGMS Blasting Permission- Blasting permission has been obtained from

परियोजना प्रशासिकारी
 28/11/22
 Project Officer
 Colliery

DGMS, Koderma vide Letter No.-1636 dated-09/10/2013. (Copy attached as **Annexure-IV**)

(v) Seam Opening Permission- Seam Opening Permission has been obtained from Office of Coal Controller, vide letter No.-CC/14/CCO/98/CS & CC/Tech/re-OP.Perm/kathara colliery/CCL/ 14-15' on dated-05.01.1984 & 21.08.2014 respectively. (Copy attached as **Annexure-VI**)

(vi) Mining Lease copy- Mining Lease Issued by Ministry of coal & mines vide letter no-18016/5/2002-CA for period of 30 years beyond the lease period. (Copy attached as **Annexure-VII**)

2.Matter is under sub-Judice vide File No.PCA-38029/5/2018-PCA.

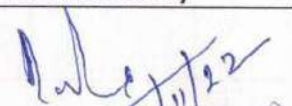
(i) The order has been passed by joint Secretary,Ministry of Coal (GoI) in this regard as mentioned in Para 12(ii) which is stated as follows "***The execution of the 33 notices, as per the annexure, is stayed in exercise of power under rule 55(5) of Mineral Concession Rules, 1960 read with section 30 of the MMDR Act, till further order. Further, no coercive action shall be taken against the Applicants by the Respondents pursuant to the impugned demand notices, including discontinuation of issuance of transit challans for the dispatch of coal.***"

Further RA No. 14 of 2018-PCA is related to Kathara OCP (Copy attached as **Annexure-VIII**)

(ii) Undertaking by the undersigned to comply Judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. (Copy attached as **Annexure-IX**)

(iii) Submission of Demand draft No.-960699 dated-30.09.2022 towards Penalty amount of Rs. 4.11 Crores and BG no.- 0089NDLG00030123 dated-30.09.2022 towards Remediation Plan and Natural & Community Resource Augmentation Plan amount of Rs. 20.33 Crores to the MS, JSPCB vide letter no. GM(Env)/644 dated-01.10.2022.

(Copy attached as **Annexure- X**)


परियोजना पदाधिकारी
कथारा कोलियरी
Officer

Kathara OCP has been stopped operation since 01.01.2022 due to non-availability of CTO. Subsequent, Kathara Washery is also stopped operation due to non-feeding of coal from Kathara OCP. Washery-II & Washery-III grade coal is produced in Kathara OCP. The Manpower of Kathara OCP is 724 and Kathara Washery is 556. As the mine is stopped all the work persons are idle. The production target of Kathara OCP is 3000 Te/day. The rate of coal of Washery-II Grade is Rs.3210/-.

Hence, the loss/day to CCL will be Rs.3210/- x 3000 = Rs.9,630,000/-.

The Revenue loss/day to State Govt. is as follows: -

Royalty @ 14% of Rs.3210/- x 3000 = Rs.1,348,200/day.

DMFT @ 30% of Royalty = Rs.4,04,460/day.

NMET @ 2% of Royalty = Rs.26,964/day.

Management Fee = Rs.1/Te = Rs.3000/day.

Forest Transit Fee Rs.57/Te = Rs.171000/day.

Covid Cess Rs.10/Te = Rs.10 x 3000 = Rs.30,000/day.

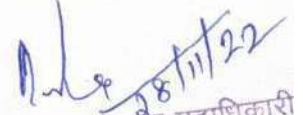
Total loss to State Govt. = Rs.1,983,624/day

Therefore, you are requested to give date for showing cause before 7.12.2022 so that it will help to issue CTO early to start the project, preferably within a day or two.

It is Submitted to you for further needful and kindly requested to grant CTO in respect of Kathara OCP as earliest.

Thanking You.

Yours faithfully



Project Officer जेनी पदाधिकारी

Kathara OCP कथारा कोलयरी

Project Officer

Kathara Colliery

Copy for Kind Information: -

1. Regional Office, JSPCB, H.I.G.-1, Sardar Patel Nagar, Dhanbad-826001 (Email- dhanbadjspcb@gmail.com)
2. The General Manager (Env), CCL Ranchi (Email- envccl@gmail.com)
3. The General Manager, Kathara Area (Email- gmkth.ccl@coalindia.in)
4. The S.O.(Env.), Kathara Area (Email- envcclka@gmail.com)
5. The Office copy.

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CENTRAL COALFIELDS LIMITED
DARBHANGA HOUSE: RANCHI

Annexure

Annexure- XV

**Sub: Forwarding Minutes of the 485th (No. 05 of 2020)
Meeting of the Board of Directors held on 04.05.2020.**

Extract from the minutes of the above meeting, in respect of following item, is appended below:

Item No. 485.4(7): Proposal seeking approval of Mining Plan and Mine Closure plan of Kathara OCP (Capacity 1.9MTPA) with Project Area of 773.23Ha and mine closure cost of 7129.13 Lakhs.

The Board was apprised of the subject proposal of Mining Plan and Mine closure Plan of Kathara OCP (1.9 MTPA) with project area of 773.23 Ha and mine closure cost of Rs. 7129.13 Lakhs, which is required for obtaining extension of validity of EC from MOEF&CC

After detailed deliberations, the Board approved the subject proposal as brought out in agenda note.

Submitted for immediate necessary action to ensure compliances of the directives of the Board. ATR, may please be submitted within 08 days, so that it can be placed before the Board at least 07 days in advance of the next Board Meeting.


Company Secretary

D(T/P&P)

HOD(E&F)

Ref No. CS/BM/485/2020/214

Date: 29.05.2020

**MINING PLAN
&
MINE CLOSURE PLAN
OF
KATHARA OC**

Project Area (Ha)	Capacity (MTPA)
773.23 Ha	1.9

**(Kathara Area)
Central Coalfields Limited
(March, 2020)**

Prepared at

Regional Institute – III

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

Chapter 1

Project Background

1.1 Introduction

Kathara Opencast Project of Central Coalfields Limited lies in the South-Western part of the East Bokaro Coalfields in Bokaro District of Jharkhand. Mining in Kathara block was started in the year 1944 by M/s Anderson Wright and Company on behalf of M/s Kathara Coal Company. A few inclines were started in Kargali and Bermo seam from out-crop (Near present Quarry No.2 area) after putting some trial trenches. From 1949, M/s Tata Iron & Steel Company worked this block, but no systematic mining was started except a few more trial pits and trenches.

The Govt. of India acquired this Colliery under the coal bearing area (acquisition and development) Act 1957 vide declaration SRO No.3810 dt. 23.11.57.

An interim report of Kathara OCP was prepared in May'1988 and approved in July 1988 at an additional cost of 19.85 crores. The project obtained Environment Clearance for capacity (0.960/1.90 MTPA) vide no. J-11015/482/2008-IA.IIM dated 08.01.2014. A revised cost estimate (RCE) of Kathara OCP was approved in 390th Board meeting of CCL on 01.10.2012. As per RCE balance mineable reserve was estimated to be 26.80 MT and life of mine was 15 years at a rated capacity of 1.90 MTPA.

1.2 Purpose of the report

While considering New Kathara Coking Coal Washery for Environmental Clearance on 20.02.2020 Expert Appraisal Committee (EAC), MoEF&CC desired exclusion of washery from the mining plan of Kathara OCP. Accordingly, revised mining plan and mine closure plan is prepared excluding area existing and proposed Kathara Washery.

1.3 Location & Communication

The project is located in Bokaro District of Jharkhand. By road, the project is about 110.00 Km North-East of Ranchi, the capital city of Jharkhand. The project is connected by NH-2 road at Bagodar (30Km) away. The Ramgarh-Dhanbad road is also connected by 20 Km. metalled road. It is also connected with Bokaro Thermal Power Station on Barkakana- Gomoh Loop Line.

The Kathara Block falls between the latitudes $23^{\circ} 45' 19''$ North to $23^{\circ} 46' 22''$ North and longitudes $85^{\circ} 51' 16''$ East to $85^{\circ} 52' 32''$ East.

The nearest railway station from the project is Bokaro Thermal Power Station of SE Railway, 6.0 Km towards north-east on Gomoh-Barkakana loop line. However, the Kathara block has its own Railway Siding. No alternative site has been considered, as this is an existing & running opencast mine project.

1.4 Description of importance to the country and region

Benefits at national level-

Central Coalfields Limited is facing increasing demand of coal because of increased demand from industry and steel sector. Coal production from this mine will help to bridge the gap of demand and supply of coal in India. Coal production from Kathara OC will help to a certain degree to meet the growing demand of coal in the country.

Benefits at regional level-

The project will create employment opportunities both for skilled and semi- skilled persons in the area. Power network will be extended to the project site for the construction & operation of the plant. This network will also facilitate distribution of power in the neighbouring area. The project will also bring about enhanced socio-economic benefits to local population due to expenditure on CSR activities

1.5 Employment Generation:

Kathara OC is an existing project. It has been a major source of direct and indirect employment for nearby villagers in buffer zone.

Chapter-2

Project Description

2.1 Mining Method & Mine Boundary-

The method of mining to extract coal and OB in Kathara Opencast mine is with shovel-dumper combination. Mine boundary optimization (within the mine leasehold area) is considered keeping in view of the following parameters:

- Northern Boundary: The northern surface boundary has been fixed along a safe distance of 45 m from existing road (going to Tenughat and partly diverted). Mine has reached up to its sanctioned Quarry limit. Minimum and maximum advance of quarry surface towards dip direction is 92 m and 264 m from existing quarry surface respectively which becomes the boundary for this mine(RCE).
- Southern Boundary: Along the incrop of Kargali Bottom/combined seam (fixed earlier).Here quarry boundary is limited by central dump and washery site. It has been kept same for this RCE.
- Eastern Boundary: Earlier quarry floor boundary was fixed along the fault F₂F₂.Same Boundary parameters are maintained in this RCE. Eastern side of the mine is Colony no 4 of CCL and external dump. Mine depth at this end becomes 225 m which is the deep most point of this proposed mine.
- Western Boundary: The western boundary is same as considered in earlier sanctioned report and is fixed at 60 m distance from land acquired boundary. West side of the mine is Jhirki Tola.

2.2 Geological and Mining Characteristics

The geological and mining characteristics of the Kathara OC have been summarized in table below-

Geological and Mining Characteristics of Kathara OC

Sl. No	Seam/parting	Unit(m)	Amount
A. Coal Seams Thickness			
1	Kathara Seam	m	4.0
	Uchitdih	m	2.0
	Uchitdih A	m	1.0
	Kargali Bottom/Top/Combined	m	34.0

2	Dip of Seam	degree	12-25 degree
3	Sp Gravity of Seam		
4	Kathara Seam	t/cum	1.48
	Uchitdih	t/cum	1.45
	Uchitdih A	t/cum	1.46
	Kargali Bottom/Top/Combined	t/cum	1.55
5	Drilling Category		VIII
6	Excavation Category		Cat III
B. Overburden			
1	Top OB above Kathara Seam	m	40
	Parting between Kathara and Uchitdih Seam	m	25
	Parting between Uchitdih and Uchitdih A Seam	m	6
	Parting between Uchitdih A and Kargali Seam	m	60
2	Overburden Volume Wt	t/cum	2.4
3	Drilling category		X
4	Excavation Category		Cat III 50% +Cat IV 50%
C. Quarry parameters			
1	Maximum length of Quarry	km	
	At Surface		3.4
	At floor		3.0
2	Maximum width of Quarry along dip	m	
	At surface		175
	At floor		139
3	Maximum depth of quarry	m	145
3	Maximum lift of coal	m	138
5	Area of excavation at the surface	Sq km	1.09

2.3 Coal Reserves and Life of the Mine

Seams	Mineable Res. (Mte)	Particulars	OBR (Mcum)
	Total		Total
KATHARA	2.48	Top OB	44.04
UCHITDIH	1.22	Part bet. KATH & UCHIT	10.50
UCHITDIH A	0.70	Part bet. UCHIT & UCHIT A	5.85

KARGALI TOP	10.86	Part bet. UCHIT A & KAR T	24.49
KARGALI BOTTOM/COMB.	11.54	Part bet. KAR T & KAR B	7.56
Total	26.80	Total	92.44
S.R	3.45		

The production figures for the project since 2011-12 (year of approval of RCE) is given below:

S.No	Year	Production (MT)
1.	2011-12	0.211
2.	2012-13	0.217
3.	2013-14	0.465
4.	2014-15	0.658
5.	2015-16	0.923
6.	2016-17	0.937
7.	2017-18	0.493
8.	2018-19	0.733
Total		4.637

About **4.637** MT of coal has already been mined out. Thus the balance reserve in mine is about 22.16 MT and accordingly the mine life will be about **12 years** at a capacity of 1.90 MTY.

2.4 HEMM PROVISION

Following points were considered while provisioning the HEMM for Coal and OB transportation.

COAL

- Quantity of Coal and OB, where Top OB above Kathara Seam is outsourced and Coal from Kargali Bottom/Top/Comb. seam is outsourced. HEMM are provided for balance coal and OB .
- Up gradation of existing HEMM as per CIL Norms.
- Coal will be mined by 10.0 cum Electric Rope Shovel in combination with 100T rear dumpers. One 5.5 cum Diesel Hydraulic Shovel with backhoe is provided for wedge removal, mixed benches working and selective mining to avoid grade slippage. Dozer with ripper attachments are provided to facilitate in handling faulted area operation and temporary sump formation in horizontal slicing method.
- For the estimation of the dumpers population in coal, the lead for coal transportation has been considered for each year and for each seam. Coal will be transported through batters. Ramps are designed (1 in 10 gradient) to facilitate HEMM movement in between different horizon.

- Possibility of haul road on floor is ruled out due to steep gradient and faulted properties of coal seam floor.
- A hydraulic shovel with backhoe is proposed in common to deal with developed workings from upper benches. Adequate precautions are required to deal with fire as soon as it appears. A 2.5 Cum Back hoe, F E loader and water sprinkler have been provided for common mining activities.
- Productivity of these FE loader and backhoe has not been considered while calculating the requirement of HEMM for the mine. Coal will be transported from both flanks of mine to Kathara Washery through the haul road along batter in the flanks and surface roads.

OB

- OB / partings are envisaged to be removed by 10 cum Electric Rope Shovel with 100 T Rear Dumpers. Identical set of HEMM are provided to maintain uniform inventory (except one 5.5 cum Diesel Hydraulic shovel).
- OB will be transported through batters on the flanks of the mine similar to Coal transportation. Ramp is provided (1 in 10 gradient) to facilitate HEMM movement in between different horizon to the external/Internal dump.
- Horizon of each haul road is linked to internal dump horizon in the quarry; this will coincide with the internal dump already done in the mine over decoaled area. Toe of lowermost dump horizon (+130RL) has been kept at a minimum and maximum distance of 110 m and 270 m respectively to avoid any dump slope failure. However if needed the floor of quarry may be leveled by dozing or blasting to accommodate the first layer of dump which is +100RL or +130RL at some places. Slope stability monitoring radar may be used for monitoring dump slope movements and advance alarm.
- A safe distance of 40 m has been taken in between two dump horizon/levels for safety of dump slope towards running face of the mine. As mine is already having internal as well as external integrated dump; it is proposed to level at some places (where the proposed dump level coincides with the existing dump) the existing dump with the help of Dozer and Grader to reduce the angle of slope of the dump.
- Proposed slope of dump is designed at 27 degree from quarry floor. RL of Existing Internal /external dump to the left of Washery is around +300 RL and towards right side of Washery is around +282 RL. To accommodate the dump internally and due to lack of non coal bearing area for external dump, it has been designed to increase the dump height up to +340 RL and +310 RL respectively. Height of proposed external dump from surface topography varies from is 82m (minimum) to 90m (maximum)

2.5 HEMM PRODUCTIVITY

Table-2: Shovel Productivity (Mcum per year)

Shovel Capacity	100 Te Dumper	
	Coal	OB
10CuM Electric Rope Shovel	2.310	2.178
5.5CuM Diesel Hydraulic Shovel with Backhoe	1.78	

Table-3: Dumper Productivity (Mcum per year)

Lead in Kms	5.5 Cum Diesel Hydraulic Shovel with 100 T Rear Dumper		Lead in Kms	10.0 Cum ERS with 100 T Rear Dumper	
	COAL	OB		COAL	OB
1	0.441	0.432	1	0.47	0.39
2	0.343	0.334	2	0.36	0.30
3	0.289	0.282	3	0.30	0.25
4	0.252	0.246	4	0.26	0.21
5	0.226	0.221	5	0.23	0.19
6	0.208	0.204	6	0.21	0.17
7	0.195	0.191	7	0.20	0.16

2.6 Coal Handling & Dispatch System

Coal produced from the Kathara OCP is transported to Kathara Washery. Kathara Washery is at a distance of 3 Km from mine.

2.7 Power Requirement

Kathara Colliery has 3 no. Of quarry substations-

Sub-station 1- 2 x 1 MVA 11/3.3 KV

Sub-station 2- 3 x 2 MVA 11/3.3 KV

-1 x 5 MVA 11/6.6 KV

Sub-station 3- 2 x 2 MVA 11/3.3 KV

2.8 Water Requirement

Total industrial and domestic demands of Kathara OC are being fulfilled by mine water discharge. The approximate water usage are as given below.

S.No	Description	Annual Water discharge/consumption (m ³ /day)
1.	Industrial water consumption	500
2.	Domestic water consumption	2500

2.9 Land Requirement

The proposed land use during mining is as given below.

S.No	Description of land	Original Area in Ha	Revised Area in Ha
1	Quarry	258.46	258.46
2	OB Dump	150.91	150.91
3	Plantation		
4	Built-up	122.87	122.87
5	Infrastructure	84.03	64.54
6	Vacant Land & Green Belt	176.45	176.45
	Total	792.81	773.23

Remarks- 19.49 ha of area of washery (existing and proposed) is excluded from the project area.

Chapter-3 Project Planning

3.1 Mining reserves

The mineable reserve of Kathara OC is estimated as 22.16 Mte with corresponding volume of O.B estimated as 76.4Mm³.

3.2 Life of the Mine : The life of mine is 12 years.

3.3 Proposed Calendar Plan

Year	COAL	OB
Y1	1.41	5.55
Y2	1.90	6.55
Y3	1.90	6.55
Y4	1.90	6.55
Y5	1.90	6.55
Y6	1.90	6.55
Y7	1.90	6.55
Y8	1.90	6.55
Y9	1.90	6.55
Y10	1.90	6.55
Y11	1.90	6.55
Y12	1.75	5.35
TOTAL	22.16	76.4

3.4 Proposed Post Mining Land Use Plan

Land Use	Plantation	Water Body	Public Use	Total (in Ha)
External OB Dump	150.91	0	0	150.91
Excavation (Quarry)	160.90	97.56	0	258.46
Roads	0	0	40	40
Built Up & Infrastructure Area	0	0	147.41	147.41

Green Belt	176.54	0	0	176.54
Total	488.35	97.56	187.41	773.32

CHAPTER-4

INFRASTRUCTURE

4.1 WORKSHOP

A Base workshop exists for the repair and maintenance of HEMM deployed in Kathara OCP. This workshop is not sufficient for the maintenance of HEMM. So, a Field workshop has been proposed and the existing workshop will be utilized as Base workshop. In the Field workshop, only Excavation workshop has been provided for the running repair & maintenance of HEMM deployed in the mine. Any minor/medium repair will be done at the Base workshop. This Field workshop will be dependent on the Base workshop. Any major overhaul & medium repair of equipment and manufacturing of spares on large scale are beyond the scope of this workshop. These works will be carried out in Regional workshop or Central workshop, Barkakana. Minor repair of assemblies and sub-assemblies of pumps, electrical, etc. deployed in the project will be performed in an existing base workshop.

4.1.1 FIELD WORKSHOP

In this Field workshop only Excavation workshop has been provided for the running repair & maintenance of HEMM deployed in the mine. This field workshop will have the facilities for attending to the scheduled maintenance & daily maintenance of HEMM deployed in the mine.

Broadly this Field workshop will have the dumper daily maintenance shop, dumper schedule maintenance shop, dozer repair shop & Washing stations for dumper & dozer.

4.1.2 E&M WORKSHOP

A Light vehicle repair shop is existing at the base workshop. There is no separate E&M Workshop. The E&M Workshop is dependent on existing base workshop for the repair & maintenance of E&M equipment deployed in the project such as Pumps, Electrical etc.

4.1.3 PROJECT STORE

A full fledged project store already exists in this project to meet the total requirement of proposed workshop as well as additional requirement of the project. Only day-to-day requirement of spares and consumables will be kept in the workshop store for smooth functioning of workshop.

4.1.4 WORKING SCHEDULE

This workshop will work mainly in two shifts of 8 hrs. but a group of technical personnel will also be provided in the third shift to look after the field repairs of mining equipment deployed in this shift.

4.2 PUMPING

4.2.1 PUMPING CAPACITY REQUIRED

Probable water accumulation on the day of maximum rainfall considering seepage and underground precipitation will be 197654 m³ & so required pumping capacity is 1647 m³/hr . 7 nos of 540 m³/hr, 200 m head pumps have been provided to dewater the accumulated water from quarries for future mining.

4.2.2 SELECTION OF PUMPS AND DELIVERY RANGES:

Following pumps have been provided.

a) PUMPS:-

	Qty(nos)	Discharge(m ³ /hr)	Head (m)
Main Pumps	4	540	300
	7	540	200
Low Head Pumps	1	150	60
Diesel Pump	1	300	300
Face Pumps	2	50	60
Slurry Pumps	2	80	45

b) SELECTION OF DELIVERY RANGES

The delivery ranges for different capacity of pumps have been selected for nominal diameters as 300mm, 250mm, 150mm and 100mm for the pumps as per manufacturer's standard.

Chapter-5

Cost Estimates

5.1 Mine Closure

5.2 Details of Escrow Fund for Mine Closure

As per MOC guidelines, a corpus escrow account @ Rs. 6.0 lakhs per Ha (As on 2009) of the property leasehold shall be opened with the coal controller organization to meet the expenses of mine closure. Thus the total expenditure on his front may be calculated in following manner:

The cost expenditure of closure activities during the operation and 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, if required, 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).

Basis of Calculation

ESCROW ACCOUNT	
Project Area (Ha)	773.23
Escrow amount per Ha for OC project as on Aug, 2009 (in Rs Lakhs)	6
Corpus Value based on Aug, 2009 rate (in Rs. Lakhs)	4639.38
WPI as on Aug, 2009 (base year 2004-05)	129.6
Corpus value based on Aug,2009 *161/129.6 (Index based on April 2012 WPI having base year 2004-05) (Rs. Lakhs)	5763.43
WPI as on April, 2019 (base year 2011-12)	120.9
Current value of Corpus (in Rs. Lakh)	6967.98
Amount deposited till 01.04.19 (in Rs. Lakh)	6438.07
Balance Corpus for which provision is to be made as on 01.04.19 (in Rs. Lakh)	529.91
Balance Life of mine as on 01.04.19 (in years)	12
Annual corpus (Balance corpus / Balance life, in Rs. Lakh)	
Year	Amount in Lakh (Rs.)
1	44.16
2	46.37
3	48.69

4	51.12
5	53.68
6	56.36
7	59.18
8	62.14
9	65.24
10	68.51
11	71.93
12	75.53
Total Mine closure cost (in Rs Lakhs)	702.89
Total Mine Closure Cost	7140.96

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. 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).

5.3 BREAK-UP OF MINE CLOSURE COST AS PER CMPDI NORMS

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.)	Remarks
A	Dismantling of Structures			To be included in final mine closure plan
	Service Buildings	0.2	14.28	
	Residential Buildings	2.67	190.66	
	Industrial structures like CHP, Workshop, field sub-station etc.	0.3	21.42	
B	Permanent Fencing of mine void and other dangerous area			To be included in final mine closure plan
	Random rubble masonry of height 1.2 metre including levelling up in cement concrete 1:6:12 in mud mortar	1.5	107.11	
C	Grading of highwall slopes			To be included in final mine closure plan
	Levelling and grading of	1.77	126.39	

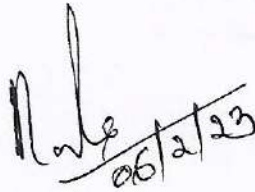
	highwall slopes			
D	OB Dump Reclamation			
	Handling/ Dozing of OB Dump and back filling for progressive mine closure	71	5070.08	Equal weightage throughout the life of the mine
	Handling/ Dozing of OB Dump and back filling for final mine closure	17.66	1261.09	To be included in final mine closure plan
	Bio-reclamation including soil spreading, plantation and post care	0.4	28.56	Equal weightage throughout the life of the mine
E	Landscaping			
	Landscaping of the open space in lease hold area for improving its esthetic	0.3	21.42	Equal weightage throughout the life of the mine
F	Plantation			
	Plantation over cleared area obtained after dismantling	0.5	35.70	To be included in final mine closure plan
	Plantation around the quarry area and in safety zone	0.2	14.28	Equal weightage throughout the life of the mine
	Plantation over the external OB Dump	0.02	1.43	Equal weightage throughout the life of the mine
G	Post Closure Env Monitoring/ testing of parameters for three years			For three years after mine closure
	Air Quality	0.22	15.71	
	Water Quality	0.2	14.28	
H	Enterpreneurship Development (Vocational/ skill development training for sustainable income of affected people	0.26	18.57	Equal weightage throughout the life of the mine
I	Miscellaneous and other mitigative	2	142.82	Equal weightage throughout the life of the mine

	measures			
J	Post Closure Manpower cost for supervision	0.8	57.13	To be included in final mine closure plan
	TOTAL	100	7140.96	

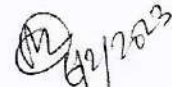
Central Coalfields Limited
Kathara Colliery

Implementation status of Reclamation measures

1. There is 87768 M³ of top soil has been stacked at (W1016-W1122) and (N212-N284).
2. Internal dumping is regularly being done to backfill the excavated area. Till date 225000M³ of internal OB dumping has been done.
3. Top soil will be utilised in progressive way as per mine closure plan.


06/2/23

Project officer
Kathara Colliery


09/2/23

Officer (Survey)
Kathara Colliery

PO (KTS) / 22-23 / 6034 Dt 06/02/2023



कर्मणो भवति मृतमश्नुते

CENTRAL COALFIELDS LIMITED

सेंट्रल कोलफील्ड्स लिमिटेड

(A Miniratna Subsidiary Company of Coal India Ltd.)

OFFICE OF THE PROJECT OFFICER

KATHARA COLLIERY, PO – KATHARA,

DIST – BOKARO, JHARKHAND, 829116

Annexure-XVII

Ref. No.: -PO(KTC)/IME/PME/VTC/2023/720

Date: 25.05.2023

Sub: Details of PME & VTC in respect of Kathara Colliery, Kathara Area, CCL

Vocational Training

Year	Departmental		Contractual	
	Target	Refresher Training	Target	Refresher Training
2022	132	137	00	05

IME/ PME Details:

YEAR	IME (Cont.)	PME Target	Actual PME done
2022	00	201	204


25/5/23
Safety Officer
Kathara Colliery



Annexure-XVIII

कार्यालय :- वन प्रमण्डल पदाधिकारी, बोकारो वन प्रमण्डल, बोकारो।

BLOCK-A, VAN BHAWAN, PURULIA ROAD, CHAS, BOKARO-827013

E-mail : dfo-bokaro@gov.in & bokarodfo@gmail.com

Phone/Fax No : +91-6542-265142

पत्रांक :- 07

दिनांक :- 05/01/2022

सेवा में,

परियोजना पदाधिकारी,
कथारा कोलियरी,
पो0-कथारा,
जिला-बोकारो, पिन कोड-829116

विषय :- कथारा कोलियरी से आरक्षित वन, राष्ट्रीय उद्यान और वन्य जीव अभ्यारण्य की दूरी के संबंध में।

प्रसंग :- आपका पत्रांक-3427 दिनांक-06.10.2021 एवं वन क्षेत्र पदाधिकारी, तेनुघाट वन प्रक्षेत्र का पत्रांक-299 दिनांक-28.12.2021

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के संबंध में सूचित करना है कि कथारा कोलियरी से आरक्षित वन, राष्ट्रीय उद्यान एवं वन्य जीव अभ्यारण्य की दूरी के संबंध में वन क्षेत्र पदाधिकारी, तेनुघाट वन प्रक्षेत्र से प्रतिवेदन की मांग की गयी। वन क्षेत्र पदाधिकारी, तेनुघाट वन प्रक्षेत्र के पत्रांक-299 दिनांक-28.12.2021 द्वारा सूचित किया गया है, कि कथारा कोलियरी से 10 (दस) किलो मीटर की त्रिज्या में कोई भी आरक्षित वन राष्ट्रीय उद्यान एवं वन्य जीव अभ्यारण्य नहीं है।

सूचनार्थ प्रेषित।

विश्वासभाजन,

वन प्रमण्डल पदाधिकारी,
बोकारो वन प्रमण्डल, बोकारो।

05/01/2022



CENTRAL COALFIELDS LIMITED
(A MINERATNA CAT-I COMPANY)
(GOVT. OF INDIA UNDERTAKING)
OFFICE OF THE GENERAL MANAGER
KATHARA AREA
PO:-KATHARA, DIST:-BOKARO,(JHARKHAND)
JHARKHAND-829116

Annexure-XIX



Ref. No. : 6 M / KTA / PS / 22 / 2022 / 02

Dated: 04/04/22

To,
The Divisional Forest Officer
Bokaro, Jharkhand

Sub:- Submission and approval of wildlife conservation plan for the compliance of 27th (A) MoM of EAC, Delhi in respect of Kathara OCP, Kathara Area.

Dear Sir,

As per Minutes of 27th (A) meeting of the EAC was held on 3rd March 2022 vide S.No (X) that "Project Proponent shall provide the receiving of Wildlife Conservation Plan for Schedule-I species and breakup of the proposed activities with budgetary provision submitted to the DFO"

Therefore, a conservation plan for observed schedule-I species has been prepared by Wolkem India limited under supervision of CMPDI and submitted to your good office for kind approval.

Thanking You

Encl:- As above

[Signature]
05.4.2022

Yours faithfully,

[Signature]
4/4/22
General Manager
Kathara Area

Copy to:

1. Project Officer, Kathara OCP
2. Staff Officer (P&P), Kathara Area
3. Staff Officer (Env), Kathara Area
4. Office Copy

[Signature]
05/4/22

Annexure-VI

Conservation Plan for Observed
Scheduled-I Species

CHAPTER 10

CONSERVATION PLAN FOR PLANTS & ANIMAL OF THE STUDY AREA

10.1 INTRODUCTION

Conservation of Wildlife is necessary to recognize the importance of nature and other wildlife species. It is important to protect the endangered plants and animal species along with their natural habitat. The main concern is to preserve the habitats so that the future generations of wildlife and even humans can enjoy it. Therefore, we can say that the **Conservation of Wildlife** is necessary to recognize the importance of nature and other wildlife species.

Govt. role of conservation of wildlife:-

- ♣ Wildlife protection Act 1972.
- ♣ Project Tiger 1972-73.
- ♣ Forest Protection Act 1980-88.
- ♣ Anti-poaching agencies.
- ♣ State wildlife & Forest department.
- ♣ Ministry of Environment & Forests
- ♣ Wildlife conservation society

Conservation of Biodiversity has become the most important requirement of the present day world. This is because survival of the man depends upon the biodiversity. Biodiversity consists of two components: richness, or taxonomic diversity, and evenness, or the distribution of individuals among taxa. Anthropogenic factors are eroding both the richness as well as evenness components of the biodiversity, jeopardizing the survival of human race itself.

This realization has initiated serious efforts towards conservation of both the components of biodiversity. One of the causes for the erosion of biodiversity has been recognized to be the mining activity. Some of the important minerals of our country are lying below the forests. Opencast mining of such areas are bound to result in the destruction or fragmentation of the habitat. If the area under mining is not having any endemic species then the mining will result only in the reduction in the gene pool, i.e. the evenness component of the biodiversity. However, mining an area with endemic species will have more drastic effect on biodiversity. Similarly, if the area falls under crucial migratory route of a species then also the mining may have some impact on such migratory species. Thus, it is required to evaluate the area, going to be mined, for any endemic and endangered species and any direct or indirect impact on biodiversity. Jharkhand is rich in biodiversity of medicinal plants. Bokaro District is well endowed. The buffer zone is covered by several patches of protected forest.

Schedule I species recorded from the buffer zone-

All vegetation data of this study were collected during post-monsoon 2020 around 10 km radius from the project site. During the present investigation of buffer zone, plant species which comes under the RET category has not been observed. During the site visit avifaunal species only Peafowl has observed in core zone as well as buffer zone. It is also reported in secondary data of forest department and local villagers also confirm it. Python & Monitor lizard are also reported in secondary data of forest department and also confirmed by local person, mine workers and forest guard. All three are belong to Schedule-I of Wildlife Protection Act 1972 & needs to prepare conservation plan.

10.2 CONSERVATION PLAN FOR PEACOCK

As per the secondary source (Interview from the local people) it was noted that peafowl is present in both, village and forest areas. Day time they temporarily move towards the surrounding agriculture areas for feeding while during night time roosts on the trees present in the village.

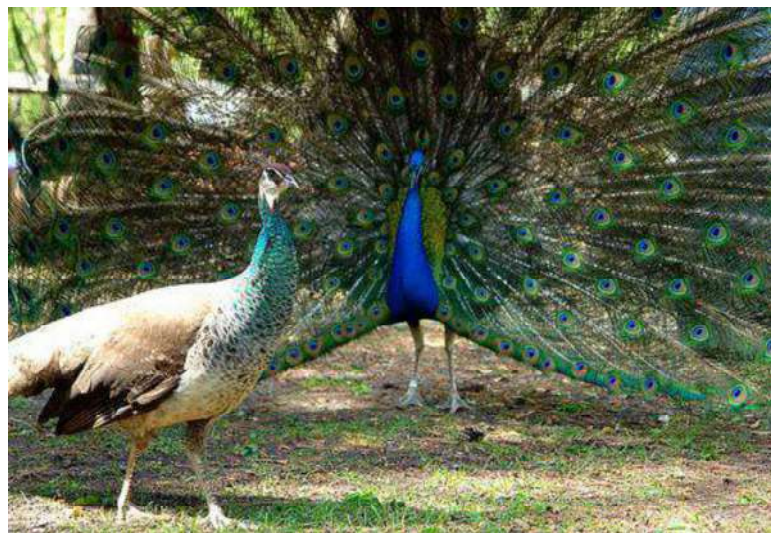
Peacock or Indian peafowl (*Pavo cristatus*) is a familiar and universally known large pheasant. It is a National Bird of India, belongs to Schedule I (part III) of the Wildlife (Protection) Act 1972 was present in both, village and forest areas of the study area. (as per secondary source

Interview from the local people). The male has a spectacular glossy green long tail feathers that may be more than 60 percent of the bird’s total body length. These feathers have blue, golden green and copper colored ocelli (eyes). The long tail feathers are used for mating rituals like courtship displays. The feathers are arched into a magnificent fan shaped form across the back of the bird and almost touching the ground on both sides. Females do not have these graceful tail feathers. They have the fan like crest with whitish face and throat, chestnut brown crown and hind neck, metallic green upper breast and mantle, white belly and brown back rump and tail. Their primaries are dark brown.

Table 9.1 Scientific Classification Of Peacock

Kingdom	Animalia
Phylum	Chordata
Class	Aves
Order	Galliformes
Family	Phasianidae
Genus	Pavo
Species	<i>Pavocristatus</i>
Vernacular name	Indian Peafowl
Conservation status	
IUCN	Least concern (IUCN- 3.1)
IWPA	Schedule I

Figure: 9.1 Photograph Showing Indian Peafowl (Peacock)



Source- picture is taken from internet

Study Approach

Buffer zone of the study area has been reported as a habitat of Schedule I species *Pavo cristatus* commonly known as peacock. At first, a detailed biological survey of the core zone and buffer zone was carried out to understand the status distribution of the species in the study area. Also, questionnaire survey was carried out to understand the recent status of peacock sightings and their movements.

Habitat Use

No any peacock was sighted in the core zone. All the direct sightings (as per Interview from the local people) of the peacock were located near the human dominated and forest areas. This species is well adapted to natural village environment setting. According to the villagers, peacock is present in both, village and forest areas. Day time they temporarily move towards the surrounding agriculture areas for feeding while during night time roosts on the trees present in the village.

Life Cycle

Call	Kee-ow, Kee-ow, Kee-ow, Ka-an, Ka-an, Ka-an, Kok-kok, Kok-kok, cain- kok
Breeding	April-September
(Project area) Nest site	On ground in undergrowth(wild) On buildings by semi-feral birds in villages
Bodylength	180-230 cm
Weight	2750-6000gm
Habitat	In the undergrowth in deciduous forests near streams Tall trees for roosting

Food Habits

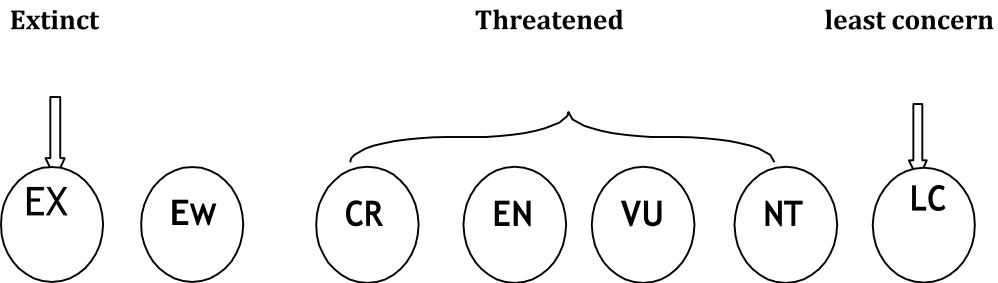
Peafowls are omnivores, eating plant parts, flower petals, seed heads, insects and other arthropods, reptiles and amphibians. In the study area, dense tree canopy cover supports good insect diversity which is very common food for peafowl.

Conservation and Relationship with man

The great beauty and popularity of the Indian Peafowl has ensured its protection throughout most of its native ranges. It is a National bird of India. The peafowl is prominent in the mythology and folklore of the Indian people. The Hindus consider the bird to be sacred because of its association with Lord Krishna who used to wear its feather as crown (Mor Mokut). It is

also associated with the God Kartikeya, son of the Lord Shiva and Parvati and brother of Lord Ganesh. It is “Vaahan” (transport) of Lord Kartikeya.

CONSERVATION STATUS



IUCN	:	Least Concern
IWPA	:	Schedule-I
CITES	:	Not listed

Buffer Zone as a Peacock Habitat

Present survey of the peafowl in the buffer zone of the project site cleared that; peafowl is using both, village adjacent habitats and forest habitats of the buffer zone. However, the following points can give an insight on the overall status of peafowl in the study area and thereby plan for better management strategies related to proposed project activities.

People of the surveyed villages were well aware of the habits and habitats of peafowl in the study area. Moreover, local people are against hunting and poaching of the Peacocks. In the buffer zone, peafowl uses agriculture (adjacent to village) and forest habitats as a feeding and breeding ground. Some of the peacocks are taking shelter in the village adjacent habitats while some prefer to rocky forest hills. It clearly indicates that, peafowl normally uses human associated and forest habitats.

From above study, it has been visualized that, the proposed project will not have any significant impact on peacock in terms of their normal movements and other activities. However, it is necessity to take some management options like habitat improvement in the villages located in the vicinity of the project site. So, habitat improvement programme (plantation of local/ native plant species) will be undertaken indifferent villages located in the close vicinity of the project

area. Under this programme saplings will be distributed in the nearby villages with the consultation of the local forest department.

Threats

Threats to the peacocks in the area are:

- 1) Habitat loss, specially the shortage of tall trees in and around the villages for roosting and for providing shade during hot summer months.
- 2) Shortage of drinking water for the birds during the hot summer days.
- 3) Casualties caused by eating chemically treated agricultural crop seeds.
- 4) Illegal hunting by some poachers.

In the study area, all the villages surveyed are against hunting or poaching of the people. Peacock conservation plan has to address these threats.

Conservation Measures

Direct and indirect approach is required to provide effective conservation, which is recommended as under:

1. Increasing the tree cover in the buffer area for shelter and roosting of peacocks. This will be achieved by planting of tree groves (a group of trees that grow close together, generally without many bushes or other plants) in buffer area. Some local species such as Neem, Siris, Ashok, Amaltash, Ardu, Shesham, Peepal tree etc. will be planted. Planting of tree groves in school compounds in the villages of buffers area will be planted as per the plantation programme.
2. By conducting awareness programmes (community and school level) for conservation of peacocks in the area and also through organizing competitions during “Wildlife Week” and “Van Mahotsave” celebrations.
3. Some provision of rewards to informers for the control of poaching and illegal trade in wildlife.
4. Carrying out census and research projects to know the potential threats and population status of the species.
5. Provision of veterinary care and cages for injured or sick deformed birds.
6. Suggest strategies to minimize negative impacts of changing environment in nearby area of peacock populations and to promote conservation of peacock habitats.

10.3 CONSERVATION PLAN FOR PYTHON

General description

The Indian Rock Python is thick-bodied and smooth scaled, head broader than neck, eye has vertical pupil and upper surface of head has large scales of different shapes and average length of 18ft. The overall colour of the rock Python varies from body full of irregular shaped patches with main dorsal colour white mixed with yellow, grey or brown; colour of patch mostly dark brown or blackish, between these patches yellowish-brown colour exists.

Python is large snake generally reaching up to 6 meters and in extreme cases up to 9 metres, the Indian Python inhabits lowland forests. It is adept at both swimming and climbing trees. As with other pythons, it kills its prey which are mainly small mammals by the process of constriction and suffocation.

Taxonomy

Kingdom	Animalia
Phylum	Chordata
Class	Reptilia
order	Squamata
Family	Serpentes
Sub-family	Pythonidae
Genus	Python
Species	molurus

Figure 9.2 Photograph showing Python



Source- picture is taken from internet

Behaviour and Food Habit

Python molurus is a solitary species. Mating is the only time that these snakes are commonly found in pairs. Indian pythons will generally move only when food is scarce or when threatened. Indian pythons are often found in or near water. They are expert swimmers and can stay submerged without breathing for up to thirty minutes at a time. During colder months, Indian pythons usually remain in brief period of hibernation until the temperature rises again.

They are carnivorous. Its diet consists mostly of rodents and other mammals. These snakes have very poor eyesight. To compensate for this, the species has a highly developed sense of smell, and heat pits within each scale along the upper lip, which sense the warmth of nearby prey. Indian pythons kill prey by biting and constricting until the prey suffocates.

Reproduction

Python molurus reaches sexual maturity between 2-3 years of age provided the proper body weight is met. Gestation period lasts between 2-3 months and the female lay up to 100 eggs approximately.

Distribution and Habitat

The nominate subspecies is found in India, southern Nepal, Pakistan, Sri Lanka, Bhutan, Bangladesh, and probably in the north of Myanmar. They occur in a wide range of habitats, including grasslands, swamps, marshes, rocky foothills, woodlands, "open" jungle, and river valleys. They depend on a permanent source of water. Sometimes, they can be found in abandoned mammal burrows, hollow trees, dense water reeds, and mangrove thickets.

Conservation Measures

Plantation details and programs: (In consultation with forest department) Preferred roosting trees for the herbivorous species and Native or fruit bearing species plantation would be specially taken up in the green belt area of the project and nearby area.

Captive Breeding for species Indian Python are popular as it can be easily maintained in captivity.

Small earthen material lined water tanks will be created in the Buffer Zone to make sure availability of clean drinking water to the species. The availability of clean water will ensure a permanent stay of species in these areas.

Awareness Program for locals to reduce minimise their dependence on forest. Like fodder, wood for fuel etc, aware youth and students for eliminating poaching which consequently improve the

status of wildlife also Campaign against buying live animals or materials made of animal horns, teeth, carapace and corals as gifts.

10.4 CONSERVATION PLAN FOR Indian Monitor lizards (*Varanus bengalensis*):-

A. General description

The Bengal monitor or common Indian monitor is a monitor lizard found widely distributed over the Indian Subcontinent, as well as parts of Southeast Asia and West Asia. This large lizard is mainly terrestrial, and grows to about 175 cm from the tip of the snout to the end of the tail. Young monitors may be more arboreal, but adults mainly hunt on the ground, preying mainly on arthropods, but also taking small terrestrial vertebrates, ground birds, eggs and fish. Although large monitors have few predators apart from humans who hunt them for meat, younger individuals are hunted by many predators. They do not possess any venom glands or delivery mechanisms but folk myths around India hold these lizards as venomous.

The species is distributed mainly in the lower elevations and is found both in dry semiarid desert habitats to moist forest. They are often found in agricultural areas and are mainly found below 1500m altitude.

Classification

Kingdom	Animalia
Phylum	Chordata
Class	Reptilia
order	Squamata
Family	Varanidae
Genus	Varanus
Species	bengalensis

Figure 9.3 Photograph showing Varanus



Source- picture is taken from internet

B. Behaviour

In the wild, Common Indian Monitor is almost completely solitary. Much of the day time is spent in constant movement, searching for food. Common Indian Monitor is more likely to interact with one another during the peak breeding season, when males compete for mates.

C. Reproduction and Social Organization

Individuals mate in June, July, and early August and the shelled eggs are laid any time from July through early September. The incubation period is from 4 to 8 months. Young Bengal monitors are very secretive.

D. Breeding

There are three major phases in the reproductive cycle of female *V. bengalensis*. Usually, mature females of *V. bengalensis* will produce only one clutch annually. The average number of eggs laid per year is 20, of which about 80% typically hatch. This results in about 16 young per female per year. Additionally, because *V. bengalensis* has a large clutch size relative to most tropical lizards, neonates are subject to relatively high predation rates. Because of predation, roughly half of the offspring do not live past the age of two.

E. Reproductive Behaviours

Both males and females become sexually mature at approximately 2.5 to 3 years of age, both in the wild and in captivity. In female Bengal monitors, reproductive efforts occur throughout most of their life span. After reaching sexual maturity, females remain reproductively active for the remainder of their lives, which may extend to 27 years. Chemical cues play an important role in the ability of males to recognize receptive females. In females, the reproductive cycle is annual.

F. Status

According to the IUCN Red List of Threatened Species, *V. bengalensis* is a species of Least Concern. This is based on its wide geographic range. However, there are increasing pressures on the species. They are hunted for their meat, skins, and for use in medicine. Due to expanding human habitation and urbanization, the range threats to their population are likely to increase in the future.

G. Threats

Their large size, use of open habitat and shallow conspicuous burrows, has together served to render them particularly vulnerable to persecution. It is also threatened due to large scale exploitation for skin trade leather of considerable utility and value. This species is possibly threatened by habitat destruction (due to urbanization, mining etc.). However; as it can utilize a wide range of habitat types this is not considered a major concern. Reducing of pests (food of the *V. bengalensis*) due to use of pesticide in agriculture is an indirect cause which affects the species survival. There is a common myth popular among the community that the species is poisonous. Due to this myth sometimes people tend to kill the species.

H. Observations/Sightings

During the study period, *V. bengalensis* was not observed in buffer area and core area. Although, it is sometimes seen by the local people/villagers & in the buffer zone.

I. Food and Feeding Habit

The diet of the Monitor is almost strictly carnivorous. They consume almost anything that is smaller than themselves and that they can easily overpower. Their normal prey consists of beetles, grubs, orthopterans, scorpions, ants and other invertebrates. Vertebrate prey is comparatively rare, and includes frogs, lizards, snakes and rodents.

J. Action Plan for the Conservation of Common Indian Monitor

- It is critical that efforts are made to keep the habitat and population status growing steadily.
- Creation of awareness to protect the species through seminars/workshop/ gathering among local villagers.
- The company will carry on an afforestation programme within the study area to enhance quality of habitat and availability of food indirectly.
- Effective communication network will be developed among mine management and local people to reduce the risk of the human wildlife conflict.
- Farmers will be educated to optimal use of pesticide in agriculture fields.
- Special vocational training programs shall be arranged for drivers to take care of wildlife while driving.
- Awareness among local people against myths for the animal of being poisonous.

Financial Forecast

Funds for flora and fauna management plan

S. No	Description	Amount in Lakhs (Rs)
A	Capital cost	
1	Afforestation program	Covered in EIA & EMP report
2	Artificial nests, feeding and watering arrangement for birds	5.00
3	Construction of water holes & check dams etc.	10.00
	Sub Total amount	15.00
B	Revenue expenditure / Year	
1	Afforestation program	Covered in EIA & EMP report
2	Food facility for animals (Grass land development)	2.00
3	Drinking water arrangement by tanker	2.00
4	Protection arrangements for animals (Fencing, along with operation and maintenances)	3.00
5	Training program for villagers	2.00
6	Awareness program, Sign boards, cultural program to create awareness for flora & fauna	1.00
7	Rescue center for animals	1.00
8	Man Power for protection (4 persons)	3.00
9	Financial assistance for wild animals health care	1.00
10	Artificial nests, feeding & watering arrangement(Pots) for birds	2.00
11	Habitat for grazing animals will be developed at suitable location in consultant with Panchayat	2.00
	Sub Total amount	19.00
	Grand total	34.00

- Capital Cost for Flora & Fauna management: - **Rs 15 Lakhs**
- Yearly Cost: - **Rs 19 Lakhs /Year**
- Plantation needs be done in the core zone because trees absorbed PM_{2.5}, PM₁₀, SO₂ & NO_x, other pollutants and check Soil erosion. This will help to control air pollution and Soil Pollution in the M.L area.
- Artificial nests, feeding pots and watering arrangement (Pots) for birds will be provided for life and safety.
- Awareness and Training program will be conducted to create awareness for flora & fauna management.
- Wire fencing will be done around the mining area for Protection of wild animals because many animals fall into in the mine pits frequently and get injured, so wire fencing is necessary along with rescue center for animals.

