



C.C.L.

A Miniratna Cat -I Company

सेंट्रल कोलफील्ड्स लिमिटेड

(कोल इंडिया लिमिटेड की अनुबंधी कंपनी / भारत सरकार का एक उपक्रम)

CENTRAL COALFIELDS LIMITED

(A subsidiary of Coal India Limited/Govt. of India Public Sector Undertaking)

Ref No. :- 195

Dated: 02.05.2019

To
Member Secretary,
EAC (Violation),
Ministry of Environment, Forest and Climate Change,
Indira Paryawaran Bhawan, Vayu Wing,
Jor Bagh Road, New Delhi-3

Subject: Reply to the ADS with respect to the proposal No.[IA/JH/CMIN/74445/2018 DATED 13.04.2018] [F. NO. 23-268/2018-IA.III (V)] Giridih-Kabribad Group of Mines (1.3 MTPA) –reg.

Reference: Minutes Of 14th Meeting of EAC (Violation) held on 23rd October 2018.

Respected Sir,

The EAC meeting for Giridih-Kabribad Group of Mines (1.3 MTY) was held on 23.10.2018, in which EAC deferred the proposal and asked to submit revised Form 1 along with Prefeasibility report and other documents separately for two mines i.e Giridih OCP & Kabribad OCP.

As per the above direction, please find attached herewith the revised form-I and prefeasibility report of Kabribad OCP (exceeded the production level of 1993-94) for kind consideration for ToR.

Thanking you.

Encl: As Above

Yours Faithfully,

IC
Project officer
Project Officer
C.C.L, Giridih

Annexure 1

Revised Form-1

Form-1 for Giridih Kabribad Group of Mines (1.30 MTY capacity)
Giridih Area, Central Coalfields Limited

FORM-I

Basic Information

1	Name of the project	Kabribad OCP is an existing project in Giridih area, Central Coalfields Limited. This proposal has been prepared for 1.00 MTY within the project area of 169.45 Ha.
	Salient Features	<p>Giridih Coalfield is one of the earliest coalfields in India. Mining activity in the coalfield started as early as 1871 by M/s Bengal Coal Company & by then State Railway and subsequently transferred to National Coal Development Corporation (NCDC) about 60 years back. Later in the year 1973, it came under the control of Central Coalfields limited (CCL), a subsidiary of Coal India Limited. Presently it is under the administrative control of Giridih Area of CCL.</p> <p>This proposal is put up for a rated capacity of 1.00 MTY within the project area of 169.45 Ha..</p> <p>This revised Form-I is being submitted under violation as per MoEFCC notification vide letter no SO 804 (E) Dt.14.03.2017 and subsequent notifications 1030 (E) Dt 08.03.2018 & OM No Z-11013/22/2017-IA-II (M) Dt 15/16.03.2018.</p>
2	S. No. in the schedule	1 (a)
3	Proposed capacity / area / length / tonnage to be handled / command area / lease area / number of wells to be drilled	<p>Kabribad OCP Capacity- 1.00 MTY capacity Project area: 169.45 Ha. Mineable Reserves: 3.60 Mte.</p>
4	New / Expansion / Modernization	New. This Form-I is being submitted under violation as per MoEFCC notification vide letter no SO 804 (E) Dt.14.03.2017 and subsequent notifications 1030 (E) Dt 08.03.2018 & OM No Z-11013/22/2017-IA-II (M) Dt 15/16.03.2018.
5	Existing Capacity/Area etc	Proposed Capacity: 1.00 MTY
6	Category of Project. i.e 'A' or 'B'	A

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7	Does it attract the general condition? If yes, Please specify	No
8	Does it attract the specific condition? If yes, Please specify	No
9	Location	The proposed Kabribad OCP is located in the Giridih Coalfield and falls in the Giridih District of Jharkhand. Kabribad OCP falls under the administrative control of Giridih Area of Central Coalfields Limited (CCL). It is bounded by latitudes 24° 8' 47" to 24° 9' 57" North and longitudes 86°17' 38" to 86°18' 39" East. The block is covered in Survey of India toposheet no. 72L/8 (in 1:50,000 scale).
	Plot / Survey / Khasra No	Survey of India toposheet no. 72L/8 (in 1:50,000 scale)
	Village	Kabribad
	Tehsil	
	District	Giridih
	State	Jharkhand
10	Nearest railway station / airport along with distance in kms.	The area is well connected by rail and road. The Giridih district town is about 5km from the project. The nearest Railway station Giridih is about 5km from the Project. The nearest commercial airport is situated at Ranchi at a distance of 180 km.
11	Nearest Town, city, District Headquarters along with distance in kms.	Nearest Town - Giridih Nearest City – Giridih District Headquarters - Giridih
12	Village Panchayats Zilla Parishad Municipal Corporation, Local body (complete postal Addresses with telephone nos. to be given)	Village Panchayat : Kabribad District : Giridih, Jharkhand.
13	Name of the applicants	General Manager/Project Officer, Kabribad OCP, Giridih Area Central Coalfields Limited.
14	Registered Address	Project Office, Kabribad OCP, Giridih Area, Central Coalfields Limited, PO Beniadih, Dist Giridih, Jharkhand. PIN- 815311
15	Address for correspondence:	
	Name	Soumitra Singh
	Designation (Owner /	Deputy General Manager (Env & Forest),

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	Partner / CEO	
	Address	Central Coalfields Limited, Darbhanga House, PO- Ranchi, Dist : Ranchi, Jharkhand.
	Pin Code	834001
	E-mail	-
	Telephone No.	0651-2360184
	Fax No.	0651-2360010
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on a toposheet	Not Applicable. This is an existing project. Coal mining project is site specific depending on favourable geo-mining conditions.
17	Interlinked Projects	None.
18	Whether separate application of interlinked Project has been submitted	Not Applicable
19	If yes, date of submission	Not Applicable
20	If no, reason	Not Applicable
21	Whether proposal involves approval / clearance under The Forest (Conservation) Act, 1980 The Wildlife (Protection) Act, 1972 The CRZ Notification, 1991	No No No
22	Whether there is any Government Order/ Policy relevant/relating to the site	No
23	Forest land involved (hectares)	Nil
24	Whether there is any litigation pending against the project and/or land in which the project is proposed to be set up? (a) Name of the Court (b) Case No. (c) Orders / directions of the Court, if any, and its	No

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	relevance with the proposed project	
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(II) Activity

Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data																											
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	<p>Change in the land use due to mining operation & infrastructure development is expected. The proposed land use plan during mining is as given below.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th style="width: 8%;">Sl. No</th> <th