10.5 PUBLIC AWARENESS PROGRAMME FOR WILDLIFE PROTECTION AND CONSERVATION

Among all the threats of biodiversity, lack of awareness is the major cause for their loss. Hence, public awareness programmes will be conducted regarding the issues, conflicts and facts of wildlife, especially for the entire schedule-I and schedule-II species present in the buffer zone. Any kind of illegal collection or poaching noted in the study area will be immediately informed to the concerned authority. Conservation education and public awareness are useful tools in changing the behaviour of people. Awareness programmes about various wildlife species, their ecology, habitat, food & feeding and behaviour will be conducted in the Buffer Zone. Programmes will target to make aware of all groups (Community Forest User Group, Women's groups, Villagers of the Buffer Zone, School Teachers and Students).

Moreover, workers will be trained and educated about the importance of the entire wild animal for ecology and ultimately to humans; an internal attraction towards the species will be trying to develop. More importantly, worker will make aware of wildlife crime and also subsequent penalties and punishment. For the more, aware of people for protection their selves and all the wild animals, signboards will also be placed in the buffer zone with slogans.

Functions like Van Mahotsav, Wildlife Week, World Forestry Day, and World Environment Day will be organized in a befitting manner to which village heads and other members of gram Panchayat, local leaders and members of regional NGO may also be invited.

The discussion may evolve around habitat loss, human-wildlife conflicts and how best the vegetation can be revamped etc. Moreover, a training workshop for all mine workers will be conducted in starting of any project. It will include the formal training on the importance of biodiversity and also to make available the information of the flora and fauna of high conservation value present in the surrounding areas. Information on Wildlife policies and Government regulation and penalties will be provided to workers.

TEST REPORT

09/23 Test Report No. 1900	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Sep-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:** Kathara OCP **Stations:** Railway Colony

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)	
Jul-23 1st FN	03/07/23-04/07/23	17-07-2023	17/07/23-21/07/23	188	83	45	< 25	< 6	East Cloud
Jul-23 2nd FN	17/07/23-18/07/23	01-08-2023	01/08/23-11/08/23	223	62	37	< 25	< 6	East Sunny
Aug-23 3rd FN	01/08/23-02/08/23	16-08-2023	16/08/23-25/08/23	216	78	45	< 25	< 6	East Cloud
Aug-23 4th FN	16/08/23-17/08/23	01-09-2023	01/09/23-12/09/23	275	82	52	< 25	< 6	East Sunny
Sep-23 5th FN	01/09/23-02/09/23	18-09-2023	16/09/23-26/09/23	152	77	31	< 25	< 6	East Cloud
Sep-23 6th FN	18/09/23-19/09/23	03-10-2023	03/10/23-11/10/23	123	46	25	< 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

09/23 Test Report No. 1901	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Sep-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:** Kathara OCP **Stations:** Guest House

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)	
Jul-23 1st FN	03/07/23-04/07/23	17-07-2023	17/07/23-21/07/23	164	73	41	< 25	< 6	East Cloud
Jul-23 2nd FN	17/07/23-18/07/23	01-08-2023	01/08/23-11/08/23	277	88	51	< 25	< 6	East Sunny
Aug-23 3rd FN	01/08/23-02/08/23	16-08-2023	16/08/23-25/08/23	190	66	38	< 25	< 6	East Cloud
Aug-23 4th FN	16/08/23-17/08/23	01-09-2023	01/09/23-12/09/23	144	52	31	< 25	< 6	East Sunny
Sep-23 5th FN	01/09/23-02/09/23	18-09-2023	16/09/23-26/09/23	138	69	27	< 25	< 6	East Cloud
Sep-23 6th FN	18/09/23-19/09/23	03-10-2023	03/10/23-11/10/23	187	73	42	< 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

09/23 Test Report No. 1902	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Sep-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:** Kathara OCP **Stations:** Saram 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 (PM _{2.5})	Sulphur Dioxide (SO ₂)	Nitrogen Oxides (as NO _x)	
Jul-23 1st FN	03/07/23-04/07/23	17-07-2023	17/07/23-21/07/23	216	91	54	< 25	< 6	East Cloud
Jul-23 2nd FN	17/07/23-18/07/23	01-08-2023	01/08/23-11/08/23	196	72	45	< 25	< 6	East Cloud
Aug-23 3rd FN	01/08/23-02/08/23	16-08-2023	16/08/23-25/08/23	148	52	34	< 25	< 6	East Sunny
Aug-23 4th FN	16/08/23-17/08/23	01-09-2023	01/09/23-12/09/23	204	78	47	< 25	< 6	East Sunny
Sep-23 5th FN	01/09/23-02/09/23	18-09-2023	16/09/23-26/09/23	114	58	25	< 25	< 6	East Cloud
Sep-23 6th FN	18/09/23-19/09/23	03-10-2023	03/10/23-11/10/23	167	41	26	< 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

09/23 Test Report No. 1903	Job No. 094323120	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	Sep-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:** Kathara OCP **Stations:** D A V School

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)	
Jul-23 1st FN	04/07/23-05/07/23	17-07-2023	17/07/23-21/07/23	156	61	35	< 25	< 6	East Cloud
Jul-23 2nd FN	19/07/23-20/07/23	01-08-2023	01/08/23-11/08/23	275	95	56	< 25	< 6	East Cloud
Aug-23 3rd FN	02/08/23-03/08/23	16-08-2023	16/08/23-25/08/23	231	74	41	< 25	< 6	East Sunny
Aug-23 4th FN	17/08/23-18/08/23	01-09-2023	01/09/23-12/09/23	255	90	55	< 25	< 6	East Sunny
Sep-23 5th FN	02/09/23-03/09/23	18-09-2023	16/09/23-26/09/23	155	85	44	< 25	< 6	East Sunny
Sep-23 6th FN	19/09/23-20/09/23	03-10-2023	03/10/23-11/10/23	208	93	54	< 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

09/23 Test Report No. 1904	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Sep-23
Customer	CCL		
Testing/ Sampling Protocol:	<i>'The noise pollution (Regulation and Control), Rules,2000, LQR 34</i>		
Remarks:			

TEST RESULT

The sample has been tested with the following results:-

Area : **Kathara** **Project:** **Kathara OCP**

Station Name	Noise Level dB(A) Leq					
	Jul-23 1st FN	Jul-23 2nd FN	Aug-23 3rd FN	Aug-23 4th FN	Sep-23 5th FN	Sep-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	03-07-2023	17-07-2023	01-08-2023	16-08-2023	01-09-2023	18-09-2023
1. Railway Colony	52.2/46.3	51.9/49.7	51.6/49.7	48.9/39.4	49.7/45.5	60.4/58.5
Date of recording	03-07-2023	17-07-2023	01-08-2023	16-08-2023	01-09-2023	18-09-2023
2. Guest House	51.6/45.5	50.6/48.2	50.8/48.3	48.8/38.4	52.9/50.1	60.4/51.5
Date of recording	04-07-2023	17-07-2023	01-08-2023	17-08-2023	02-09-2023	19-09-2023
3. D.A.V.School	48.2/39.3	41.7/39.4	43.4/38.7	48.2/38.1	35.6/38.5	41.4/35.4

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

09/23 Test Report No. 1905	Job No. 094323120	Year	FY2023-24
Type of Sample:	Effluent Water	Quarter Ending	Sep-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:** Kathara OCP **Stations:** Lagoon Discharge

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			
Jul-23 1st FN	04/07/23	17/07/23	17/07/23-31/07/23	16	<2.00	7.4	42
Jul-23 2nd FN	31/07/23	01/08/23	01/08/23-14/08/23	12	<2.00	7.7	42
Aug-23 3rd FN	14/08/23	16/08/23	16/08/23-31/08/23	16	<2.00	7.9	52
Aug-23 4th FN	25/08/23	01/09/23	01/09/23-15/09/23	20	<2.00	7.8	46
Sep-23 5th FN	11/09/23	18/09/23	18/09/23-29/09/23	24	<2.00	7.4	45
Sep-23 6th FN	27/09/23	03/10/23	03/10/23-13/10/23	20	<2.00	7.5	53
BIS Standard & Method				APHA, 24th 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

*The Environment (Protection)Rule,1986, Schedule-VI (General Standards for Discharge of Environmental Pollutants Part-A: Effluent)

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TEST REPORT

09/23 Test Report No. 1906	Job No. 094323120	Year	FY2023-24
Type of Sample:	Surface Water	Quarter Ending	Sep-23
Customer	CCL	Date of Receipt:	17-07-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	17.07.23-06.10.23
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
Stations:

Project: Kathara OCP
Date of Sampling:

1. Damodar U/S of Mine
2. Damodar D/S of Mine

04-07-2023
04-07-2023

Sl.No	Parameter	Sampling Stations				Detection Limit	BIS Standard & Method
		1	2	3	4		
1	Arsenic (as As), mg/l	<0.002	<0.002			0.002	IS 3025/37:1988 R : 2003, AAS-VGA, Method
2	BOD (3 days 27°C), mg/l	2	<2.00			2.00	IS 3025 /44: 1993, R: 2003 3 day incubation at 27°C
3	Cadmium(as Cd), mg/l	<0.0004	<0.0004			0.0004	APHA, 24th Edition AAS-GTA Method, 2017
4	Chlorides (as Cl ⁻), mg/l	12	12			2.00	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	<0.02	<0.02			0.02	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Disolved Oxygen	6.1	6.4			0.10	IS 3025/38: 1989, R:2003, Winkler Azide Method
7	Fluoride (as F ⁻) mg/l	0.58	0.55			0.02	APHA, 24th Edition, SPADNS Method, 2017
8	Hexavalent Chromium, mg/l	<0.01	<0.01			0.01	APHA, 24th Edition, 2017 Diphenylcarbohydrazide,
9	Iron (as Fe), mg/l	<0.04	<0.04			0.04	IS 3025 /53: 2003, R : 2009, AAS (Air-Ac-Flame)
10	Lead (as Pb), mg/l	<0.001	<0.001			0.001	APHA, 24th Edition AAS-GTA Method, 2017
11	Nitrate (as NO ₃ ⁻), mg/l	1.35	1.72			0.50	APHA, 24th Edition, UV - Spectrophotometric, 2017
12	pH value	6.6	7			1.0	IS-3025/11:1983, R-1996, Electrometric Method
13	Phenolic compounds (as C ₆ H ₅ OH), mg/l	<0.001	<0.001			0.001	APHA, 24th Edition, 2017, 4-Amino Antipyrine Method,
14	Selenium (as Se), mg/l	<0.0005	<0.0005			0.0005	IS 3025/56:2003 AAS-VGA Method
15	Sulphate (as SO ₄ ⁻²) mg/l	42	42			2.00	APHA, 24th Edition Turbidity Method, 2017
16	Total Dissolved Solids, mg/l	231	248			25.00	IS 3025 /16:1984 R : 2006, Gravimetric Method
17	Total Suspended Solids, mg/l	20	23			10.00	IS 3025 /17:1984, R :1996, Gravimetric Method
18	Zinc (as Zn), mg/l	0.006	0.010			0.005	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

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TEST REPORT

09/23 Test Report No. 1907	Job No. 094323120	Year	FY2023-24
Type of Sample:	Drinking Water	Quarter Ending	Sep-23
Customer	CCL	Date of Receipt:	17-07-2023
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	17.07.23-06.10.23
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	Project:	Kathara OCP
Stations:			Date of Sampling:
	1. Bandh Basti		04-07-2023
	2. Jhirki Basti		04-07-2023
	3. Asnapani Tola		04-07-2023
	4. Kathara Basti		04-07-2023

Sl. No	Parameter	Sampling Stations				Detection Limit	IS:10500 Standards	Standard / Test Method
		1	2	3	4			
1	Boron (as B), mg/l	<0.20	<0.20	<0.20	<0.20	0.20	0.5, Max	APHA, 24th Edition Carmine Method; 2017
2	Cadmium (as Cd), mg/l	<0.0004	<0.0004	<0.0004	<0.0004	0.0004	0.003, Max	APHA, 24th Edition AAS-GTA Method, 2017
3	Calcium (as Ca), mg/l	33.6	33.6	35.2	33.6	1.60	75, Max	IS-3025/40:1991, EDTA
4	Chloride (as Cl ⁻), mg/l	12	16	18	18	2.00	250, Max	IS-3025/32:1988, R-2007, Argentometric Method
5	Copper (as Cu), mg/l	0.02	<0.02	<0.02	<0.02	0.02	0.05, Max	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
6	Fluoride (as F ⁻) mg/l	0.58	0.57	0.58	0.54	0.02	1.0, Max	APHA, 24th Edition, SPADNS Method, 2017
7	Free Residual Chlorine, mg/l	<0.02	<0.02	<0.02	<0.02	0.02	0.2, Min	APHA, 24th Edition, DPD Method, 2017
8	Iron (as Fe), mg/l	<0.04	0.06	<0.04	<0.04	0.04	0.3, Max	IS 3025 /53: 2003, R : 2009 AAS (Air-Ac-Flame)
9	Lead (as Pb), mg/l	<0.001	<0.001	<0.001	<0.001	0.001	0.01, Max	APHA, 24th Edition AAS-GTA Method, 2017
10	Manganese (as Mn), mg/l	<0.01	0.02	<0.01	<0.01	0.01	0.1, Max	IS-3025/59:2006, AAS (Air-Ac-Flame) Method
11	Nickel (as Ni), mg/l	<0.003	<0.003	<0.003	<0.003	0.003	0.02, Max	APHA, 24th Edition, 3120 B, ICP Method: 2017
12	Nitrate (as NO ₃ ⁻), mg/l	1.35	1.38	1.35	1.31	0.5	45, Max	APHA, 24th Edition, UV-Spectrophotometric, 2017
13	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Qualitative	Agreeable	IS 3025 /05:1983, R-2012, Qualitative
14	pH value	7.93	8.11	7.97	7.99	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	<0.001	<0.001	<0.001	<0.001	0.001	0.001, Max	APHA, 24th Edition, 4-Amino Antipyrine, 2017
16	Selenium (as Se), mg/l	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.01, Max	IS 3025/56:2003 AAS-VGA Method
17	Sulphate (as SO ₄ ²⁻) mg/l	74	75	77	77	2.00	200, Max	APHA, 24th Edition, Turbidity Method, 2017
18	Total Alkalinity (CaCO ₃), mg/l	96	88	80	72	4.00	200, Max	IS-3025/23:1986.R: 2009, Titration Method
19	Total Arsenic (as As), mg/l	<0.002	<0.002	<0.002	<0.002	0.002	0.01, Max	IS 3025/ 37:1988 R : 2003, AAS-VGA: 1998
20	Total Chromium (as Cr), mg/l	<0.002	<0.002	<0.002	<0.002	0.002	0.05, Max	APHA, 24th Edition, 3120 B, ICP Method: 2017
21	Total Dissolved Solids, mg/l	235	231	233	226	25.00	500, Max	IS 3025 /16:1984 R : 2006, Gravimetric
22	Total Hardness (CaCO ₃), mg/l	152	140	136	128	4.00	200, Max	IS-3025/21:1983, R-2009, EDTA Method
23	Turbidity, NTU	<1	1	<1	<1	1.0	1.0, Max	IS-3025/10:1984 R-1996, Nephelometric Method
24	Zinc (as Zn), mg/l	0.009	<0.005	0.012	0.011	0.005	5.0, Max	IS 3025 /49: 1994, R : 2009, AAS (Air-Ac-Flame)

Analysed By

Authorized Signatory

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TEST REPORT

06/23 Test Report No. Metal / 01	Job No. 094322160	2023-24
Type of Sample	Ambient Air	Quarter Ending
Customer	CCL	Date of Receipt of Sample:
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:
Sampling Protocol:	USEPA IO-3.2: 1999, 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: **Kathara OCP**

Stations: **1. Railway Colony** Date of Sampling: **06-07/04/2023**
2. Guest House **06-07/04/2023**
3. Saram Village **06-07/04/2023**
4. D.A.V.School **07-08/04/2023**

S.No	Test Parameters	Units	Test Result				Method detection Limit	Limit (NAA QS-2011)	Test Method
			1	2	3	4			
Stations:			1	2	3	4			
1	Conc. of As in Air	ng/m ³	0.74	0.41	<0.10	0.46	0.1	6.00	USEPA IO-3.2:1999
2	Conc. of Ni in Air	ng/m ³	0.36	0.42	0.17	0.22	0.1	20.00	USEPA IO-3.2:1999
3	Conc. of Pb in Air	µg/m ³	0.017	0.013	<0.005	0.013	0.005	1.0	USEPA IO-3.2: 1999
4	Conc. of Cu in Air	ng/m ³	0.2	0.19	<0.10	0.19	0.1	-	USEPA IO-3.2: 1999
5	Conc. of Cd in Air	ng/m ³	0.021	<0.02	0.021	<0.02	0.02	-	USEPA IO-3.2: 1999
6	Conc. of Cr in Air	ng/m ³	0.16	0.17	<0.10	0.13	0.1	-	USEPA IO-3.2: 1999
7	Conc. of Hg in Air	ng/m ³	<0.005	<0.005	<0.005	<0.005	0.005	-	USEPA IO-3.2: 1999

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TEST REPORT

06/23 Test Report No. 1900	Job No. 094322160	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	June-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:** Kathara OCP **Stations:** Railway Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m ³)	CO (in mg/m ³)	Ozone (in µg/m ³)	
Apr.'23 1st FN	06/04/23	06/04/23	06/04/23	<20	0.416	<19.62	E to W
Apr.'23 2nd FN	17/04/23	17/04/23	17/04/23	<20	0.343	<19.62	E to W
May'23 3rd FN	02/05/23	02/05/23	02/05/23	<20	0.429	<19.62	W to E
May'23 4th FN	16/05/23	16/05/23	16/05/23	<20	0.448	<19.62	E to W
June'23 5th FN	01/06/23	01/06/23	01/06/23	<20	0.476	<19.62	E to W
June'23 6th FN	16/06/23	16/06/23	16/06/23	<20	0.495	<19.62	E to W

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

06/23 Test Report No. 1901	Job No. 094322160	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	June-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:** Kathara OCP **Stations:** Guest House

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in $\mu\text{g}/\text{m}^3$)	CO (in mg/m^3)	Ozone (in $\mu\text{g}/\text{m}^3$)	
Apr.'23 1st FN	06/04/23	06/04/23	06/04/23	<20	0.487	<19.62	E to W
Apr.'23 2nd FN	17/04/23	17/04/23	17/04/23	<20	0.437	<19.62	E to W
May'23 3rd FN	02/05/23	02/05/23	02/05/23	<20	0.416	<19.62	W to E
May'23 4th FN	16/05/23	16/05/23	16/05/23	<20	0.502	<19.62	E to W
June'23 5th FN	01/06/23	01/06/23	01/06/23	<20	0.466	<19.62	E to W
June'23 6th FN	16/06/23	16/06/23	16/06/23	<20	0.532	<19.62	E to W

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

06/23 Test Report No. 1902	Job No. 094322160	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	June-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:** Kathara OCP **Stations:** Saram Village

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m ³)	CO (in mg/m ³)	Ozone (in µg/m ³)	
Apr.'23 1st FN	06/04/23	06/04/23	06/04/23	<20	0.411	<19.62	E to W
Apr.'23 2nd FN	17/04/23	17/04/23	17/04/23	<20	0.387	<19.62	E to W
May'23 3rd FN	02/05/23	02/05/23	02/05/23	<20	0.468	<19.62	W to E
May'23 4th FN	16/05/23	16/05/23	16/05/23	<20	0.423	<19.62	E to W
June'23 5th FN	01/06/23	01/06/23	01/06/23	<20	0.515	<19.62	E to W
June'23 6th FN	16/06/23	16/06/23	16/06/23	<20	0.492	<19.62	E to W

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

06/23 Test Report No. 1903	Job No. 094322160	Year	FY2023-24
Type of Sample	Ambient Air	Quarter Ending	June-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:** Kathara OCP **Stations:** D A V School

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters NAAQS (8 Hourly Average)			Wind Direction (from) & Weather
				Ammonia (in µg/m ³)	CO (in mg/m ³)	Ozone (in µg/m ³)	
Apr.'23 1st FN	07/04/23	07/04/23	07/04/23	<20	0.454	<19.62	W to E
Apr.'23 2nd FN	20/04/23	20/04/23	20/04/23	<20	0.295	<19.62	E to W
May'23 3rd FN	03/05/23	03/05/23	03/05/23	<20	0.411	<19.62	W to E
May'23 4th FN	18/05/23	18/05/23	18/05/23	<20	0.402	<19.62	E to W
June'23 5th FN	02/06/23	02/06/23	02/06/23	<20	0.486	<19.62	W to E
June'23 6th FN	18/06/23	18/06/23	18/06/23	<20	0.397	<19.62	E to W



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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		<p align="center">Annexure-XXI</p> <p align="center">सेंट्रल कोयलाफील्ड्स लिमिटेड (कोयला इंडिया की अनुपंगी इकाई) जी. एम. यूनिट पिन:- ८२९११६. CENTRAL COALFIELDS LIMITED (A Subsidiary of Coal India Limited) OFFICE OF THE GENERAL MANAGER, KATHARA AREA. PO:- KATHARA, DIST:- BOKARO, JHARKHAND. दूरभाष/Phone :- 8987785648. वेबसाइट/Website : https://www.centralcoalfields.in Email Id- er.hrushikesh@gmail.com</p>
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Ref No:- G.M.(KTA)/S.O.(Civil)/KTC/AOW/2023-24/122

Dated:- 17/11/23

Registered post/ Speed Post

Award of work.

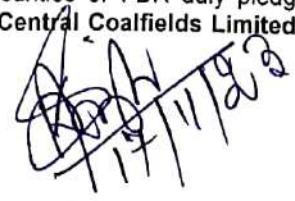
To,
AASHI ENGINEERING AND CONSTRUCTION PRIVATE LIMITED,
354 K.G.ROAD, JHIRKEY,P.O.KATHARA
Dist:- Bokaro,829116 (Jharkhand.)
Email Id- aashiengineering007@gmail.com
Mob. No. 91- 9431562836.

Sub:-	"Providing of Sprinkler Network from entrance of check post of quarry to view point of Kathara OCP under Kathara Colliery, Kathara Area."
Ref.:-	E-Tender Notice No. NIT No:- 08, of 2023-24 vide e-tender notice no:- PO/PE(C)/KTC/E-Tender/2023-24/08, Dt:-05.05.2023, Bid submission end date on:- 29.05.2023, and Date of opening of tender on:- 30.05.2023. (Tender Id:- 2023_CCL_278587_1). CCL Tender Id:-89842.

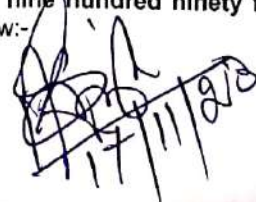
Dear Sir,

In response to your tender for the subject work mentioned above, this is to inform you that your offer for a contract amount of Rs. 55,86,489.20, (Rupees Fifty five Lakh eighty six thousand four hundred eighty nine and Paise twenty) only inclusive of GST amount of Rs. 8,52,176.32 (Rupees, Eight Lakh fifty two thousand one hundred seventy six and Paise thirty two) and Rs. 47,34,312.88, (Rupees forty seven Lakh thirty four thousand three hundred twelve and paise eighty eight) only exclusive of GST amount [Cost to company amount of Rs. 55,86,489.20, as Input Tax Credit is Not Available] to undertake the work has been accepted by CCL, subject to the following stipulations / conditions which are supplementaries / complementaries to the conditions of the tender documents: -

1. The payment of GST and GST Compensation Cess by the service availer (i.e. CCL) to bidder/ contractor (If GST payable by bidder/ contractor) would be made only on the latter submitting a Bill/Invoice in accordance with the provision of relevant GST Act and the rules made there under and after online filing of valid return on GST portal. The payment of GST and GST Compensation Cess is responsibility of the Contractor.
2. The period of completion of work shall be 150 (One hundred fifty) days from expiry of 10 (Ten) days from the issue of this Award of work or within 07 (Seven) days of handing over of the site, whichever is later.
3. (a). The earnest money amounting to Rs, 66,600.00, (Rupees, Sixty six thousand six hundred and Paise Zero), only deposited by you vide online through Axis Aggregator vide Bank/UTR No:- 135429291, and Ref. no:- 288410946829, has been retained by the company (CCL) as part of Performance Security Money.
(b). You are further required to deposit Rs, 1,00,995.00 (Rupees, One lakh nine hundred ninety five and Paise Zero) only with the company in the form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara within 21 (Twenty one) days of issuance of this letter thus making the total performance security money amount to Rs, 1,67,595.00, (Rupees, One lakh sixty seven thousand five hundred ninety five and Paise Zero) only i.e. 3% of the contract amount. If you fail to deposit the above amount within the prescribed time, the Award of Work shall be cancelled additionally, the company shall ban such defaulting contractor for a period of 02(Two) years from being eligible to submit Bids in CIL and its subsidiaries from the date of issue of such letter.
(c). Further you have to deposit Rs. NIL, (Rupees, NIL), only as Additional performance security as per clause no. 4.8 of GTC of Conditions of Contract of tender documents along with Performance Security in form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara (if applicable).




4. A copy of Bill of Quantity (BOQ) is enclosed for ready reference.
5. There is no Abnormally Low Rate (ALR) or Abnormally High Rate (AHR) item in this work as it is percentage rate quotation.
6. All running on A/c bills shall be paid at 95% of the work value. The 5% deduction towards retention money will form Second Part of Security deposit and shall be refunded after issue of no defect certificate.
7. You shall comply with Contract Labour (Regulation and Abolition) Act and make payments to your workmen accordingly. In case you engage 10 & above labourers in the work on any working day you shall be required to submit registration certificate under the B.O.C.W. (RE&CS) Act 1996 and in case you engage 20 (Twenty) or more labourers in the work on any working day you shall be required to submit Labour license under Contract Labour (Regulation & Abolition) Act 1970 for the same.
8. You shall comply with CMPF/any other appropriate PF authority's clause of tender document and you will have to submit "No dues certificate" from Provident Fund Authority, Ministry of Labour, Govt. of India at Jharkhand before finalization of final bill.
9. Work shall be executed strictly as per specification in accordance with laid down norms of company.
10. You shall be responsible for arranging all necessary tests of materials as per instruction of Project Engineer (C) / Engineer-in-Charge at your own cost as per terms & conditions of Tender Document.
11. You shall make your own arrangement for all materials, tools, staff and labour required for the above work. The rates for the work include all taxes (excluding GST), octroi, carriage, tools etc. for execution and completion of work.
12. You shall arrange necessary water for the work & for your own establishment. However, if available and feasible the company may arrange water at one point near the work site for which recovery @ 1% (One percent) of the contract value of work done shall be made from your bills.
13. The technical personnel shall be engaged by you on work site as per terms and conditions of tender document.
14. You shall not employ on this contract any close relatives of CCL's employee.
15. Before clearance of final bill you will submit royalty clearance from concerned Mining Officer.
16. All investments, operating expenses, incidentals, overheads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total quotation offer price submitted by the bidder.
17. **Input Tax Credit (ITC) is Not Available for this work.**
18. Your tax invoice raised must be in compliance of relevant GST Acts, Rules and notifications made there under and should bear the GSTIN of CCL. The rate and amount of IGST/CGST/SGST, GST (Compensation to State) cess (if any), related to execution of work shall be shown separately in Tax invoice.
19. The IGST/CGST/SGST and GST (Compensation to State) cess (if any), as applicable at the time of execution of the work, shall be paid extra against submission of proper tax invoice, as referred above by you so that CCL is able to avail Input tax Credit (If available) of such IGST/CGST/SGST, GST (Compensation to State) cess (if any) reflected in the invoice.
20. If the ITC claimed is disallowed due to failure on your part in incorporating the tax invoice issued to CCL in its relevant returns under GST, payment of IGST/CGST/SGST, GST (Compensation to State) cess (if any) shown in tax invoice to the tax authorities, issue of improper tax invoice or any other reason whatsoever, the applicable taxes and cess paid based on such tax invoice along with interest, penalties if any levied on CCL, shall be recovered from your current Bills and any other dues.
21. The amount of IGST/CGST/SGST and GST cess if any as indicated in Tax invoice shall be paid only when they appear in GSTR 2A of CCL and you have filed the valid return in accordance with provisions of the GST acts and Rules made there under.
22. In the event of any additional tax liabilities accruing on you due to classification issue or for any other reason the liability of CCL shall be restricted to the amount of GST charged on original tax invoice issued by you.
23. You shall pass on the benefit on account of reduction in rate of tax on any supply of goods and / or services or any benefit of the input tax credit to CCL by way of commensurate reduction in prices in terms of Anti profiteering clause of GST Act 2017.
24. You are requested to submit the following for execution of agreement / Detail Work Order within 21(twenty one) days from the issue of this Award of Work: –
 - a. An amount of Rs. 1,00,995.00 (Rupees, One lakh nine hundred ninety five and Paise Zero) only towards Performance Security in the form given below:-



- i. Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
- ii. Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at SBI Kathara
- b. An amount of **Rs NIL, (Rupees, NIL)** only towards Additional Performance Security in the form given below (if applicable):-
 - i. Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - ii. Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
 - iii. Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at S. B. I. Kathara
- c. Non-judicial stamp paper worth 120/= only for execution of agreement along with partnership deed / Memorandum & Articles of Association, power of attorney if any, GST identification Number etc. (applicable where agreement is to be executed).
- d. Site handover and takeover certificate, jointly signed by Engineer-in-Charge and the Contractor/ authorized representative.
- e. Time Bound Programme for completion of the work within stipulated time as per NIT showing physical progress of work duly signed by Engineer-in-Charge and the Contractor/authorized representative.
- f. Registration under B.O.C.W. (RE&CS) Act and / or Labour License as per Contract Labour (Regulation & Abolition) Act.
- g. Insurance Certificates as per Clause No.13 (xviii) of General Terms & Conditions of NIT.
- h. You will have to indemnify the company against any liability arising out of non-observance of the statutory provisions like royalty payments, all taxes, workmen compensation act, minimum wages act, income tax act, Contract Labour (Regulation & Abolition) Act etc on non-judicial stamp paper worth ` 20/= only.
25. **Sri Sanjay Singh**, shall be Engineer-in-Charge for this work.(Applicable for works having Award value more than 10.00 Lakhs)
26. The date of uploading of this LOA/Work Order on e-Procurement Portal (<https://coalindiataenders.nic.in>) shall be treated as the date of receipt of this LOA / Work Order by you.
27. You are requested to contact the **Sri Krishan Mohan, Overseer (Civil), Kathara OCP, Kathara Colliery, Kathara Area, Mob. No. 6203696819** for further needful action regarding execution of work.

Yours faithfully,


Staff Officer(Civil)
Kathara Area.

DISTRIBUTION:-

1. T.S to CVO, CCL HQ., Ranchi
2. General Manager(KTA),Kathara Area.
3. Project Engineer (Civil),Kathara Colliery.
4. Area Finance Manager, Kathara Area .
5. Overseer(Civil), Kathara Colliery.
6. Any other official as per need

In reference to Budget Certification on estimate vide no C&B/ RFC/2023-24/Advance Action Budget/KTC/ Contractual Expenses-Other/08 dated 08.05.2023 for Rs 1,00,000.00 including GST and on TCR vide no. C&B/ RFC/23-24/KTC/Contractual Expenses-other/54 dated 09.11.2023 for Rs.54,86,489.20 including GST

Percentage BoQ						
Tender Inviting Authority: Project Engineer (Civil), Kathara Area						
Name of Work:- Providing of Sprinkler Network from entrance of Check post of quarry to View Point of Kathara OCP under Kathara Colliery, Kathara Area						
Category of Services (To Be Selected by Department)			Category of Bidder (To Be Selected by Bidder)	To Be Entered by Department		
ITC Not Available	Works Contract		Bidder's Status (Mandatory)	Rate of GST (in %)	GST to be Paid By Bidder (in Rs.)	GST to be Paid By CIL/Subsidiary (in Rs.)
Name of the Bidder/ Bidding Firm / Company :	AASHI ENGINEERING AND CONSTRUCTION PRIVATE LIMITED		GST Registered Bidder under regular scheme	18.00	852176.32	0.00
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT in Rs. P	TOTAL AMOUNT In Words
1	2	3	4	5	6	7
1.01	Item Description/ Heading	PART - A (CIVIL WORK)				
1.02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ridding of bottoms, fill upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	66.82	Cum	206.70	13811.69	INR Thirteen Thousand Eight Hundred & Eleven and Paise Sixty Nine Only
1.03	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	11.14	Cum	5276.40	58779.10	INR Fifty Eight Thousand Seven Hundred & Seventy Nine and Paise Ten Only
1.04	Providing and laying in position specified grade of reinforced cement concrete, including the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	19.80	Cum	6610.15	130880.97	INR One Lakh Thirty Thousand Eight Hundred & Eighty and Paise Ninety Seven Only
1.05	Reinforced cement concrete work in walls (any thickness), including attached plaster, buttresses, piers and string courses, fillets, columns, pillars, piers, abutments, posts and slabs etc. up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement : 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	29.70	Cum	7834.85	232696.05	INR Two Lakh Thirty Two Thousand Six Hundred & Ninety Five and Paise Five Only
1.06	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and bending all complete upto plinth level. Thermo-Mechanically Treated bars.	3960.00	kg	70.60	279576.00	INR Two Lakh Seventy Nine Thousand Five Hundred & Seventy Six Only
1.07	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete	217.80	sqm	239.95	52261.11	INR Fifty Two Thousand Two Hundred & Sixty One and Paise Eleven Only
1.08	Centering and shuttering including strutting, propping etc. and removal of form for : Columns, Pillars, Abutments, Posts and Slabs	475.20	sqm	617.05	293222.16	INR Two Lakh Ninety Three Thousand Two Hundred & Twenty Two and Paise Sixteen Only
1.09	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	66.82	Cum	170.25	11376.11	INR Eleven Thousand Three Hundred & Seventy Six and Paise Ten Only
1.10	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete : 50 to 80 mm nominal bore/size	1.00	nos	1000.05	1000.05	INR One Thousand and Paise Five Only

Contractor


 Staff Officer (C) (KTA)
 CCL Kathara Area

17.11.20

1.11	Providing and laying S45 Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS - 8329 - 100 mm dia Ductile Iron Class K-7 pipes	2035.00	mtr	905.25	1844218.75	INR Eighteen Lakh Forty Four Thousand Two Hundred & Eighteen and Paise Seventy Five Only
1.12	Providing push-on joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket : 100 mm dia pipes	370.00	nos	80.25	29692.50	INR Twenty Nine Thousand Six Hundred & Ninety Two and Paise Fifty Only
1.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete : 25 to 40 mm nominal bore	132.00	nos	567.75	74943.00	INR Seventy Four Thousand Nine Hundred & Forty Three Only
1.14	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) : 100 mm diameter : Class II	1.00	nos	3722.35	3722.35	INR Three Thousand Seven Hundred & Twenty Two and Paise Thirty Five Only
1.15	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) : 32 mm nominal bore	132.00	nos	489.85	64660.20	INR Sixty Four Thousand Six Hundred & Sixty and Paise Twenty Only
1.16	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) : 32 mm nominal bore	132.00	nos	327.95	43289.40	INR Forty Three Thousand Two Hundred & Eighty Nine and Paise Forty Only
1.17	Providing and fixing Low operating pressure sprinkler (LOPE) single nozzle sprinkler having discharge capacity of 5.5 cum/hr & radius of coverage 15-17 m @ 2.5 bar with 32mm BSP from brass connection & brass swing arm (part providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work - Exposed on wall : 32 mm dia nominal bore	132.00	nos	3414.81	450754.92	INR Four Lakh Fifty Thousand Seven Hundred & Fifty Four and Paise Ninety Two Only
1.18	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work - Exposed on wall : 32 mm dia nominal bore	635.00	mtr	429.90	272986.50	INR Two Lakh Seventy Two Thousand Nine Hundred & Eighty Six and Paise Fifty Only
1.19	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited	2035.00	mtr	290.90	591981.50	INR Five Lakh Ninety One Thousand Nine Hundred & Eighty One and Paise Fifty Only
1.20	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade - New work (Two or more coats applied @ 1.43 lit/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 lit/ 10 sqm)	475.20	sqm	125.10	59447.52	INR Fifty Nine Thousand Four Hundred & Forty Seven and Paise Fifty Two Only
1.21	Total impact of GST for the purpose of CTC	1.000	Nos	852176.32	852176.32	INR Eight Lakh Fifty Two Thousand One Hundred & Seventy Six and Paise Thirty Two Only
Total in Figures					5586489.20	INR Fifty Five Lakh Eighty Six Thousand Four Hundred & Eighty Nine and Paise Twenty Only
Quoted Rate in Figures			Excess (+)	4.99%	5586489.20	INR Fifty Five Lakh Eighty Six Thousand Four Hundred & Eighty Nine and Paise Twenty Only
Quoted Rate in Words		INR Fifty Five Lakh Eighty Six Thousand Four Hundred & Eighty Nine and Paise Twenty Only				

Contractor

Staff Officer (C) (KTA)
CCL Kanhara Area

17.11.23



A miniratna cat-I company

सेंट्रल कोयलील्ड्स लिमिटेड
(कोयला इंडिया की अनुपंगी इकाई)
जी. एम. यूनिट पिन:- ८२९११६.
CENTRAL COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)
OFFICE OF THE GENERAL MANAGER, KATHARA AREA.
PO:- KATHARA, DIST:- BOKARO, JHARKHAND.
दूरभाष/Phone :- 8987785648.
वेबसाइट/Website : <https://www.centralcoalfields.in>
Email Id- er.hrushikesh@gmail.com

Ref No:- G.M.(KTA)/S.O.(Civil)/KTC/AOW/2023-24/1184

Dated:- 09.11.2023

Registered post/ Speed Post

Award of work.

To,
M/S RANA PRATAP SINGH.
Ramnagar, Bermo
Dist:- Bokaro,829104 (Jharkhand.)
Email Id- ranaphusro1@gmail.com
Mob. No. 91- 9304607912.

Annexure-XXII

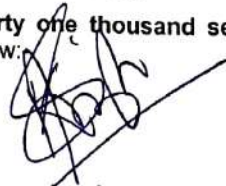
Sub:-	"Construction of Toe Wall, Garland drain & Settling tank along the OB heap no 06 towards Damodar River Side, under Kathara Colliery, Kathara Area."
Ref.:-	E-Tender Notice No. NIT No:- 23, of 2023-24 vide e-tender notice no:- PO/SO(C)/KTC/E-Tender/2023-24/23, Dt:-11.07.2023, Bid submission end date on:- 27.07.2023, and Date of opening of tender on:- 28.07.2023. (Tender Id:- 2023_CCL_283359_1).

Dear Sir,

In response to your tender for the subject work mentioned above, this is to inform you that your offer for a contract amount of Rs.51,70,247.79 (Rupees Fifty one Lakh seventy thousand two hundred forty seven and Paise seventy nine) only inclusive of GST amount of Rs. 7,88,681.76 (Rupees, Seven lakh eighty eight thousand six hundred eighty one & paise seventy six) and Rs.43,81,566.03 (Rupees Forty three lakh eighty one thousand five hundred sixty six & paise zero three) only exclusive of GST amount [Cost to company amount of Rs. 51,70,247.79 as Input Tax Credit is Available] to undertake the work has been accepted by CCL, subject to the following stipulations / conditions which are supplementaries / complementaries to the conditions of the tender documents: -


1. The payment of GST and GST Compensation Cess by the service availer (i.e. CCL) to bidder/ contractor (If GST payable by bidder/ contractor) would be made only on the latter submitting a Bill/Invoice in accordance with the provision of relevant GST Act and the rules made there under and after online filing of valid return on GST portal. The payment of GST and GST Compensation Cess is responsibility of the Contractor.
2. The period of completion of work shall be 150 (One hundred fifty) days from expiry of 10 (Ten) days from the issue of this Award of work or within 07 (Seven) days of handing over of the site, whichever is later.
3. (a). The earnest money amounting to Rs.1,24,100.00 (Rupees, One lakh twenty four thousand one hundred and Paise Zero), only deposited by you vide online through Axis Aggregator vide Bank/UTR No:- SBIN323205504007, and Ref. no:- 293399966462, has been retained by the company (CCL) as part of Performance Security Money.
(b). You are further required to deposit Rs.31,007.00 (Rupees Thirty one thousand seven and Paise Zero) only with the company in the form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara within 21 (Twenty one) days of issuance of this letter thus making the total performance security money amount to Rs.1,55,107.00, (Rupees, One lakh fifty five thousand one hundred seven and Paise Zero) only i.e. 3% of the contract amount. If you fail to deposit the above amount within the prescribed time, the Award of Work shall be cancelled additionally, the company shall ban such defaulting contractor for a period of 02(Two) years from being eligible to submit Bids in CIL and its subsidiaries from the date of issue of such letter.
(c). Further you have to deposit Rs. 32,63,279.00 (Rupees, Thirty two Lakh sixty three thousand two hundred seventy nine and Paise Zero), only as Additional performance security as per clause no. 4.8 of GTC of Conditions of Contract of tender documents along with Performance Security in form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara (if applicable).

4. A copy of Bill of Quantity (BOQ) is enclosed for ready reference.
5. There is no Abnormally Low Rate (ALR) or Abnormally High Rate (AHR) item in this work as it is percentage rate quotation.
6. All running on A/c bills shall be paid at 95% of the work value. The 5% deduction towards retention money will form Second Part of Security deposit and shall be refunded after issue of no defect certificate.
7. You shall comply with Contract Labour (Regulation and Abolition) Act and make payments to your workmen accordingly. In case you engage 10 & above labourers in the work on any working day you shall be required to submit registration certificate under the B.O.C.W. (RE&CS) Act 1996 and in case you engage 20 (Twenty) or more labourers in the work on any working day you shall be required to submit Labour license under Contract Labour (Regulation & Abolition) Act 1970 for the same.
8. You shall comply with CMPF/any other appropriate PF authority's clause of tender document and you will have to submit "No dues certificate" from Provident Fund Authority, Ministry of Labour, Govt. of India at Jharkhand before finalization of final bill.
9. Work shall be executed strictly as per specification in accordance with laid down norms of company.
10. You shall be responsible for arranging all necessary tests of materials as per instruction of Project Engineer (C) / Engineer-in-Charge at your own cost as per terms & conditions of Tender Document.
11. You shall make your own arrangement for all materials, tools, staff and labour required for the above work. The rates for the work include all taxes (excluding GST), octroi, carriage, tools etc. for execution and completion of work.
12. You shall arrange necessary water for the work & for your own establishment. However, if available and feasible the company may arrange water at one point near the work site for which recovery @ 1% (One percent) of the contract value of work done shall be made from your bills.
13. The technical personnel shall be engaged by you on work site as per terms and conditions of tender document.
14. You shall not employ on this contract any close relatives of CCL's employee.
15. Before clearance of final bill you will submit royalty clearance from concerned Mining Officer.
16. All investments, operating expenses, incidentals, overheads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total quotation offer price submitted by the bidder.
- 17. Input Tax Credit (ITC) is Available for this work.**
18. Your tax invoice raised must be in compliance of relevant GST Acts, Rules and notifications made there under and should bear the GSTIN of CCL. The rate and amount of IGST/CGST/SGST, GST (Compensation to State) cess (if any), related to execution of work shall be shown separately in Tax invoice.
19. The IGST/CGST/SGST and GST (Compensation to State) cess (if any), as applicable at the time of execution of the work, shall be paid extra against submission of proper tax invoice, as referred above by you so that CCL is able to avail Input tax Credit (If available) of such IGST/CGST/SGST, GST (Compensation to State) cess (if any) reflected in the invoice.
20. If the ITC claimed is disallowed due to failure on your part in incorporating the tax invoice issued to CCL in its relevant returns under GST, payment of IGST/CGST/SGST, GST (Compensation to State) cess (if any) shown in tax invoice to the tax authorities, issue of improper tax invoice or any other reason whatsoever, the applicable taxes and cess paid based on such tax invoice along with interest, penalties if any levied on CCL, shall be recovered from your current Bills and any other dues.
21. The amount of IGST/CGST/SGST and GST cess if any as indicated in Tax invoice shall be paid only when they appear in GSTR 2A of CCL and you have filed the valid return in accordance with provisions of the GST acts and Rules made there under.
22. In the event of any additional tax liabilities accruing on you due to classification issue or for any other reason the liability of CCL shall be restricted to the amount of GST charged on original tax invoice issued by you.
23. You shall pass on the benefit on account of reduction in rate of tax on any supply of goods and / or services or any benefit of the input tax credit to CCL by way of commensurate reduction in prices in terms of Anti profiteering clause of GST Act 2017.
24. You are requested to submit the following for execution of agreement / Detail Work Order within **21(twenty one)** days from the issue of this Award of Work: –
 - a. An amount of **Rs.31,007.00 (Rupees Thirty one thousand seven and Paise Zero)** only towards Performance Security in the form given below:



- LIMITED
- i. Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
 - ii. Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at SBI Kathara
 - b. An amount of **Rs. 32,63,279.00 (Rupees, Thirty two Lakh sixty three thousand two hundred seventy nine and Paise Zero)** only towards Additional Performance Security in the form given below (if applicable):-
 - i. Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - ii. Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
 - iii. Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at S. B. I. Kathara
 - c. Non-judicial stamp paper worth 120/= only for execution of agreement along with partnership deed / Memorandum & Articles of Association, power of attorney if any, GST identification Number etc. (applicable where agreement is to be executed).
 - d. Site handover and takeover certificate, jointly signed by Engineer-in-Charge and the Contractor/ authorized representative.
 - e. Time Bound Programme for completion of the work within stipulated time as per NIT showing physical progress of work duly signed by Engineer-in-Charge and the Contractor/authorized representative.
 - f. Registration under B.O.C.W. (RE&CS) Act and / or Labour License as per Contract Labour (Regulation & Abolition) Act.
 - g. Insurance Certificates as per Clause No.13 (xviii) of General Terms & Conditions of NIT.
 - h. You will have to indemnify the company against any liability arising out of non-observance of the statutory provisions like royalty payments, all taxes, workmen compensation act, minimum wages act, income tax act, Contract Labour (Regulation & Abolition) Act etc on non-judicial stamp paper worth ` 20/= only.
 25. **Sri Sanjay Singh**, shall be Engineer-in-Charge for this work.(Applicable for works having Award value more than 10.00 Lakhs)
 26. The date of uploading of this LOA/Work Order on e-Procurement Portal (<https://coalindiataenders.nic.in>) shall be treated as the date of receipt of this LOA / Work Order by you.
 27. You are requested to contact the **Sri Krishan Mohan, Overseer (Civil), G.M. Unit, Kathara Area, Mob. No. 6203696819** for further needful action regarding execution of work.

Yours faithfully,


Staff Officer (Civil)
Kathara Area.

DISTRIBUTION:-

1. T.S to CVO, CCL HQ., Ranchi
2. General Manager(KTA),Kathara Area.
3. Project Engineer (Civil), Kathara Colliery.
4. Area Finance Manager, Kathara Area .
5. Overseer(Civil),Kathara Colliery.
6. Any other official as per need

In reference to Budget Certification on estimate vide no C&B/ RFC/2023-24/ Advance Action Budget/KTC/ Contractual Expenses-Other/23 dated 08.07.2023 for Rs 2,00,000.00 including GST and on TCR vide no. C&B/ RFC/23-24/KTC /Contractual Expenses -Other/53 dated 08.11.2023 for Rs.49,70,247.79 including GST

Tender Inviting Authority: Staff Officer, (Civil), Kathara Area.

Name of Work:- Construction of Toe Wall ,Garland drain &Settling tank along the OB heap no 06 towards Damodar River Side , Under Kathara Colliery, Kathara Area.

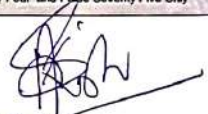
Category of Services (To Be Selected by Department)		Category of Bidder (To Be Selected by Bidder)	To Be Entered by Department		
ITC Available	Works Contract	Bidder's Status (Mandatory)	Rate of GST (in %)	GST to be Paid By Bidder (in Rs.)	GST to be Paid By CIL/Subsidiary (in Rs.)
Name of the Bidder/ Bidding Firm / Company :	Rana Pratap Singh	GST Registered Bidder under regular scheme	18.00	788681.89	0.00

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT in Rs. P	TOTAL AMOUNT in Words
1	2	3	4	5	6	7
2	Item Description/ Heading					
3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	2601.40	Cum	206.70	537709.38	INR Five Lakh Thirty Seven Thousand Seven Hundred & Nine and Paise Thirty Eight Only
4	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	395.68	Cum	203.85	80659.37	INR Eighty Thousand Six Hundred & Fifty Nine and Paise Thirty Seven Only
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:3:6 (1cement : 3coarse sand : 6graded stone aggregate 20 mm nominal size)	98.51	Cum	5276.40	519778.16	INR Five Lakh Nineteen Thousand Seven Hundred & Seventy Eight and Paise Sixteen Only
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:2:4 (1cement : 2coarse sand : 4graded stone aggregate 20 mm nominal size)	61.00	Cum	5829.70	355611.70	INR Three Lakh Fifty Five Thousand Six Hundred & Eleven and Paise Seventy Only
7	Random rubble masonry with Quarry boulder in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse	1850.00	Cum	2956.75	5469987.50	INR Fifty Four Lakh Sixty Nine Thousand Nine Hundred & Eighty Seven and Paise Fifty Only
8	Dry stone pitching including supply of QUARRY stones and preparing surface complete.	457.00	SQM	406.70	185861.90	INR One Lakh Eighty Five Thousand Eight Hundred & Sixty One and Paise Ninety Only
9	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) : Flush/ Ruled pointing	4457.00	SQM	236.75	1055194.75	INR Ten Lakh Fifty Five Thousand One Hundred & Ninety Four and Paise Seventy Five Only

Contractor

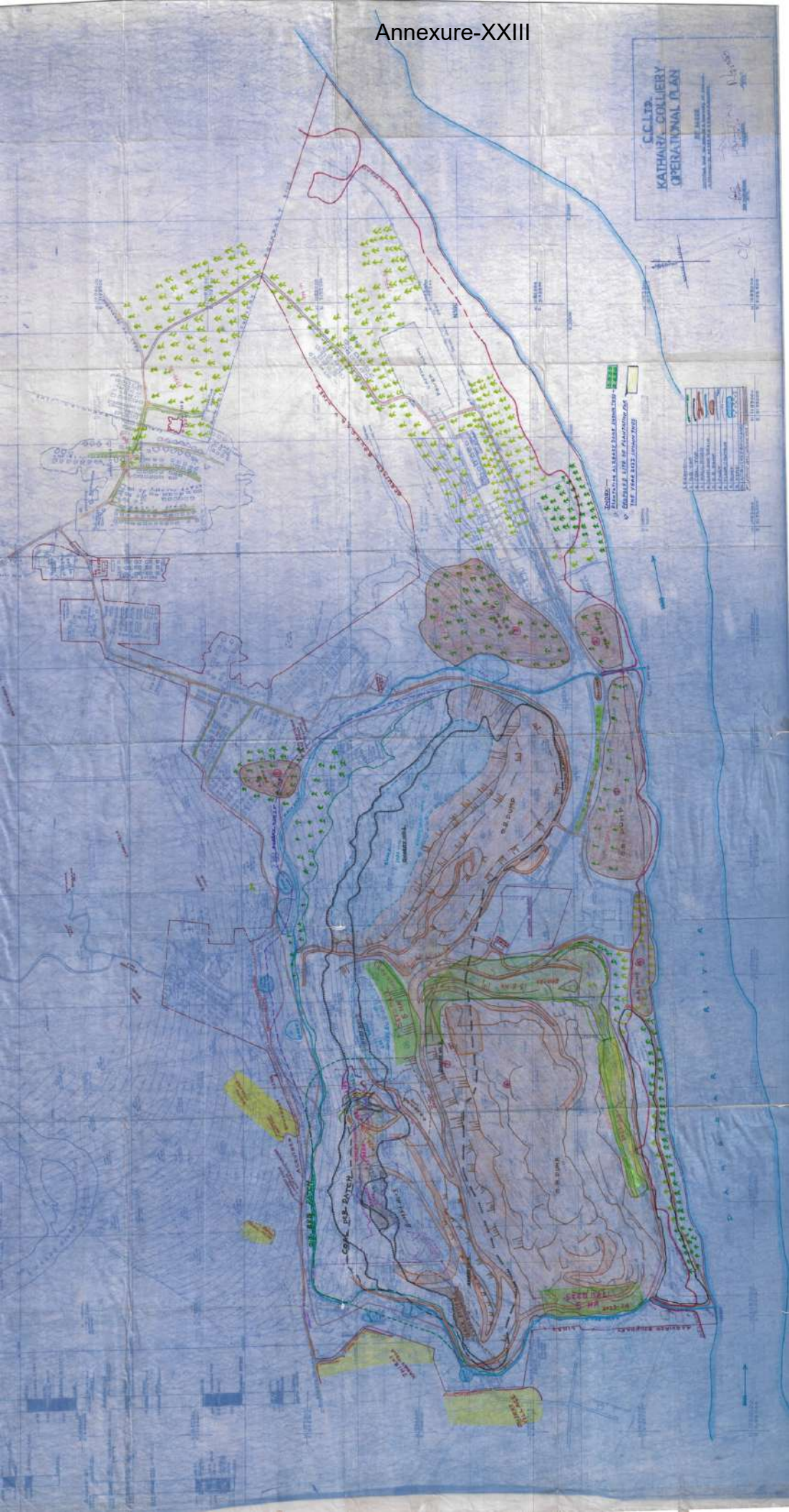

Staff Officer (C) (KTA)
CCL Kathara Area

10	Centering and shuttering including strutting, propping etc. and removal of form work for : Foundations, footings, bases for columns	267.36	SQM	239.95	64153.03	INR Sixty Four Thousand One Hundred & Fifty Three and Paise Three Only
11	White washing with lime to give an even shade : New work (three or more coats)	4160.00	SQM	22.65	94224.00	INR Ninety Four Thousand Two Hundred & Twenty Four Only
12	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work	6.00	SQM	107.15	642.90	INR Six Hundred & Forty Two and Paise Ninety Only
13	Lettering with black Japan paint of approved brand and manufacture	1800.00	CM	4.05	7290.00	INR Seven Thousand Two Hundred & Ninety Only
14	Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be struted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar ribs fixed while casting the post (cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used. With G.I. barbed wire	1536.00	MTR	9.70	14899.20	INR Fourteen Thousand Eight Hundred & Ninety Nine and Paise Twenty Only
15	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but excluding cost of reinforcement, with 1:2:4 (1cement : 2coarse sand: 4graded stone aggregate 20 mm nominal size)	1.64	Cum	7134.05	11699.84	INR Eleven Thousand Six Hundred & Ninety Nine and Paise Eighty Four Only
16	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars	150.00	KG	70.60	10590.00	INR Ten Thousand Five Hundred & Ninety Only
17	Total impact of GST for the purpose of CTC	1.000	Nos	0.00	0.00	INR Zero Only
Total In Figures					4381566.03	INR Forty Three Lakh Eighty One Thousand Five Hundred & Sixty Six and Paise Three Only
Quoted Rate In Figures					Less (-)	47.89%
Quoted Rate In Words					4381566.03	INR Forty Three Lakh Eighty One Thousand Five Hundred & Sixty Six and Paise Three Only
INR Forty Three Lakh Eighty One Thousand Five Hundred & Sixty Six and Paise Three Only						

Contractor


Staff Officer (C) (KTA)
 CCL Kalthara Area

C.C.LTD.
KATHARA COLLIERY
OPERATIONAL PLAN



ZONE - The area marked with green color is reserved for the purpose of the mine and the area marked with yellow color is reserved for the purpose of the mine.

COAL RISE RAYEN

WATER TOWER

CL

CENTRAL COALFIELDS LIMITED

DARBHANGA HOUSE : RANCHI

Ref:CCL/HoD(Envt.)/GA/W.O./23-Plantation/Hzb.East/2023/ 926 .

Dated:14.03.2023

AWARD OF WORK

To,
The Divisional Forest Officer,
Hazaribagh East Forest Division, Hazaribagh.

Sub: Award of plantation work to DFO, Hazaribagh East Forest Division, Hazaribagh, Govt.of Jharkhand for plantation in Kathara, Jarangdih, SDOCM and Karo OCM of Kathara, Dhori and B&K area of CCL.

Ref:Our letter no. CCL/ HOD (Envt)/2023-Plantation/2023/ 851 dated: 31.01.2023 & CCL/HOD(Envt)/2023-Plantation/2023/ 866 dated: 15.02.2023 and your letter no.516 dated 21/28.02.2023.

Dear Sir,

This is to convey that competent authority has accepted the above mentioned estimate/scheme for a total value of Rs. 19484548.00 only (Rs. one crore ninety four lakh eighty four thousand five hundred forty-eight only) for carrying out plantation work over 29.649Ha &1.50 Km land comprising of 76122 nos. saplings of mixed native species in Kathara, Jarangdih, SDOCM and Karo OCM of Kathara, Dhori and B&K area of CCL, as per the estimate/scheme submitted to CCL based on office order no.38 dated 31.03.2002 of CCF (Development),office order no. संख्या- 01/ योब- 10/2014- 22 दिनांक 19.06.2018 of PCCF (Development) & office order no. संख्या- 01/ योब- 10 /14 II-04 dated 20.01.18 of additional principal chief conservator of forest(Development),Govt. of Jharkhand, minimum labour wages Rs.334.14 /Man days , Government of Jharkhand effective from 01.10.2022 & letter no.134 dated 05.02.2009 by DFO, Hazaribagh Afforestation Division. The detailed breakup of the works and cost thereof are as follows:

Amount in Rs.							
Sl. No.	Name of Area	Area (ha.)	Adv. Work 2022-23	Comp. Work 2023-24	1st year maint. 2024-25	2nd year maint. 2025-26	Total
1	Kathara OCP	10.00	1933919.00	811974.00	388772.00	261356.00	3396021.00
2	Jarangdih OCP	5.75	995785.00	503119.00	277969.00	204705.00	1981578.00
3	Jarangdih OCP Patch-A	3.00	922251.00	303271.00	206273.00	168048.00	1599843.00
4	Jarangdih OCP Patch-B	2.75	845397.00	285103.00	199755.00	164716.00	1494971.00
5	Jarangdih OCP Patch-C	2.27	702398.00	250221.00	187241.00	158317.00	1298177.00
6	Jarangdih OCP Patch-D	3.00	948565.00	303271.00	206273.00	168048.00	1626157.00
7	Karo OCM Patch-I	1.175	464715.00	170645.00	158693.00	143721.00	937774.00
8	Karo OCM Patch-II	0.954	408213.00	154585.00	152931.00	140776.00	856505.00
9	Karo OCM Patch-III	0.75	362130.00	139760.00	147613.00	138056.00	787559.00
10	Dhori SDOCM Along Tisri Nallah from Karipani to Railway crossing &Near KPS weigh bridge	1.50km (2000 Plants)	2415146.00	1185021.00	952898.00	952898.00	5505963.00
	Total	29.649 ha &1.50Km	9998519.00	4106970.00	2878418.00	2500641.00	19484548.00

Continued overleaf

Scheme of plantation, spread over 4 years, will be as follows:

Details of Work	Value of works	Plantation Area (in Ha)/Length in Km	Nos. of Plants
Advance work 2022-23	9998519.00	29.649 Ha & 1.50Km	74122 + 2000
Completion Work 2023-24	4106970.00		
1 st Year Maintenance Work 2024-25	2878418.00		
2 nd Year Maintenance Work 2025-26	2500641.00		
Total	19484548.00	29.649 Ha & 1.50Km	74122+2000=76122

The MoU between Hazaribagh East Forest Division, Hazaribagh and CCL, effective from 23.11.2013, shall be the guideline for implementation of the scheme. The amount as "Advance" to be released from time to time as per the stipulation of the MoU and shall be in accordance with the work order only and shall in no case exceed the amount as stipulated against each work component. Amount released shall be utilized for specific work head and not diverted to any other work component. Forest Department shall submit expenditure vouchers as stipulated in the MoU and the vouchers shall indicate the work component head against which vouchers are submitted.

Adjustment, if any, in the advance amount released during execution of work, the same shall be adjusted from subsequent release of fund. In case of revision in labour wages during the period of scheme a revised estimate shall be submitted to CCL for acceptance enclosing there with a copy of the State Government notification required as per MoU.

You are requested to take physical possession of the site for execution of the work from the concerned Project officer and start the work immediately with intimation to this office.

Yours faithfully,

Raj
14/03/23
HoD (Envt.)
CCL, Ranchi

- Encl: (i). Copy of the MoU
(ii). Copy of the approved scheme/ estimate
(iii). Copy of the format for joint inspection

Copy forwarded for kind information:

CCL:

1. Director Tech(P&P),D(F),CCL.
2. CVO,CCL.
3. TS to CMD,CCL.
4. GM (Kathara,Dhori & B&K area).-The expenditure occurred against this work will be charged against mine closure.
5. GM(Finance-I/C), CCL.
6. Chief Manager(F)/(P&P),CCL
7. Dy.GM Finance (XP/HQ),CCL
8. Area Finance Manager, (Kathara, Dhori & B&K area).
9. Project Officer Kathara, Jarangdih, Karo, SDOCM OCP with a copy of MoU, Scheme/estimate & Joint Inspection format.
10. Area Env.officer Kathara, Dhori & B&K area: with a copy of MoU, Scheme/estimate & joint inspection format.
11. HoD (Envt.). CCL HQ Ranchi

Forest Department:

1. RCCF, Hazaribagh Region, Hzb
2. CF, Territorial Circle, Hazaribagh

Labour Department:

1. Asst.Labour.Commissioner, Hazaribagh



Records of Plantation- Kathara OCP, Kathara Area, CCL

Location	Year	No. of Saplings	Area in Ha.	Remark
E	1990-91	5000	2	
F		3000	1.2	
G		1000	0.4	
H		500	0.2	
I&J		1000	0.4	
K		500	0.2	
L		8000	3.2	
5		32000	12.8	
A+B+C+D	1992-93	40000	16	
	1995-96	75000	30	
	1996-97	62500	25	Along the Road
1&6	2002-03	62500	25	
3	2007-08	47500	19	
Rase W/S	2012-13	16400	6.56	River Side+3KM Road
Beside O/B Dump No-1	2014-15	6000	2.4	
Distributed under GM Office	2019-20	1000		Fruit Bearing Distributed
Distributed under GM Office	2020-21	10764		Fruit Bearing Distributed
Swg runway under GM Office	2020-21	1500		Bamboo Plantation along periphery
Along KTW Road	2021-22	2500		2KM Along KTW road
Distributed under GM Office	2021-22	5000		Fruit Bearing Distributed
	2021-22	2700	1.08	Along the river
Total		384364	145.44	

CENTRAL COALFIELDS LIMITED

DARBHANGA HOUSE : RANCHI

Ref:CCL/GM(Envt.)/GA/W.O./22-Plantation/Hzb.East/2022/

628

Dated:26.09.2022

AWARD OF WORK

To,
The Divisional Forest Officer,
Hazariabagh East Forest Division, Hazariabagh.

Sub: Award of plantation work along road side & OB Dump during monsoon 2022 at Kathara OCP and Dhori Khas UG of Kathara & Dhori area of CCL to DFO, Hazariabagh East Forest Division, Hazariabagh, Govt. of Jharkhand.

Dear Sir,

This is to convey that competent authority has accepted the above mentioned estimate/scheme for a total value of Rs. 11658684.00 only (Rs. one crore sixteen lakh fifty eight thousand six hundred eighty four) only for carrying out plantation work over 15.80Ha & 2.74 Km land comprising of 41336 nos. saplings of mixed species, as per the estimate/scheme submitted to CCL based on office order no.38 dated 31.03.2002 of CCF(Development),office order no. संख्या- 01/ यो.व. - 10/2014- II-04 dated 20.01.18 of Additional Principal chief conservator of forest (Development),Govt of Jharkhand, minimum labour wages Rs 326.85 /Man days , Government of Jharkhand effective from 01.04.2022 & letter no.134 dated 05.02.2009 by DFO, Hazariabagh Afforestation Division at Kathara OCP & Dhori Khas UG of Kathara & Dhori area of CCL .The detailed breakup of the works and cost thereof are as follows:-

Table-I Amount in Rs.

Sl No.	Name of Project	Area /Length in Ha / km.	Adv. Work 2022-23	Comp.Work 2022-23	1 st Year Maint. Work 2023-24	2 nd year maint. Work 2024-25	Total
1	Kathara OCP Patch-I	4.00 Ha	736412.00	367898.00	309773.00	259878.00	1673961.00
2	Kathara OCP Patch-II	4.30 Ha	806057.00	389236.00	327215.00	273578.00	1796086.00
3	Kathara OCP Patch-III	7.50 Ha	1466570.00	616838.00	492667.00	399114.00	2975189.00
4	Along Road from PO Office to Sub Station(Kathara)	1.50 Km	1197687.00	584703.00	469985.00	469985.00	2722360.00
5	Dhori Khas UG-I	0.78 Km	623274.00	297929.00	280099.00	280099.00	1481401.00
6	Dhori Khas UG-II	0.46 Km	367052.00	209737.00	216449.00	216449.00	1009687.00
	Total	15.80 Ha & 2.74 Km	5197052.00	2466341.00	2096188.00	1899103.00	11658684.00

Scheme of plantation, spread over 4 years, will be as follows: Table-II

Details of Work	Value of works(in Rs.)	Plantation Area (in Ha)/Length (in Km)	Nos. of Plants
Advance work 2022-23	5197052.00	2.74 Km & 15.80 Ha	1836+39500=41336
Completion Work 2022-23	2466341.00		
1 st Year Maintenance Work 2023-24	2096188.00		
2 nd Year Maintenance Work 2024-25	1899103.00		
Total	11658684.00	2.74 Km & 15.80 Ha	41336

Contd. over leaf

The MoU between Hazaribagh East Forest Division, Hazaribagh and CCL, effective from 23.11.2013, shall be the guideline for implementation of the scheme. The amount as "Advance" to be released from time to time as per the stipulation of the MoU and shall be in accordance with the work order only and shall in no case exceed the amount as stipulated against each work component. Amount released shall be utilized for specific work head and not diverted to any other work component. Forest Department shall submit expenditure vouchers as stipulated in the MoU and the vouchers shall indicate the work component head against which vouchers are submitted.

Adjustment, if any, in the advance amount released during execution of work, the same shall be adjusted from subsequent release of fund. In case of revision in labour wages during the period of scheme a revised estimate shall be submitted to CCL for acceptance enclosing there with a copy of the State Government notification required as per MoU.

It has been financially concurred and certified vide No. BGT/RB/PP/22-23/852459/17/(13) dated 26.09.2022 under the head of revenue budget 2022-23 "Environmental Exp."

You are requested to take physical possession of the site for execution of the work from the concerned Project officer and start the work immediately with intimation to this office.

Yours faithfully,

26/9/2022
Cm
General Manager (Envt.)
CCL, Ranchi
hmv

- Encl: (i). Copy of the MoU
(ii). Copy of the approved scheme/ estimate
(iii). Copy of the format for joint inspection

Copy forwarded for kind information:

CCL:

1. Director Tech(P&P),D(F),CCL.
2. CVO,CCL.
3. TS to CMD.
4. GM (Kathara&Dhori area).-The expenditure occurred against this work will be charged against mine closure.
5. GM(Finance-I/C), CCL.
6. Chief Manager(F)/(P&P),CCL
7. Dy.GM Finance (XP/HQ),CCL
8. Area Finance Manager, (Kathara & Dhori area).
9. Project Officer Kathara OCP&Dhori Khas UG, with a copy of MoU, Scheme/estimate & joint inspection format.
10. Area Env.officer Kathara & Dhori area: with a copy of MoU, Scheme/estimate & joint inspection format.
11. GM (Envt.). CCL HQ Ranchi

Forest Department:

1. RCCF, Hazaribagh Region, Hzb
2. CF, Territorial Circle, Hazaribagh

Labour Department:

1. Asst. Labour Commissioner, Hazaribagh

Kathara OCP, Kathara Area, CCL

Fruits bearing plants Distribution Record (2022-23)

① कोरिया उन्नी पंचायत - मुखियाजी समिन्वर महल

200 पीछा पात किचे
25/11/22

मुखिया

ग्राम पंचायत कोरिया उन्नी
प्रखण्ड-वेमो (कोरिया)

② कोरिया दक्षिणी - मुखिया श्रीमती नरुलता देवी

200 पीछा पात किचे

नरुलता देवी

③ वीथि पंचायत

पंचायत समिती पन्थुइव थारुव

200 पीछा पात किचे

Chandrasekhar Dasu

पंचायत समिती पन्थुइव

ग्राम पंचायत वीथि

प्रखण्ड-गोविया (कोरिया)

④ कथारा पंचायत

मुखिया पुनम देवी

200 पीछा पात किचे

Kan

कथारा

ग्राम पंचायत कथारा

प्रखण्ड-गोविया, कोरिया (आरखण्ड)

(25-2305) कर्मचारी का नाम और पद का विवरण

1. श्री वसुधा कुं विक्रम - परिमोजना प्रदायकारी - 5 पैसे ✓
2. श्री गोपाल सिंह मोना - एका प्रबंधक 5 पैसे ✓ 25/11/22
3. श्री अश्वनी कुमार दिवाकर - सेमरी कर्मिका - 5 पैसे ✓
4. श्री मंगेश भादव - गैर शहारीमा - 10 पैसे ✓
5. श्री विन्तामणी मणी कामक - कपडार - 10 पैसे ✓
6. श्री तुलु प्रसाद मंडल - कर्मिक प्रबंधक - 10 पैसे ✓ 25/11/22
7. श्री केशव सिन्हा - एका 10 पैसे ✓
8. श्री मंगेश महतो - एकरगडा - 10 पैसे सतीप ✓
9. श्री मंडीप मंडल - यलकाी - 10 पैसे ✓
10. श्री रामु मंडल - आरंगडीह - 10 पैसे Ramco Man ✓

INDEX

(1) PROPOSED SITE FOR SEED BAL PLANTATION FOR THE YEAR 2023-24

SHOWN IN THIS

(2) LOCATION	Latitude	Longitude
A	23° 45' 32"	85° 52' 14.7"
B	23° 45' 35.14"	85° 52' 0.16"
C	23° 45' 31.23"	85° 51' 43.83"
D	23° 45' 28.51"	85° 51' 44.61"
E	23° 45' 13.51"	85° 51' 13.61"
F	23° 45' 12.47"	85° 51' 9.91"
G	23° 44' 56.32"	85° 51' 14.16"
H	23° 44' 58.16"	85° 51' 16.56"

3) SITE AREA

i) ABCD	5.00 Ha.
ii) EFGH	5.00 Ha.
TOTAL	10.00 Ha.



11/8/2023
 S. S. SURVEYOR
 KTC
 MANAGER
 KTC
 11/8/2023



CENTRAL COALFIELDS LIMITED
(Govt. of India undertaking)
OFFICE OF THE PROJECT OFFICE (KTC)
PO: KATHARA: DIST.: BOKARO (JHARKHAND)
PIN: (829116)

CCL

A Miniratna Cat-I Company

Ref. No.: PO (KTC)/Environment /Work Order/2023-24/ - 557
Dated: - 27/05/23

WORK ORDER

GSTN No: - 20AJTPR6610H124

PAN No. : - AJTPR6610H

Account No: 34935702223

To
M/s Rafique Shoe House
Gomia, Bokaro (Jharkhand)

Sub: - "Work of Preparation of SEED BALLS for Three-Tier Plantation at Slopes of OB with comprising of a mix of native species to Kathara OCP, Kathara Area, CCL.

Ref: i) E-Tender: 2023_CCL_276351_1

ii) E-Tender Notice No.: PO (KTC)/Environment/E-Tender/2022-23/88 dated: 22.03.2023

All work to be best of its kind carried on subject to the condition quoted on back No. portion of the work to be considered as accepted or approved of until such in notified in writing by the superintendent of Collieries or Colliery Managers or until the final bill for the entire work is paid.

Your balance Security Money 8.75% i.e Rs.28175 (Rs. Twenty Eight Thousand One Hundred Seventy Five) will be deducted from your final bill & you have deposit Earnest money Rs.5200 (Rupees Five Thousand Two hundred) UTR: 132167184, PNR: 286095939264 .online submitted which is returned after completion of guarantee period, both of which will be returned preposition of satisfactory completion certificate from Env. Officer Kathara Colliery.

Sl. No	Description	Qty.	Unit	Rate Per Ha.	Amount
1.	SEED BALLS preparation for Three-Tier Plantation with comprising of a mix of native species with all materials as per instruction of Officer Incharge.	10	Hectare	32,200.00	3,22,000.00
Total =					3,22,000.00
CGST @ 18 %				(+)	57960.00
Sub-Total =					3,79,960.00

(Rupees Three Lakh Seventy Nine Thousand Nine Hundred Sixty only.)

Completion time: the period of completion of work shall be 90 (Ninety) days.


Note: All Term and Condition as per NIT No. : PO (KTC)/Environment/E-Tender/2022-23/88 dated: 22.03.2022 (General Terms and Conditions).

Amf

(Terms & Condition)

1. Guarantee: The party has to furnish a guarantee certificate for workmanship for a period of 06 (six) months from the date of completion and acceptance of the estimated work.
2. Completion period: - The work will be completed within 90 days from the date of receipt of Work Order.
3. Payment: - 90% payment will be made by Area Account Officer (KTA) Kathara after acceptance by Safety Officer, Kathara Colliery through E Payment.
4. Inspection: - Final inspection of all the work done by the contractor will be carried out by Safety Officer, Kathara Colliery or his authorized representative.
5. Materials: - All to be supplied by the contractor.
6. Taxes: - GST, I.TAX, & Other Taxes will be deducted from your bill as per Govt. of India/Jharkhand rules.
7. Project/Area vide BC No C&B/RFC/23-24/Advance Action Budget/KTC/Environmental Expenses/04
Dated.19.05.23 Amount Rs.-100000 Commitment item -ENVIRONMENTALEXP

- Note: -1. Release of Rs. 1,00,000/- (Rupees One Lakh) including GST towards work and balance fund will be communicated when full R.B 23-24 will be communicated as per E-Office No.1013136.
2. the Rate is exclusive of all the taxes which are subsumed under the GST


27/5/2023
Nodal officer (Env.)
Kathara Colliery.

Copy to:-

- 1) Project Officer, Kathara Colliery.
- 2) AFM, (KTA), Kathara.
- 3) Manager (Finance) Kathara Colliery.

सेंट्रलकोलफिल्डसलिमिटेड

(कोलइंडियालिमिटेडकीएकसहायककम्पनी)
 दरभंगाहाउस, रांची, झारखण्ड - 834029
 ई-मेल: peenmktc@gmail.com
 कार्यालयवेबसाइट: www.centralcoalfields.in
 ईएंडएमविभाग विभाग

**Central Coalfields Limited**

(A Subsidiary of Coal India Limited)
 Darbhanga House, Ranchi,
 Jharkhand-834029
 e-mail: peenmktc@gmail.com
 Office website: www.centralcoalfields.in
 Department E&M, Kathara Colliery

E-TENDERNOTICENIT No: **KTC/PE(E&M) /E-Tender/23-24/51**Dated: **05.08.2023**

1. Tenders are invited on-line under single cover system on the website <https://coalindiatenders.nic.in> from the eligible bidders having Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India and which can be traced up to the chain of trust to the Root Certificate of CCA, for the following work:

Description of work	Location	Estimated Value (Including GST)(₹ .)	Earnest Money (₹ .)	Period of Completion (in Days)
Supply Installation and commissioning of Pre-Fabricated 100 KLD Effluent Treatment Plant (ETP) with 01 year of warranty and 05 years of Comprehensive Annual Maintenance Contract (CAMC) in respect with Kathara OCP, Kathara Area, CCL	Kathara Colliery	1940294.00	24300.00 (1.25% of value of the estimated cost rounded off to next hundred rupees subject to a maximum of Rs. 50 lakhs.)	90

Note: The bid documents will be available on the website(s) <https://coalindiatenders.nic.in> and www.centralcoalfields.in and can be downloaded by the bidder up to the bid download end date. There is no Application Fee.

2. (i) Time Schedule of Tender:

SL. NO.	Particulars	Date	Time
a.	Tender e-Publication date	05.08.2023	16:00 Hrs
b.	Document download start date	07.08.2023	10:00 Hrs
c.	Document download end date	16.08.2023	16:00 Hrs
d.	Bid Submission start date	07.08.2023	10:00 Hrs
e.	Bid submission end date	16.08.2023	16:00 Hrs
f.	Start date for seeking Clarification on-line	07.08.2023	10:00 Hrs
g.	Last date for seeking Clarification on-line	13.08.2023	16:00 Hrs
h.	Date of Pre-bid meeting (if any)	----	---
i.	Date of Bid Opening	17.08.2023	16:00 Hrs

(ii) For Site visit of location of work, the prospective bidder(s) may contact...

Tender inviting authority	Contact Person(s)/Tender Dealing Officer(s)
Project Engineer (E&M) Kathara Colliery	Mr. Mohan Kumar, Chief Manager (E&M), Kathara Colliery



मेकॉन लिमिटेड (भारत सरकार का संस्थान) MECON LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)

Annexure-XXV



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

Major Offices:

Page 1 of 47

नई दिल्ली/New Delhi
+91-11-2204 1872 (Phone)
+91-11-2204 1214 (Fax)
delhi@meconlimited.co.in

मुंबई/Mumbai
+91-22-2781 2155-58 (Phone)
+91-22-2781 2275 (Fax)
mumbai@meconlimited.co.in

कोलकाता/Kolkata
+91-33-2282 2381-82 (Phone)
+91-33-2282 4441 (Fax)
kolkata@meconlimited.co.in

बंगलुरु/Bangalore
+91-80-2625 2000 (Phone)
+91-80-2657 6352 (Fax)
bangalore@meconlimited.co.in



मेकॉन लिमिटेड
भारत सरकार का संस्थान

MECON LIMITED

A Government of India Enterprise

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

फोन / Phone : 0651 – 248 3060/ 3566

फैक्स / Fax : 0651 – 248 2289

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

3.8 Taxes & duties as applicable on Raw Materials/ Bought Out Components/ Inputs are included in the Contract price. No adjustment in the Contract price shall be made for variations in the taxes on raw - materials, parts, component/ intermediate components, assemblies/ sub-assemblies, etc.

3.9 The contract price specified under clause 2.0 is based on taxes, cesses, duties, levies etc. prevailing as on Effective date of i.e., date of LOI/ Order.

Goods & Service Tax Number (GSTN) of CCL: 20AAACC7476RHZT

Goods & Service Tax Number (GSTN) of MECON, Ranchi: 20AACCM2119B1ZG

3.10 **E-Way Bills (if applicable)**

Any consignment from outside the State of Jharkhand shall not be dispatched by the Contractor without a valid e-Way Bill. Once the material is ready for supply, the contractor shall generate E-waybill no. (EBN) from GSTN portal and shall be made available to MECON & CCL.

3.11 **Recovery of Income Tax**

Any Indian Income Tax which MECON may be required to deduct by law/ statute, shall be deducted at the source under Chapter XVII B and the same shall be paid to the Income Tax Authorities on account of the Contractor. MECON shall provide the Contractor a certificate for such deduction of Tax. The Contractor shall indicate their Permanent Account Number with the relevant Income Tax Authority to MECON. Contractor shall maintain Books of Account and shall get the accounts audited as required under the relevant Act.

3.12 **Rent & Royalties (if applicable)**

3.12.1 Unless otherwise specified, the Contractor shall pay all tonnage and other royalties, rents and other payments or compensation (if any) for getting stone, sand, grave, clay, bricks and other materials required for the works or any temporary works and it shall be deemed to have been included in the quoted prices.

3.12.2 Contractor to also note that as per Mines and Minerals Act of Govt. of Orissa, the contractor is required to pay royalty for various types of construction materials (minor minerals) used in the work. The royalty charges shall have to be deposited in the office of Tahsildar from whose jurisdiction the minerals have been lifted. The Contractor has to submit Mineral usage statement and Royalty Clearance certificate from above Authority before final payment to the contractor.

3.12.3 Building and Other Construction Worker's Welfare Cess (BOCW), if applicable, shall be borne by the Contractor. The Owner (CCL) and MECON shall not bear any liability in respect of the same.

4.0 COMPLETION PERIOD

4.1 Completion Period/ Time is one of the most important aspects of the work order and is firm & binding. Contractor shall complete the entire work as per the scope of work detailed in the technical specification and clause 1.0 above in all respects as the following schedule:

The time of completion of the total package shall be 18 (Eighteen) months from date of Order, which comprise of Project execution time (i.e. upto commissioning) of 12 (Twelve) months and Trial run period of 6 (Six) months.

4.2 In order to achieve completion schedule as stated above, Contractor shall submit to MECON within 2 (Two) weeks, a detailed work programme / time schedule in the form of a Bar Chart / Pert Network of complete work for approval by MECON. Bar Chart/ pet Network as stated above shall include clearly all activities including mobilization, site clearance, etc.

Detailed Bar Chart / pert network as approved by MECON shall from part of this work order and work shall be carried out by the Contractor as per the finally agreed Bar Chart/Pert Network.



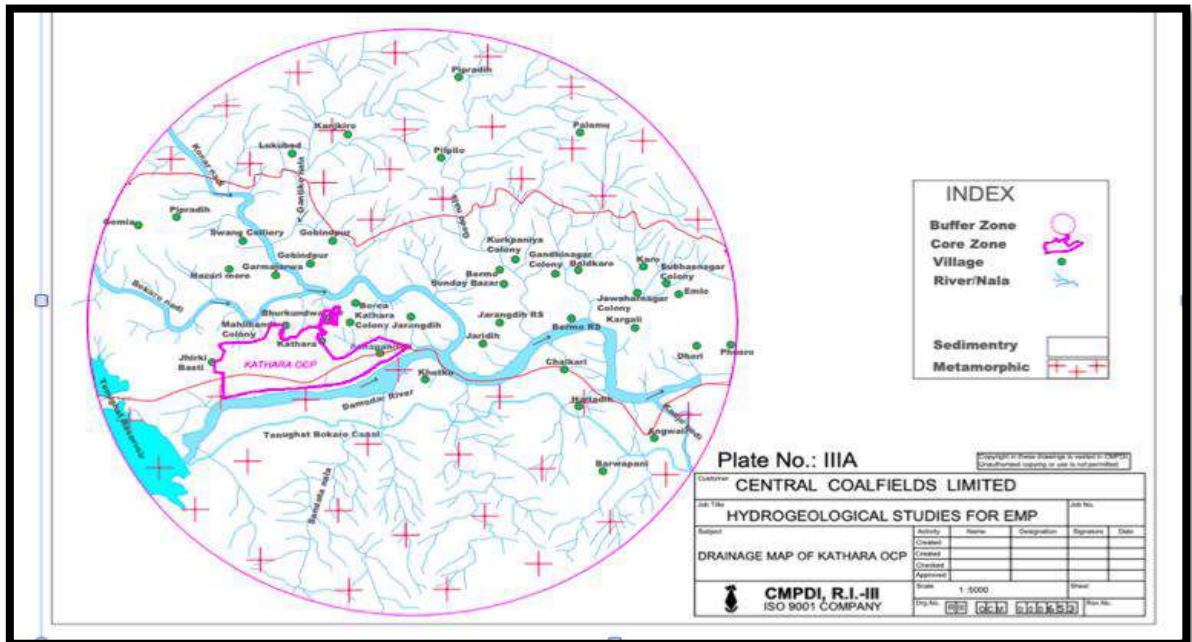
Conservation & Management Plan of

Damodar River

Kathara OCP
(Kathara Area)

(Project Area: 773.23 Ha
Capacity: 1.90 MTPA)

CENTRAL COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)



April 2022

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Chapter 1

Introduction

1.1 Background of the Project

Kathara OCP is a brownfield project operating since pre-nationalization era. This project falls in the CD block Bermo in Bokaro District of Jharkhand, administratively under Kathara Area of CCL. This project has obtained Environmental clearance for 0.96/1.90 MTPA under EIA Notification, 2006 vide letter no: J-11015/482/2008-IA-II (M) dt. 08.01.2014.

The life of mine as per the calendar plan of previous EC was 03 years. Meanwhile, a revised cost estimate (RCE) Project Report of Kathara OCP was prepared for balance mineable reserve of 26.80 MT with mine life 15 years and rated capacity of 1.90 MTPA, and approved by CCL Board on 01.10.2012. Kathara OCP has obtained ToR for 1.90 MTPA vide letter no. F.J-11015/482/2008-IA-II dt. 27.4.2021. Public Hearing of the project was held on 31.08.2021.

The proposal for issuance of fresh EC to Kathara OCP (1.90 MTPA) within the project area of 773.23 Ha was submitted to MoEFCC as per EIA Notification, 2006.

1.2 Brief Description of Nature and Size of the Project

Kathara OCP is an existing opencast coal-mining project. The proposed project will run with a rated capacity of 1.90 MTPA within the project area of 773.23 Ha and a mine life of 12 years.

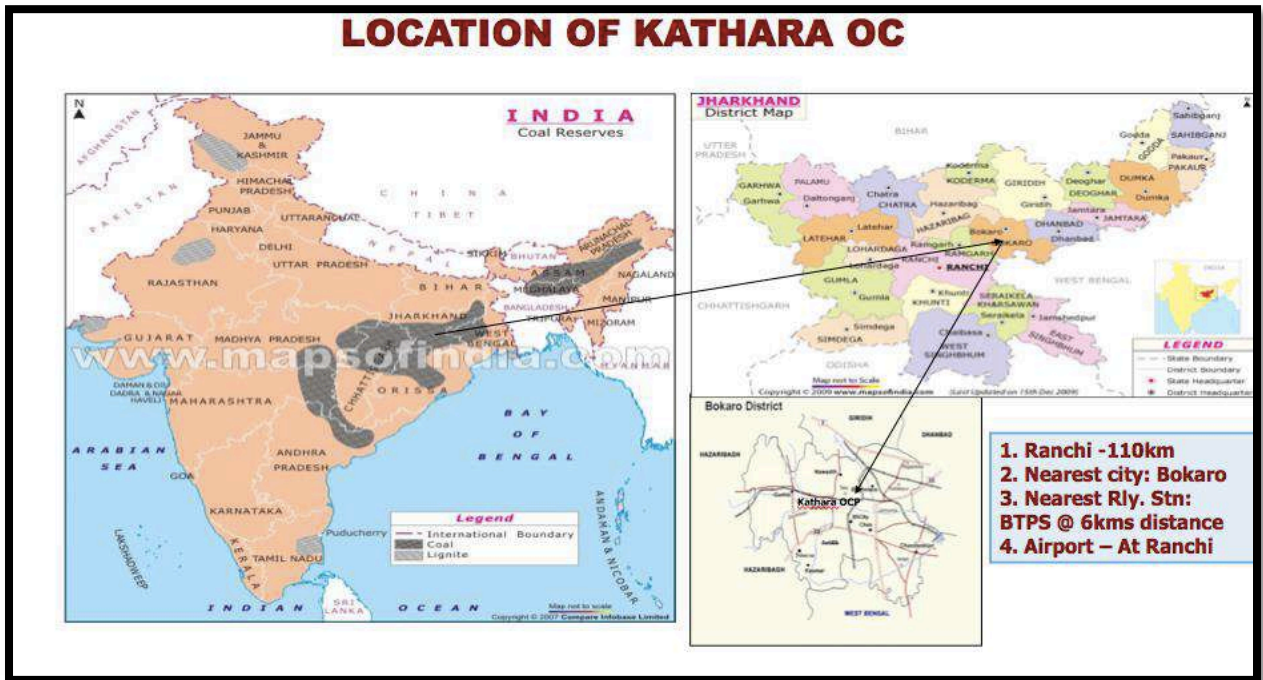
1.3 Location Details

1.3.1 General Location

Kathara Opencast Project lies in the South-Western part of the East Bokaro Coalfields in Bokaro District of Jharkhand, administratively falls within Kathara area of Central Coalfields Limited, Jharkhand.

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**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**



1.3.2 Specific Location:

Kathara OCP falls in the Kathara Block East Bokaro Coalfields, Bermo CD Block located in Bokaro District of Jharkhand. This project is covered by the Survey of India Toposheet no: 73E/13 & 73 E/14, enclosed by Latitude: 23°44'47.26"N to 23°46'26.11"N and Longitude: 85°50'59.89"E to 85°54'25.91"E.

1.3.3 Project Boundary & Project Site Layout:

a) Northern Boundary

The northern surface boundary has been fixed along a safe distance of 45 m from existing road (going to Tenughat and partly diverted).

b) Eastern Boundary

Earlier quarry floor boundary was fixed along the fault F2F2. Eastern side of the mine is Colony no 4 of CCL and external dump.

c) Southern Boundary

Along the incrop of Kargali Bottom/combined seam (fixed earlier). Here quarry boundary is limited by central dump and washery site.

d) Western Boundary

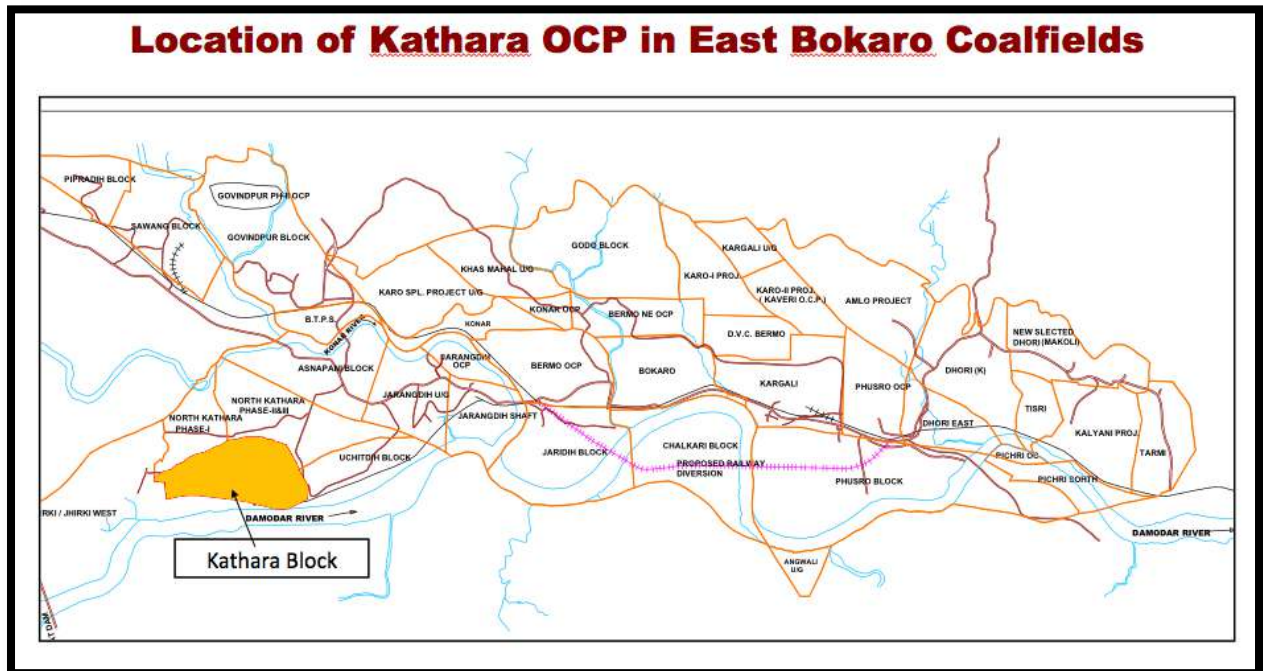
The western boundary is fixed at 60 m distance from land acquired boundary. West side of the mine is JhirkiTola.

**Conservation and Management Plan of Damodar River
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As per the Approved Mining Plan of Kathara OCP (1.9 MTPA), the total land requirement is 773.23 Ha. consisting of 258.46 Ha of quarry area and 109.53 Ha of active external dump. The details of land use during mining is as given below.

Table 1 Proposed Land Use Plan

Description	Forest Area in Ha.	Non-Forest Area in Ha.	Total Area in Ha.
Quarry	0	258.46	258.46
External OB Dump	0	109.53	109.53
Reclaimed OB Dump and Embankment	0	74.09	74.09
Industrial Area (W/S, S/S, Haul Road, Office etc)	0	64.54	64.54
Colony & Settlement	0	122.87	122.87
Safety Zone / Green belt	0	45	45
Vacant Land	0	98.74	98.74
Total	0	773.23	773.23



Chapter 2

Description of Water Environment

2.1 Watershed Description

2.1.1 General Topography

Undulating terrain sloping towards South and South-East direction of Damodar River basin. General elevation ranges from 220 m (in the eastern most part near Damodar River) to 441 m above msl (in the northern part near dense mixed jungle of Taraberapahar). Several hillocks are present in the buffer zone. Some of the hillocks with highest peak of 441 m above msl are present in the dense mixed jungle of Taraberapahar at about 7 to 8 km north-east of the project and another hill about 437 m above msl is present in the dense mixed jungle of Kuripahar around 5 to 6 km north-east of the project. Hillock having peak of 323 m above msl is present in the dense mixed jungle around 4 to 5 km south-east of the project. In general, north of the study area is dominated by several hillocks as compare to south.

2.1.2 Drainage Pattern of the Study Area

The general surface slopes towards the Damodar River, the master drainage in the area. The drainage of the area is controlled by Damodar River, Bokaro River and Konar River. Bokaroriver and Konar river which flows from north-west to south-east and joins in Damodar River. Damodar River located south of the project flowing towards east. No nala diversion is required for this project. The HFL of the Damodar River as recorded in the vicinity of the project is 221.64 m above MSL (as on 11.08.1935) (nearby RL of project is 227.0 m). The drainage pattern of the area is mostly dendritic.

**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**

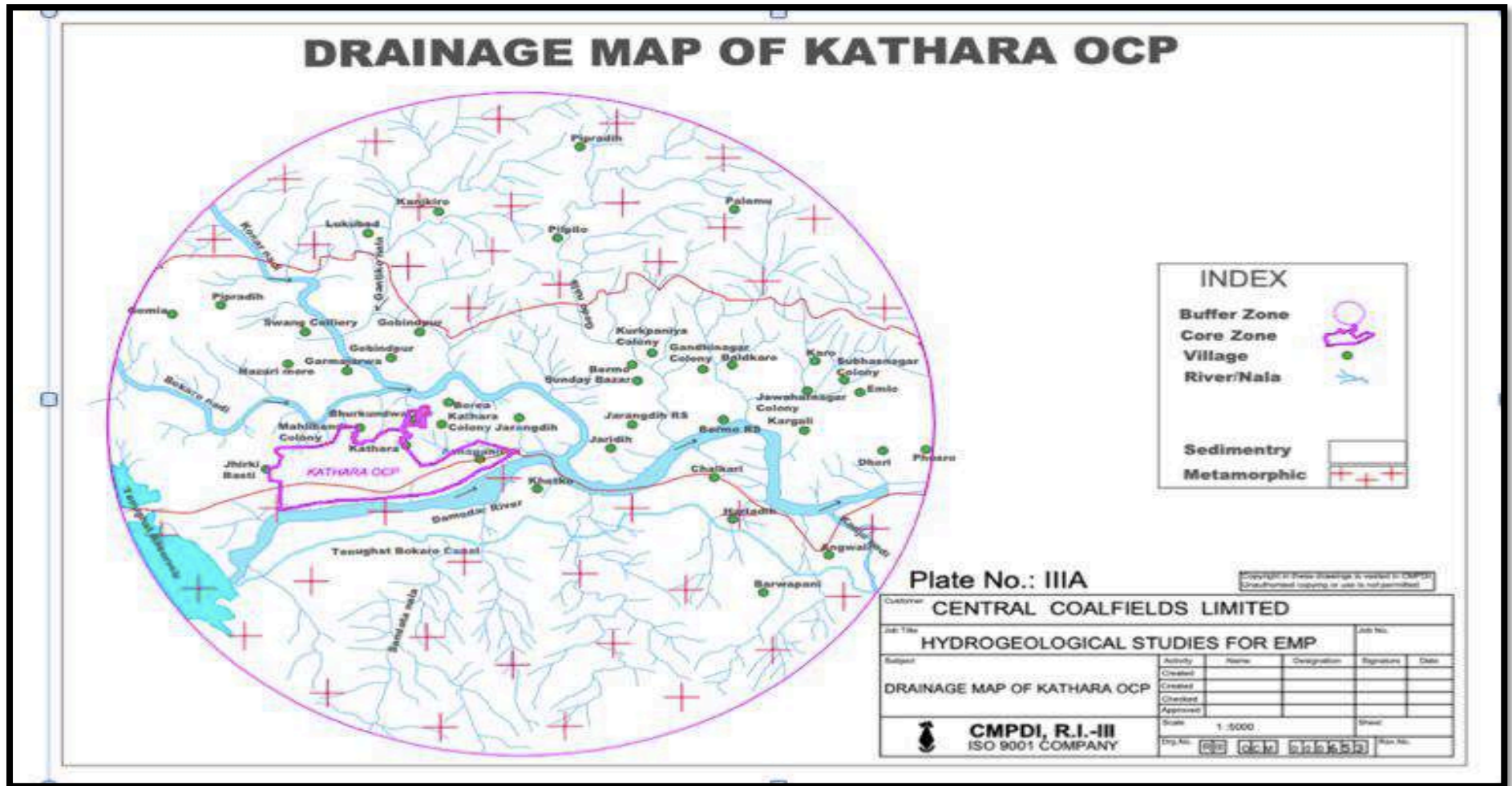


Fig: Drainage Map Of Kathara OCP

Chapter 3 Impact of Mining on Surface Water Bodies

3.1 Watershed Description

The study area lies in the watershed area of the Damodar River. The entire project area of Kathara OCP i.e. 773.23 ha falls in the catchment area of Damodar River which also includes the Tenughat Reservoir/Dam (i.e. less than 0.5% of total catchment area of Damodar River).

The project area of Kathara OCP is 7.7323 sq.km (773.23 Ha) whereas the quarriable area is about 2.5848 sq.km (258.48 ha). Total excavated (mining) area of the Kathara OCP (2.5848 sq.km) is significantly small as compared to the catchment area of the Damodar River. Moreover, the present proposal involves mining activity within the already broken/damaged land thus, not having any further impact on the topography and drainage catchment of river Damodar.

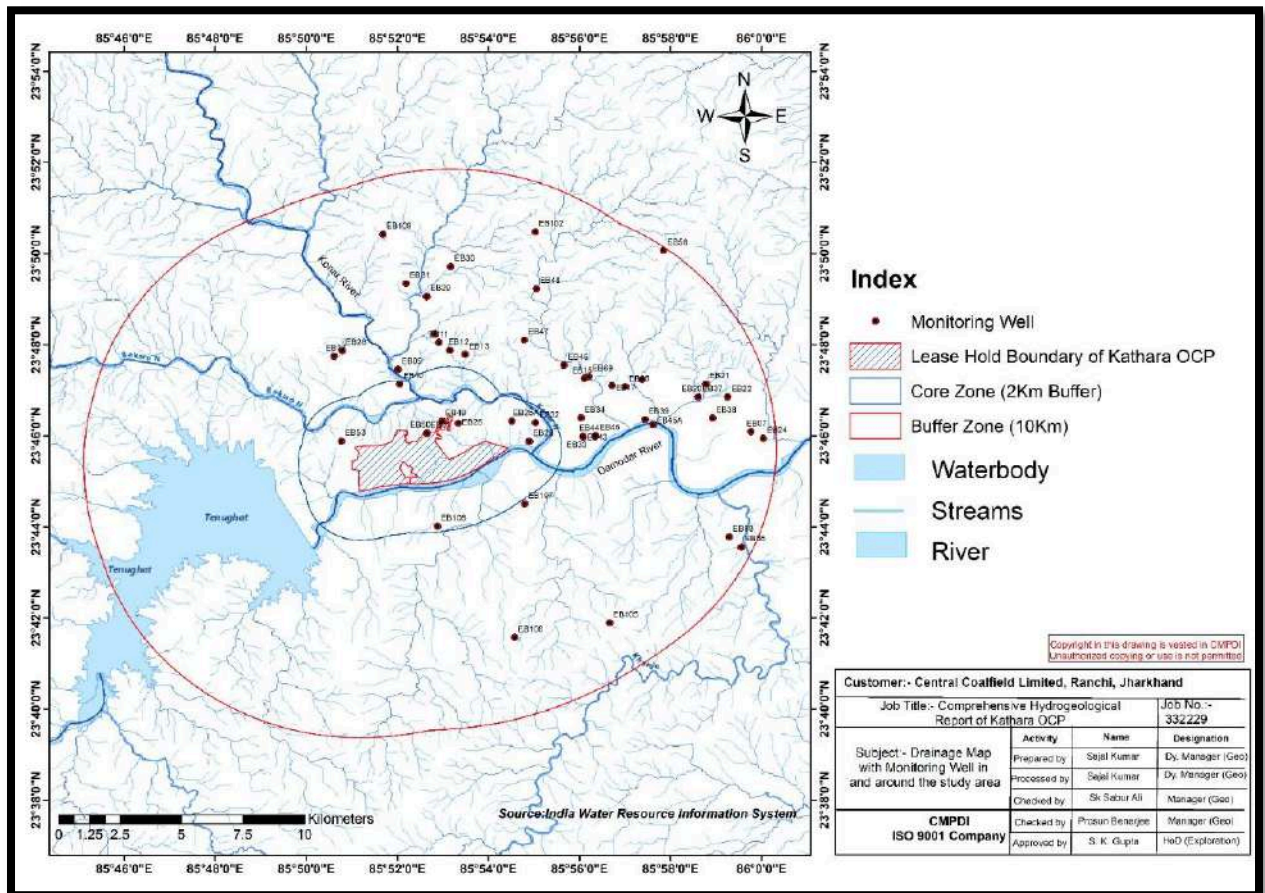


Fig: Watershed Map of Damodar River

3.2 Impact of Mining Activity

The identified impacts of mining activity on Damodar River are as given below:

SN	Particulars	Details
01	Quantitative Impact	<ul style="list-style-type: none"> • Impact due to change in the Topography and drainage of the watershed due to mining activity
02	Qualitative Impact	<ul style="list-style-type: none"> • Mine and workshop effluent • Surface run off/ storm water run-off from the mine and industrial area • Sewage Effluent from site

3.2.1 Quantitative Impact

Impact Due to Change in Topography and Drainage:

Mining of coal by **open cast method** causes changes in topography. The change of ground relief in a mine area influences the local drainage. This may alter the drainage at the micro level. Care is taken during mining activity to avoid any serious damage to surface water bodies. The drainage of the area is controlled by Damodar River, Bokaro River and Konar River. Bokaro River and Konar River which flows from north-west to south-east and joins in Damodar River. Damodar River located south of the project flowing towards east. No nala diversion is required for this project. The HFL of the Damodarnadi as recorded in the vicinity of the project is 221.64 m above MSL (as on 11.08.1935) (nearby RL of project is 227.0 m). The distance of the Kathara OCP (quarry) from Damodar River ranges from around 500 m to 1000 m.

Impact on Ground Water:

Ground water level by Permanent Observation Well (PoW) of the area is continuously monitored by CMPDI and CGWB. There is a permanent observation well of CGWB in Gomia (Well No.: BGH-01). The pre-monsoon and post monsoon historical groundwater levels for the last few years (1998 to 2017) recorded by CGWB at the nearest permanent hydrograph stations at Gomia (Well No.: BGH-01). The pre-monsoon and post monsoon historical groundwater levels for the last few years recorded by CMPDI at the nearest permanent hydrograph stations like at Jarandih (Well No.: EB-25) and Kathara (Well No.: EB-26) were collected and are given below:

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**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**

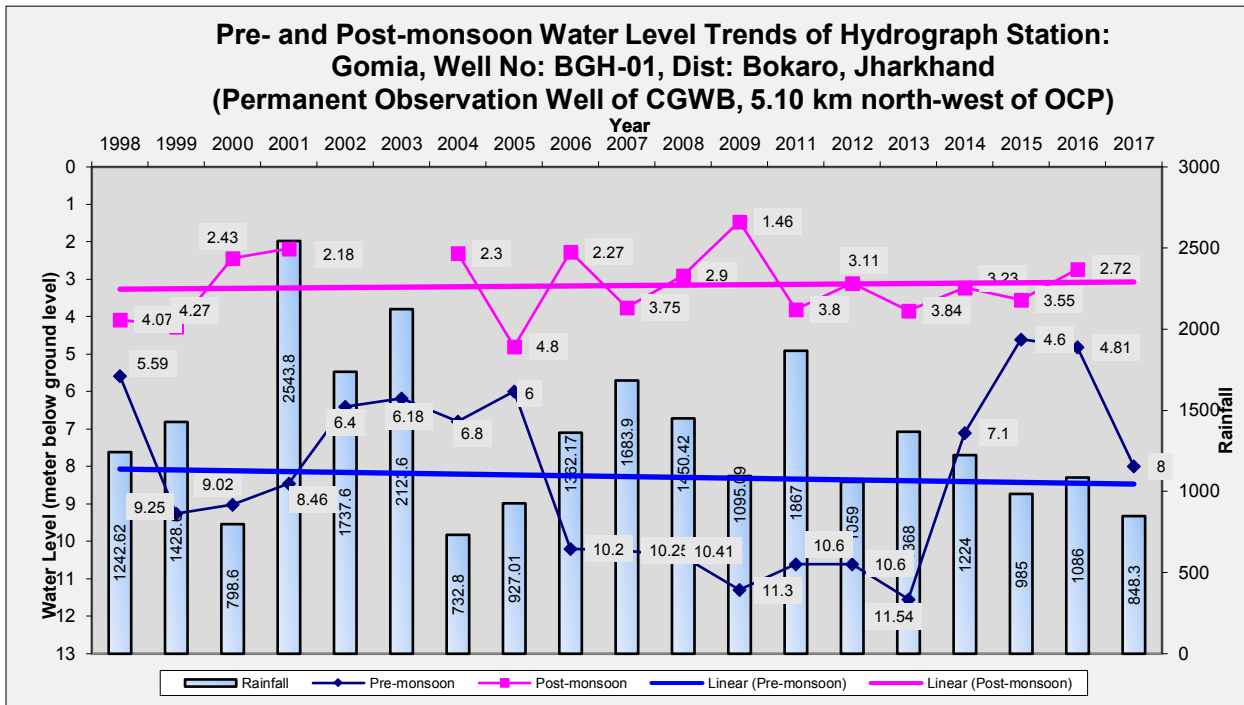


Fig 1 (a): Water level trend of CGWB Well, Gomia (BGH-01)

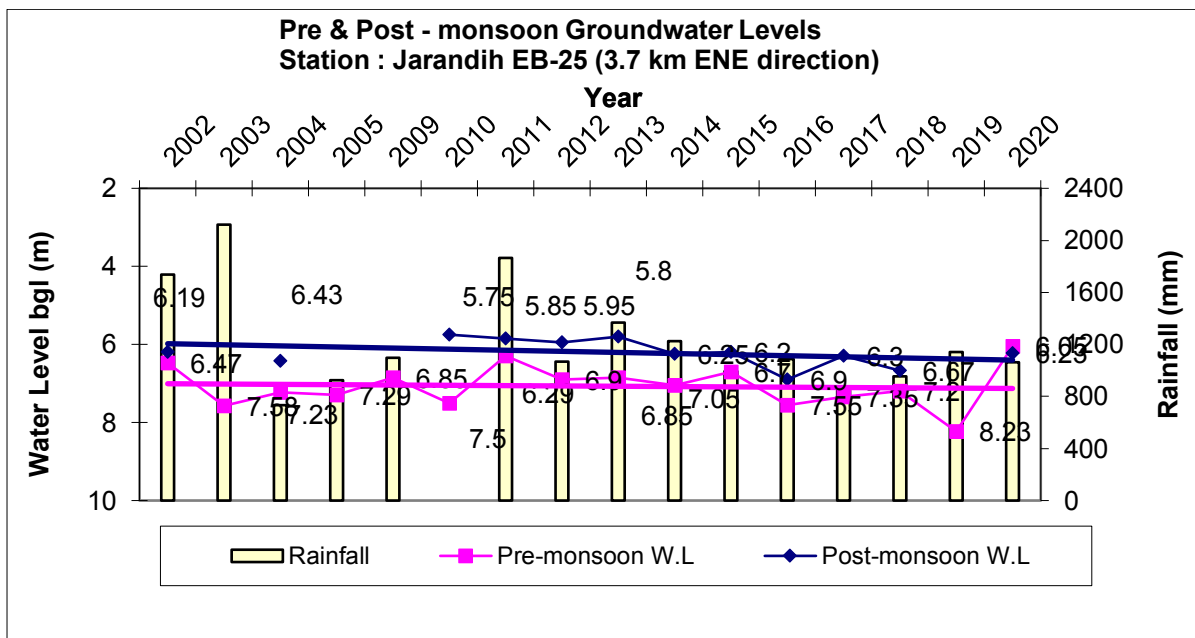


Fig 1 (b): Hydrograph station at Jarandih (Well No.: EB-25)

**Conservation and Management Plan of Damodar River
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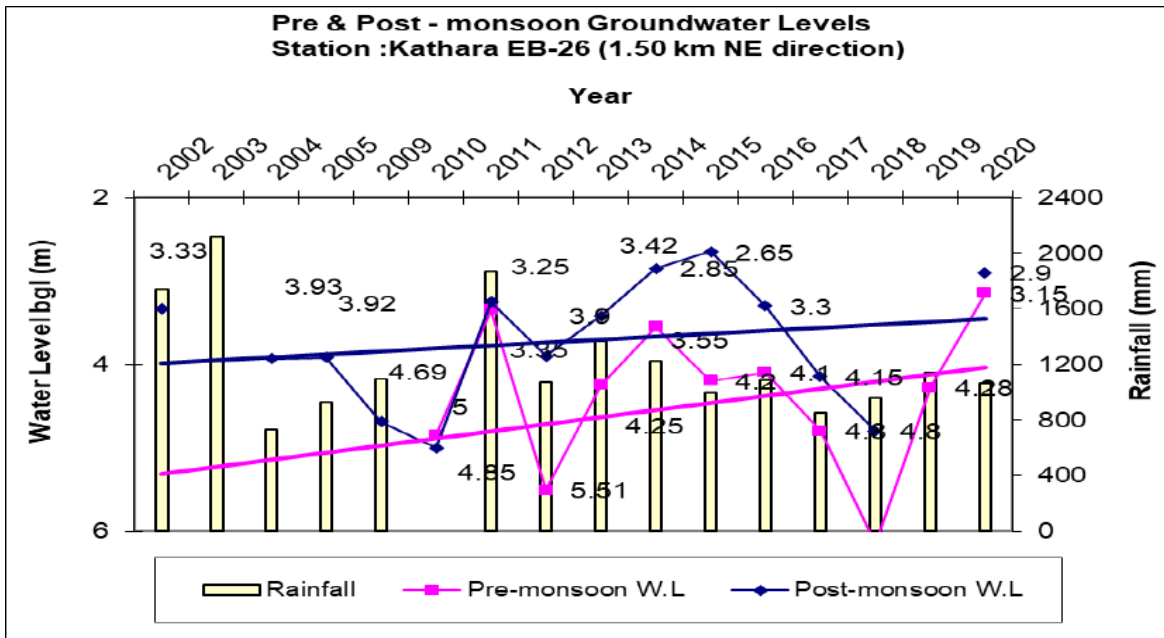


Fig 1 (c): Hydrograph station atKathara (Well No.: EB-26)

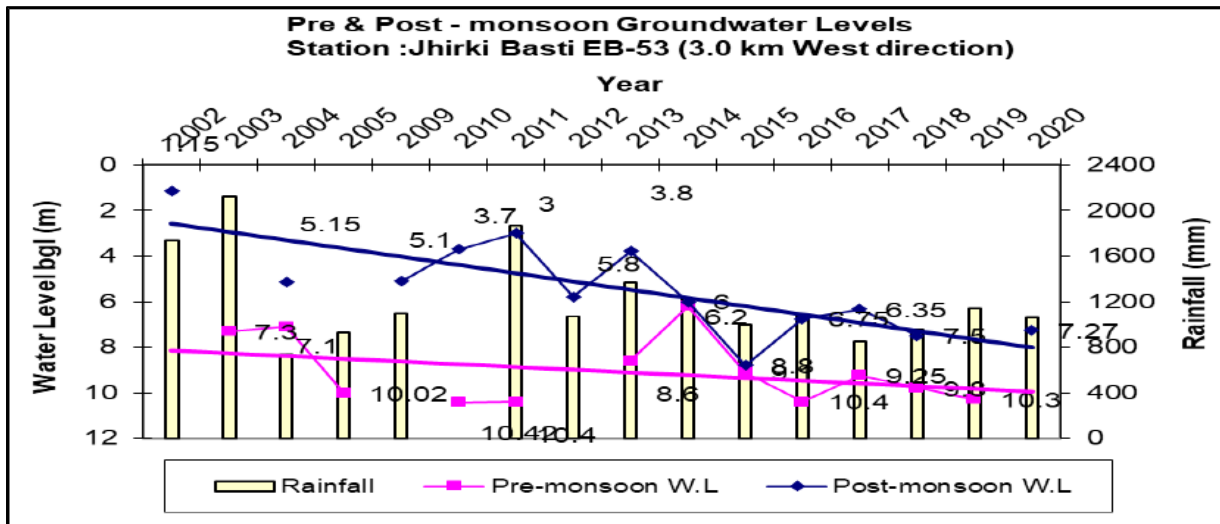


Fig 1 (d): Hydrograph station at JhirkiBasti (Well No.: EB-53)

**Conservation and Management Plan of Damodar River
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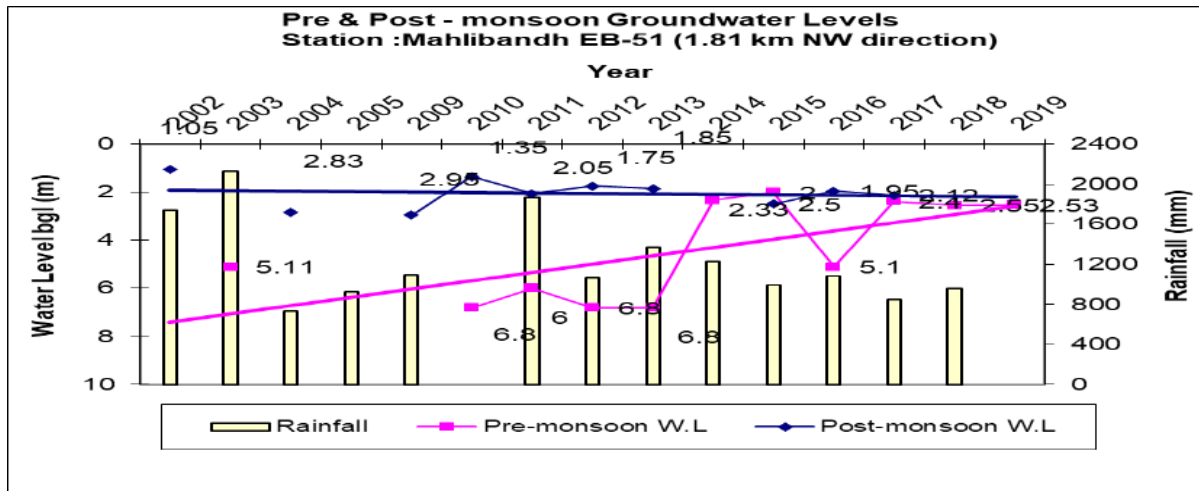


Fig 1 (e): Hydrograph station at Mahliband (Well No.: EB-51)

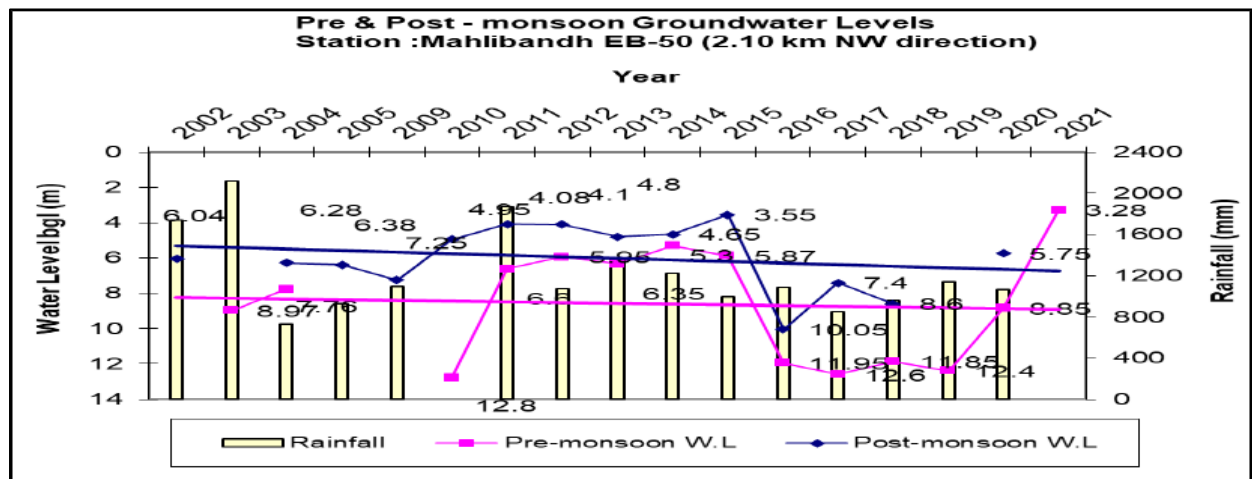


Fig 1 (f): Hydrograph station at Mahliband (Well No.: EB-50)

The above data shows that the pre-monsoon water levels vary from 1.23 m (2015 at ED-25, Jarangdih) to 12.60 m (2017 at ED-50, mahlibandh) with an average of 5.55 m and the post-monsoon water levels vary from 1.28 m (2015 at ED-25A) to 10.05 m (2016 at ED-50) with an average of 3.90 m.

The water level fluctuation varies from 0.10 m to 7.40 m with an average fluctuation of 1.60 m in the area.

Overall groundwater utilisation with the increasing population and Industrial demand and less recharge by rainfall has in recent past years, may be affected the local groundwater regime. Studies reveal that the general water table gradient for the top aquifer in the buffer zone is around $1.5 \text{ to } 3.30 \times 10^{-3}$ towards Damodar River.

**Conservation and Management Plan of Damodar River
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Mine water inflow and disposal for Kathara OCP:

Type of mine: Open Cast

Elevation of Water Table: 255m (AMSL)

Lowest Elevation of mine pits: 50m (AMSL) at final stage of quarry.

Mine seepage has been predicted based on Darcy's equation for the exposure of formations/aquifers of Kathara OCP as per predicted mine progress upto 5th year since the resumption of the mine operation. This is appropriate to mention here that monsoon period has been included in postmonsoon period for estimation of water inflow in the mine for next five years after the reopening of mine operation. Hydraulic Conductivity (K) value of 1.0 m/day is considered for the top unconfined aquifer whereas for semiconfined aquifer it is 0.38 m/day. The shale and coal layers in this region have been considered as aquiclude.

The details estimate of the yearly mine seepage has been furnished considering 120 days for pre-monsoon and 245 days for post-monsoon period for unconfined and semiconfined aquifers from the face walls of mine.

The seepage from the bottom of the mine pit is considered nil as coal formation in the working bench acts as aquiclude.

The estimated value depicts that daily mine seepage will reach at its maximum value in the 4th year 1176 m³/day during monsoon season whereas it will reach 1092m³/day during non-monsoon period.

Yearly mine seepage during pre-monsoon as well as in post-monsoon period has been summarized below-

Year	Period	Annul Mine Seepage (Cub m/Year)
Year 1	Pre monsoon	229320
	Post monsoon	246960
Year 2	Pre monsoon	229320
	Post monsoon	246960
Year 3	Pre monsoon	229320
	Post monsoon	246960
Year 4	Pre monsoon	267540
	Post monsoon	288120
Year 5	Pre monsoon	267540
	Post monsoon	288120

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**Conservation and Management Plan of Damodar River
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However, the estimate mine seepage may deviate due to presence of hydrogeological barriers, enhanced aquifer properties due to mining activity or any spatial variation of aquifer parameters.

The project area of Kathara OCP is 7.7323 sq.km (773.23 Ha) whereas the quarriable area is about 2.5848 sq.km (258.48 ha). Total excavated (mining) area of the Kathara OCP (2.5848 sq.km) is significantly small as compared to the catchment area of the Damodar River. Moreover, the present proposal involves mining activity within the already broken/damaged land thus, not having any further impact on the topography and drainage catchment of river Damodar.

SN	River	Length along the project
1	Damodar River	6 km

Radius of Influence

Considering the dewatering of unconfined aquifer in the immediate mine area and permeability 1.0 m/d, by using the Sichardt formula $[R = C*(H - h_w)*\sqrt{k}]$, the radius of influence for KatharaExpansion OCP has been estimated.

Sl.No	Project	Final Mine Depth (m)	Probable drawdown (m)	Radius of Influence (m)
				K= 1.0 (unconfined aquifer)
1	Kathara OCP	150	25.0 to 50.0	250m to 485m(i.e 250 mt to 500 mt)

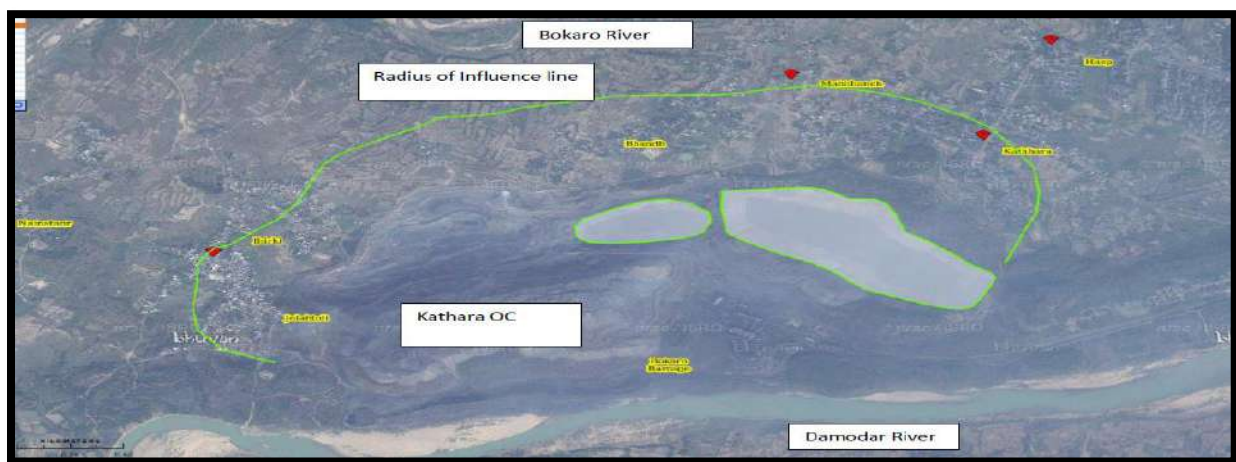


Fig: Radius of Influence- Kathara OCP

The projected radius of influence due to Kathara OCP on groundwater has been estimated at about 250m to 485m from the mine periphery and the impact zone is restricted due to

**Conservation and Management Plan of Damodar River
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presence of Bokaro River in the North direction, by Damodar River in the Southern part and by Quarry in the eastern part of the area.



Fig: View of Damodar River (As on 18.04.2022)

3.2.2 Qualitative Impact

Likely sources of pollution from this project along with the type of pollutants are as follows:

Sources of Water pollution

(i)	Mine Discharge	Suspended solids of coal and clay.
(ii)	Workshop Effluent	Suspended solids and Oil & Grease.
(iii)	Domestic waste water	BOD and TSS.
(iv)	Surface run-off passing through coal stockpiles,	Suspended solids.
(v)	Storm water from leasehold area and built-up area	Suspended solids.

**Conservation and Management Plan of Damodar River
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Mine discharge and Workshop Effluent

Maximum mine discharge during premonsoon period i.e. 1000 m³/day will be achieved on complete exposure of the aquifers over the bottom most coal seam Kargali Bottom & Top Combined in the 4th year of mine resumption. The mine discharge is proposed to be collected in a sump located at the bottom of the mine surface from where it will be pumped out to satisfy water requirement of the project after sedimentation to arrest suspended solids.

Initially water collected and stored in sumps, where maximum settlement of suspended solids takes place. Water from workshops is circulated through oil and grease trap and reused for same purpose before letting out into the local drainage network or before its storing in abandoned mines. Hence chance of pollution or contamination of ground water due to coal mining is very less.

1. Workshop discharge → O&G Trap → Settling tank → Reuse
2. Mine Discharge → Mine Sumps for TSS removal → Reuse
3. Domestic effluent → Sewage Treatment Plant.

Thus, both Mine discharge and workshop effluent are treated in a closed-circuit system, leading to no direct impact on the riverine ecosystem.

The detailed water balance is given in the figure below-

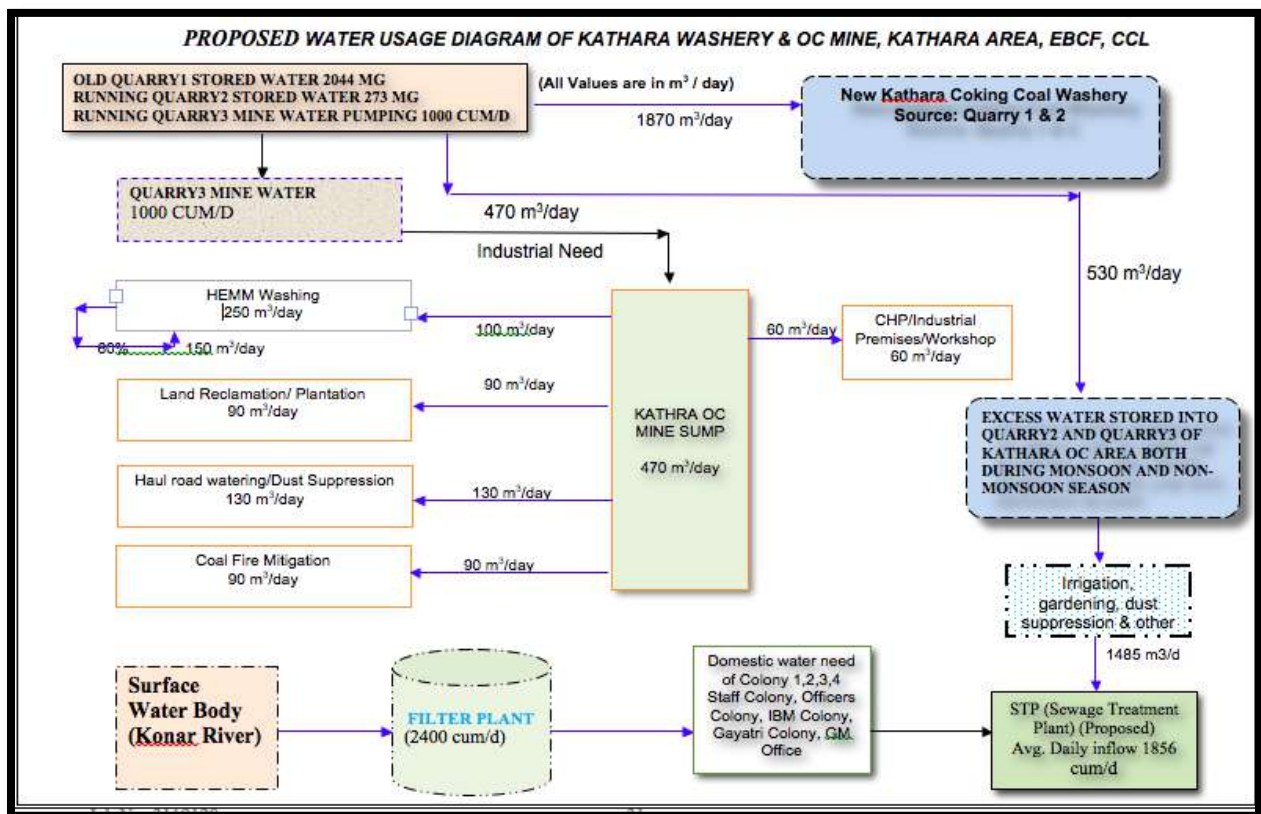


Fig: Water Usage Diagram of Kathara OCP

**Conservation and Management Plan of Damodar River
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In order to assess the impact of proposed working on the surface water quality & ground water quality, water quality analysis has been carried out. The monitoring locations are shown below in the plan:



Fig. Schematic Diagram showing monitoring locations for surface water quality in the study area

**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**

Table -1 Water Quality Assessment of Major Surface Bodies in the Buffer Zone.

Sl. No	Parameter	Unit	Locations				
			A	B	C	D	E
1.	pH	--	7.40	7.46	6.72	7.23	7.47
2.	Temperature	°C	26.2	26.2	26.3	25.2	26.2
3.	B.O.D	mg/L	BQL (QL=2)	2.0	BQL (QL=2)	2.1	BQL (QL=2)
4	C.O.D	mg/L	BQL (QL=5)	10	BQL (QL=5)	10	BQL (QL=5)
5	D.O.	mg/L	7.6	6.6	6.8	6.0	7.5
6	T.S.S	mg/L	11.0	19.0	16.8	17.3	20
7	T.D.S	mg/L	202.4	246.8	168.7	194.6	165.5
8	Chloride	mg/L	30.0	30.0	24.0	30.0	20.0
9	Fluoride	mg/L	0.88	0.98	0.73	0.78	0.86
10	Sulphate	mg/L	63.9	76.9	31.2	40.4	57.4
11	Nitrate	mg/L	4.3	5.3	4.1	6.1	7.0
12	Oil & Grease	mg/L	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)	BQL (QL=1)
13	Total Coliform	MPN/10 0 ml	30	42	26	42	52
14	Faecal Coliform	MPN/10 0 ml	Absent	16	Absent	12	Absent

Ground Water Quality

Presence of multiple coal mining projects and thermal project in the region have surely impacted the groundwater regime of the buffer zone. An effort has been made to assess and map the groundwater quality in the region.

ID	Location	Falling under Impact Zone of
A	BandhBasti	Kathara OCP
B	Kathara Bazar	Kathara OCP, Jaragdi OC
C	KhetkoBasti	None
D	Subhash Nagar Colony	Karo OCP, Kargali OCP
E	Shiv mandir, Bermo	Kargali OC, kargaliWashery

**Conservation and Management Plan of Damodar River
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Fig. Schematic Diagram showing monitoring locations for ground water quality in the study area.

Table-1 Ground Water Quality Assessment in the Buffer Zone.

Sl. No.	Parameter	Unit	Locations					Permissible Limit
			A	B	C	D	E	IS:10500
1.	pH	--	7.13	6.67	7.18	6.87	6.64	No relaxation
2.	Temperature	°C	24.3	26.3	26.0	24.5	25.3	-
3	T.D.S	mg/L	528.0	384.6	323.7	755.2	743.5	2000
4	Chloride	mg/L	44.0	54.0	24.0	158.0	92.0	1000
5	Fluoride	mg/L	0.85	0.69	0.49	0.60	0.74	1.5
6	Sulphate	mg/L	102.3	47.7	73.9	122.6	120.1	400
7	Nitrate	mg/L	1.7	14.5	11.2	20.4	23.1	No relaxation

**Conservation and Management Plan of Damodar River
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8	Alkanity as CaCO ₃	mg/L	300.0	144.0	144.0	288.0	420.0	600
9	Total Hardness as CaCO ₃	mg/L	370.0	224.0	188.0	520.0	452.0	600
10	Calcium as Ca	mg/L	92.2	83.4	57.7	131.5	85.0	200
11	Iron (as Fe)	mg/L	0.97	0.23	BQL (QL=0.05)	BQL (QL=0.05)	0.78	No relaxation
12	Zinc (as Zn)	mg/L	0.20	BQL (QL=0.02)	BQL (QL=0.02)	0.02	0.08	15
14	Manganese (as Mn)	mg/L	1.44	0.42	BQL (QL=0.05)	BQL (QL=0.05)	0.18	0.3
15	Arsenic (as As)	mg/L	BQL (QL=0.005)	BQL (QL=0.005)	BQL (QL=0.005)	BQL (QL=0.005)	BQL (QL=0.005)	0.05
16	Hexavalent Chromium as Cr ⁺	mg/L	BQL (QL=0.01)	BQL (QL=0.01)	BQL (QL=0.01)	BQL (QL=0.01)	BQL (QL=0.01)	-

Surface Run-Off/ Storm Water Run-Off from the Mine and Industrial Area

Surface run-off from the mine and industrial area generally contain suspended particles of coal, silt, and occasionally oil and grease. When this surface run-off directly enters the natural drainage, it can have several adverse impacts like increased silt load on river bed, depleting the water quality etc.

**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**

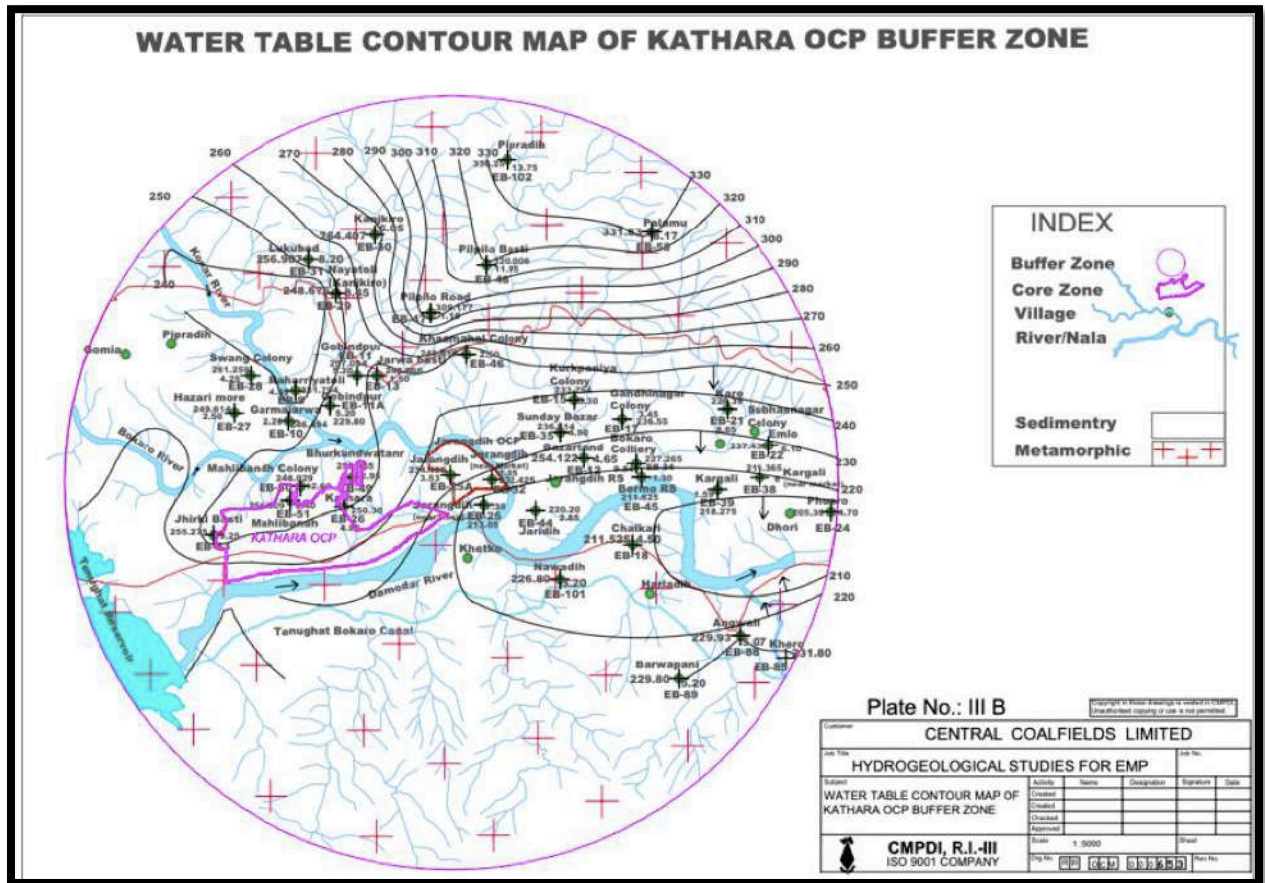


Fig: Plan Showing Water Table Contour Plan

To minimize the surface run-off, Mine Sumps have been provided. Workshop effluent is being treated at ETP consisting of Oil and grease trap and Sequential Settling ponds. 0.70 MGD filter plant has been installed to provide treated drinking water to different colonies in Kathara area. Around 5.5 km of garland drain along with sequential settling ponds have been provided all around the mine periphery to treat surface run-off and prevent soil erosion. The detailed conservation and management plan is discussed in Chapter-4.

Chapter 4

Conservation and Management Plan

4.1 Existing Control Measures

- a) Mine Sumps have been provided for collection and treatment of Mine Seepage water.
- b) Workshop effluent is being treated at ETP consisting of Oil and grease trap and Sequential Settling ponds.
- c) 0.70 MGD filter plant has been installed to provide treated drinking water to different colonies in Kathara area.
- d) Around 5.5 km of garland drain along with sequential settling ponds have been provided all around the mine periphery to treat surface run-off and prevent soil erosion.
- e) Rain water harvesting system has been provided at P.O. Office of Kathara OCP and in about 100 residential quarters of Kathara Area.
- f) 03 no. of ponds were constructed in nearby villages.
- g) A Piezometer installation in Kathara OCP under process to check the level of ground water

**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**

Photographs showing the water conservation measures are as given below:



Rain Water Harvesting System at Kathara OCP



Piezometer at Kathara OCP



Deep Borewell at Kathara OCP

**Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)**



Effluent Treatment Plan at Kathara OCP Workshop



Sedimentation Pond near Quarry-1

Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)



Sedimentation Pond near MuslimTola



Mine Void at Quarry-2

Conservation and Management Plan of Damodar River
Kathara OCP, (Kathara Area)



Mine water of Quarry-2 is utilized for irrigation purpose



Pond near Muslim Tola

**Conservation and Management Plan of Damodar River
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4.2 Proposed Water Conservation Measures:

Activity	Details	Total Cost in Rs. Lakhs	Timeline of Completion
Sewage Treatment Plant at the existing colony	Existing colonies at Kathara colliery with 794 quarters will be provided with an integrated sewage treatment plant.	500	Mar' 2023
Embankment with a catch drain along Damodar River	Embankment along with catch drain of 4000 m along Damodar River.	400	Dec' 2022
Additional Rain Water Harvesting System	Roof top rain water harvesting system at Workshop and Pit Office	25	Dec' 2022
Toe wall and garland drain/ catch drain	Toe wall, garland drain and catch drains around the active and stabilized OB Dumps, quarry and other industrial settlements	200	Oct' 2022
Sedimentation Tank	02 Nos. of Sedimentation tank to arrest run-off before discharge of water into Damodar	30	Pre-monsoon 2022
Piezometers	Additional 2 no.ofPoezometers in upstream and Downstream of the project.	50	Oct' 2022
Total Cost of proposed Water Pollution & Conservation Measures		1205	

Chapter 5

Concluding Remarks

- From the present study, it is concluded that there is no water drawl from the surface water regime around the mining area. Thus, there is no direct impact on the supportive carrying capacity of the riverine system.
- The likely sources of pollution of the riverine ecosystem from Kathara OCP are surface run-off from mine, workshop effluent, and mine water from the mine.
- Adequate water pollution control measures have been taken to prevent pollution from the mine.
- The excess mine water discharge from the mines is discharged into surface water regime which helps in rejuvenation of the riverine ecosystem.
- For further conservation of river, several measures including construction of embankment & sewage treatment plant is proposed in FY 2022-23. The total cost of proposed measures is approximately Rs1205 Lakhs.
- Periodic Monitoring of surface water at several locations have been proposed for determining the quality of the surface water and if required, additional protection measures will be undertaken by the CCL.
- Any other measures proposed by MoEF&CC, JSPCB & other regulatory bodies shall also be undertaken in addition to the above measures.

	 <p>CCL A member of ICL group</p>	<p>Corporate Office 10th Floor, 10, West End Road, Kolkata, Pin - 700028 CENTRAL COALFIELDS LIMITED (A Subsidiary of Coal India Limited) OFFICE OF THE PROJECT OFFICER KATHARA COLLIERY PO: KATHARA, DIST: BOKARO, JHARKHAND Telephone: 0661-25271, 25282 Website: http://www.ccl.coalindia.co.in Email id: prmo@cccl.coalindia.co.in</p>
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Ref No:- CCL/Kathara/P.OIP/E/CW/KTC/IAOW/2023-24/43

Dated:- 14/05/2023

Registered post/ Speed Post

Award of work.

To,
Nisha Devi,
Vill:- Asnapani,
P.O:- Kathara,
Dist:- Bokaro, Jharkhand.
Email Id:- nishadevi829118@gmail.com.
Mob. No. 7209428643.

Sub:-	"Providing Stone revetment up to H.F.L. level along the Damodar river bank beside the O.B. dump at Kathara Colliery."
Ref:-	E-Tender Notice No. NIT No- 097, of 2022-23 vide e-tender notice no- POIP/E/CW/KTC/E-Tender/22-23/97, dated- 13.03.2023, Bid submission end date on- 24.03.2023, and Date of opening of tender on- 25.03.2023. (Tender Id- 2023_CCL_275029_1) CCL Tender Id- 88974.

Dear Sir,

In response to your tender for the subject work mentioned above, this is to inform you that your offer for a contract amount of Rs. 3,24,379.62 (Rs. Three Lakh twenty four thousand two hundred seventy nine and Paise sixty two) only exclusive of GST amount of Rs. NIL, (Rupees, NIL) and Rs. 4,15,788.55, (Rupees One Lakh thirty five thousand seven hundred eighty eight and paise fifty five) only exclusive of GST amount (Cost to company amount of Rs. 3,24,379.62, as Input Tax Credit is Available) to undertake the work has been accepted by CCL, subject to the following stipulations / conditions which are supplementaries / complementaries to the conditions of the tender documents. -

- The payment of GST and GST Compensation Cess by the service availer (i.e. CCL) to bidder/contractor (if GST payable by bidder/contractor) would be made only on the latter submitting a Bill/Voice in accordance with the provision of relevant GST Act and the rules made there under and after online filing of valid return on GST portal. The payment of GST and GST Compensation Cess is responsibility of the Contractor.
- The period of completion of work shall be 30, (Thirty) days from expiry of 10 (Ten) days from the issue of the Award of work or within 07 (Seven) days of handing over of the site, whichever is later.
- (a) The earnest money amounting to Rs. 1,000.00, (Rupees, Five thousand six hundred and Paise Zero) only deposited by you vide online through Axis Aggregator vide Bank/UTR No:- 130685285, and Ref. no: 24469935695, has been retained by the company (CCL) as part of Performance Security Money.
(b) You are further required to deposit Rs. 4,128.00 (Rupees, Four thousand one hundred twenty eight and Paise Zero), only with the company in the form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara within 21 (Twenty one) days of issuance of this letter thus making the total performance security money amount to Rs. 9,728.00, (Rupees, Nine thousand seven hundred twenty eight and Paise Zero) only i.e. 3% of the contract amount. If you fail to deposit the above amount within the prescribed time, the Award of Work shall be cancelled additionally, the company shall treat you as defaulting contractor for a period of 02 (Two) years from being eligible to submit Bid in CCL and subsidiaries from the date of issue of such letter.

(C) Further you have to deposit Rs. NIL (Rupees, NIL) only as Additional performance security as clause no. 4.8 of GTC of Conditions of Contract of tender documents along with Performance Security in form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara or demand draft in favour of Central Coalfields Limited Kathara from any Scheduled Bank payable at SBI Kathara (if applicable).

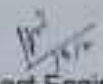


4. A copy of Bill of Quantity (BOQ) is enclosed for ready reference.
5. There is no Abnormally Low Rate (ALR) or Abnormally High Rate (AHR) item in this work as it is percentage rate quotation.
6. All running on A/c bills shall be paid at 95% of the work value. The 5% deduction towards retention money will form Second Part of Security deposit and shall be refunded after issue of no defect certificate.
7. You shall comply with Contract Labour (Regulation and Abolition) Act and make payments to your workmen accordingly. In case you engage 10 & above labourers in the work on any working day you shall be required to submit registration certificate under the B.O.C.W (RE&CS) Act 1996 and in case you engage 20 (Twenty) or more labourers in the work on any working day you shall be required to submit Labour license under Contract Labour (Regulation & Abolition) Act 1970 for the same.
8. You shall comply with CMPF/any other appropriate PF authority's clause of tender document and you will have to submit "No dues certificate" from Provident Fund Authority, Ministry of Labour, Govt. of India at Jharkhand before finalization of final bill.
9. Work shall be executed strictly as per specification in accordance with laid down norms of company.
10. You shall be responsible for arranging all necessary tests of materials as per instruction of Project Engineer (C) / Engineer-in-Charge at your own cost as per terms & conditions of Tender Document.
11. You shall make your own arrangement for all materials, tools, staff and labour required for the above work. The rates for the work include all taxes (excluding GST), octroi, carriage, tools etc. for execution and completion of work.
12. You shall arrange necessary water for the work & for your own establishment. However, if available and feasible the company may arrange water at one point near the work site for which recovery @ 1% (One percent) of the contract value of work done shall be made from your bills.
13. The technical personnel shall be engaged by you on work site as per terms and conditions of tender document.
14. You shall not employ on this contract any close relatives of CCL's employee.
15. Before clearance of final bill you will submit royalty clearance from concerned Mining Officer.
16. All investments, operating expenses, incidentals, overheads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total quotation offer price submitted by the bidder.
17. Input Tax Credit (ITC) is Available for this work.
18. Your tax invoice raised must be in compliance of relevant GST Acts, Rules and notifications made there under and should bear the GSTIN of CCL. The rate and amount of IGST/CGST/SGST, GST (Compensation to State) cess (if any), related to execution of work shall be shown separately in Tax invoice.
19. The IGST/CGST/SGST and GST (Compensation to State) cess (if any), as applicable at the time of execution of the work, shall be paid extra against submission of proper tax invoice, as referred above by you so that CCL is able to avail input tax Credit(if available) of such IGST/CGST/SGST, GST (Compensation to State) cess (if any) reflected in the invoice.
20. If the ITC claimed is disallowed due to failure on your part in incorporating the tax invoice issued to CCL in its relevant returns under GST, payment of IGST/CGST/SGST, GST (Compensation to State) cess (if any) shown in tax invoice to the tax authorities, issue of improper tax invoice or any other reason whatsoever, the applicable taxes and cess paid based on such tax invoice along with interest, penalties if any levied on CCL, shall be recovered from your current Bills and any other dues.
21. The amount of IGST/CGST/SGST and GST cess if any as indicated in Tax invoice shall be paid only when they appear in GSTR 2A of CCL and you have filed the valid return in accordance with provisions of the GST acts and Rules made there under.
22. In the event of any additional tax liabilities accruing on you due to classification issue or for any other reason the liability of CCL shall be restricted to the amount of GST charged on original tax invoice issued by you.
23. You shall pass on the benefit on account of reduction in rate of tax on any supply of goods and / or services or any benefit of the input tax credit to CCL by way of commensurate reduction in prices in terms of Anti profiteering clause of GST Act 2017.
24. You are requested to submit the following for execution of agreement / Detail Work Order within 21(twenty one) days from the issue of this Award of Work. -

10/11

- a. An amount of Rs. 4,128.00 (Rupees, Four thousand one hundred twenty eight and Paise Zero) only towards Performance Security in the form given below:-
- Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara
 - Demand Draft drawn in favour of Central Coalfields Limited Kathara on any Scheduled Bank payable at its Branch at SBI Kathara
- b. An amount of Rs. NIL (Rupees, NIL) only towards Additional Performance Security in the form given below (if applicable) :-
- Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - Govt. Securities or FDR duly pledged in favour of Central Coalfields Limited Kathara
 - Demand Draft drawn in favour of Central Coalfields Limited Kathara on any Scheduled Bank payable at its Branch at S. B. I. Kathara
- c. Non-judicial stamp paper worth 100/- only for execution of agreement along with partnership deed / Memorandum & Articles of Association, power of attorney if any, GST identification Number etc (applicable where agreement is to be executed)
- d. Site handover and takeover certificate, jointly signed by Engineer-in-Charge and the Contractor/ authorized representative.
- e. Tie Bound Programme for completion of the work within stipulated time as per NIT showing physical progress of work duly signed by Engineer-in-Charge and the Contractor/authorized representative.
- f. Registration under B.O.C.W. (RE&CS) Act and / or Labour License as per Contract Labour (Regulation & Abolition) Act
- g. Insurance Certificates as per Clause No 13 (xviii) of General Terms & Conditions of NIT
- h. You will have to indemnify the company against any liability arising out of non-observance of the statutory provisions like royalty payments, all taxes, workmen compensation act, minimum wages act, income tax act, Contract Labour (Regulation & Abolition) Act etc on non-judicial stamp paper worth 20/- only.
25. Sri Hrushikesh RayMohapatra, shall be Engineer-in-Charge for this work (Applicable for works having Award value more than 10.00 Lakhs)
26. The date of uploading of this LOA/Work Order on e-Procurement Portal (<https://coalindiatenders.nic.in>) shall be treated as the date of receipt of this LOA / Work Order by you
27. You are requested to contact the Sri Krishna Mohan, Overseer. (Civil), Kathara Colliery, Mob. No. 6203696819 for further needful action regarding execution of work.

Yours faithfully,


Project Engineer (Civil)
Kathara Colliery

DISTRIBUTION:-

1. T.S to CVO, CCL HQ, Ranchi
2. Project Officer, Kathara Colliery.
3. Manager, (Finance) Kathara Colliery.
4. Overseer (Civil), Kathara Colliery.
5. Any other official as per need

In reference to Budget Certification vide no :- Manager(FY/KTC/Conc./Repair Building/Other then Welfare/22-23/786, dated:- 13.03.2023, for Rs. 1,00,000.00, only including G.S.T. and Vide BC No -C&B/RFC/23-24/Advance Action Budget/KTC/Contractual Expenses-other/06, dated:- 28.04.2023 for Rs. 1,00,000.00, and Balance fund will be Provided when the full R.B. Budget will be communicated in FY 2023-24 "Under head of Revenue"

TEST REPORT

12/22 Test Report No. 1904	Job No. 094322160	Year	FY2022-23
Type of Sample:	Noise	Quarter Ending	Dec-22
Customer	CCL		
Testing/ Sampling Protocol:	<i>'The noise pollution (Regulation and Control), Rules,2000, LQR 34</i>		
Remarks:			

TEST RESULT

The sample has been tested with the following results:-

Area : **Kathara** **Project:** **Kathara OCP**

Station Name	Noise Level dB(A) Leq					
	Oct-22 1st FN	Oct-22 2nd FN	Nov-22 3rd FN	Nov-22 4th FN	Dec-22 5th FN	Dec-22 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	03-10-2022	17-10-2022	01-11-2022	16-11-2022	01-12-2022	16-12-2022
1. Railway Colony	52.3/50.5	52.2/50.4	50.1/45.2	52.4/50.3	48.2/38.1	51.8/49.6
Date of recording	03-10-2022	17-10-2022	01-11-2022	16-11-2022	01-12-2022	16-12-2022
2. Guest House	51.6/49.3	51.5/49.2	51.2/46.1	51.7/48.3	52.2/42.1	50.7/48.3
Date of recording	03-10-2022	17-10-2022	02-11-2022	16-11-2022	01-12-2022	16-12-2022
3. D.A.V.School	52.7/50.4	52.6/50.3	52.1/45.2	52.1/50.8	47.4/37.2	51.6/49.2

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

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.

TEST REPORT

03/23 Test Report No. 1904	Job No. 094322160	Year	FY2022-23
Type of Sample:	Noise	Quarter Ending	Mar-23
Customer	CCL		
Testing/ Sampling Protocol:	<i>'The noise pollution (Regulation and Control), Rules,2000, LQR 34</i>		
Remarks:			

TEST RESULT

The sample has been tested with the following results:-

Area : **Kathara** **Project:** **Kathara 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	02-01-2023	16-01-2023	01-02-2023	16-02-2023	01-03-2023	16-03-2023
1. Railway Colony	48.8/38.4	50.1/45.2	51.9/49.6	51.6/49.4	50.1/45.2	50.1/45.1
Date of recording	02-01-2023	16-01-2023	01-02-2023	16-02-2023	01-03-2023	16-03-2023
2. Guest House	51.8/41.4	55.1/48.2	50.6/48.4	50.7/48.3	55.1/48.2	51.1/45.1
Date of recording	03-01-2023	17-01-2023	01-02-2023	16-02-2023	02-03-2023	17-03-2023
3. D.A.V.School	47.6/37.3	51.1/46.2	50.8/48.2	51.8/49.5	51.1/46.2	52.1/46.1

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

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
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TEST REPORT

09/23 Test Report No. 1904	Job No. 094323120	Year	FY2023-24
Type of Sample:	Noise	Quarter Ending	Sep-23
Customer	CCL		
Testing/ Sampling Protocol:	<i>'The noise pollution (Regulation and Control), Rules,2000, LQR 34</i>		
Remarks:			

TEST RESULT

The sample has been tested with the following results:-

Area : **Kathara** **Project:** **Kathara OCP**

Station Name	Noise Level dB(A) Leq					
	Jul-23 1st FN	Jul-23 2nd FN	Aug-23 3rd FN	Aug-23 4th FN	Sep-23 5th FN	Sep-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	03-07-2023	17-07-2023	01-08-2023	16-08-2023	01-09-2023	18-09-2023
1. Railway Colony	52.2/46.3	51.9/49.7	51.6/49.7	48.9/39.4	49.7/45.5	60.4/58.5
Date of recording	03-07-2023	17-07-2023	01-08-2023	16-08-2023	01-09-2023	18-09-2023
2. Guest House	51.6/45.5	50.6/48.2	50.8/48.3	48.8/38.4	52.9/50.1	60.4/51.5
Date of recording	04-07-2023	17-07-2023	01-08-2023	17-08-2023	02-09-2023	19-09-2023
3. D.A.V.School	48.2/39.3	41.7/39.4	43.4/38.7	48.2/38.1	35.6/38.5	41.4/35.4

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

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
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Annexure-XXIX



CENTRAL COALFIELDS LIMITED
OFFICE OF THE PROJECT OFFICER
KATHARA COLLIERY,
PO – KATHARA, DIST – BOKARO, JHARKHAND, 829116.



Ref No: PO (KTC)/ PPE/2023/ 120

dated: 29.05.2023

Sub: Distribution details of PPE in respect of Kathara Colliery.

Sl. No.	PPE	Distribution in FY 2022-23
01.	Fluorescent Jacket	350 Nos.
02.	Rubber Hand Gloves (6.6KV)	50 Pairs
03.	Ear Muff	20 Nos.
04.	Safety Shoe	650 Pairs
05.	Safety Helmet	100 Nos.
06.	Leather Hand gloves	30 Pairs
07.	Dust Mask	100 Nos.

M. L.
29/5/2023
Safety Officer
Kathara Colliery



भारत सरकार / Govt. of India
श्रम एवं रोजगार मंत्रालय / Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय / Directorate General of Mines Safety
कोडरमा क्षेत्र / Koderma Region

Annexure-XXX



संख्या को /

कोडरमा - 825409, दिनांक

2013

प्रेषक,

खान सुरक्षा निदेशक
कोडरमा क्षेत्र,

सेवा में,

अभिकर्ता,

Kathara Colliery, M/s. Central Coalfields Ltd.
P.O: Kathara, Dist. Bokaro (Jharkhand).

Sub: Permission under Regulations 170(1A)&(1B) of the Coal Mines Regulations, 1957 to conduct controlled deep hole blasting within danger zone but beyond 100m from the dwellings/houses/hutments at Kathara Colliery of M/s. Central Coalfields Limited.

Sir,

Please refer to your letter No. KT/PO/Perm/1367 dated 23/06/2013 and enclosed plan bearing No. KT/SURVEY/2013/41 dated 20/06/2013 on the above subject.

The matter has since been examined in the light of what has been stated in your application and enclosed plan.

By virtue of powers conferred on the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Regulations 170(1A) &(1B) of the Coal Mines Regulations, 1957 and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director-General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I, hereby permit you to conduct controlled deep hole blasting within danger zone but beyond 100m from the houses/buildings/structures at Kathara Colliery of M/s. Central Coalfields Limited as shown on plan No. KT/SURVEY/2013/41 dated 20/06/2013 subject to the compliance of the following conditions:

1.0 No blasting shall be done within 100 m of any building/dwellings/hutments or public road or structures whether or not belonging to the Owner. No secondary blasting shall be done within 100m of such structures. This distance/restricted zone of 100m from the nearest buildings/dwellings/hutments shall be clearly demarcated on the ground by actual survey as well as on the plan maintained under Regulation 59(1)(a) of the Coal Mines Regulations, 1957.

2.0 The entire operations of transport of the explosives to the site of its use, drilling, stemming and blasting operations shall be placed under the direct personal supervision of an Assistant Manager holding 1st Class Manager's Certificate of Competency in accordance with the guidance and directives issued by the Manager. He shall maintain records of blasting parameters for every blast in a bound paged book kept for this purpose. The records shall be duly signed by him and countersigned by the Manager.

Competent persons trained in controlled blasting and duly authorized by Manager shall only be permitted to fire the shots.

3.1 Following parameters as recommended by CMPDIL, Ranchi through revised report submitted in July, 2013 (Job No. 284311170) shall be adopted for blasting in such a manner that the PPV shall not exceed 10mm per second at a distance of 100m from the site of blasting:

Sl. No.	Nature of formation	Drill dia. (mm)	Pattern of holes			Top stemming Column(m)	Max. charge/delay
			Depth (m)	Burden (m)	Spacing (m)		
1	Medium hard sand stone	160	10-12	5	6	5.0-6.0	92.16Kg
2	Coal	160	6.0-8.0	4.0	5.0	4.0-5.0	50Kg

Maximum charge per round for both coal and hard rock shall be restricted to 2000Kg for safe blasting.

3.2 Controlled and restricted muffle blasting should be adopted so that no damage is caused to the residential buildings or the houses. The Manager of the mine shall specify the size, depth, spacing and burden of shot holes to be charged, explosive charges and sequence of delays etc. on the basis of recommendations of scientific revised report of blasting submitted in the month of July, 2013 (Job No.284311170) by M/s CMPDIL(Hq.), Ranchi. All other recommendations made in the report shall be strictly complied with.

4.0 Provisions of Regulation 164A of the Coal Mines Regulations, 1957 shall be complied with.

5.0 The blasting operations in overburden & coal seams shall be conducted in following manner:

5.1 Storage and use of cap sensitive and non-cap sensitive slurry explosives in the opencast workings shall be strictly done in accordance with the provisions of the Coal Mines Regulations, 1957.

5.2 Only NONEL System of detonation with DTH charging shall be used. Each hole will be fired independently using short delay detonators (electric detonator) in conjunction with Excel System of initiation to prevent fly rock as well as control ground vibration. In the hole delay, NONEL/Shock Tube of 200, 225 and 250ms shall to be used whereas surface delays will be Noiseless Trunk Delay (NTD) of 17, 25, 42ms. Charge to charge delay shall be so designed to have minimum delay of 8ms between the two consecutive blasts.

Not more than 2 to 3 rows of holes shall be fired in a round of blast.

Bottom initiation in the hole shall be followed and the blasting sequence shall be such that initiation of holes/charges shall progress away from the hutments/houses. The blast design shall be such that the houses do not align across the blasting front/Waves.

Only electronic detonators with sequential blast timer shall be used, if needed.

5.3 Controlled blasting shall be done in conjunction with effective muffling arrangement to ensure that no flying fragments fall more than 10m away from the place of blasting. The muffling of deep hole for blasting shall be done by covering the entire patch to be blasted using wire netting pieces (1.8 m x 1.2 m) overlain by 3 to 4 sand bags each 40 Kg by weight.

5.4 A proper record of every blast showing the pattern of shot holes and the particulars of charge & the observations regarding flying of rocks & ground vibrations shall be carefully maintained by Assistant Manager in-charge of blasting operations in a bound paged book and countersigned by the Manager. An instrument for measuring the vibrations and frequencies shall be procured and maintained in proper working order at the mine.

5.5 No blasting shall be done in crushed, broken or sliced ground.

5.6 The precautions for warning/removal of men etc. as laid down under Regulation 170(1A) shall be observed in an area up to a distance of at least 300m measured in any direction from the place of

- blasting. Adequate number of guards shall be posted to prevent the entry of persons into the danger zone during blasting hours.
- 5.7 No person including shot-firers shall take shelter, except in a zone beyond 300m of the quarry workings and such shelter shall be adequate to protect him from flying fragments.
- 5.8 Precautions against danger of coal dust explosion while extracting pillars by opencast method as laid down in DGMS(Tech.) Circular No.4 of 1983 shall be strictly complied with.
- 5.9 No blasting shall be done within 300m of any underground workings measured in any plane where persons are employed.
- 5.10 Moist sand shall be used as stemming material.
- 5.11 The position of holes shall be marked on the cleaned off ground as per the pattern suggested by the Manager before drilling is commenced. Plugging of holes shall be done immediately after drilling to avoid any reduction in depth due to falling of materials in the hole.
- 5.12 The cartridges of explosives shall be lowered carefully to avoid sticking of cartridges in the hole so as not to cause air space. After each charge, the length of the remaining hole shall be measured to ascertain that the cartridges are in close contact and there is no air space.
- 5.13 In case the length of remaining hole is not as per calculation indicating the presence of air space, attempt shall be made to push down the charge in case of slurry cartridges. The remaining hole shall then be stemmed with moist sand. Mobile telephone must be switched off in the blasting area at the time of handling charging and blasting of explosives.
- 5.14 The Mine Manager shall fix the blasting time and it should be circulated to all concerned officials and displayed on the notice board. Blasting should be done in day-light only.
- 6.0 The management shall indemnify the occupant/owners of the houses/dwellings/buildings or other structures and the Railway Administration or public authority concerned, if any, against danger to their property or injury to them or others present, arising out of operations conducted under this permission, should there be any controversy in this respect, the decision of the Regional Inspector or the Chief Inspector shall be final binding on the management.
- 7.0 If at any time any one of the conditions subject to which this permission has been granted, is violated or not complied with, this permission shall be deemed to have been revoked with immediate effect.
- 8.0 In the event of any change in the circumstances connected with this permission, which is likely to endanger the life of workmen employed in the mine or the mines, the mining operations for which this permission has been granted shall be stopped forthwith and intimation thereof shall be sent to the Director of Mines Safety, Koderma Region. The said mining operation shall not be resumed without express & fresh written permission from this Directorate.
- 9.0 The above permission may be amended or withdrawn at any time if considered necessary in the interest of safety.
- 10.0 This permission is being issued under Regulations 170(1A&1B) of the Coal Mines Regulations, 1957 only and without prejudice to any other provisions of law which may be or may become applicable to any time.

भवदीय

Sd/-

खान सुरक्षा निदेशक,
कोडरमा क्षेत्र

ज्ञापन संख्या को/ 1636 कोडरमा - 825409, दिनांक

9/10 2013

प्रतिलिपि सूचना एवं आवश्यक कार्रवाई के लिए निम्नलिखित को प्रेषित है:-

1. निदेशक तकनीकी/मनोनीत मालिक, मेसर्स सेन्टल कोलफिल्डस लिमिटेड, दरभंगा हाउस, राँची, झाड़खण्ड
2. मध्यप्रबन्धक, कथारा क्षेत्र, मेसर्स सेन्टल कोलफिल्डस लिमिटेड, पो: कथारा, जि: बोकारो, झाड़खण्ड।
3. प्रबन्धक, कथारा कोलयरी, मेसर्स सेन्टल कोलफिल्डस लिमिटेड, पो: कथारा, जि: बोकारो, झाड़खण्ड।

[Signature]
09.10.2013

खान सुरक्षा निदेशक,
कोडरमा क्षेत्र

Annexure-XXXI

SL. No.	DATE	No. of Holes Blasted	Total Explosive	Avg Depth of Hole	Peak Particle Velocity	Min. distance	Distance of Vibration	Sign of B.O.	Sign of cracks
1.	05/12/22	12	1080	9.8	1.587 mm/sec. at 2.	90	102 m		
		12	1080	9.7		90	100 m	low	deep
		12	1080	9.8		90	100 m		
		12	1080	9.9		90	102 m		
		12	1080	10.0		90	101 m		
2.	06/12/22	20	1800	10.0	1.078 mm/sec.	90	102 m	low	deep
		10	900	10.0		90	100 m		
3.	08/12/22	13	1160	7.7		90	100 m		
		12	1070	7.7		90	100 m	low	deep
4.	10/12/22	23	2070	7.3	2.216 mm/sec.	90	100 m		
5.	11/12/22	24	2160	7.3	1.767 mm/sec.	90	100 m		
		24	2160	7.3		90	100 m	low	deep
		24	2160	7.3		90	100 m		
6.	12/12/22	29	2610	7.3	3.234 mm/sec.	90	100 m	low	deep
8.	13/12/22	10	900	8.2	4.975 mm/sec.	90	100 m		
		10	900	8.2		90	100 m	low	deep
		10	900	8.2		90	100 m		

SL. NO.	DATE	NO OF Holes Blasted	Total Explosive Kg	Average depth Holes	Peak Particle velocity	Charge per minimum delay (kg)	Distance of vibration	Signature of BO	Signature of Manager		
9.	14/12/22	10	7650	8.5	1.629 mm/sec.	85	102 m	[Signature]	[Signature]		
		10	7200	80		80	100 m				
		10	7200	80		80	100 m				
10.	15/12/22	9	1620	12 mt.	2.133 mm/sec.	90	100m	[Signature]	[Signature]		
11.	16/12/22	07	1150	12 mt.	1.244 mm/sec.	90	100 m				
		05	800	"		90	100 mt.				
12.	18/12/22	28 Holes	1300	8.0 mt.	3.241 mm/sec.	45	108 mt.	[Signature]	[Signature]		
13.	19/12/22	09		12 mt.	1.438 mm/sec.	90	102 mt.				
		08		"		"	"				
14.	20/12/22	14	2520	12 mt.	3.032 mm/sec.	90 kg	105 m	[Signature]	[Signature]		
		15.	21/12/22 (2022)	11		1870	12 mt.			90 kg	106 mt.
				5		790	"			"	"
		50	1800	6.9 mt.	1.696 mm/sec.	40					
16.	23/12/22	18	1200	7.0 mt.	3.157 mm/sec.	70	100 mt.	[Signature]	[Signature]		
		16	1060	6.8 mt.		70					
		8	1440	12.05		90					
17.	24/12/22	8	1250	12.0	1.860 mm/sec.	90	102 mt.	[Signature]	[Signature]		
		13	630	7.0		50					

Date/Time Vert at 15:15:31 December 5, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.7 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221205151531.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

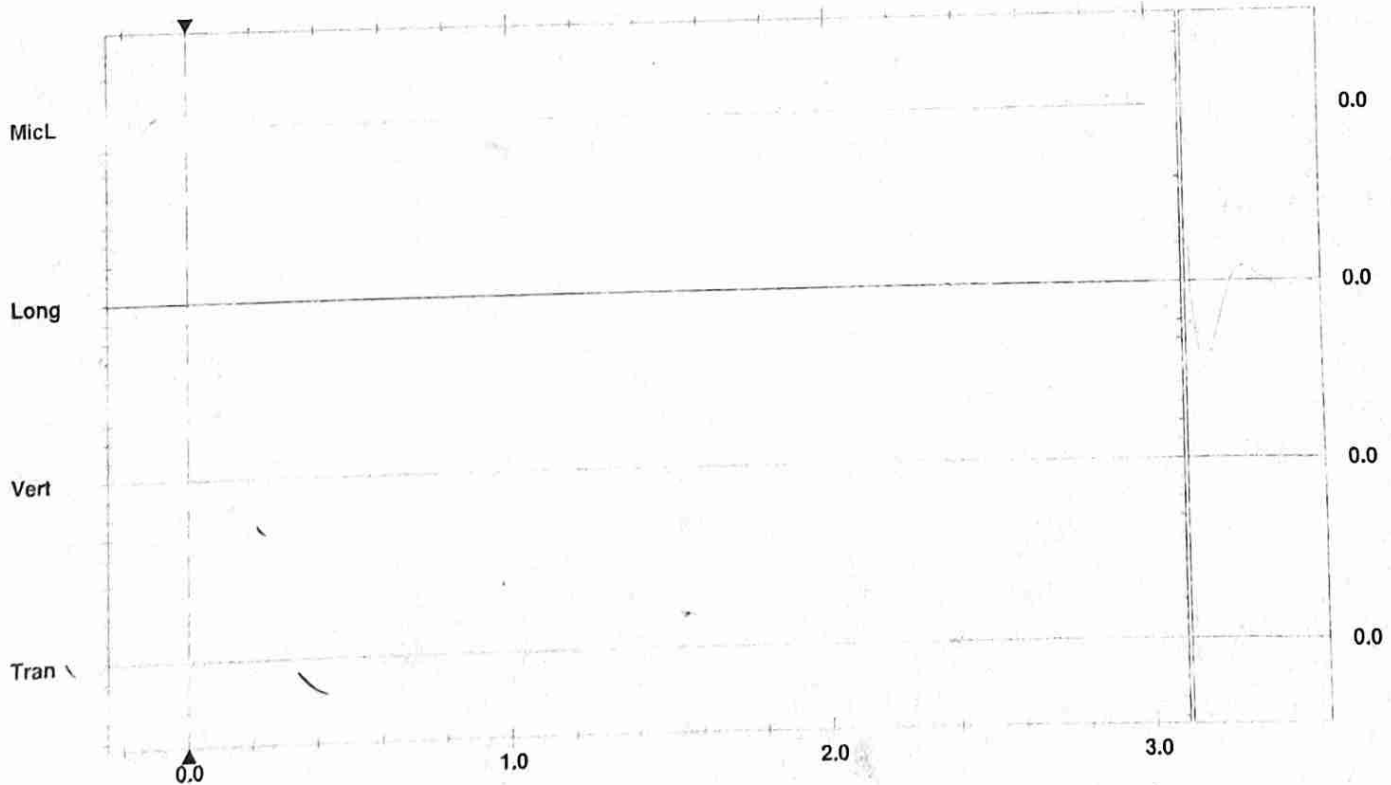
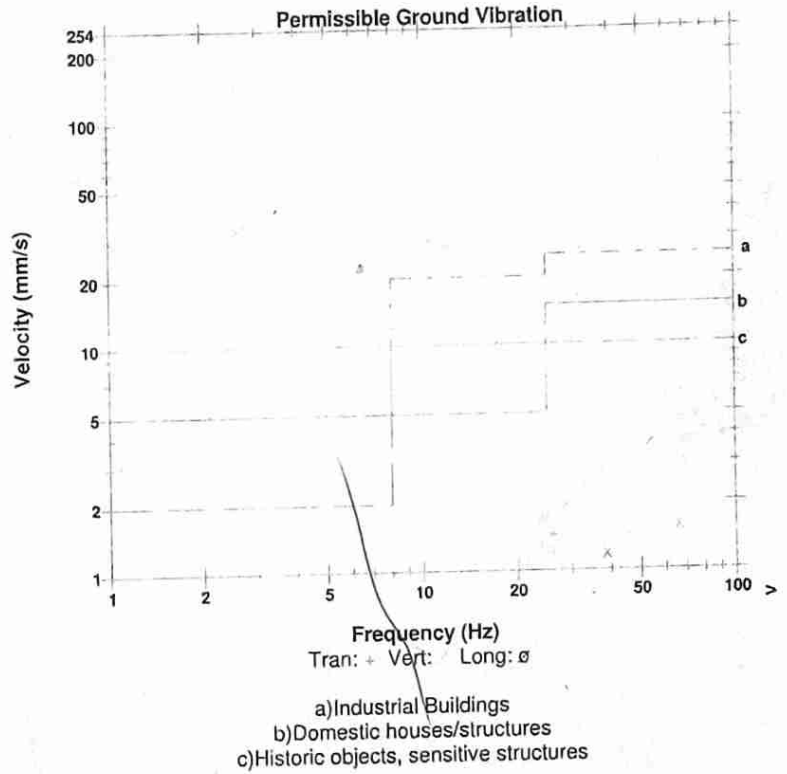
Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	0.638	1.584	0.260	mm/s
ZC Freq	49	66	26.9	Hz
Time (Rel. to Trig)	2.378	2.373	2.392	sec
Peak Acceleration	0.039	0.230	0.036	g
Peak Displacement	0.002	0.003	0.001	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.3	6.9	Hz
Overswing Ratio	4.8	5.1	5.4	

Peak Vector Sum 1.587 mm/s at 2.373 sec
 N/A: Not Applicable

DGMS India (A)



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger =

Sensor Check

Date/Time Vert at 15:16:12 December 6, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.7 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221206151612.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Notes

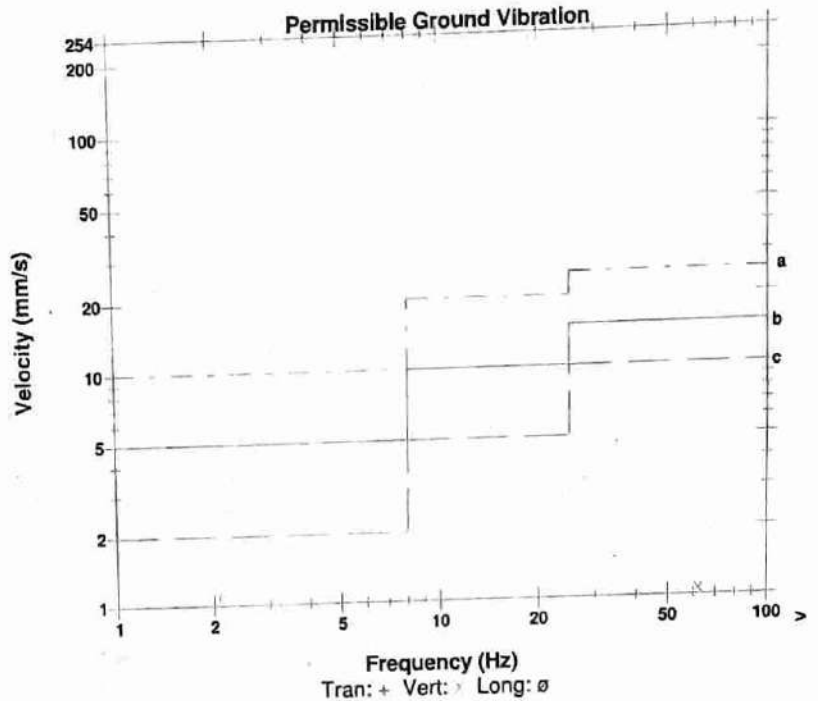
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq 256 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

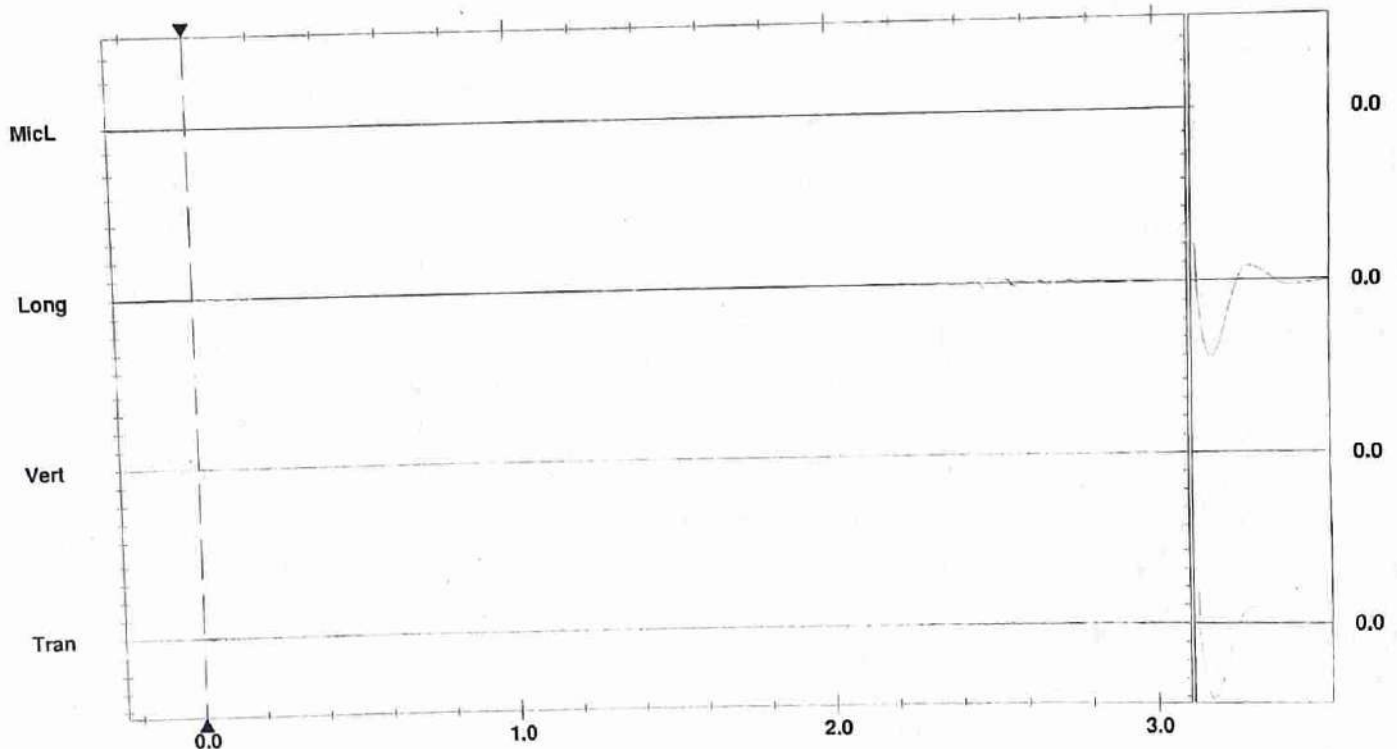
	Tran	Vert	Long	
PPV	0.465	1.064	0.504	mm/s
ZC Freq	51	62	21.3	Hz
Time (Rel. to Trig)	0.020	0.017	2.477	sec
Peak Acceleration	0.026	0.128	0.023	g
Peak Displacement	0.001	0.002	0.004	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	6.9	Hz
Overswing Ratio	4.8	5.1	5.4	

Peak Vector Sum 1.078 mm/s at 0.017 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = >

Sensor Check

Date/Time Tran at 14:05:05 December 10, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221210140505.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Notes

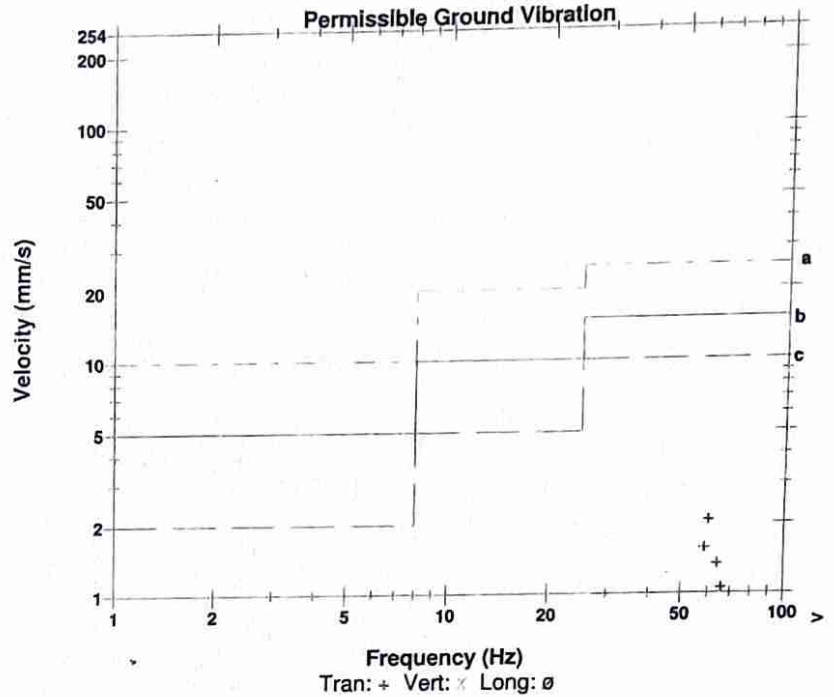
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

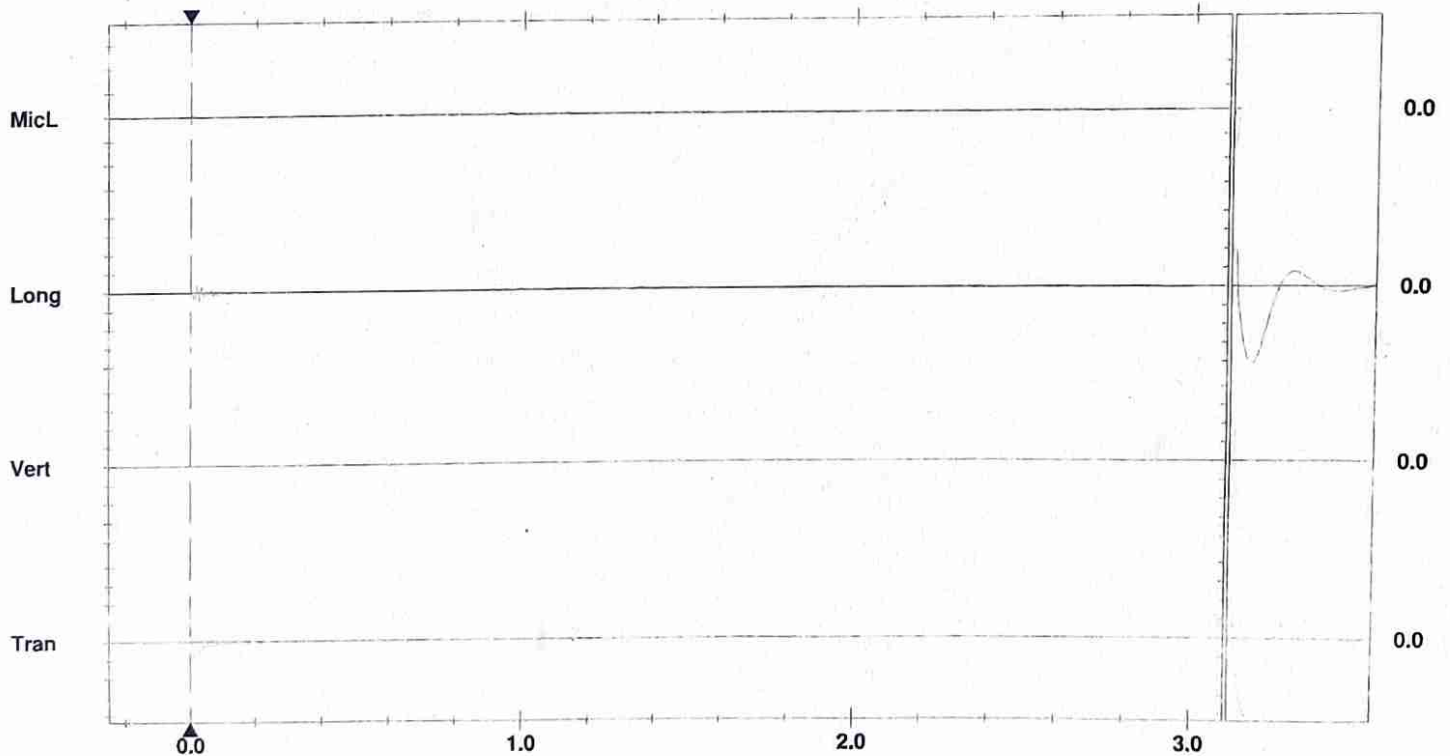
	Tran	Vert	Long	
PPV	2.112	0.079	0.914	mm/s
ZC Freq	60	114	73	Hz
Time (Rel. to Trig)	0.010	0.005	0.026	sec
Peak Acceleration	0.089	0.020	0.046	g
Peak Displacement	0.005	0.000	0.007	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 2.216 mm/s at 0.010 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = \blacktriangleleft

Sensor Check

Date/Time Tran at 14:02:44 December 11, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221211140244.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

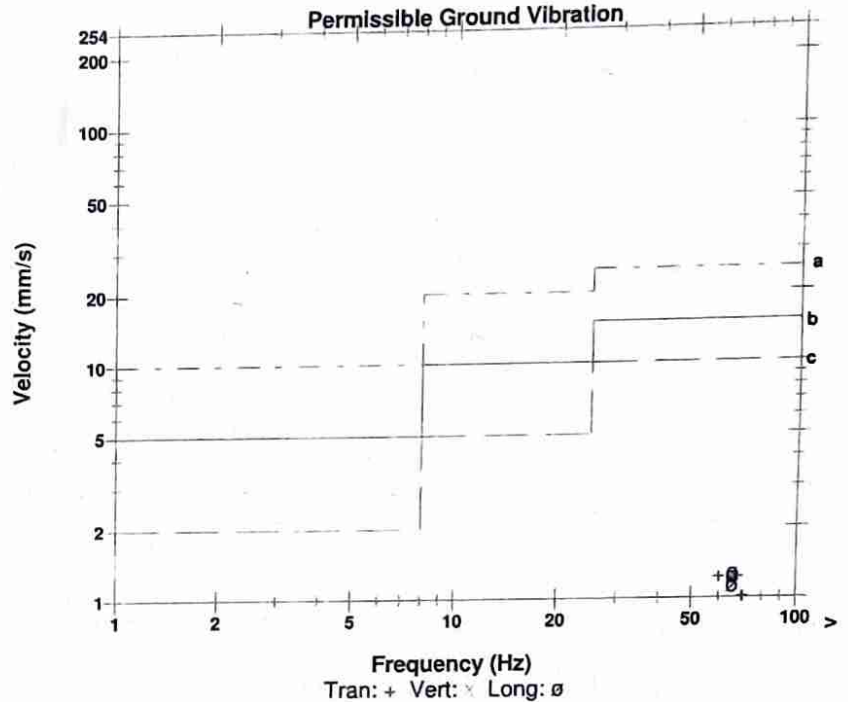
Notes
 Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

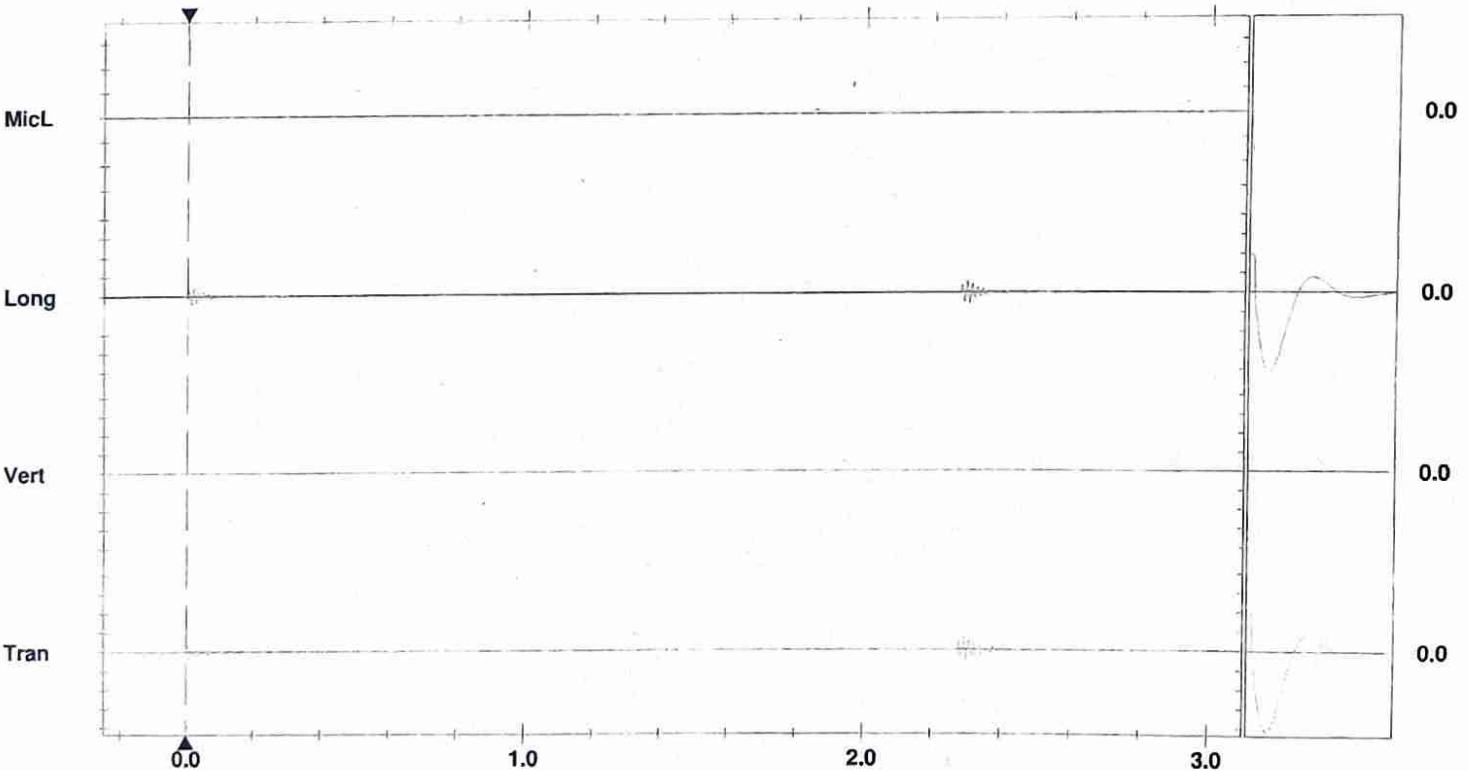
	Tran	Vert	Long	
PPV	1.253	0.079	1.277	mm/s
ZC Freq	68	146	66	Hz
Time (Rel. to Trig)	2.289	2.283	2.298	sec
Peak Acceleration	0.056	0.016	0.059	g
Peak Displacement	0.003	0.000	0.003	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 1.767 mm/s at 2.297 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = \blacktriangleleft \blacktriangleright

Sensor Check

Date/Time Long at 14:12:43 December 12, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221212141243.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Notes

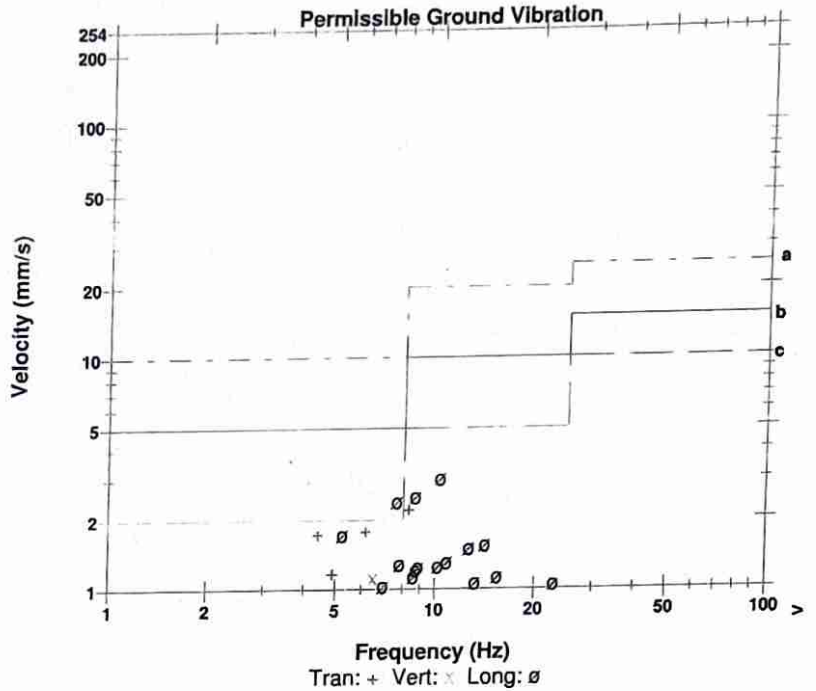
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

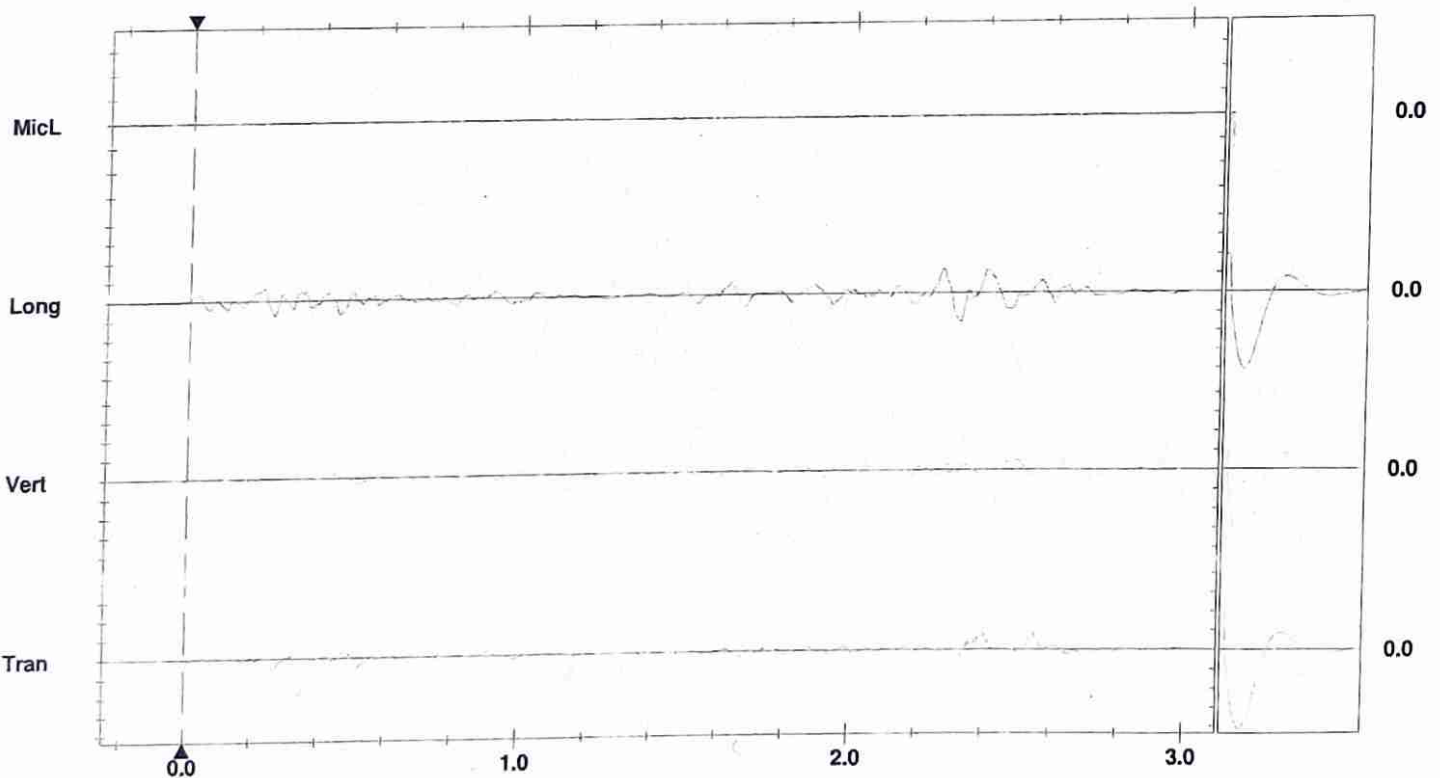
	Tran	Vert	Long	
PPV	2.254	1.119	3.027	mm/s
ZC Freq	8.3	6.5	10.3	Hz
Time (Rel. to Trig)	2.453	2.577	2.323	sec
Peak Acceleration	0.023	0.020	0.030	g
Peak Displacement	0.038	0.026	0.046	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.3	6.9	Hz
Overswing Ratio	4.7	5.0	5.4	

Peak Vector Sum 3.234 mm/s at 2.323 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = ▶ — ◀

Sensor Check

Date/Time Tran at 14:04:05 December 13, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221213140405.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Notes

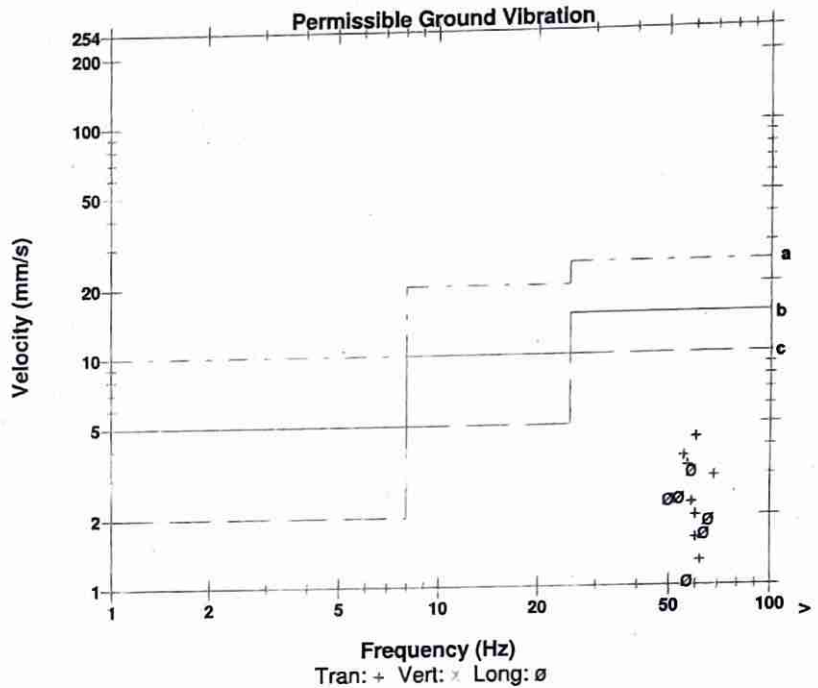
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

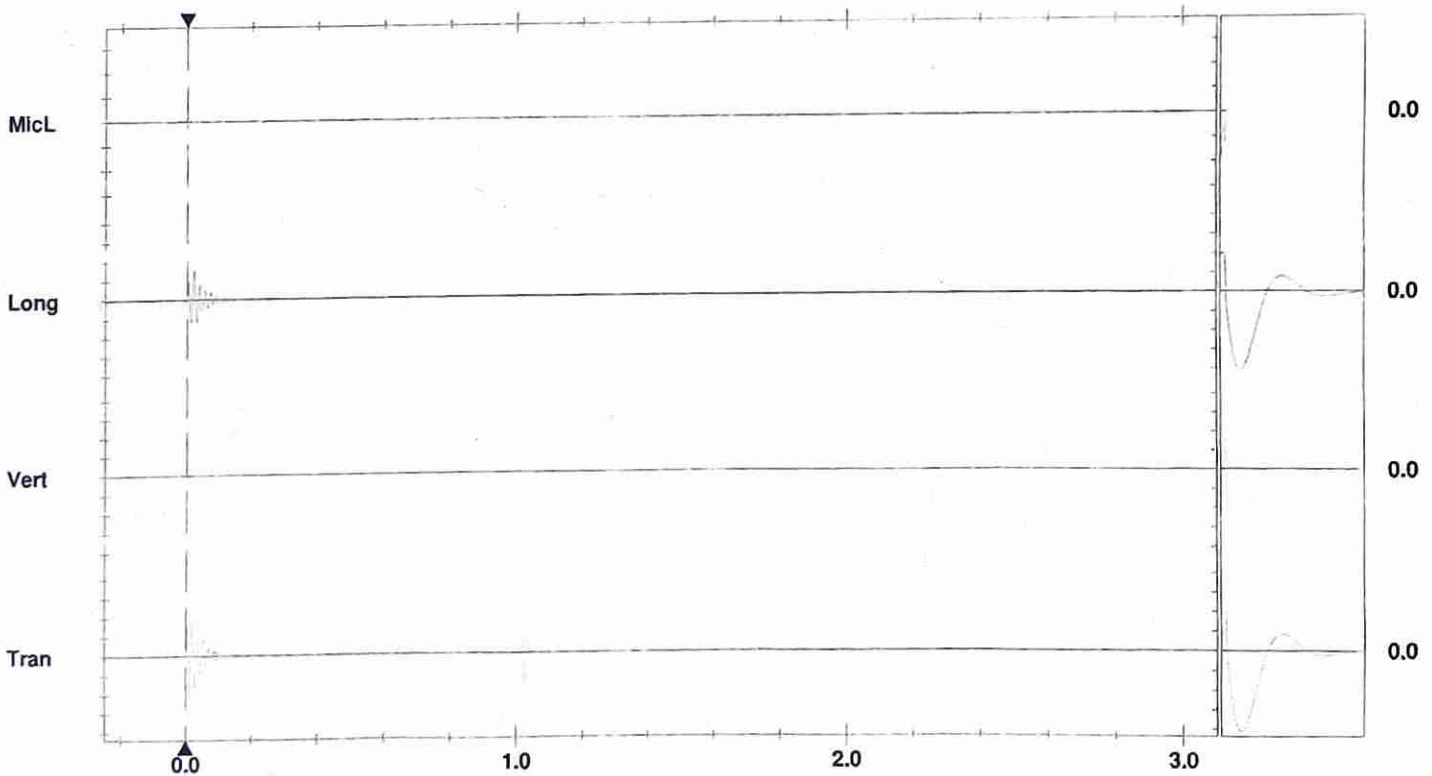
	Tran	Vert	Long	
PPV	4.437	0.252	3.113	mm/s
ZC Freq	60	89	59	Hz
Time (Rel. to Trig)	0.010	0.004	0.021	sec
Peak Acceleration	0.188	0.020	0.122	g
Peak Displacement	0.012	0.000	0.008	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 4.975 mm/s at 0.010 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = > <

Date/Time Tran at 14:04:44 December 14, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221214140444.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

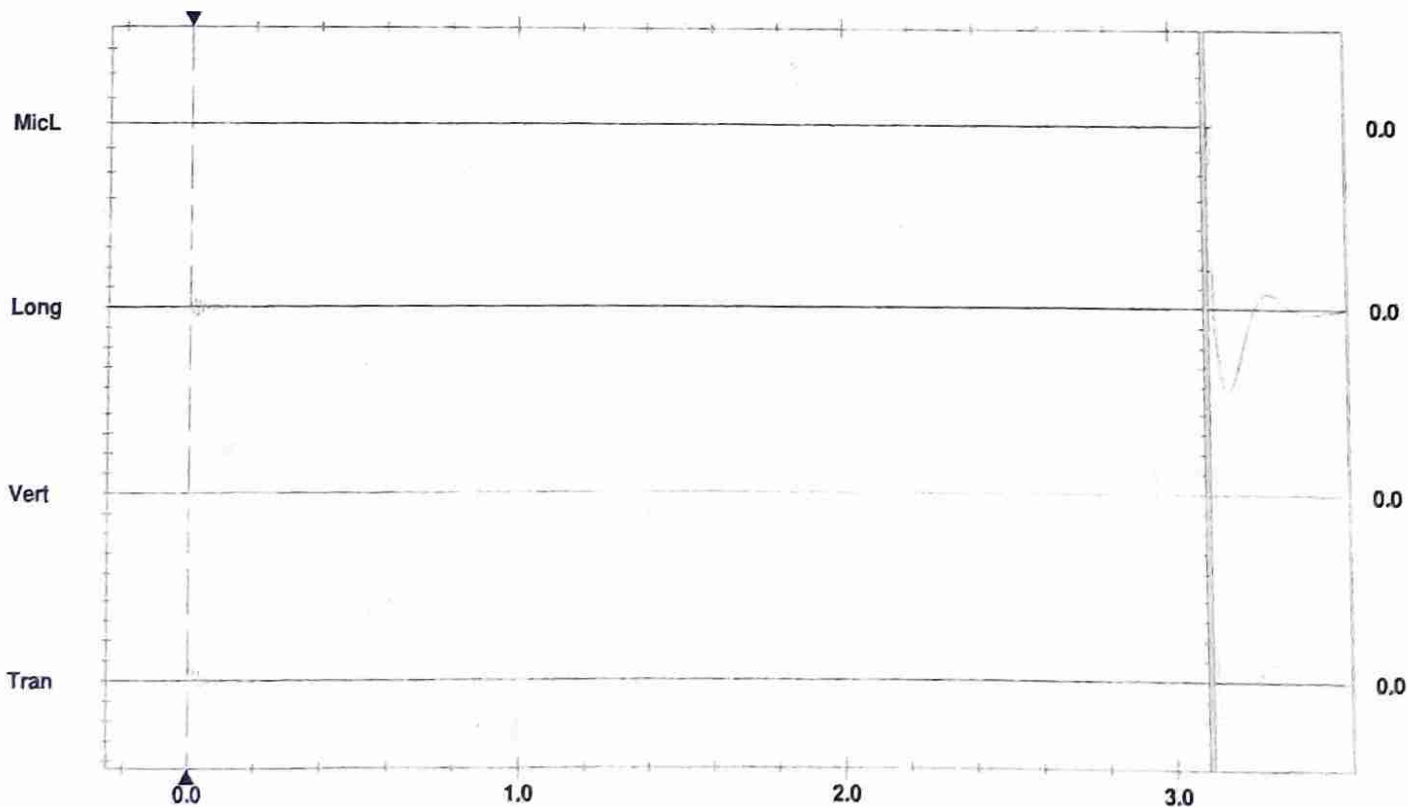
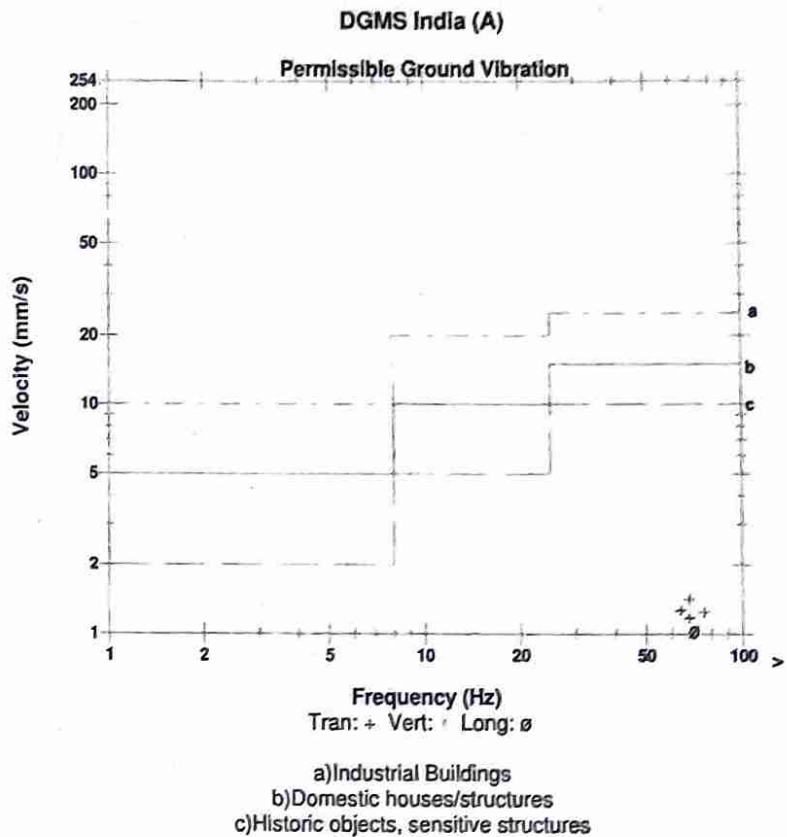
Post Event Notes

Kathra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	1.450	0.386	1.040	mm/s
ZC Freq	68	158	71	Hz
Time (Rel. to Trig)	0.009	0.003	0.023	sec
Peak Acceleration	0.069	0.063	0.056	g
Peak Displacement	0.003	0.000	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 1.629 mm/s at 0.009 sec
 N/A: Not Applicable



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = ▶ — ◀

Sensor Check

Date/Time Tran at 14:07:35 December 15, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221215140735.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

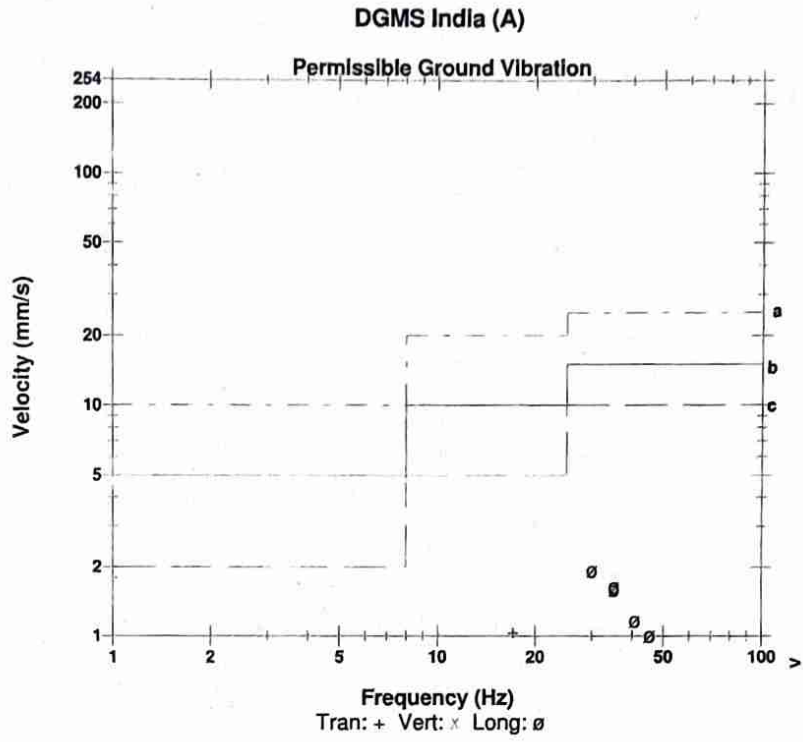
Post Event Notes

Kathra OCP
 distance from blast 100 mtr.

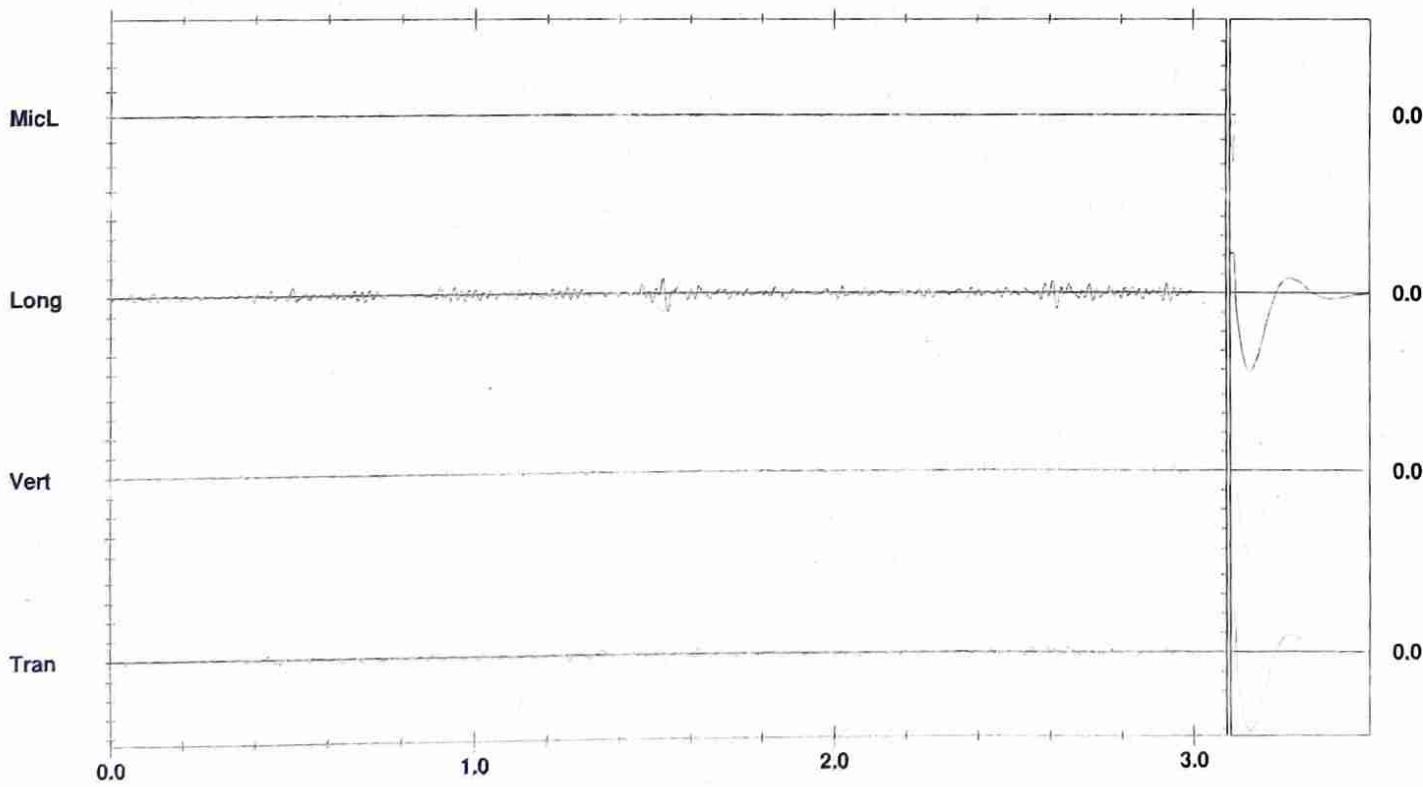
Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	1.056	0.662	1.939	mm/s
ZC Freq	17.1	41	30.1	Hz
Time (Rel. to Trig)	1.531	1.242	1.533	sec
Peak Acceleration	0.033	0.030	0.082	g
Peak Displacement	0.006	0.003	0.010	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.2	

Peak Vector Sum 2.133 mm/s at 1.533 sec
 N/A: Not Applicable



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div

Sensor Check

Date/Time Vert at 13:55:19 December 16, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL ,MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221216135519.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Post Event Notes

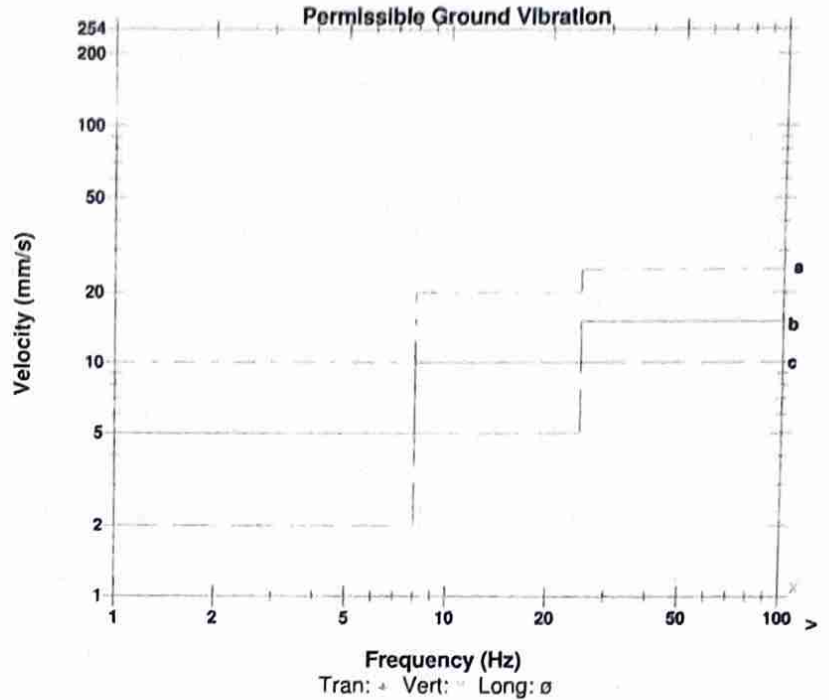
Kalhra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

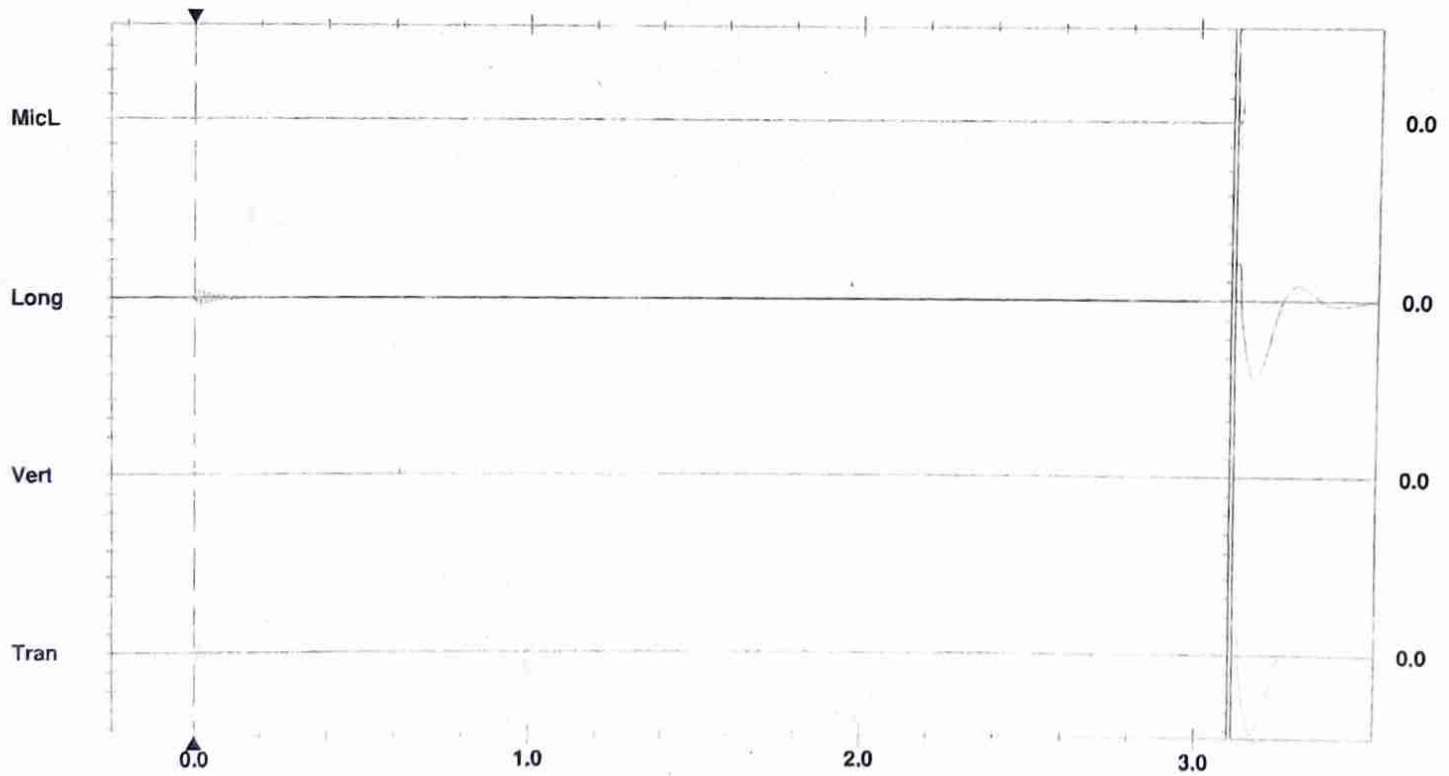
	Tran	Vert	Long	
PPV	0.977	1.111	0.788	mm/s
ZC Freq	76	102	68	Hz
Time (Rel. to Trig)	0.014	0.004	0.012	sec
Peak Acceleration	0.046	0.115	0.043	g
Peak Displacement	0.002	0.002	0.002	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	6.9	Hz
Overswing Ratio	4.5	4.9	5.2	

Peak Vector Sum 1.244 mm/s at 0.004 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = \blacktriangleleft

Sensor Check

Date/Time Long at 14:47:55 December 18, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221218144755.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Post Event Notes

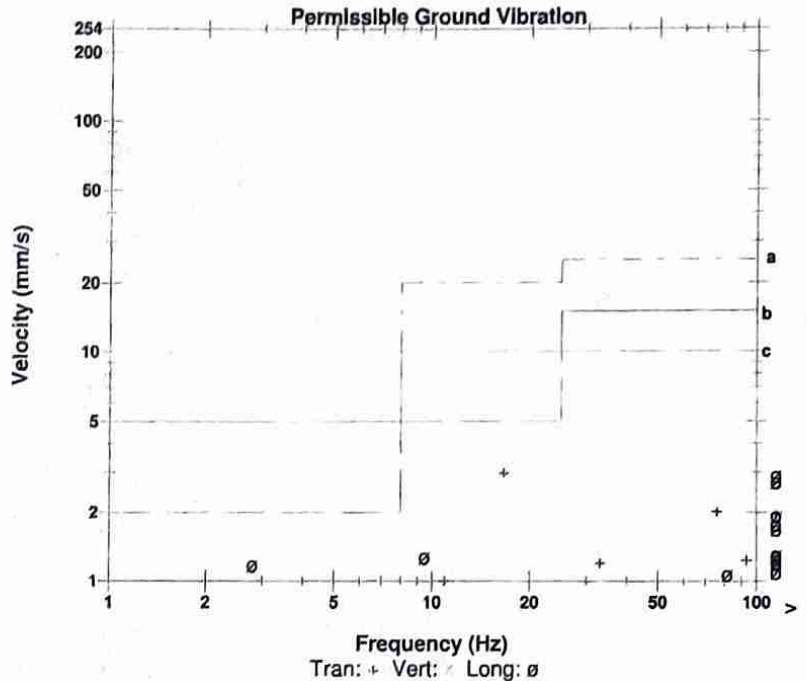
Kathra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

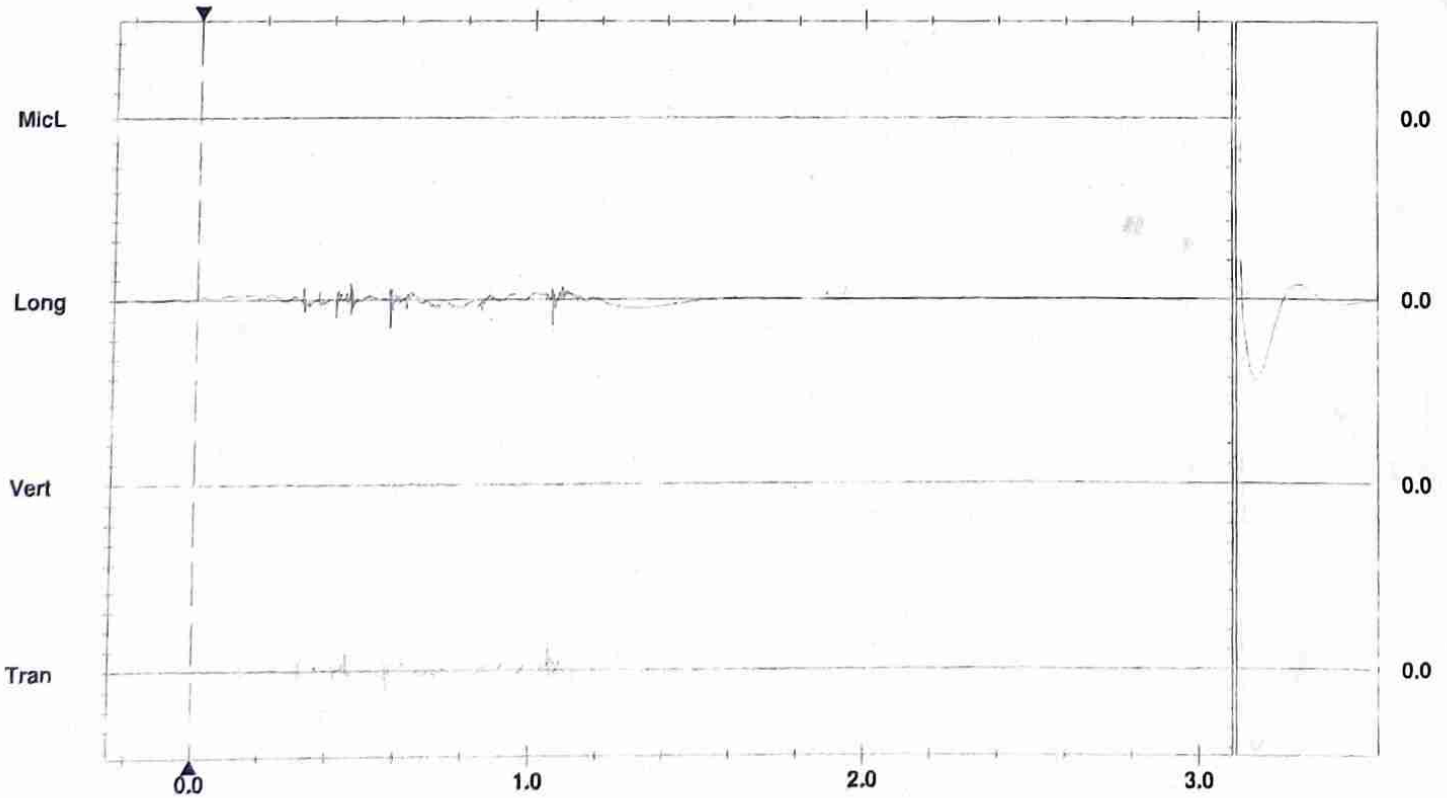
	Tran	Vert	Long	
PPV	3.042	0.449	2.901	mm/s
ZC Freq	16.7	12.8	128	Hz
Time (Rel. to Trig)	1.058	1.058	0.577	sec
Peak Acceleration	0.211	0.049	0.217	g
Peak Displacement	0.016	0.008	0.091	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	6.9	Hz
Overswing Ratio	4.5	5.0	5.4	

Peak Vector Sum 3.241 mm/s at 0.577 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = $\blacktriangleleft \blacktriangleright$

Sensor Check

Date/Time Long at 14:31:13 December 19, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221219143113.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Post Event Notes

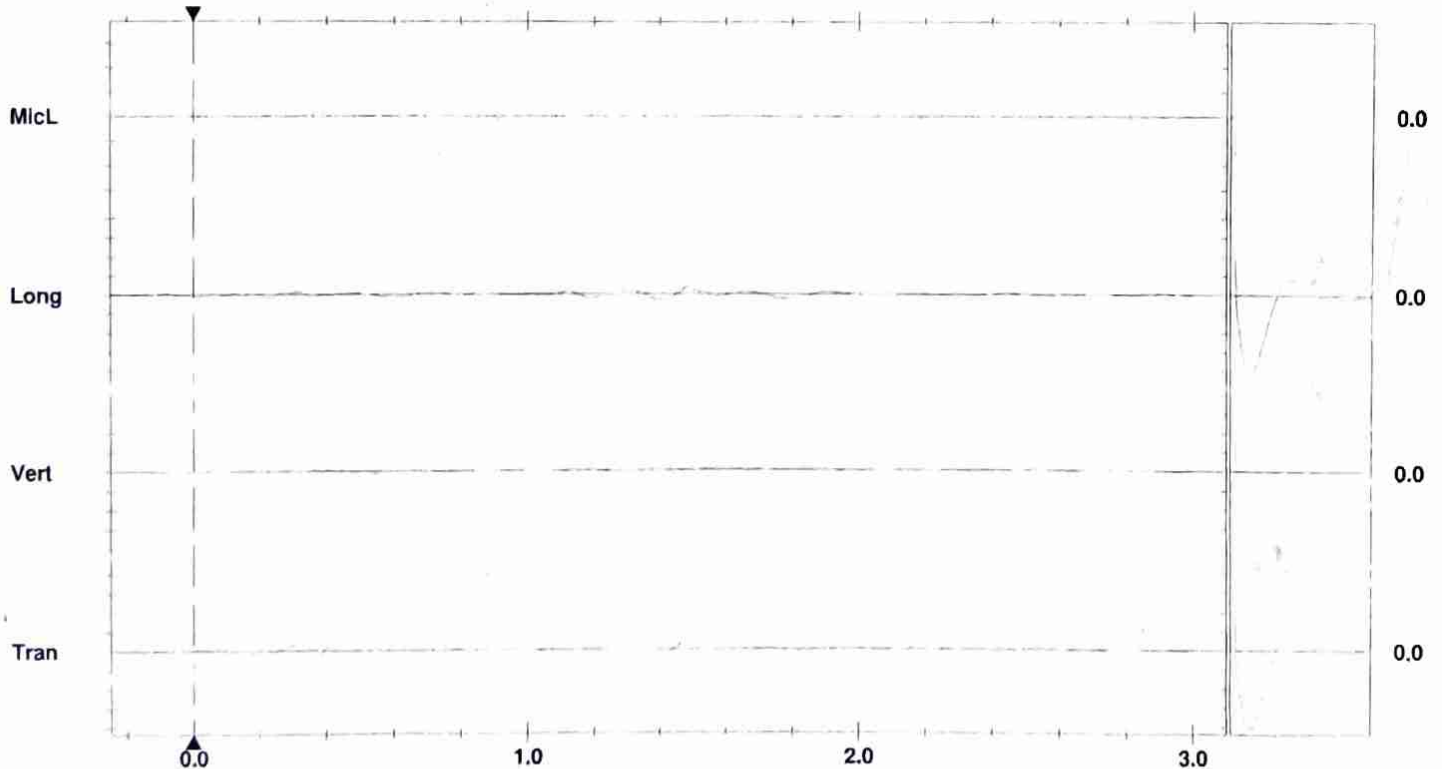
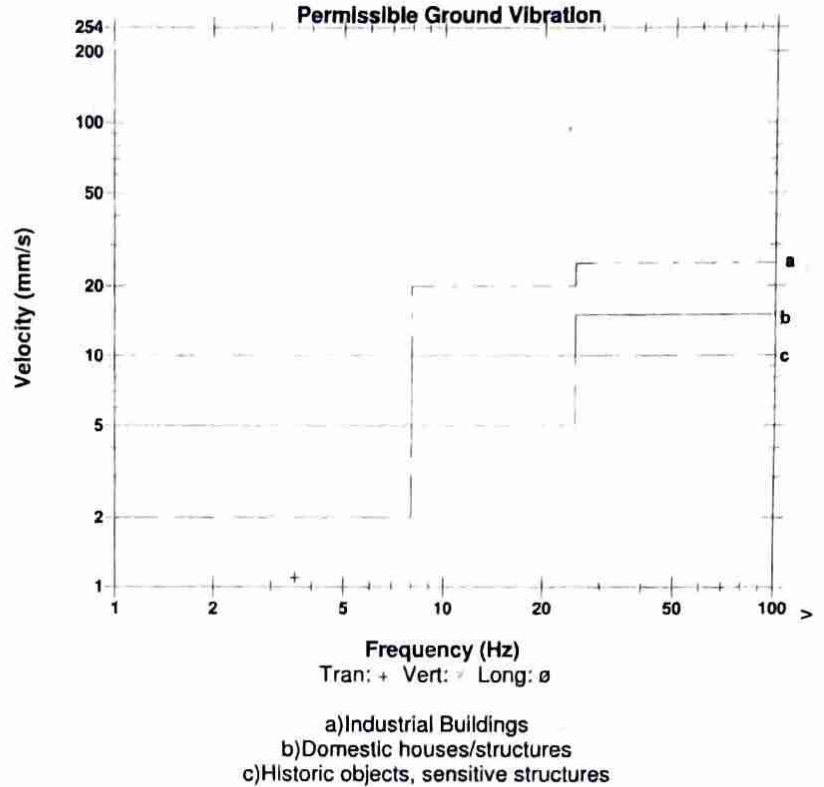
Kathra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	1.127	0.583	0.843	mm/s
ZC Freq	3.6	3.5	5.4	Hz
Time (Rel. to Trig)	1.487	1.715	1.484	sec
Peak Acceleration	0.016	0.016	0.020	g
Peak Displacement	0.043	0.023	0.023	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	6.9	Hz
Overswing Ratio	4.6	5.0	5.3	

Peak Vector Sum 1.438 mm/s at 1.484 sec
 N/A: Not Applicable

DGMS India (A)



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = ▶ ◀

Sensor Check

Date/Time Vert at 14:09:54 December 20, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221220140954.IDFW

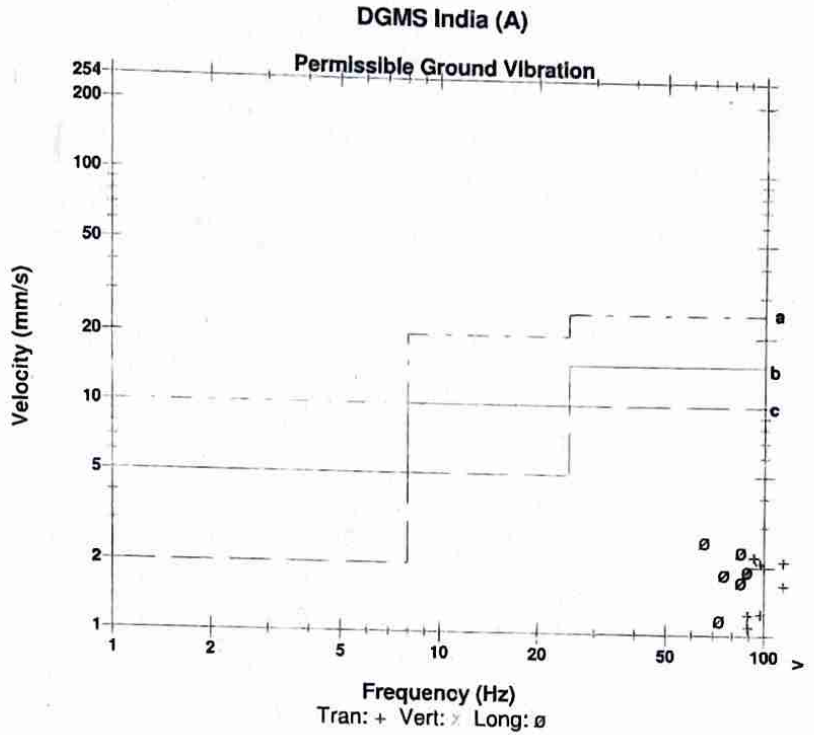
Notes
 Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

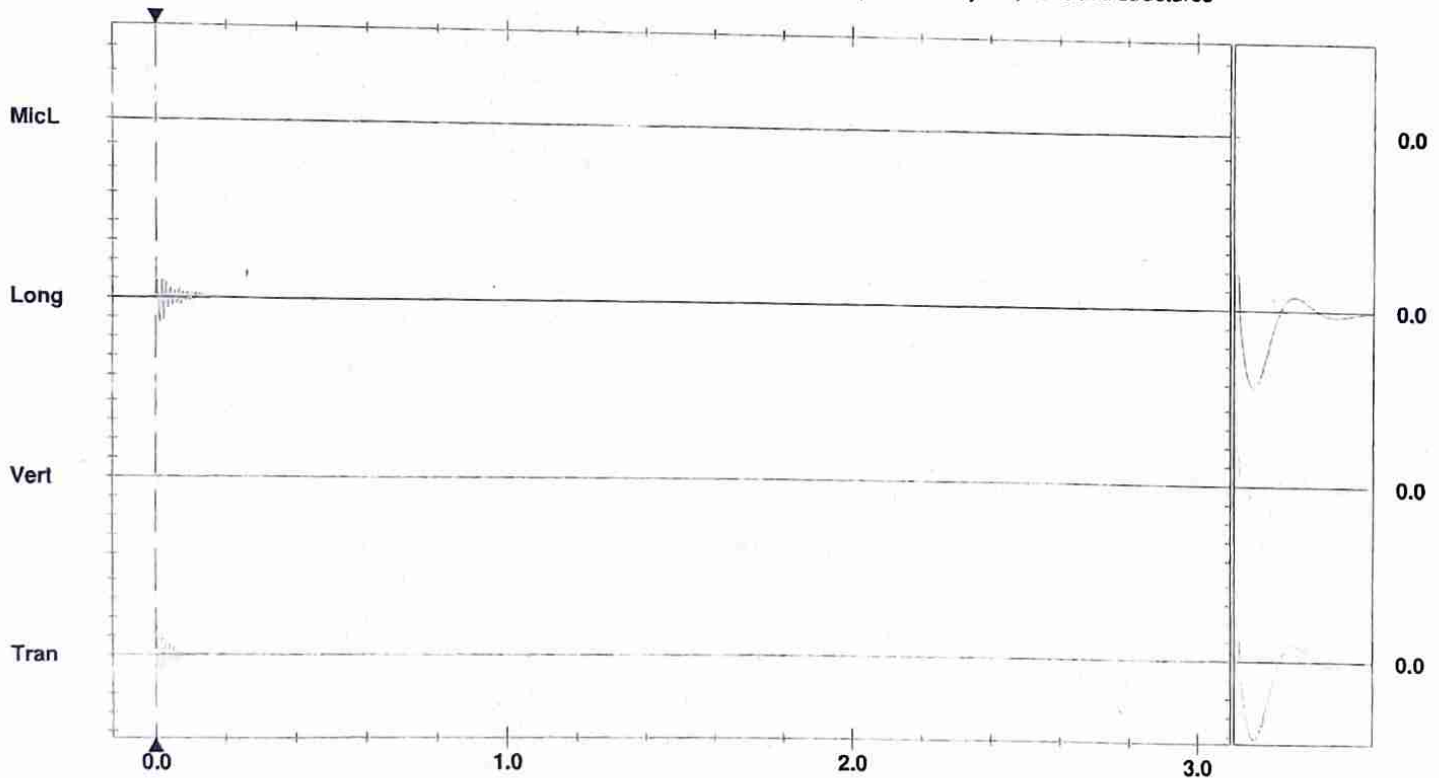
Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	2.262	0.410	2.601	mm/s
ZC Freq	93	71	66	Hz
Time (Rel. to Trig)	0.013	0.008	0.010	sec
Peak Acceleration	0.155	0.036	0.128	g
Peak Displacement	0.004	0.001	0.012	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 3.032 mm/s at 0.022 sec
 N/A: Not Applicable



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = \blacktriangleleft

Sensor Check

Date/Time Tran at 10:46:59 December 21, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.8 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221221104659.IDFW

Post Event Notes
 Kathra OCP
 distance from blast 100 mtr.

Notes

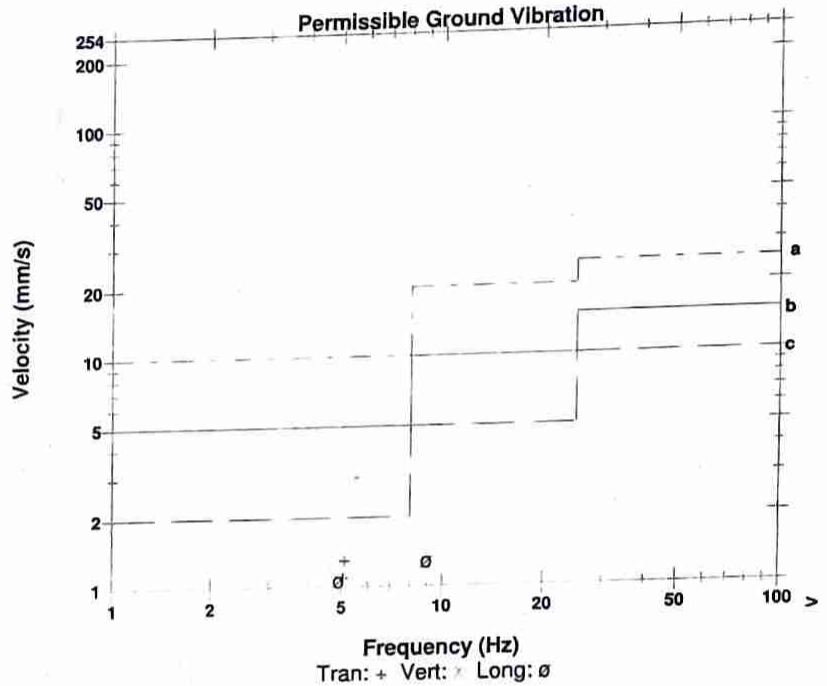
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

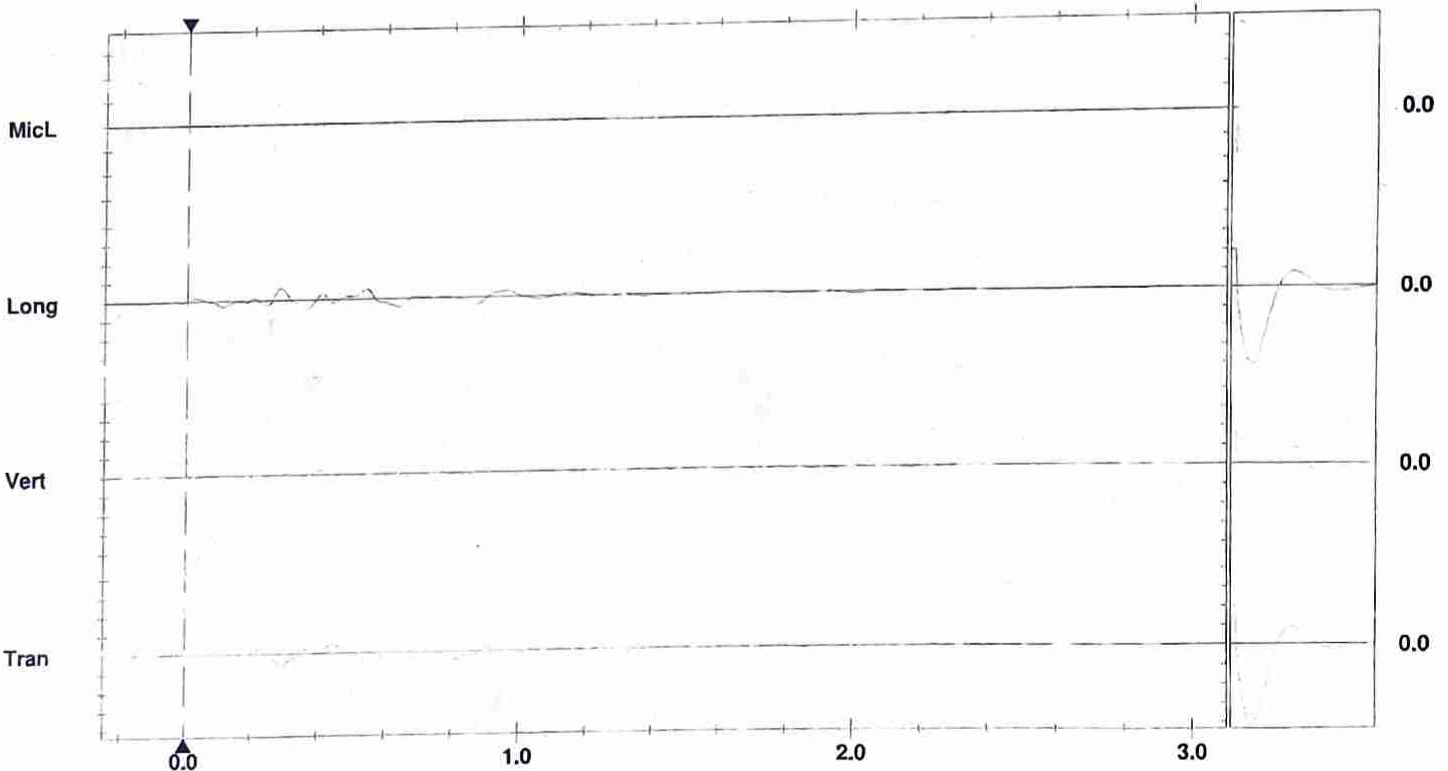
	Tran	Vert	Long	
PPV	1.324	0.520	1.285	mm/s
ZC Freq	5.1	7.4	9.0	Hz
Time (Rel. to Trig)	0.292	0.217	0.278	sec
Peak Acceleration	0.016	0.020	0.020	g
Peak Displacement	0.032	0.011	0.027	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.3	6.9	Hz
Overswing Ratio	4.7	5.0	5.3	

Peak Vector Sum 1.696 mm/s at 0.288 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = ▶ ←

Sensor Check

Date/Time Vert at 15:00:49 December 23, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.7 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221223150049.IDFW

Notes

Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

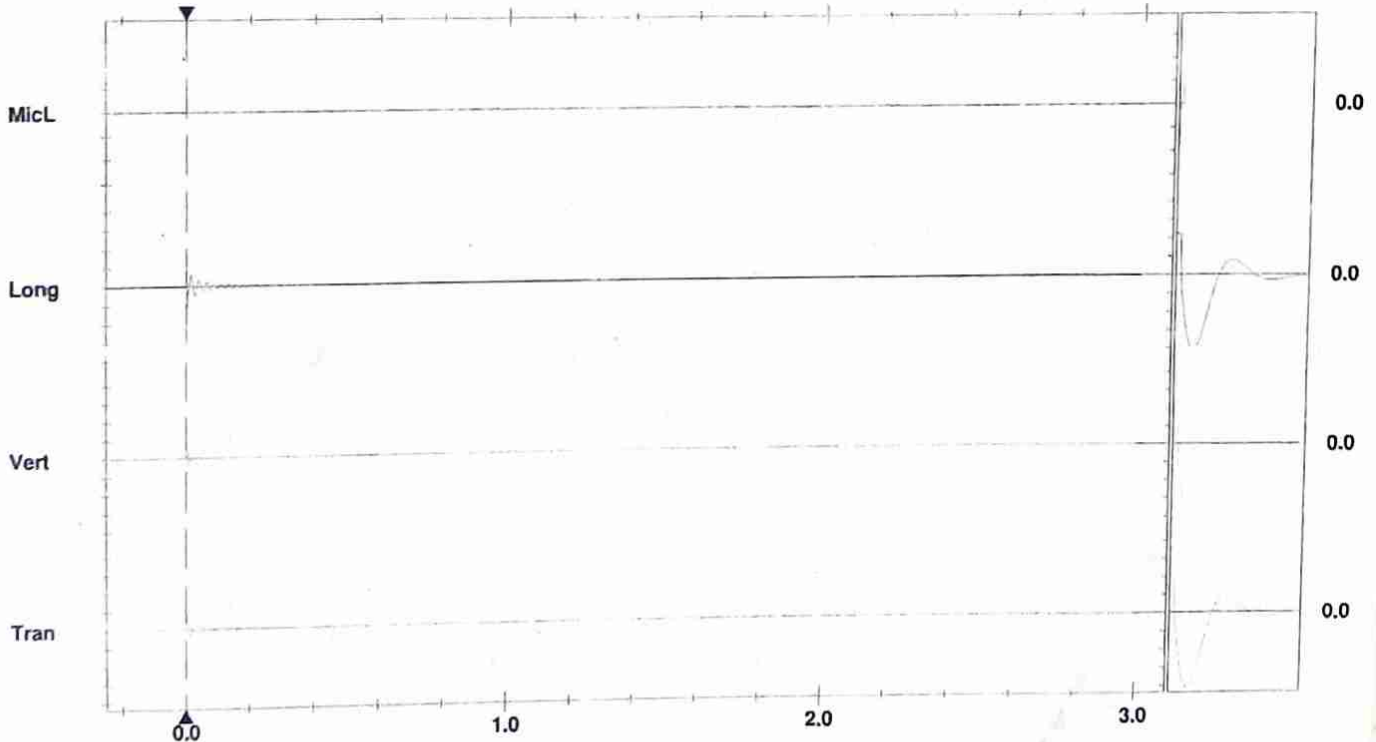
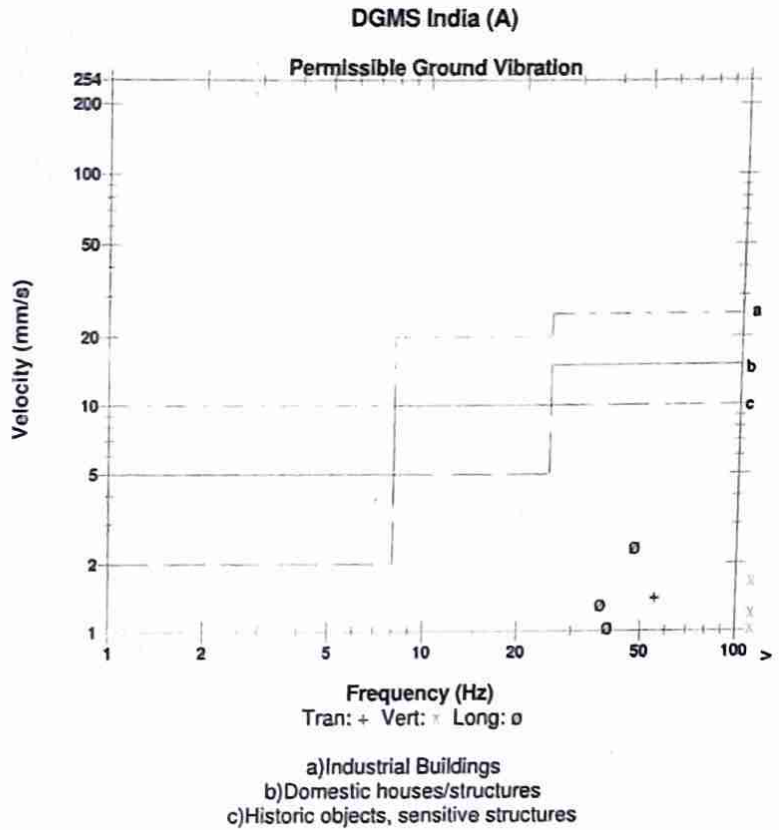
Post Event Notes

Kathra OCP
 distance from blast 100 mtr.

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

	Tran	Vert	Long	
PPV	1.427	1.671	2.365	mm/s
ZC Freq	55	256	48	Hz
Time (Rel. to Trig)	0.002	0.002	0.002	sec
Peak Acceleration	0.112	0.237	0.207	g
Peak Displacement	0.003	0.001	0.005	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.1	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.2	

Peak Vector Sum 3.157 mm/s at 0.002 sec
 N/A: Not Applicable



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = \blacktriangleleft

Sensor Check



Indian Oil Corporation Limited

Date/Time Vert at 14:19:09 December 24, 2022
 Trigger Source Geo: 0.200 mm/s, Mic: 100.00 dB(L)
 Range Geo: 254.0 mm/s
 Record Time 3.0 sec at 4096 sps
 Operator/Setup: Operator/CCL .MMB

Serial Number UM16973 V 10-89 Micromate ISEE
 Battery Level 3.5 Volts
 Unit Calibration November 18, 2021 by CIMFR Dhanabd
 File Name UM16973_20221224141909.IDFW

Post Event Notes
 Jarangdlh Ocp

Notes

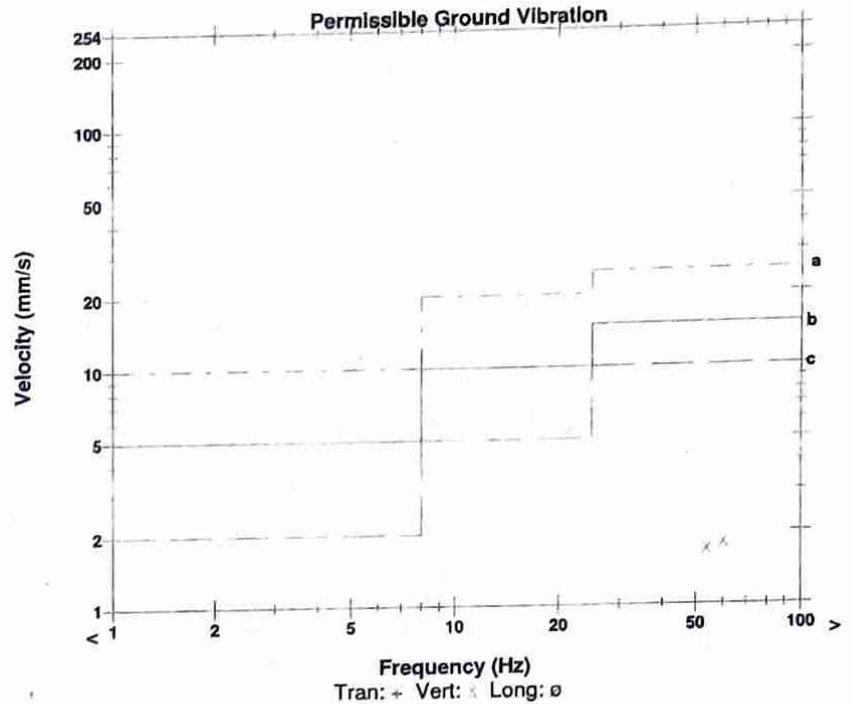
Location:
 Client: Central Coalfields Limited (CCL)
 User Name: IndianOil, Kathara
 General: IOCL

Microphone Linear Weighting
 PSPL <88 dB(L)
 ZC Freq >400 Hz
 Channel Test Check (Freq = 0.0 Hz Amp = 0 mv)

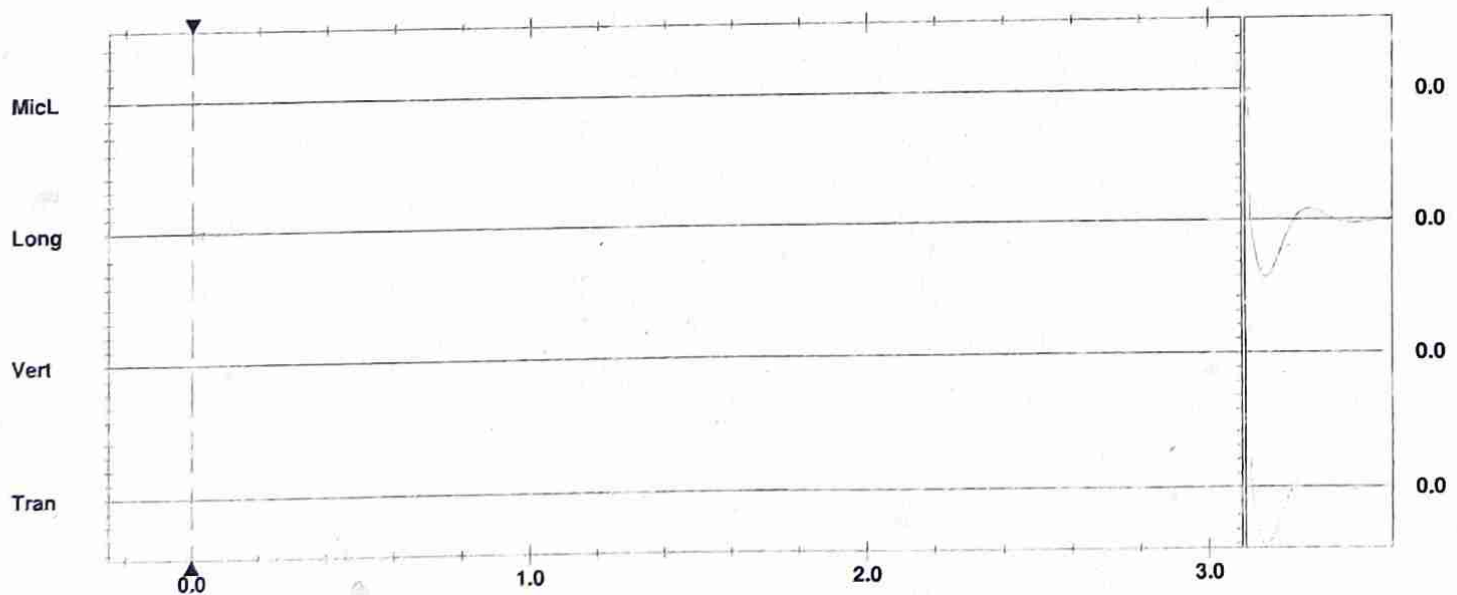
	Tran	Vert	Long	
PPV	0.331	1.829	0.733	mm/s
ZC Freq	102	60	79	Hz
Time (Rel. to Trig)	0.040	0.004	0.027	sec
Peak Acceleration	0.026	0.165	0.039	g
Peak Displacement	0.000	0.004	0.014	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.3	7.1	Hz
Overswing Ratio	4.7	5.0	5.4	

Peak Vector Sum 1.860 mm/s at 0.004 sec
 N/A: Not Applicable

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures




Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.000 mm/s/div Mic: 1.000 pa.(L)/div
 Trigger = ▶ ◀


Sensor Check

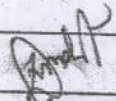
ILLUMINATION SURVEY REPORT OF NOV

730 PM

Sl. No.	LOCATION	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED	
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
01.	OB DUMP.	15	15	15	16
02.	HALLROAD OF OB DUMP	10	10	10	11
03.	WORK PLACE FOR HEAVEY MACHING.				
	(A) 1851 SHOVEL (ELECT.)	25	15	26	16
	(B) 1075 SHOVEL (ELECT.)	25	15	25	16
	(C) TATA HITACHI (DIESEL)				
04.	OPERATOR CABIN OF MACHING.		50		56
05.	PUMPING STATION.		40		45
06.	WORK SHOP.	50	100	55	106
07.	DUMPER PARKING YARD.		50		57
08.	ELECTRICAL SUB. STATION.	150	50	105	55


Safety Officer
KATHARA OCP


MR. (EXM)
Kathara OCP


F.M. in charge
EXM Kathara OCP

2

ILLUMINATION SURVEY REPORT OF DEC

Date: 7.25 PM

SL. NO.	LOCATION	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED	
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
01.	OB DUMP.	15	15	15	16
02.	HALL ROAD OF OB DUMP	10	10	10	10
03.	WORK PLACE FOR HEAVY MACHING.				
	(A) 1851 SHOVEL (ELECT.)	25	15	26	17
	(B) 1075 SHOVEL (ELECT.)	25	15	26	17
	(C) TATA HITACHI (DIESEL)				
04.	OPERATOR CABIN OF MACHING.		50		54
05.	PUMPING STATION.		40		44
06.	WORK SHOP	50	100	55	105
07.	DUMPER PARKING YARD		50		57
08.	ELECTRICAL SUB. STATION.	100	50	104	56

[Signature]
 Safety Officer
 Kathara OCP.

[Signature]
 MR. (ERM)
 Kathara OCP

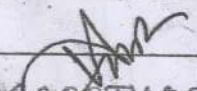
[Signature]
 FM / INCHARGE
 ERM Kathara OCP.


3

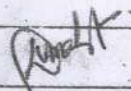
ILLUMINATION SURVEY REPORT OF JAN

720 PM

SL. NO.	LOCATION	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED		SL.
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	
01.	OB DUMP	15	15	15	16	01
02.	HALLROAD OF DUMP	10	10	10	11	02
03.	WORKPLACE FOR HEAVY MACHING.					03
	(A) 1851 SHOVEL (ELECT.)	25	15	26	16	
	(B) 1075 SHOVEL (ELECT.)	25	15	25	16	04
	(C) TATA HITACHI (DIESEL) EKG	25	15	26	17	
04.	OPERATOR CABIN OF MACHING.		50		56	05
05.	PUMPING STATION		40		43	06
06.	WORK SHOP.	50	100	54	105	07
07.	DUMPER PARKING YARD		50		56	08
08.	ELECTRICAL SUB. STATION.	100	50	104	57	


SAFETY OFFICER
KATHARA OCP


MR (ERM)
KATHARA OCP

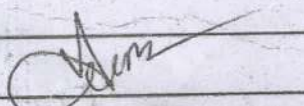

F.M. IN CHARGE
ERM KATHARA OCP

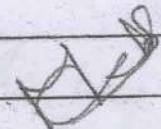
4

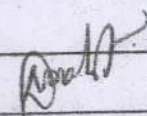
ILLUMINATION SURVEY REPORT OF Feb

7:30 PM

SL. NO.	LOCATION	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED	
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
01.	OB DUMP	15	15	15	15
02.	HALL ROAD OF DUMP	10	10	10	11
03.	WORK PLACE FOR HEAVY MACHING. (A) 1851	25	15	26	15
	(B) 1075 SHOVEL (ELECT)	25	15	25	16
04.	OPERATOR CABIN OF MACHING.				
05.	PUMPING STATION		40		45
06.	WORK SHOP	50	100	55	106
07.	DUMPER PARKING YARD.		50		55
08.	ELECTRICAL SUB STATION.	180	50	105	57


SAFETY OFFICER
KATHARA OCP


MR (EXM)
KATHARA OCP

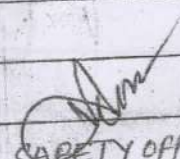

P.M / INCHARGE
EXM KATHARA OCP


5


ILLUMINATION SURVEY REPORT OF MAR

7:28 PM

SL. NO.	LOCATION.	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED	
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
01.	DB DUMP	15	15	15	16
02.	HALLROAD OF DUMP	10	10	10	11
03.	WORK PLACE FOR HEAVY MACHING.				
	(A) 1851 SHOVEL (ELECT.)	25	15	25	16
	(B) 1075 SHOVEL (ELECT.)	25	15	25	15
	(C) TATA HITACHI (DIESEL) ETC.	25	15	25	16
04.	OPERATOR CABIN OF MACHING.		50		55
05.	PUMPING. STATION.		40		45
06.	WORK SHOP.	50	100	55	100
07.	DUMPER PARKING YARD		50		55
08.	ELECTRICAL SUB. STATION.	100	50	105	50


SAFETY OFFICER
KATHARA OCP


MR (EXM)
KATHARA OCP

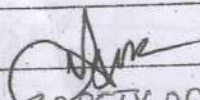

F.M/INCHARGE
EXM KATHARA OCP

6

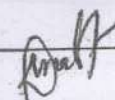
SURVEY
ILLUMINATION REPORT OF APR

Date: 1/1/2018
7- Annexure-XXX

SL.NO.	LOCATION	ILLUMINATION STANDERED LUX		ILLUMINATION MEASERED	
		VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
01.	OB DUMP.	15	15	15	15
02.	HALL ROAD OF DUMP	10	10	10	11
03.	WORK PLACE FOR HEAVY MACHING.				
	(A) 1851 SHOVEL (ELECT)	25	15	25	16
	(B) 1075 SHOVEL (ELECT)	25	15	25	15
	(C) TATA HITACHI (DIESEL) EKG	25	15	25	15
04.	OPERATOR CABIN OF MACHING.		50		54
05.	PUMPING STATION.		40		46
06.	WORK SHOP.	50	100	55	106
07.	DUMPER PARKING YARD.		50		55
08.	ELECTRICAL SUB. STATION.	100	50	106	55


SAFETY OFFICER
KATHARA OCP


MR (ERM)
KATHARA OCP


F.M / INCHARGE
ERM KATHARA OCP

CENTRAL COALFIELDS LIMITED
DARBHANGA HOUSE: RANCHI

**Sub: Forwarding Minutes of the 480th (No. 12 of 2019)
Meeting of the Board of Directors held on 16.11.2019.**

Extract from the final confirmed minutes of the above meeting, in respect of following item, is appended below:

Item No. 480.3(4): Proposal seeking approval of Corporate Environment Policy for Central Coalfields Limited, based on the Corporate Environment Policy (CEP) 2018 of Coal India Limited.

The Board was apprised of the subject proposal seeking approval of Corporate Environment Policy for Central Coalfields Limited, based on the Corporate Environment Policy (CEP) 2018 of Coal India Limited.

It was further apprised that based upon the observation of CAG in its Draft Performance Audit Report on "Assessment of Environmental Impact due to Mining activities and its mitigation in Coal India Limited and its subsidiaries", CIL had reviewed its Corporate Environment Policy in 2018 and the same had been approved in the 377th CIL Board Meeting held on 20th December 2018. Also, as per the directions of 2nd Apex Committee meeting dtd: 18.10.2019 presided by Additional Secretary, Ministry of Coal, the Environment Policy-2018 of CIL also needs be approved by CCL Board.

After detailed deliberations, the Board approved the subject proposal as brought out in the agenda note.

Submitted for immediate necessary action to ensure compliances of the directives of the Board. ATR, may please be submitted within 08 days, so that it can be placed before the Board at least 07 days in advance of the next Board Meeting.


Company Secretary

HOD(E&F)

D(T/P&P)

No. CS/BM/480/2019/ 410

Date: 10-12-2019



COAL INDIA LIMITED



CORPORATE ENVIRONMENT POLICY

2018

Environmental Policy Statement:

Coal India Limited(CIL) is committed to promote sustainable development by protecting the environment through integrated project planning & design, prevention / mitigation of pollution, conservation of natural resources, restoration of ecology & biodiversity, recycling/ proper disposal of wastes, addressing climate change and inclusive growth. It also aims to bringing awareness amongst its stakeholders for continual improvement in environmental performances following best practices.

OBJECTIVES:

Coal India Limited shall endeavor to:

- 1. Plan & design projects with due consideration to environmental concerns for Sustainable Development.*
- 2. Conduct mining and associated operation in an environmentally responsible manner to comply with applicable laws and other requirements related to environmental aspects.*
- 3. Prevent pollution of surrounding habitation by continuous monitoring and adopting suitable measures for environment protection.*
- 4. Implement Environment Management Plans in all our mines /projects effectively to mitigate pollution, conservation of natural resources and restoration of ecology & biodiversity.*
- 5. Ensure compliance of all applicable Environmental Clearance & Forestry Clearance conditions and other statutory conditions issued by regulatory agencies.*
- 6. Recycling of wastes on the principle of REDUCE, REUSE and RECYCLE.*
- 7. Put special thrusts on efficient energy utilization / renewable energy as a measure to reduce carbon foot-print.*
- 8. Strive for continual improvement in our environmental performances by setting targets, measuring progress and taking corrective action.*
- 9. Taking measures to render productive post mining land use.*
- 10. Implementation of activities applicable to CIL arising out of International Conventions.*
- 11. Create environmental awareness among the employees and the local communities through pro-active communication and training.*

STRATEGIES FOR IMPLEMENTATION OF ENVIRONMENTAL POLICY:

Back Ground:

Coal India Limited subscribes to the view of Sustainable Development. Unless the environment can sustain all the developmental activities, any pursuit of development in isolation can cause irreparable damage to the ecosystem and associated environmental attributes. Keeping this view in mind, Coal India Limited attaches top priority towards sustainable development and approved its 'Corporate Environmental Policy' in December 1995, which was subsequently revised in 2012. However the present policy is the amendment of the 2012 Policy and is complimentary to the National Environmental Policy, 2006.

This modification in the present policy is the outcome of the experience gained since 2012 keeping in view the modifications / amendments made time to time in environmental policies and additional stipulation notified by MoEF&CC (Ministry of Environment, Forest& Climate Change) and other organisations concerning mine closure, reclamation of degraded land, environmental clearance etc. and also with the objective of revisiting the corporate policy.

This Policy has a vision of Green Mining and mission of 100% compliance of environmental statutes applicable to coal mining industry.

Strategies: Coal India adopts the strategies appended below for effective implementation:

1. MINE/ PROJECT PLANNING & DESIGN FOR SUSTAINABLE DEVELOPMENT:

- a) Coal being a non-renewal energy source, extraction shall be planned prudently to meet national requirement in a planned way. The projects shall be designed on the principle of Sustainable Development with due consideration to environment, mine closure ,safety and aspirations of the stakeholders at the planning& design stage itself with due regard to mine closer plan.
- b) While preparing the Mining plan/project reports, the effort shall be to incorporate latest mining technologies and equipment's with optimal capacity, which are more environment friendly.

- c) All Mining Plan/ project reports will be provided with detailed provisions for ensuring environmental compliances.

2. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) & ENVIRONMENT MANAGEMENT PLAN (EMP)

- a. All mine planning and design shall be environmentally acceptable and operation shall be carried out in such a way as to facilitate the compliance of stipulated environmental standards.
- b. EIA& EMP for all projects shall be formulated as per the approved ToR (Terms of Reference) and public consultations for obtaining Environmental Clearance (EC) from MoEF&CC. Similarly, in the existing projects needing enhancement of production capacities with or without increase in land, change of technology, renewal of lease and change in land use etc. fresh EC is required to be sought as per norms. The projects shall be operated after obtaining Consent to Establish (CTE)/Consent to Operate (CTO) from State Pollution Control Boards (SPCB).
- c. Detailed Mine Closure Plans shall be prepared for all existing and new mines as per the MoC (Ministry of Coal) guidelines.

3. COMPLIANCE OF THE STATUTORY REQUIREMENTS:

The implementation of EMP and fulfillment of all other statutory requirements like conditions of EC, FC and consents to establish & operate, including timely submission of returns to statutory bodies and various agencies, are to be ensured at all levels.

4. MEASURES TO MITIGATE POLLUTION:

a) Air Pollution:

- i) Generation of dust is to be controlled at the source to the possible extent with necessary control measures during drilling, blasting, loading, unloading, CHP transfer points etc.
- ii) Deployment of eco-friendly mining technologies.
- iii) Dust generation is to be minimized along coal / waste transportation routes.
- iv) Mechanized transportation of coal to be encouraged.
- v) Green belt is to be created around the source of dust.

b) Water pollution:

- i) The mine water and other effluent shall be treated to ensure the discharge norms as per statute. The treated effluent shall be utilized to the extent possible with a view to achieve maximum water conservation.
- ii) Oil & grease from the effluent shall be removed by Oil & Grease Traps for proper disposal.

c) Noise / ground vibration:

- i) All measures to minimize noise pollution will be taken including maintenance of HEMM, equipment and provision of PPE where required.
- ii) Suitable controlled blasting techniques shall be followed to reduce ground vibration as well as noise pollution.

d) Land reclamation:

- i) Progressive and concurrent reclamation of mined out areas will be carried out as per approved EIA/EMP and Mine Closure Plan (MCP).
- ii) Slopes of external dumps are the important area to be suitably graded / terraced for effective reclamation and plantation.
- iii) Preservation of top soil is required for future use. Old as well as existing non-active dumps are to be technically and biologically reclaimed.
- iv) Monitoring of reclamation work of all opencast mines will be done through Satellite Surveillance. The outcome shall be put in the websites.

e) Mine closure plans:

Mine Closure Plan (MCP) shall be prepared for each mine. MCP are being delineated in two phases viz. progressive and final mine closure. Appropriate funds are set aside and deposited under a special Escrow fund every year as per MoC guidelines, to be utilized for proper and final mine closure.

For mines closed prior to issuance of MoC guidelines (i.e. 27th August, 2009) suitable action to be taken as per provisions of Mines Act 1952.

f) Mine fire

CIL shall endeavour to reduce occurrence of mine fire and subsidence due to mining activity. Monthly report shall be submitted to top management of the subsidiary and CIL and Quarterly to company board. Action Plan for mine fire control shall be implemented. Monitoring will be done through Satellite Surveillance/other suitable technology.

g) Monitoring:

- I. All receptors in and around the mining projects shall be monitored regularly to assess the efficacy of the pollution control / mitigation measures within stipulated standards.
- II. Effect of mining on the hydrology of the area will be monitored through measurement of water level and its quality of nearby wells and bore holes provided for this purpose. Conservation of water through rainwater harvesting shall be taken up.
- III. Area and Unit environmental cells shall have regular interaction with the people in and around the coal mines and other allied units on matters related to environment to take necessary and timely corrective actions.
- V. Environmental initiatives and monitoring through self and third party environment audit shall be conducted for generating useful data for taking corrective actions and mitigation measures as per guidelines.

h) Other measures:

- I. Special emphasis shall be given to undertake R&D related to various facets of coal mine environmental management in collaboration with Central Mine Planning and Design Institute (CMPDI) and other competent institutions.
- II. Besides ensuring statutory compliance, the CIL desires to set high standards and continual improvement.
- III. A number of mines and establishments of CIL are ISO 14001 certified and balance mines & establishments shall be ISO 14001 certified in phased manner.
- IV. CSR and R&R policies of CIL are to be incorporated for better planning and implementation of the socio-economic issues of coal mining areas.
- V. The coal mining environmental issues are complex and require multi-disciplinary approach to address the same. CIL will endeavor to enter into MoUs with expert agencies of repute to assist in environment issues and also help in capacity building of CIL executives.
- VI. CIL conduct periodical medical examination (PME) of its work force on routine basis in compliance of the requirement mining rules and regulation, additional test will be done as and when require.

5. PRESERVATION OF BIO-DIVERSITY:

- a) This will start from mine planning including technically and biologically reclamation of mined out areas in collaboration with State Forest Departments, Wild Life Divisions, NGOs etc. working in the fields of bio-diversity conservation.

- b) The selection of species for plantation shall be done in consultation with the local community to include the local species and their preferences, if any.

6. COAL BENEFICIATION / COAL WASHERIES:

- a) For beneficiation of Runoff Mines (ROM) coal, washeries are being set up in a phased manner as per requirement and statutes.
- b) Slurry Management System (SMS) in all washeries shall be organized to ensure collection of fines, gainful utilization of rejects viz. power generation in Fluidized Bed Combustion (FBC) plants, selling to brick manufacturers or adopting other environmental friendly disposal options as feasible.
- c) The reject dumps and tailings shall be suitably handled to avoid any contamination.
- d) The effluent from washeries including tailings pond shall be suitably treated and reused to minimize water consumption with zero discharge concept.

7. CONSERVATION AND CLEAN TECHNOLOGY:

- a) R&D projects shall be taken up to promote clean coal technology and improve the existing technologies.
- b) Energy saved is energy produced. Voluntary energy audit to be done for corrective action to reduce carbon footprint.
- c) Clean Development Mechanisms will be explored for reducing emission of Green House Gases by exploration, identification, preparation of projects reports for extraction of methane from Coal Bed, Coal Mine, Abandoned Mine, Ventilation Air, UG Coal Gasification, generation and utilization of renewable energy etc.

8. AWARENESS PROGRAMME:

- a) Publicity to generate awareness through exchange & communication of information, newsletters and periodicals on environment, seminars, workshops, celebration of World Environment Day etc. at CIL / Subsidiary HQs, Areas & units to be undertaken. Regular training programs to be organized at various levels to inculcate awareness among employees.
- b) Courses on environmental and forestry laws and Environmental Protection Measures and the Corporate Policy to be organized for project executives for improving knowledge.
- c) CIL to give annual awards for achieving excellence in environment related

issues and activities. These awards will be in recognition for implementation of EMP, land reclamation and compliance of statutes, proper maintenance of air & water quality and noise level.

9. WASTE MANAGEMENT:

CIL will undertake appropriate action for safe handling, storage and disposal of solid waste and hazardous waste generated from its industrial set up and colonies as per relevant rules. The biomedical waste generated from hospitals and dispensaries will be collected and disposed in appropriate facilities created as per statutes. E-waste management and handling of various types of e-waste generated in its operations will be done as per rule.

10. CORPORATE ENVIRONMENT RESPONSIBILITY:

Corporate Environment Responsibility (CER) is mandatory for issuing environmental clearance for all the Greenfield and Brownfield projects as per directives of MoEFCC with effect from 1st May, 2018 (O.M.No.22-65/2017-IAIII dt. 19.06.2018). Budgetary provisions should be kept for implementation of provisions of CER for all the projects which will be submitted to MoEFCC for grant of environmental clearance.

11. INCORPORATION OF VIEWS OF STAKEHOLDERS:

CIL will critically examine and incorporate the viewpoints of various stakeholders like PAPs/PAFs, Parliamentary Committees, Standing Sub-Committees, NGOs etc. CIL being a listed entity with stock exchange, it will also take into consideration the observations/viewpoints of international investors.

12. IMPLEMENTATION OF POLICY:

- i) **Manpower:** CIL shall have environmental divisions at decision making & operational levels in its structure. The environment department shall be set up and strengthened at:
 - i) CIL Corporate HQ at Kolkata
 - ii) Subsidiary HQs
 - iii) Areas / Units / Collieries / Workshops /Washeries
 - iv) CMPDI (HQ) & CMPDI Regional Institutes
- ii) **Roles and Responsibilities:** The environmental department, set up at company HQs, Areas and Unit levels with appropriate manpower and resources, shall be responsible for implementation of policy, obtaining EC, FC, consent to establish

& operate, statutes requirements and undertaking mitigation measures besides preparation of action plan every year and also to intimate the status of implementation to the management regularly.

iii) Annual Environment Budget (Revenue & Capital): The Annual Environment Budget (revenue & capital) shall be prepared based on the action plan including monitoring of various bench marks and the budget utilization. The year wise funds earmarked for environmental protection measures shall be kept in separate accounts with Environmental cost code.

13. FLEXIBILITY TO THE SUBSIDIARY COMPANIES:

CEP 2018 will be applicable for all subsidiaries of CIL. The subsidiary company Boards have been authorized to approve necessary modifications in CEP 2018 with reference to unique conditions prevailing at the concerned subsidiary.

REVIEW OF ENVIRONMENTAL POLICY:

In view of the present fast changing social, economic and environmental scenario, this Policy shall be reviewed every 5 years to incorporate the changes in the legal, technical, environmental, economic and social inputs prevailing at that time. Whenever, there is change in National Environmental Policy or other National / State relevant policies, Acts etc, this Corporate Environmental Policy would be reviewed and suitably revised.



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cmpdi
A Mini Ratna Company

Annexure-XXXIV

STRICTLY RESTRICTED
FOR COMPANY USE ONLY

The information given in this report is not to be communicated
either directly or indirectly to the press or to any person not
holding an official position in the CIL/ Government.

CENTRAL COALFIELDS LIMITED (CCL)

REVISED COST ESTIMATE

FOR

KATHARA OCP

NOMINAL CAPACITY-1.90 MTY

PEAK CAPACITY-2.56 MTY

(Approved by the Board of Directors ,CCL on 30/9/2012)

[Text and Appendices]
(JOB NO. 341201)

October 2012

REGIONAL INSTITUTE-III
CENTRAL MINE PLANNING & DESIGN INSTITUTE LIMITED
(A Subsidiary of Coal India Limited)
GONDWANA PLACE, KANKE ROAD, RANCHI - 834 031,
JHARKHAND, INDIA

Summarised Data

RCE for Kathara OCP(1.90 MTY)-September 2012

Sl No	Particulars	Unit	Value
1	Total Capital Investment		
	Existing	Rs. Crs.	
	Additional up to target year	Rs. Crs.	109.41
	Additional beyond target	Rs. Crs.	128.94
2	Specific Investment		
	Upto target Yr	Rs. / tonne	
	Beyond target Yr	Rs. / tonne	1254.51
			148.84
3	Total Capital Investment on P&M		
	Existing	Rs. Crs.	
	Upto target Yr	Rs. Crs.	93.01
	Beyond target Yr	Rs. Crs.	79.08
4	Specific Investment on P&M		
	Upto target Yr	Rs. / tonne	
	Beyond target Yr	Rs. / tonne	905.74
			10.55
5	Capital requirement upto target year	Rs. Crs.	128.94
6	Year of opening of Revenue account (from zero date)		1 st Year
7	Earnings per manshift (EMS) (target year)	Rs.	2483.05
8	Output per manshift (OMS) (target year)		11.84
9	Estimated Cost of Production		
	At 100% production level	Rs. / tonne	1083.12
	At 85% production level	Rs. / tonne	1194.77
10	Estimated average selling price	Rs. / tonne	1482.00
11	Estimated Profit		
	At 100% production level	Rs. / tonne	398.88
	At 85% production level	Rs. / tonne	287.23
12	Financial Internal rate of return (FIRR)		
	At 100% production level	%	131.90%
	At 85% production level	%	69.43%
13	Break-even point		
	Production	Mty	1.17
	Production level	%	61.33%
14	Cost of Outsourcing (average)		
	OB	Rs/m ³	80
	Coal	Rs/tonne	40&46(for lead 4-5 & 5-6 Km)
15	Mine Closure Cost	Rs. Crs./te	31.76
16	Expected Completion Capital for Target Year	Rs. Crs.	246.28

RCE FOR KATHARA OCP(1.90MTY)

List of Appendices

Appendix no.	Title of the Appendix	Page No
A	Estimated total capital investment and its phasing	1X
A'	Statement showing Completion capital with phasing	2X
A.1	Estimated capital investment on land acquisition, compensation and rehabilitation	3X
A.2	Estimated capital investment on buildings	4X
A.2.1	Estimated capital investment on residential buildings	5X-6X
A.2.2	Estimated capital investment on service buildings	7X
A.2.3	Building cost index	8X
A.3	Estimated capital investment on P&M with phasing	9X
A.3.2	Estimated capital investment on P&M - Electrical	10X-12X
A.3.3	Estimated capital investment on P&M - Workshop and stores	13X-15X
A.3.4	Estimated capital investment on P&M - pumps, pipes and fittings	16X-17X
A.3.6	Estimated capital investment on other P&M	18X
A.3.7	Estimated capital investment on Communication System	19X
A.4	Estimated capital investment on furniture and fittings	20X
A.6	Estimated capital investment on vehicles	21X
A.7	Estimated capital investment on prospecting and boring	22X
A.8.1	Estimated capital outlay in mines	23X
A.8.2	Estimated capital investment on roads and culverts	24X-27X
A.8.3	Estimated capital investment on water supply and sewerage arrangements	28X
B	Job-wise / Category-wise requirement of manpower	32X-36X
B	Year wise manpower	31X-35X
B.1	Estimated salaries and benefits	36X
C	Estimated cost of production at 100% capacity utilization	37X
C.1,C.2 & C.3,C4	Estimated cost of production at 85% capacity utilization	38X-39X
D-D.3	Cash flow statement for financial & economic analysis at 100%, and 85% of the capacity.	40X-41X
E	Estimated investment on Land Reclamation	44X
F	Environmental Protection Measures	45X-46X
E	Capital Investment on Land Reclamation	42X
F	Environmental Protection Measures	43X-44X
Annexure - Board Note of CCL		45X

RCE for Kathara OCP(1.9 MTY)
Estimated Capital Investment on Land Reclamation

(Amount in Rs.)

SI No	Particulars	Size	Total Provision		Initial as on 31.03-12		Capital For Sanction upto 2nd year(Target)			Phasing					
										1		2		3	
			No.	Amount	No.	Amount	No.	Unit Cost	Amount	No.	Amount	No.	Amount	No.	Amount
	HEMM														
1	DOZER	410HP	2	355.88	2	355.88		253.92						2	695.26
2	F.E.LOADER	5-6 CUM						347.63						1	78.699
3	WATER SPRINKLER	28000 Ltrs	1	69.53	1	69.528		78.70						3	773.06
	Total			425.41		425.41									38.698
	Float engine														812.66
	Contingency														
	Grand Total			425.41		425.41									

III CAPITAL FOR RESTORATION			
HEMM for Reclamation --			
1	2No. Dozer 410 HP	507.84	Appendix-E
2	2 Nos. FE loader (5-6 Cum)	695.26	Appendix-E
3	2No. water sprinkler (28 kl)	157.40	Appendix-E
4	Spare Engines	63.48	Appendix-E
5	Contingency	68.03	Appendix-E
7	Biological reclamation of area @ Rs 85,000/-per Ha for 268.00 Ha.	227.80	Appendix-A.8.1
SUB-TOTAL		1719.81	
IV CAPITAL FOR ANTI-POLLUTION MEASURES IN MINE AND INDUSTRIAL AREA			
1	3 Nos. water sprinkler (wide spray system)	236.10	Appendix-A.3
2	Industrial sewage treatment	83.29	Appendix-A.8.3.2
3	Water supply distribution system	253.74	Appendix-A.8.3.1
4	Dust suppression & extraction in coal handling plant & feeder breaker	0.00	Appendix-A.3.4
5	Garland drain, embankment, sedimentation lagoon etc.	30.00	Appendix-A.8.1
6	Development of green belt	15.00	Appendix-A.8.1
SUB-TOTAL		618.13	
V CAPITAL FOR ANTI-POLLUTION MEASURES IN TOWNSHIP			
1	Colony Sewage treatment	240.00	Appendix-A.8.3
2	Storm water drain	0.00	
3	Water treatment plant & Distribution system	200.00	Appendix-A.8.3
4	Cost for Arboriculture	10.00	Appendix-A.8.1
SUB-TOTAL		450.00	
VI OTHER PROVISIONS			
1	Base line data generation and monitoring works	15.00	Appendix-A.8.1
2	Rainwater harvesting scheme	10.00	Appendix-A.8.1
3	Housing for personnel for pollution control	0.00	Appendix-A.2.1
SUB-TOTAL		25.00	
VII COMPENSATION FOR NON- FOREST LAND			
A Government Land			
	Government Land required	0.00	
	Government Land Acquired		
	Government Land to be Acquired	0.00	
	Comp. for Government Land @ Rs 2.47Lakh/Ha. for 0 Ha.	0.00	Appendix-A.1
B Tenancy Land			
	Compensation of tenancy land @ Rs.12.35 lakh/Ha for 0 Ha of land	0.00	Appendix-A.1
SUB-TOTAL		0.00	
VIII FINANCIAL IMPACT			
CAPITAL			
1	Cost of rehabilitation	1385.00	
2	Cost of compensatory afforestation	1.19	
3	Cost of restoration	1719.81	
4	Cost of Anti-pollution measures in mine & Industrial area	618.13	
5	Cost of Anti-pollution measures in township	450.00	
6	Other provisions	25.00	
7	Compensation for non-forest land	0.00	

ESTIMATED CAPITAL EXPENDITURE ON ENVIRONMENTAL PROTECTION MEASURES**A-CAPITAL EXPENDITURE**

COST OF REHABILITATION		
Total no.of families to be rehabilitated before the start of the project	250	
No.of families rehabilitated till date	0	
No.of families required to be rehabilitated.	250	
CAPITAL ESTIMATES		
(Amount in Rs.Lakhs)		
Description	Amount	Remarks
Compensation for homestead to be aquired @ Rs.2,00,000/- for each house which are likely to be demolished.	500.00	
One time lump sum Payment of Rs. 3,00,000/- for each family in lieu of alternate house site,assistance in designing,shifting allowance,compensation for construction of cattle shed & work shed etc.	750.00	
Subsistence allowance @ 25 days minimum agricultural wage per month for one year.	135.00	
SUB-TOTAL	1385.00	Appendix-A.8.1
COST OF COMPENSATORY AFFORSTATION		
Forest Land Required For the Project in Ha.	0.00	
Forest land already acquired		
Forest land in safety zone	0.00	
Net forest land to be acquired	0.00	
Density of forest:	0.30	
No. of trees at 100%density	2000.00	
CAPITAL ESTIMATES		
(Amount in Rs.Lakhs)		
Description	Amount	Remarks
Cost of forest growth & capital NPV (for forest density 0.3) for 0 Ha @ Rs.9.00 Lakh/Ha	0.00	
Cost of afforstation @Rs 0.85 Lakh/ Ha.for double the forest land of 0.7 Ha.that is 1.4 Ha.	1.19	
Cost of affrostation in safety zone is 1.5 times of the safety zone area that is 1.5x0 =0 Ha.@ Rs.0.85 Lakh/Ha .	0.00	
Cost of enrichment of forest, fencing and maintenance of 7.5m strip of actual safety zone @ Rs.516.41 per running metre that is 0 m.	0.00	
SUB-TOTAL	1.19	Appendix-A.8.1

Chapter 9 Environmental Cost Benefit Analysis

MOEF&CC while recommending standard TOR has indicated for carrying out "Cost Benefit analysis" hence, the same has been carried out.

Table 9.1 Environmental Costs

Assessment of Costs to Environment		
Head	Details	Monetary Equivalent of Cost (in Rs. Lakhs)
Land and Ecological Services	At present Kathara OCP is having around 308 Ha of Land being used for Mining and related activities causing land degradation. The present proposal involves no additional land utilization for mining and allied activities. Thus, causing no incremental land degradation.	Nil
	Ecological Services like NWFP, Fuelwood Production, Fodder Production, Carbon Sequestration etc. are closely related with the land environment. As already mentioned that the present proposal involves no forest land as well as no additional land degradation, the cost of impact of project on ecological services is not applicable.	Nil
Air Environment	Kathara OCP is proposed to produce maximum coal production at rate of 1.9 MT/year. This incremental production will cause a corresponding increase in the pollutant emission. It has been assessed that the final GLC including incremental emissions lies well within the prescribed standard limits (refer Chapter 4). However, the monetary equivalent of the likely impact of incremental emission of pollutants has been assessed. Compensation rate has been taken as per CBCP prescribed rate.	7770.19

**Final EIA & EMP of Kathara OCP
(773.23 Ha./ 1.90 MTPA)
Kathara Area, Central Coalfields Limited**

Water Environment	Mining Projects does involve extraction of ground water and significant impact on the acquifer system of the project area. The monetary equivalent of the likely impact of groundwater extraction has been assessed as per CGWA guidelines.	5403.77
	It has been proposed to utilize surface water from Konar river for the domestic needs of residential colony. It has been assessed that 2400 cum of surface water withdrawal will be required as peak demand. The monetary equivalent of the likely impact of groundwater extraction has been assessed as per CGWA guidelines.	183.96
Socio-Economic	The project is operational long before the nationalisation of coal mining projects. Present proposal does not involve any loss of habitation or livelihood.	Nil
Total Cost (In Rs. Lakhs)		13357.92

Table 9.2 Assessment of Benefits to Environment

Assessment of Benefits to Environment			
Head	Details	Investment by Company towards Environment Conservation (Rs. Lakhs)	Monetary Equivalent of Services/ Benefits (in Rs. Lakhs)

Prepared by CMPDI, RI-III, Ranchi

**Final EIA & EMP of Kathara OCP
(773.23 Ha./ 1.90 MTPA)
Kathara Area, Central Coalfields Limited**

Post-Mining Reclamation and Ecological Services	Bio-reclamation of the degraded land and eco-restoration of the area by bringing around 455.12 Ha under dense plantation. The nature of the degraded land is non-forest. Thus by undertaking dense plantation programmes (3-tier plantation @ 2500 tree/Ha), the Net Present Value of the land shall be rightfully increased by converting it to an equivalent of tropical dry deciduous forest. The computation of monetary equivalent (@Rs 8.87 Lakh/Ha for VDF) of the ecological service generated is based on the report "REVISION OF RATES OF NPV APPLICABLE FOR DIFFERENT CLASS/CATEGORY OF FORESTS-2014", CESM & IIFM Bhopal in collaboration of FSI, Dehradun activities. Thus causing no incremental land degradation. The monetary equivalent of the ecological services generated due to generation of dense plantation is inclusive in the NPV.	1763.2	4036.9
	As per the interaction with local stakeholders, visual sighting and reference of forest working plan, Schedule I species viz. Python, Monitor Lizard and Peafowl have been observed in the core zone and buffer zone. Presence of Schedule-I faunal and avifaunal species in the core zone indicates a healthy ongoing eco-restoration.	85	Intangible Benefits
Water Pollution Control and Control	It has been proposed in the EMP to construct additional rain water harvesting structures and better water management practices. Also, it has been assessed that the mine voids acts as a site for rain water harvesting and groundwater recharge. The assessed rainfall catchment area is approximately 1600 Ha with annual groundwater recharge potential of 0.31 Mcum. The annual average rainfall for Gumia Block of Bokaro is 1100 mm. The monetary equivalent of groundwater recharge has been estimated by adopting the CGWA rate.		2232
Direct and Indirect Employment	The project renders direct employment to approx. 750 persons. Moreover, significant indirect employment generation due to mining in Kathara project and associated activities has always contributed in livelihood generation in the region. (Source: Manpower related and EMS data from project)		11508.75

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Prepared by CMPDI, RI-III, Ranchi

**Final EIA & EMP of Kathara OCP
(773.23 Ha./ 1.90 MTPA)
Kathara Area, Central Coalfields Limited**

Socio-Economic Development of the society through CSR and Natural & Community Resource Augmentation	<p>Education facilities including grant of schools, providing education kits, running of schools etc</p> <ul style="list-style-type: none"> • Water Supply and rain water harvesting works, wells, ponds, hand pumps and tube wells • Health Care and vaccination, awareness camp, mobile medical camp, Immunisation, medicine etc. • Environment Protection i.e plantation etc. • Social Empowerment like Community centre, Literacy drive, shopping complex. • Infrastructure Development like road, bridge, repairing of school, drains, electric line etc. • Sports Culture like village stadium village stadium, grant to village sports body, organizing sports meet • Grant to NGO for community development • Miscellaneous welfare for adopted villages <p>(source:</p>	998.52	Intangible Benefits
Royalty to Government	<p>Project also contributes to the revenue of government in form of royalties and cess. Various form of royalties/cess/surcharge being paid are as follows:</p> <ul style="list-style-type: none"> • Royalty to DMO, Department of Mines and Geology (14% of sale value of per Te of Coal). • District Mineral Fund (30% of royalty value paid to DMO.) • National Mineral Exploration Trust (2% of royalty value paid to DMO.) • Management fee (Rs.1/Te) • Forest Dept. (Rs.57/Te) <p>(source:data from project)</p>	125469	Intangible Benefits
Total Benefits (In Rs. Lakhs)		128315.72	17777.65 + Intangible Benefits

Chapter 6

Environmental Monitoring Programme

6.1 Introduction

The Environmental Monitoring Programme covers the technical aspects associated with mitigation, namely sampling schedule, measurement methodologies, data analysis, reporting schedules, emergency procedures and budgetary allocations associated with the same.

Samples for study of air quality, water quality and noise level will be collected and tested fortnightly at strategic locations representing a wholesome picture of the project. Groundwater level shall be monitored regularly. The Implementing authority will be guided and advised by feedback data obtained from above monitoring data.

6.2 Monitoring of Environmental Control Measures

Environmental cell at the area and Corporate level will take all necessary care to implement and monitor pollution control measures and for overall environmental management, It will look after the following aspects of environmental management.

- Generation of environmental data bank
- Monitoring of project implementation along with environmental control measures.
- Co-ordination for timely implementation of compliance-conditions of Environmental clearance of the project.
- Liaison with MOEF&CC and Jharkhand State Pollution Control Board.

Corporate Level

Environmental Cell headed by H.O.D (Env & Forest), CCL HQ will provide necessary support required for environmental management of project.

Area Level

The GM of Kathara Area will co-ordinate the environmental control measures including environmental quality monitoring in consultation with CCL HQ, State Govt., State Forest Department and Area Staff Officer (Environment Management and Control). The Area Staff Officer (Environment Management and Control) gets the necessary staffs and other infra-structural facilities for effective implementation of various measures from the office of GM of Kathara Area.

6.3 Monitoring of Environmental parameters

6.3.1 Ambient Air, Noise & Water Monitoring

The existing routine monitoring stations of Kathara OCP for air, water, noise has been assessed and was found suitable for monitoring the environmental status of the proposed project. Additional stations has been proposed at strategic locations to ensure wholesome and scientific representation of the region.

Details of stations considered for monitoring of the environment for the proposed project is as follows:

Table 6.1 Details of Environmental Monitoring Stations

Category	Type	Location	Frequency
Ambient Air	Existing	Railway Colony (Core Zone)	Fortnightly
	Existing	Guest House (Core Zone)	
	Existing	Saram Village – (Up Wind)	
	Existing	DAV School (Cross Wind))	
	Existing	Mine Rescue Station (Down Wind)	
	Existing	Asnapani Tola (Down Wind)	
Noise	Existing	Railway Colony (Core Zone)	Fortnightly
	Existing	Guest House (Core Zone)	
	Existing	Saram Village – (Up Wind)	
	Existing	Mine Rescue Station (Down Wind)	
	Existing	Asnapani Tola (Down Wind)	
Surface Water	Existing	Damodar River (U/S)	Quarterly
	Existing	Damodar River (D/S)	
Ground Water	Proposed	Borewell Water– Bandh Basti	Quarterly
	Proposed	Borewell Water- CPP Complex	
Effluent Water (4 parameters)	Existing	Mine Sump Effluent	Fortnightly
	Proposed	Workshop Effluent	
Effluent Water (27 parameters)	Existing	Mine Sump Effluent	Quarterly
	Proposed	Workshop Effluent	
Ground water level	Existing	Kathara (Well No.: EB-26)	Pre & Post Monsoon

(Note: Selection of the routine ambient air stations has been made based on the annual wind direction pattern of the region as per IMD, which is predominantly flowing from W-SNW.)

6.3.2 Measurement Methodologies

Air Quality: Particulate Matter PM₁₀, PM_{2.5}, Sulphur dioxide (SO₂) and Oxides of Nitrogen (NO_x) concentration in downwind direction considering predominant wind direction, at a distance of 500 metres from the following dust generating sources shall be measured in the manner indicated below:

Table 6.2 Measurement methodologies for Air Quality Monitoring

Sl. No.	Parameter	Technique	Technical Protocol
1	PM ₁₀	Respirable Dust Sampler (Gravimetric Method)	IS:5182 (Part-23)
2	PM _{2.5}	Fine Dust Sampler (Gravimetric Method)	As per CPCB guidelines
3	Sulphur Dioxide	Modified West & Gaeke (Ultra-violet Fluorescence)	IS:5182 (Part-2)
4	Oxides of Nitrogen	Jacob & Hochheiser (Chemiluminescence)	IS:5182 (Part-6)

In addition to the general laboratory and analytical facilities, the following sampling and analytical equipment shall be used.

Table 6.3 Sampling Analytical equipments used for environmental monitoring

Sl. No	Name of the Equipment
1	High Volume air samplers.
2	Multi gas air samplers.
3	Wind recorder.
4	Aneroid Barometer.
5	Wet & Dry Bulb Thermometer
6	Hygrometer
7	Spectrophotometer.

Water Quality: Three litres of representative water samples will be collected in plastic container and transported to laboratory for physico-chemical analysis. For determination of BOD and bacteriological analysis, pre-sterilized bottles will be used and care will be taken to maintain cool temperature by keeping the bottles in ice boxes during transportation to the laboratory for analysis. Physico-chemical and bacteriological parameters for drinking water samples will be compared with IS:10500 standard and mine discharge water samples will be compared with MoEF&CC Schedule-VI standard.

Noise Level: Ambient Air Quality Standards in respect of Noise as per 'The Noise Pollution (Regulation and Control), Rules 2000 along with the guidelines prescribed by the Director General, Mines & safety (DGMS) shall be complied with.

The noise level meter capable of measuring equivalent sound pressure level shall be used for noise level measurement.

**Final EIA & EMP of Kathara OCP
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Kathara Area, Central Coalfields Limited**

Ambient air quality, water quality (mine discharge and drinking water samples), ground water level, noise level and land use will be monitored. This is already being implemented through CMPDI in other running projects of CCL.

6.3.3 Plantation

Plant growth, its maintenance and survival rate will be monitored. This is already being implemented through Forest Department in other running projects of CCL.

6.3.4 Health

Health of the employees will be examined for identifying occupational diseases etc. to initiate remedial measures in time. This is already being implemented by way of periodic Medical Examination as per DGMS guidelines.

6.4 Emergency Procedures

The term 'major accident' means an unexpected and sudden occurrence of event from abnormal developments in course of one's industrial activity leading to a serious danger to public or environment, whether immediate or delayed, inside or outside the installation involving one or more hazardous substances.

Keeping in view the three basic principles i.e. prevention, preparedness (both pro-active and reactive) and mitigation of effect through rescue, recovery, relief and rehabilitation, a comprehensive blue print of disaster management plan (DMP) is to be prepared for the project incorporating the following:

- Identification and assessment of risks
- Recommendation of measures to prevent damage to life and property against such risks.

6.5 Environmental Budget

The routine environmental monitoring of the Kathara OCP, Kathara Area is being carried out by CMPDI, Ranchi. The environmental monitoring cost budget has been proposed based on existing and proposed routine monitoring stations (refer Table 6.1) and the prevalent monitoring rates of CMPDI for different parameters.

Table 6.4 Proposed Environmental Monitoring Cost

Parameters	Rate (in Rs.)	Total No. of samples in a year	Annual Cost (in Rs.)
PM10	14354	144 (6*2*12)	20,66,976
PM2.5	12194	144 (6*2*12)	17,55,936
Noise	6338	120 (5*2*12)	7,60,560
Surface Water (19 parameters)	8620	48 (2*2*12)	4,13,760

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Ground Water (24 parameters)	9313	8 (2*4)	74,504
Effluent Water (4 parameters)	2329	48 (2*2*12)	1,11,792
Effluent Water (27 parameters)	11959	8 (2*4)	95,672
Total annual cost			52,79,200

The above estimated cost against routine environmental monitoring is based on the current rate of CMPDI (as on May 2020). It cost may vary in future subject to any change in the rates.

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Table 10.1 Estimated Capital Cost of Environmental Control Measures

Head	Activity	Proposed Control Measure Details	Cost	Tentative timeline of Completion
			(in Rs. Lakhs)	
Air Pollution Control Measures	Wind Barriers along north and north-eastern quarry boundary	2000 m along mine boundary along Jhirki, Bandh Basti Village and 500 m along residential Colony	250	1300m- Aug'2022 1200 m- Dec' 2022
	Plantation on safety zone & green belt, avenue plantation.	Total additional area proposed to be brought under green belt/ avenue plantation is 25 Ha.	750	Pre-Monsoon 2022- 12.5 Ha. Pre-Monsoon 2023- 12.5 Ha.
	Fixed mist sprinkling system of on Haul Road	1600 m length along Haul Road side upto coal stock	150	Dec' 2022
	Permanent Haul Road	1600 m length of permanent Haul road upto Kathara Washery to be black topped	250	Sept' 2022
	Fog Canons	Total 02 nos for dust suppression at Coal Stockyard and Haul Road.	100	Aug' 2022
	Continuous Air Quality monitoring systems	CAAQMS at GM Office	100	Installed
	Total Cost of proposed Air Pollution prevention measures			1600

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Water Control Measures	Sewage Treatment Plant at the existing colony	Existing colonies at Kathara colliery with 794 quarters will be provided with an integrated sewage treatment plant.	500	Mar' 2023
	Embankment with a catch drain along Damodar River	Embankment along with catch drain of 4000 m along Damodar River.	400	Dec' 2022
	Additional Rain Water Harvesting System	Roof top rain water harvesting system at Workshop and Pit Office	25	Dec' 2022
	Toe wall and garland drain/ catch drain	Toe wall, garland drain and catch drains around the active and stabilized OB Dumps, quarry and other industrial settlements	200	Oct' 2022
	Sedimentation Tank	02 Nos. of Sedimentation tank to arrest run-off before discharge of water into Damodar	30	Pre-monsoon 2022
	Piezometers	Additional 2 no.of Piezometers in upstream and Downstream of the project.	50	Oct' 2022
	Total Cost of proposed Water Pollution & Conservation Measures		1205	
Reclamation and Eco Restoration	Conservation of Flora and Fauna	Conservation Measures for schedule-I species	15	
	Biological Reclamation	Reclamation activities on degraded land	1013.32	
Grand Total			3833.32	

Prepared by CMPDI, RI-III, Ranchi

10.4.2 Proposed Revenue Cost of Environmental Control Measures

Annual Revenue Cost to be incurred against environmental monitoring, plantation upkeep and other maintenances has been proposed as below.

Table 10.2 Estimated Revenue Cost of Environmental Control Measures

S No.	Particulars	Annual Revenue Cost (Rs Lakh)
1	Environmental Monitoring Cost	52.8
2	Plantation Maintenance Cost	40
3	Operation and Maintenance of Air Pollution control Measures	50
4	Revenue cost on Flora-Fauna Conservation	19
5	Maintenance cost for ETP and STP	15
6	Maintenance of RWH, Catch drains, Storm water drains and other development measures in Township	15
Total Revenue Cost		191.8

10.4.3 Mine Closure Details

As per approved Mine Closure Plan for Kathara OCP, the fund allocated against Progressive and Final Mine Closure of the project is **Rs. 7129.14 Lakhs.**

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10.4.4 Fund Allocation for Compliance of Issues Raised in PH/ CER

As per the directions issued by the EAC (Coal) in its MoM, the fund allocation for PH compliance shall not be less than 2% of the total capital expenditure of the project. The capital cost of the project is 266.63 Crs. It has been proposed to spend around 2% of the capital cost of projects (i.e 2% of Rs. 266.63 Crores = 5.3 Crore) towards compliance of the issues raised during the public consultation of Kathara OCP. The details are as given below.

Table 10.3 Proposed Activities for Compliance of Issues Raised in PH

S.No	Proposed Activity	Tentative Cost in Rs. Lakhs	Timeline
1	Deepening & cleaning of pond (at three locations near Bandh Basti & Kathara Basti) is under process for the purpose of agriculture & Other Usage use.	5.00	FY 22-23
2	2 pumps of 1000 GPM capacity are deployed for domestic water to Jhirki, Yadav tola, Asna pani and Bandh Basti located near project. The annual cost of operation, repair & maintenance of water supply system is approximately 36 Lakhs/annum.	108.00	On-going
3	Construction of 1 number of community halls within the command area of Kathara	150.00	FY 23-24
4	Fee waiver (ranging from 50 % - 100 %) has been provide to eligible students of weaker economic sections at DAV Kathara and DAV Swang. (Approximately 50 beneficiaries each year) @ 4 Lakhs/ Annum	12.00	On-going Activity
5	4 number of school buses deployed for nearby colony and bastis including Jhirki, Yadav Tola, Bandh Basti, Yadav Tola, Kathara Basti, Asnapani, Railway Colony etc. In addition to this , 6 more numbers of bus are catering the nearby command area villages like Khetko, Piparadih , Karmatiya and Swang etc. The annual cost of operation, repair & maintenance of 4 numbers of school buses are approximately 48 Lakhs/annum.	144.00	On-going Activity
6	Road from Muslim Tola to Yadav Tola (1100 meter x 4 meter x .3 meter) has been repaired departmentally	23.00	In-Progress To be completed by June 2022
7	The iron bridge over Montico Nala at Swang	1.50	Work Completed

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8	Construction of PCC road from Asnapani Mode to CPP Rly. Crossing	200.00	FY 23-24
		643.50	

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- 03 nos. of mobile water sprinklers of 28 kL capacity and 02 nos. of 16 kL capacity are used for regular sprinling of water on haul roads and coal transport road respectively
- Till date 3,51,500 saplings are planted in an area of 140.60 Ha
- Control Blasting is being practised. All drills are equipped with wet drilling arrangement.
- Silo Loading arrangements for washed coal despactch at Kathara Washery.
- No road coal transport outside project.
- Personnel working in dusty areas have been provided with dust masks and provided adequate training and information on safety and health aspects.
- PM10 Analyzer has been installed at adjoining Kathara Washery.
- Adequate fire fighting arrangements including storage of sufficient water at all critical points.

In addition to the existing control measures, additional proposed measures (both preventive and suppressive) are as enumerated below:

Table 4.10 Proposed Air Pollution Control Measures

Proposed Control Measure			
Activity	Details	Cost	Tentative timeline of Completion
		(in Rs. Lakhs)	
Wind Barriers along north and north-eastern quarry boundary	2000 m along mine boundary along Jhirki, Bandh Basti Village and 500 m along residential Colony	250	1300m- Aug'2022 1200 m- Dec' 2022
Plantation on safety zone & green belt, avenue plantation.	Total additional area proposed to be brought under green belt/ avenue plantation is 25 Ha.	750	Pre-Monsoon 2022- 12.5 Ha. Pre-Monsoon 2023- 12.5 Ha.
Fixed mist sprinkling system of on Haul Road	1600 m length along Haul Road side upto coal stock	150	Dec' 2022
Permanent Haul Raod	1600 m length of permanent Haul road upto Kathara Washery to be black topped	250	Sept' 2022
Fog Canons	Total 02 nos for dust suppression at Coal Stockyard and Haul Road.	100	Aug'2022
Continuous Air Quality monitoring systems	CAAQMS at GM Office	100	Installed
Total Cost of proposed Air Pollution prevention measures		1600	

Prepared by CMPDI, RI-III, Ranchi

4.3.6 Treatment Technology

1. Workshop discharge → O&G Trap →Settling tank →Reuse (Existing)
2. Mine Discharge → Mine Sumps for TSS removal →Reuse (Existing)
3. Domestic effluent→ Sewage Treatment Plant (involving primary, secondary and tertiary treatment) → Reuse (Proposed)

4.3.7 Water Pollution Control Measures

Existing
<ul style="list-style-type: none"> • Mine Sumps have been provided for collection and treatment of Mine Seepage water. • Workshop effluent is being treated at ETP consisting of Oil and greese trap and Sequential Settling ponds. • 0.70 MGD filter plant has been installed to provide treated drinking water to different colonies in Kathara area. • Around 5.5 km of garland drain along with sequential settling ponds have been provided all around the mine periphery to treat surface run-off and prevent soil erosion. • Rain water harvesting system has been provided at P.O. Office of Kathara OCP and in about 100 residential quarters of Kathara Area. • 03 no. of ponds were constructed in nearby villages. • A Piezometer installation in Kathara OCP under process to check the level of ground water.

Proposed

Activity	Details	Total Cost in Rs. Lakhs	Timeline of Completion
Sewage Treatment Plant at the existing colony	Existing colonies at Kathara colliery with 794 quarters will be provided with an integrated sewage treatment plant.	500	Mar' 2023
Embankment with a catch drain along Damodar River	Embankment along with catch drain of 4000 m along Damodar River.	400	Dec' 2022
Additional Rain Water Harvesting System	Roof top rain water harvesting system at Pit Office, MRS and Kathara Rest House	25	Dec' 2022
Toe wall and garland drain/ catch drain	Toe wall, garland drain and catch drains around the active and stabilized OB Dumps, quarry and other industrial settlements	200	Oct' 2022
Sedimentation Tank	02 Nos. of Sedimentation tank to arrest run-off before discharge of water into Damodar	30	Pre-monsoon 2022
Piezometers	Additional 2 no.of Piezometers in upstream and Downstream of the project.	50	Oct' 2022
Total Cost of proposed Water Pollution & Conservation Measures		1205	

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Year-wise Plantation Plan

Year	Green Belt & Safety Zone		Backfilled Area		External Dump		Reclaimed OB dump and Embankment		Vacant/ Undisturbed Land*		Total		Cost to be incurred in Rs. Lakhs
	Area (Ha)	Trees 0	Area (Ha)	Trees (000)	Area (Ha)	Trees (000)	Area (Ha)	Trees (000)	Area (Ha)	Trees (000)	Area (Ha)	Trees (000)	
Plantation carried out till date	20	50000	0	0	5	12500	50	125000	65.6	164000	140.6	351500	
Y1	12.5	31250	0	0	0	0	0	0	0	0	12.5	31250	375
Y2	12.5	31250	0	0	0	0	0	0	0	0	12.5	31250	375
Y3	0	0	0	0	0	0	12	30000	0	0	12	30000	42
Y4	0	0	0	0	0	0	12.09	30225	0	0	12.09	30225	42.315
Y5	0	0	0	0	15	37500	0	0	0	0	15	37500	52.5
Y6	0	0	0	0	15	37500	0	0	0	0	15	37500	52.5
Y7	0	0	0	0	0	0	0	0	0	0	0	0	0
Y8	0	0	0	0	0	0	0	0	0	0	0	0	0
Y9	0	0	20	50000	0	0	0	0	0	0	20	50000	70
Y10	0	0	20	50000	15	37500	0	0	0	0	35	87500	122.5
Y11	0	0	20	50000	15	37500	0	0	0	0	35	87500	122.5
Y12	0	0	25	62500	0	0	0	0	0	0	25	62500	87.5
Post Closure Y1	0	0	25	62500	0	0	0	0	0	0	25	62500	87.5
Post Closure	0	0	25	62500	20	50000	0	0	0	0	45	112500	157.5

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Y2													
Post Closure Y3	0	0	25.9	64750	24.53	61325	0	0	0	0	50.43	126075	176.505
Total Plantation to be carried out	25	62500	160.9	402250	104.53	261325	24.09	60225	0	0	314.52	786300	1763.32
Grand Total	45	112500	160.9	402250	109.53	273825	74.09	185225	65.6	164000	455.12	1137800	1763.32

*Plantation of approx. 65.6 Ha has been carried out on vacant/undisturbed land in the past.

2022-23

GARLAND DRAIN.		Work ord. No.	Contractor Name	Amount	Completion period		STATUS
1	Cleaning of Garland drain around quarry no:- 03 and Settling tank to Culvert near Damodar river, Under Kathara Colliery.	CCL/PO/PE(C)/KTC/ W.O/22-23/26 Dt.20.08.2022	M/S Asif Raza	256363.00	12.08.2022	22.08.2022	Completed
2	Garland drain from western side of Kargil outlet dewatering point quarry no 2 Under Kathara Colliery.	CCL/PO/PE(C)/KTC/ W.O/22-23/23 Dt. 17.08.2022	Pawan Enterprises	220403.50	04.08.2022	13.08.2022	Completed
3	Construction of pucca drain along stone wall western side of quarry edge near quarry no:-2, Under Kathara Colliery	CCL/PO/PE(C)/KTC/ W.O/22-23/50 Dt. 20.12.2022	Pawan Enterprises	549631.68	01.12.2022	30.12.2022	Work in Progress.
4	Cleaning of Garland drain from outsidig patch (from check post to culvert and along the OB dump) to near mini quarry, Under Kathara Colliery	CCL/PO/PE(C)/KTC/ W.O/22-23/24 Dt. 17.08.2022.	Pawan Enterprises	310252.68	04.08.2022	15.08.2022	Completed
5	Cleaning of Garland Drain from Sub-Station no:- 2 to Mini Quarry Under Kathara Colliery	CCL/PO/PE(C)/KTC/ W.O/22-23/49 Dt. 15.12.2023.	Pawan Enterprises	339098.72	03.12.2022	17.12.2022	Completed
				TOTAL:-	1675749.58		
FENCING WORK.							
1	Stone wall fencing along quarry no:-03 near Jhirkey (Yadav Tola), Under Kathara Colliery.(Length 350.00Mtr)	CCL/PO/PE(C)/KTC/ Agr/22-23/69 Dt. 24.01.2023	M/S A. Y. Enterprises.	1508359.73	18.01.2023	18.03.2023	Awarded
				TOTAL:-	1508359.73		

12



CCL

A miniratna cat-I company

सेंट्रल कोयलाफील्ड्स लिमिटेड
(कोयला इंडिया की अनुषंगी इकाई)
कथारा कोलियरी, पिन:- ८२९११६.
CENTRAL COALFIELDS LIMITED
(A Subsidiary of Coal India Limited)

OFFICE OF THE PROJECT OFFICER KATHARA COLLIERY.
PO:- KATHARA, DIST:- BOKARO, JHARKHAND.
दूरभाष/Phone : 06549-235277, 8987785385
वेबसाइट/Website : <https://www.centralcoalfields.in>
Email Id- gyanverdhan.lal@coalindia.in

Ref No:-CCL/Kathara/P.O/P.E(Civil)/KTC/AOW/2022-23/ 69

Dated:- 03/02/2023

Registered post/ Speed Post

Award of work.

To,
Harish Chandra Kumar.
Vill:- Bhurkundwa Basti,
P.O:- Kathara,
Dist:- Bokaro, Jharkhand.
Email Id- harishchandrak17@gmail.com.
Mob. No. 7209447087.

Sub:-	"Establishment of Tyre Washing platform and UGT of capacity 50 KL with High Pressure Washing Pump near Pit office at Kathara Colliery, Kathara Area."
Ref.:-	E-Tender Notice No. NIT No:- 065, of 2022-23 vide e-tender notice no:- PO/P.E(C)/KTC/E-Tender/22-23/65 dated:- 05.12.2022, Bid submission end date on:- 16.12.2022, and Date of opening of tender on:- 17.12.2022. (Tender Id:- 2022_CCL_264172_1). CCL Tender Id:- 86220.

Dear Sir,

In response to your tender for the subject work mentioned above, this is to inform you that your offer for a contract amount of **Rs. 19,23,278.83, (Rupees, Nineteen Lakh twenty three thousand two hundred seventy eight and Paise eighty three)** only inclusive of GST amount of **Rs. 2,93,381.52, (Rupees, Two Lakh ninety three thousand three hundred eighty one and Paise fifty two)** and **Rs, 16,29,897.31, (Rupees Sixteen Lakh twenty nine thousand eight hundred ninety seven and paise thirty one)** only exclusive of GST amount [Cost to company amount of **Rs, 16,29,897.31, as Input Tax Credit is Available**] to undertake the work has been accepted by CCL, subject to the following stipulations / conditions which are supplementaries / complementaries to the conditions of the tender documents: -


1. The payment of GST and GST Compensation Cess by the service availer (i.e. CCL) to bidder/ contractor (If GST payable by bidder/ contractor) would be made only on the latter submitting a Bill/Invoice in accordance with the provision of relevant GST Act and the rules made there under and after online filing of valid return on GST portal. The payment of GST and GST Compensation Cess is responsibility of the Contractor.
2. The period of completion of work shall be **65 (Sixty five)** days from expiry of 10 (Ten) days from the issue of this Award of work or within 07 (Seven) days of handing over of the site, whichever is later.
3. (a). The earnest money amounting to **Rs, 29,000.00, (Rupees, Twenty nine thousand and Paise Zero)**, only deposited by you vide online through Axis Aggregator vide **Bank/UTR No:- 122106899**, and Ref. no:- 273239894794, has been retained by the company (CCL) as part of Performance Security Money.

(b). You are further required to deposit **Rs, 28,698.00 (Rupees, Twenty eight thousand six hundred ninety eight and Paise Zero)** only with the company in the form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara** or demand draft in favour of **Central Coalfields Limited Kathara** from any Scheduled Bank payable at SBI Kathara within **21 (Twenty one)** days of issuance of this letter thus making the total performance security money amount to **Rs, 57,698.00 (Rupees, Fifty seven thousand six hundred ninety eight and Paise Zero)** only i.e. 3% of the contract amount. If you fail to deposit the above amount within the prescribed time, the Award of Work shall be cancelled additionally, the company shall ban such defaulting contractor for a period of **02(Two)** years from being eligible to submit Bids in CIL and its subsidiaries from the date of issue of such letter.

(C). Further you have to deposit **Rs. NIL (Rupees, NIL)** only as **Additional performance security** as per clause no. 4.8 of GTC of Conditions of Contract of tender documents along with Performance Security in form of a Bank Guarantee (if applicable) or Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara** or demand draft in favour of **Central Coalfields Limited Kathara** from any Scheduled Bank payable at SBI Kathara (if applicable).

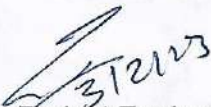
[Handwritten signature]
2/2/23

4. A copy of Bill of Quantity (BOQ) is enclosed for ready reference.
5. There is no Abnormally Low Rate (ALR) or Abnormally High Rate (AHR) item in this work as it is percentage rate quotation.
6. All running on A/c bills shall be paid at 95% of the work value. The 5% deduction towards retention money will form Second Part of Security deposit and shall be refunded after issue of no defect certificate.
7. You shall comply with Contract Labour (Regulation and Abolition) Act and make payments to your workmen accordingly. In case you engage 10 & above labourers in the work on any working day you shall be required to submit registration certificate under the B.O.C.W. (RE&CS) Act 1996 and in case you engage 20 (Twenty) or more labourers in the work on any working day you shall be required to submit Labour license under Contract Labour (Regulation & Abolition) Act 1970 for the same.
8. You shall comply with CMPF/any other appropriate PF authority's clause of tender document and you will have to submit "No dues certificate" from Provident Fund Authority, Ministry of Labour, Govt. of India at Jharkhand before finalization of final bill.
9. Work shall be executed strictly as per specification in accordance with laid down norms of company.
10. You shall be responsible for arranging all necessary tests of materials as per instruction of Project Engineer (C) / Engineer-in-Charge at your own cost as per terms & conditions of Tender Document.
11. You shall make your own arrangement for all materials, tools, staff and labour required for the above work. The rates for the work include all taxes (excluding GST), octroi, carriage, tools etc. for execution and completion of work.
12. You shall arrange necessary water for the work & for your own establishment. However, if available and feasible the company may arrange water at one point near the work site for which recovery @ 1% (One percent) of the contract value of work done shall be made from your bills.
13. The technical personnel shall be engaged by you on work site as per terms and conditions of tender document.
14. You shall not employ on this contract any close relatives of CCL's employee.
15. Before clearance of final bill you will submit royalty clearance from concerned Mining Officer.
16. All investments, operating expenses, incidentals, overheads, lifts, carriages, tools and plants etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total quotation offer price submitted by the bidder.
- 17. Input Tax Credit (ITC) is Available for this work.**
18. Your tax invoice raised must be in compliance of relevant GST Acts, Rules and notifications made there under and should bear the GSTIN of CCL. The rate and amount of IGST/CGST/SGST, GST (Compensation to State) cess (if any), related to execution of work shall be shown separately in Tax invoice.
19. The IGST/CGST/SGST and GST (Compensation to State) cess (if any), as applicable at the time of execution of the work, shall be paid extra against submission of proper tax invoice, as referred above by you so that CCL is able to avail Input tax Credit (If available) of such IGST/CGST/SGST, GST (Compensation to State) cess (if any) reflected in the invoice.
20. If the ITC claimed is disallowed due to failure on your part in incorporating the tax invoice issued to CCL in its relevant returns under GST, payment of IGST/CGST/SGST, GST (Compensation to State) cess (if any) shown in tax invoice to the tax authorities, issue of improper tax invoice or any other reason whatsoever, the applicable taxes and cess paid based on such tax invoice along with interest, penalties if any levied on CCL, shall be recovered from your current Bills and any other dues.
21. The amount of IGST/CGST/SGST and GST cess if any as indicated in Tax invoice shall be paid only when they appear in GSTR 2A of CCL and you have filed the valid return in accordance with provisions of the GST acts and Rules made there under.
22. In the event of any additional tax liabilities accruing on you due to classification issue or for any other reason the liability of CCL shall be restricted to the amount of GST charged on original tax invoice issued by you.
23. You shall pass on the benefit on account of reduction in rate of tax on any supply of goods and / or services or any benefit of the input tax credit to CCL by way of commensurate reduction in prices in terms of Anti profiteering clause of GST Act 2017.
24. You are requested to submit the following for execution of agreement / Detail Work Order within **21(twenty one)** days from the issue of this Award of Work: -


574123

- a. An amount of **Rs. 28,698.00 (Rupees, Twenty eight thousand six hundred ninety eight and Paise Zero)** only towards Performance Security in the form given below:-
- Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
 - Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at SBI Kathara.
- b. An amount of Rs, **NIL (Rupees, NIL)** only towards Additional Performance Security in the form given below (if applicable):-
- Bank Guarantee in the form given in the bid document from any Scheduled Bank. The BG issued by outstation Bank shall be operative at its local Branch at Kathara (if applicable)
 - Govt. Securities or FDR duly pledged in favour of **Central Coalfields Limited Kathara**
 - Demand Draft drawn in favour of **Central Coalfields Limited Kathara** on any Scheduled Bank payable at its Branch at S. B. I. Kathara
- c. Non-judicial stamp paper worth 100/= only for execution of agreement along with partnership deed / Memorandum & Articles of Association, power of attorney if any, GST identification Number etc. (applicable where agreement is to be executed).
- d. Site handover and takeover certificate, jointly signed by Engineer-in-Charge and the Contractor/ authorized representative.
- e. Time Bound Programme for completion of the work within stipulated time as per NIT showing physical progress of work duly signed by Engineer-in-Charge and the Contractor/authorized representative.
- f. Registration under B.O.C.W. (RE&CS) Act and / or Labour License as per Contract Labour (Regulation & Abolition) Act.
- g. Insurance Certificates as per Clause No.13 (xviii) of General Terms & Conditions of NIT.
- h. You will have to indemnify the company against any liability arising out of non-observance of the statutory provisions like royalty payments, all taxes, workmen compensation act, minimum wages act, income tax act, Contract Labour (Regulation & Abolition) Act etc on non-judicial stamp paper worth ` 20/= only.
25. **Sri Gyan Verdhhan Lal**, shall be Engineer-in-Charge for this work.(Applicable for works having Award value more than 10.00 Lakhs)
26. The date of uploading of this LOA/Work Order on e-Procurement Portal (<https://coalindiatenders.nic.in>) shall be treated as the date of receipt of this LOA / Work Order by you.
27. You are requested to contact the **Sri Krishna Mohan, Overseer. (Civil), Kathara Colliery, Mob. No. 6203696819** for further needful action regarding execution of work.

Yours faithfully,



Project Engineer(Civil)
Kathara Colliery.

DISTRIBUTION:-

1. T.S to CVO, CCL HQ., Ranchi
2. Project Officer, Kathara Colliery.
3. Sr, Officer (F & A) Kathara Colliery.
4. Overseer(Civil), Kathara Colliery.
5. Any other official as per need

In reference to Budget Certification vide no :- C&B/RFC/KTC/22-23/GMU/Special Budget/ Repair-Other(related to ENVT.)/01, dated:- 18.11.2022. for **Rs. 5,00,000.00**, only including G.S.T. and Balance Fund of Rs, **14,23,279.00**, vide B.C. No:- C&B/RFC/KTC/22-23/ KTC/ Special Budget/ Repair-Other(related to ENVT.)/ 02, dated:- 23.01.2023, "Under head of Revenue".



सेन्ट्रल कोलफील्ड्स लिमिटेड
(भारत सरकार का एक उपक्रम)
) दरभंगा हाउस, राँची (834029-
CENTRAL COALFIELDS LIMITED
(Govt. of India Undertaking)
Darbhanga House, Ranchi- 834 029
फोन/Phone: (0651) 2360184 फैक्स/Fax: (0651) 2360184,
वेबसाइट/Website: <http://www.ccl.gov.in>

Ref. No. CCL/ HOD(E&F)/2019/348

Date: 26.07.2019

To

General Manager

Piparwar / NK / Barkasayal/ Kuju/ Argada/ Hazaribagh /
Kathara/ Rajrappa / Dhori / B&K / Rajhara / M&A / /Giridih

Sub: Action taken by committee to monitor EC and FC non compliances in Areas of CCL

Ref : OM No. 43012-10-2019-CPAM DTD. 11.06.2019 & CIL(Env.) /1.M/1650 dtd. 25.06.2019 & CCL/HOD(E&F)/2019/80-N DTD. 26.06.2019 & HOD(E&F) letter no. 271 dtd.27.06.2019

To monitor the compliance of Environmental Clearance(EC) and Forest Clearance(FC) stipulated in coal mines of CCL , a committee was constituted with following members at Area level.

1. Area General Manager	Chairman
2. SO(Civil), CCL	Member
3. AFM	Member
4. SO (X)	Member
5. SO (E&M)	Member
6. SO(MM)	Member
7. SO(SURVEY.)	Member
8. Area Env't. Officer	Member
9. SO (P&P)	Member Secretary

The Terms of Reference for the proposed committee at Areas was as under :

- i. To review EC/ FC compliance periodically.
- ii. To review the observation made by concerned authorities during fields visits, actions taken to comply with conditions wherever discrepancy has been observed and responsibilities may be assigned for corrective actions
- iii. To hold meetings to find ways to improve environmental safeguards & Forestry Compliances.

It is requested to kindly report the non-compliances in your area and send the action taken / (to be taken) report to the undersigned latest by 31st July 2019.

Yours faithfully

Sangita
f HOD(Env't. & F)



सेन्ट्रलकोलफील्ड्सलिमिटेड

)भारतसरकारकाएकउपक्रम(

) दरभंगाहाउस,राँची(834029-

CENTRAL COALFIELDS LIMITED
(Govt. of India Undertaking)

Darbhanga House, Ranchi- 834 029

फोन/Phone: (0651) 2360184फैक्स/Fax: (0651) 2360184,

वेबसाइट/Website: <http://www.ccl.gov.in>

Ref. No. CCL/ HOD(E&F)/2019/80-N

Date: 26.06.2019

Notesheet

Sub: Constitution of a committee to monitor EC and FC stipulations in coal mine

Ref : OM No. 43012-10-2019-CPAM DTD. 11.06.2019 & CL(Env.)/1.M/1650 dtd. 25.06.2019

To monitor the compliance of Environmental Clearance(EC) and Forest Clearance(FC) stipulated in coal mines of CCL , a committee at CCL is to be constituted with following members at HQ level as per directions of CIL.

Director(Tech) (P&P), CCL	Chairman
GM(Civil), CCL	Member
General Manager(F)	Member
General Manager (X)	Member
General Manager (E&M)	Member
GM(L&R)	Member
GM(P&P)	Member
GM(Opn.)	Member
HOD(Envt & F.)	Member Secretary

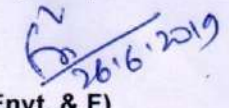
Similarly, at Area the following committee is proposed .The constitution of committee will be as follows:

Area General Manager	Chairman
SO(Civil), CCL	Member
AFM	Member
SO (X)	Member
SO (E&M)	Member
SO(MM)	Member
SO(SURVEY.)	Member
Area Envt. Officer	Member
SO (P&P)	Member Secretary

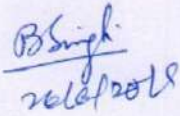
The Terms of Reference for the proposed committee at subsidiary HQ level & Areas shall be as under :

- To review EC/ FC compliance periodically.
- To review the observation made by concerned authorities during fields visits, actions taken to comply with conditions wherever discrepancy has been observed and responsibilities may be assigned for corrective actions
- To hold meetings to find ways to improve environmental safeguards & Forestry compliances.

Submitted for kind approval.


HOD(Envt. & F)

Director(Tech) (P&P)


26/6/2019

No.43012- 10-2019-CPAM
Government of India
Ministry of Coal

Shastri Bhavan, New Delhi
Dated, the 11th June 2019

Office Memorandum

Subject: Constitution of an Apex Committee to monitor the compliance of EC and FC conditions in coal mines-reg.

In order to monitor the compliance of Environmental Clearance (EC) and Forest Clearance (FC) stipulations in coal mines, an Apex Committee is hereby constituted with the following members:

- | | |
|---|------------------|
| a) Additional Secretary, Ministry of Coal | Chairman |
| b) Project Adviser | Member |
| c) CMD, CMPDI | Member |
| d) Director (Technical) CIL | Member |
| e) CMDs of the concerned company | Member |
| f) Director(T), MoC | Member Secretary |

2. The Terms of Reference for the Apex Committee would be as under:

- I. To review EC/FC compliance periodically,
- II. To review the observations made by the concerned authorities during field visits, actions taken by coal companies to comply with the conditions wherever discrepancy had been observed and assign responsibility for corrective actions if any,
- III. To hold periodic meetings to find ways to improve environmental safeguards.

3. CIL is also requested to set up a similar monitoring committee at CIL level and inform the same at the earliest. The report of CIL level committee will also be deliberated in the Apex Committee.


11/6/2019
(A.K. Mandal)

Under Secretary to the Government of India
Tel: 011-23073937
E-mail: usrc.moc@nic.in, socpam.moc@nic.in

- To:
- I. PSO to Secretary (Coal), MoC.
 - II. Additional Secretary, Ministry of Coal.
 - III. Project Adviser, MoC.
 - IV. CMD, ECL/ BCCL/ CCL/ WCL/ NCL/ SECL/ MCL/ CMPDI
 - V. Director (T), CIL
 - VI. Director(T), MoC

कोल इण्डिया लिमिटेड
(भारत सरकार का उपक्रम)

COAL INDIA LIMITED
(A Govt. of India Enterprise)

कोल भवन "COAL BHAWAN"

PREMISES NO: 04, MAR, PLOT NO: AF-III
ACTION AREA-1A, NEW TOWN, RAJHARHAT
KOLKATA-700156 (WB)



महाराष्ट्र कंपनी

A Maharatna Company

(An ISO 9001:2015, ISO 14001:2015 & ISO 50001:2011 Certified Company)

ENVIRONMENT DIVISION

पर्यावरण विभाग

E-MAIL: cgmenv.cil@coalindia.in

TEL: 033-2324 6638

FAX: 033-2324 4232

WEBSITE: www.coalindia.in

CIN:L23109WB1973GOI028844

दिनांक 25.06.2019

सिआइएल/ईएनवि/1.1/1650

To,

General Manager (Environment)
ECL/BCCL/CCL/NCL/WCL/SECL/MCL

Sub : Constitute a committee to monitor EC and FC stipulations in coal mine

Ref : vide OM (No. 43012-10-2019-CPAM) dated 11.06.2019,

Dear Sir,

In reference to above and in order to monitor the compliance of Environmental Clearance (EC) and Forest Clearance (FC) stipulated in coal mines of CIL, a committee at CIL is hereby constituted with the following members :

a) Director (Tech), CIL	Chairman
b) Director (Tech/P&P), ECL	Member
c) Director (Tech/P&P), BCCL	Member
d) Director (Tech/P&P), CCL	Member
e) Director (Tech/P&P), MCL	Member
f) Director (Tech/P&P), NCL	Member
g) Director (Tech/P&P), SECL	Member
h) Director (Tech/P&P), WCL	Member
i) Director (Tech/ES), CMPDI	Member
j) GM (Env), CIL	Member Secretary

The Terms of References for the proposed committee may be as under

- To review EC/FC compliance periodically.
- To review the observation made by concerned authorities during field visits, actions taken by subsidiaries of CIL to comply with conditions where ever discrepancy has been observed and assign responsibility for corrective actions, if any.
- To hold periodic meetings to find ways to improve environmental safeguards.

All the Subsidiaries are also requested to setup similar monitoring committee at their level and subsequently send the report at CIL for further needful.

This issues with approval of the competent authority.

स. क. मुखर्जी 25/6/19
महा प्रबंधक (पर्यावरण)

C.C : DT(Tech/P&P), ECL/BCCL/CCL/NCL/WCL/SECL/MCL —for kind information
DT (Tech/OP), ECL/BCCL/CCL/NCL/WCL/SECL/MCL —for kind information
TS to Chairman, CIL
TS to CMD, ECL/BCCL/CCL/NCL/WCL/SECL/MCL
TS to DT, CIL

Scanned by CamScanner

No.43012- 10-2019-CPAM
Government of India
Ministry of Coal

Shastri Bhavan, New Delhi.
Dated the 24th June, 2019

Office Memorandum


Subject: 1st Meeting of Apex Committee to monitor the compliance of EC/FC conditions-reg.

The undersigned is directed to refer to the O.M of even no. dated 11th June, 2019 vide which Apex Committee under the Chairmanship of Additional Secretary (Coal) to monitor the compliance of EC and FC conditions in coal mines has been constituted.

In this regard, it is to state that 01st meeting of the Apex Committee will be held under the Chairmanship of Additional Secretary (Coal) on 03rd July 2019 at 04.30 P.M in Conference Room, Room No.307, Floor No. 3 'A' Wing, Shastri Bhawan, New Delhi.

It is requested to make it convenient to attend the meeting through Video Conferencing.

Encl: As Above.


24/6/19
(A.K. Mandal)

Under Secretary to the Government of India
Tel: 011-23073937
E-mail: usrc.moc@nic.in
socpam.moc@nic.in

To:

- I. CMD, CIL
- II. CMD, NLCIL
- III. CMD, SCCL
- IV. CMD, ECL/ BCCL/ CCL/ WCL/ NCL/ SECL/ MCL/ CMPDI
- V. Director (Tech), CIL

Copy to:

- I. PSO to Secretary (Coal), MoC.
- II. PPS to Additional Secretary, MoC
- III. PPS to Project Adviser, MoC.
- IV. PS to Director(T), MoC.

संदर्भ संख्या: CS/ECFD/2023:40/219

दिनांक: 13-10-2023

दिनांक 07.10.2023 को सम्पन्न हुई 2023:40वीं ई.सी.एफ.डी. (40th ECFD) बैठक की कार्यवृत्त का अग्रसारित निष्कर्ष।

मद संख्या:

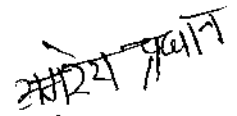
40.01: Proposal seeking approval for award of the work "carrying out third-party audit of EC compliance of 10 projects of CCL", to M/s CSIR-NEERI, Nagpur for a cost of Rs 29,50,000/- (including GST @ 18%), as per the Committee recommendation.

The ECFD was apprised regarding the subject proposal as detailed below:

- 1) Environmental Clearance is a statutory requirement for operation of coal mining projects under EIA-2006 and in that regard Ministry of Environment, Forest and Climate Change (MoEF&CC) imposes condition, requiring third-Party Environmental Audit compliance while issuing Environmental Clearance besides, several other conditions.
- 2) Accordingly in compliance to above, budgetary offers were sought vide email after competent approval from 05 different firms for carrying out third-party audit in respect of following 10 coal mine projects, of CCL for FY 2023-24:
(i) Karo OCP (ii) Topa Expansion OCP (iii) Sayal D OCP (iv) Tapin South OCP (v) Amrapali OCP (vi) Urimari Expansion OCP (vii) Bhurkunda Colliery (viii) Kathara OCP (ix) SDOCM and (x) North Urimari OCP.
- 3) In response following three parties submitted their offer against the scope of work specified by CCL:
(a) CSIR-NEERI, Nagpur
(b) ICFRE, Dehradun
(c) IIT(ISM), Dhanbad
- 4) The HQ Committee constituted in this regard scrutinized the offers received from three parties i.e. CSIR-NEERI, Nagpur, ICFRE, Dehradun & IIT(ISM), Dhanbad and found the offer of CSIR-NEERI, Nagpur to be the lowest with quoted rate of Rs. 29.50 Lakhs (including GST@18%) and finally recommended to award the work to M/s. CSIR-NEERI, Nagpur.

The ECFD after detailed deliberation agreed to the Committee recommendation for award of subject work to M/s. CSIR-NEERI, Nagpur on nomination basis, as brought out in the agenda note.

अतः अनुरोध है कि कृपया उपरोक्त का अवलोकन करें और इस कार्यालय को सूचित करते हुए आवश्यक कार्रवाई करें।


(अमरेश प्रधान)
कंपनी सचिव

HOD(Env.)

Copy for kind information to: D (T/P&P), CCL

एक नजर में

बायुसेना में मांग अग्रिमों की भीती के लिए आंदोलन... बायुसेना में अग्रिमों की भीती के लिए आंदोलन आरंभ...

पुनरी पेशा योजना को लेकर दिव्या तथा प्रशिक्षण... बायुसेना में पुनरी पेशा योजना के अंतर्गत प्रशिक्षण...

भाषण प्रतियोगिता में विद्यार्थियों ने रस्के विचार... भाषण प्रतियोगिता में रस्के विचार प्रतियोगिता...

कुड़ुगी पास पहाड़ की अग्रणी से सास कालेज में खुशी... कुड़ुगी पास पहाड़ की अग्रणी से सास कालेज में खुशी...

एनल फुट क्लब सोसाइटी गठन करने का निर्णय

जस, धनबाद - धनबाद अग्रणी में एनल फुट क्लब सोसाइटी गठन करने का निर्णय...

सिटी कालेज में छात्रों के प्रमाण पत्र की जांच

जस, धनबाद - सीनियोर प्रमाण पत्र की जांच के दौरान सिटी कालेज में छात्रों के प्रमाण पत्र की जांच...

सेन्ट्रल कोलफील्ड्स लिमिटेड 'एनल फुट क्लब सोसाइटी' के गठन के लिए प्रस्ताव

जस, धनबाद - सेन्ट्रल कोलफील्ड्स लिमिटेड 'एनल फुट क्लब सोसाइटी' के गठन के लिए प्रस्ताव...

नामनिर्दिष्ट प्राधिकारी, कोयला बंधुसंघ, भारत सरकार

नामनिर्दिष्ट प्राधिकारी, कोयला बंधुसंघ, भारत सरकार... कोयले की बिक्री के लिए कोयला खानों/खलों की नीलामी हेतु बोलीपत्र का आमंत्रण...

डीएवी नेशनल जोनल स्पोर्ट्स कल से राज्य के 74 डीएवी स्कूलों के तीन हजार खिलाड़ी लेंगे हिस्सा, 25 स्पर्धाएं होंगी

सिटी स्पोर्ट्स - जस, धनबाद - डीएवी नेशनल जोनल स्पोर्ट्स कल में भाग लेने वाले खिलाड़ियों की संख्या...



डीएवी कोयला नगर में सबसे अधिक नौ प्रतियोगिताएं होंगी... डीएवी कोयला नगर में सबसे अधिक नौ प्रतियोगिताएं होंगी...

स्कूलों में खेलों झारखंड में सहयोग करेगे खेल संघ

जस, धनबाद - सरकारी स्कूलों में खेलों झारखंड में सहयोग करेगे खेल संघ... स्कूलों में खेलों झारखंड में सहयोग करेगे खेल संघ...

शिक्षा सार

शरितनाथ महतो कालेज में चौखसूरा का आयोजन... शरितनाथ महतो कालेज में चौखसूरा का आयोजन...

संस्कार हमें सिखाते हैं जीवन जीने की कला

जस, धनबाद - संस्कार हमें सिखाते हैं जीवन जीने की कला... संस्कार हमें सिखाते हैं जीवन जीने की कला...



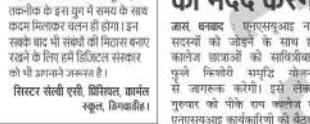
गौरीपुर किंगडम स्कूल में आयोजित संस्कार... गौरीपुर किंगडम स्कूल में आयोजित संस्कार...

उमवि बड़ा नाटाई में निबंध व चित्रकला स्पर्धा

गौरीपुर किंगडम स्कूल में आयोजित उमवि बड़ा नाटाई... गौरीपुर किंगडम स्कूल में आयोजित उमवि बड़ा नाटाई...

एडमिशन प्रक्रिया में विद्यार्थियों की मदद करेगी एनएसयूआइ

जस, धनबाद - एनएसयूआइ नए सरकारी कोलेजों के एडमिशन प्रक्रिया में मदद करेगी... एडमिशन प्रक्रिया में मदद करेगी एनएसयूआइ...



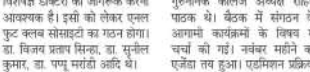
एनएसयूआइ नए सरकारी कोलेजों के एडमिशन प्रक्रिया में मदद करेगी... एनएसयूआइ नए सरकारी कोलेजों के एडमिशन प्रक्रिया में मदद करेगी...

डिस्ट्रिक्ट लेगल सर्विसेस अथॉरिटी, धनबाद

डिस्ट्रिक्ट लेगल सर्विसेस अथॉरिटी, धनबाद... डिस्ट्रिक्ट लेगल सर्विसेस अथॉरिटी, धनबाद...

जिला विधिक सेवा प्राधिकरण, धनबाद

जिला विधिक सेवा प्राधिकरण, धनबाद... जिला विधिक सेवा प्राधिकरण, धनबाद...



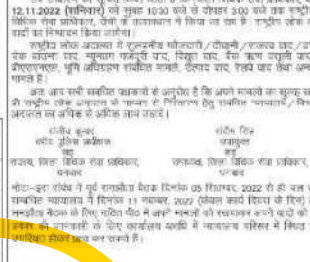
जिला विधिक सेवा प्राधिकरण, धनबाद... जिला विधिक सेवा प्राधिकरण, धनबाद...

झारखण्ड सरकार

झारखण्ड सरकार... झारखण्ड सरकार...

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...



आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...



आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय

आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय... आयोजन कार्य विभाग, मुख्य अभियंता का कार्यालय...

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/2060

दिनांक: 21.10.2022
५५

सेवा में,
श्रीमान् माननीय मुखिया
बोरिया दक्षिणी पंचायत

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

इस विषय में आप राज्य प्रदूषण नियंत्रण बोर्ड या पर्यावरण मंत्रालय,भारत सरकार के वेब साइट [hup://envfor.nic.in](http://envfor.nic.in) पर संपर्क कर विशेष जानकारी प्राप्त कर सकते हैं ।

सलंगन - यथोपरि ।

भवदीय

वि.के.साहू

परियोजना पदाधिकारी
कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो0-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/2059

दिनांक: 21.10.2022

25

सेवा में,
श्रीमान् माननीय मुखिया
झिरकी पंचायत,

महाशय

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

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सलंगन - यथोपरि ।

भवदीय

वि.के.साहु

परियोजना पदाधिकारी

कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो०-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/2058

दिनांक: 21.10.2022

25

सेवा में,
श्रीमान् माननीय मुखिया
सरहचिया पंचायत,

महाशय्

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

इस विषय में आप राज्य प्रदूषण नियंत्रण बोर्ड या पर्यावरण मंत्रालय,भारत सरकार के वेब साइट [hup://envfor.nic.in](http://envfor.nic.in) पर संपर्क कर विशेष जानकारी प्राप्त कर सकते हैं ।

सलंगन - यथोपरि ।

भवदीय

कि.के.साहू

परियोजना पदाधिकारी

कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/205

दिनांक: 21.10.2022
25

सेवा.में,
श्रीमान् माननीय मुखिया
कथारा पंचायत

महाशय

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

इस विषय में आप राज्य प्रदूषण नियंत्रण बोर्ड या पर्यावरण मंत्रालय,भारत सरकार के वेब साइट <http://envfor.nic.in> पर संपर्क कर विशेष जानकारी प्राप्त कर सकते हैं ।

सलंगन - यथोपरि ।

भवदीय

वि.के.शाहू

परियोजना पदाधिकारी

कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/

दिनांक: 21.10.2022

सेवा में,
श्रीमान् माननीय मुखिया
बाँध पंचायत,

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

इस विषय में आप राज्य प्रदूषण, नियंत्रण बोर्ड या पर्यावरण मंत्रालय,भारत सरकार के वैब साइट [hup://envfor.nic.in](http://envfor.nic.in) पर संपर्क कर विशेष जानकारी प्राप्त कर सकते हैं ।

सलंगन - यथोपरि ।

भवदीय

बि.के.साहू

परियोजना पदाधिकारी

कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची

सेन्टल कोलफील्डस लिमिटेड
परियोजना पदाधिकारी कार्यालय : कथारा कोलियरी
पो-कथारा :जिला- बोकारो(झारखण्ड)

पत्रांक सं० : परि.पदा(केटीए)/पी.ओ/पर्यावरण/2022/2056

दिनांक: 21.10.2022

25

सेवा में,
श्रीमान् माननीय मुखिया
बोरिया उत्तरी पंचायत

आपको सूचित किया जाता है कि सी.सी.एल की कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट(1.9 MTPA (Peak) को पर्यावरण एवं वन मंत्रालय,भारत सरकार के पत्र संख्या J-11015/ 482/2008-IA-II(M) दिनांक 18.10.2022 के द्वारा पर्यावरण स्वीकृती दी गई है जिसका EC Identification No.EC22A042JH147601 एवं File No.IA/JH/CMIN/11566/2008 है । पर्यावरण स्वीकृती की प्रतिलिपि सूचनार्थ सलंगन की जाती है ।

इस विषय में आप राज्य प्रदूषण नियंत्रण बोर्ड या पर्यावरण मंत्रालय,भारत सरकार के वेब साइट [hup://envfor.nic.in](http://envfor.nic.in) पर संपर्क कर विशेष जानकारी प्राप्त कर सकते हैं ।

सलंगन -- यथोपरि ।

भवदीय

वि.के.शाहु

परियोजना पदाधिकारी
कथारा ओपेन कास्ट ऐक्स्पेन्सन कोल माइन प्रोजेक्ट
कथारा क्षेत्र,सी.सी.एल,राँची



**CENTRAL COALFIELDS LIMITED
(A MINIRATNA CAT-1 COMPANY)
(GOVT. OF INDIA UNDERTAKING)**

OFFICE OF THE PROJECT OFFICER, KATHARA OCP
KATHARA AREA
PO: -KATHARA, DIST: -BOKARO, (JHARKHAND)
JHARKHAND-829116

Annexure-XXXIX



Ref No. PO/KTC/ENV/2022/ 2516

Date: 03.12.2022

To,
The Member Secretary
Jharkhand State Pollution Control Board
HEC Colony, CTI Colony, Sector 3, Dhurwa
Ranchi, Jharkhand, 834004
Email-ranchijspcb@gmail.com

Sub: Regarding intimation for start of mining operations from dated- 03.12.2022 in respect to Kathara OCP.

Dear Sir,

It is for your kind information that the EC with capacity of 1.90 MTPA (Peak) was granted by MoEF&CC vide their Letter No. J-11015/482/2008-IA-11(M), EC Identification No.EC22A042JH147601, dated-18th October,2022. Subsequently, Consent to Operate (CTO) with 1.9MTPA(Peak) has been granted by JSPCB, Ranchi vide ref No.- JSPCB/HO/CTO-13707404/2022/1689 dated-03.12.2022 in respect to Kathara OCP, Kathara Area

Hence, mining operation is being started from 03.12.2022 in respect of Kathara OCP and submitted to you for kind information.

Thanking You.

Enclosure: -Please to find in E-mail

1. Copy of Grant EC
2. Copy of Grant of CTO

Yours faithfully

**Project Officer
Kathara OCP**

Copy for Kind Information: -

1. The Integrated Regional Officer, MoEF&CC, 2nd floor, Headquarter- Jharkhand State Housing Board, Harmu Chowk, Ranchi- 834002 (Email-ro.ranchi-mef@gov.in)
2. Regional Office, JSPCB, H.I.G.-1, Sardar Patel Nagar, Dhanbad-826001 (Email-dhanbadjspcb@gmail.com)
3. The General Manager (Env), CCL Ranchi (Email- envccl@gmail.com)
4. The General Manager, Kathara Area (Email- gmkth.ccl@coalindia.in)
5. The S.O.(Env.), Kathara Area (Email- envcclkta@gmail.com)
6. The Office copy.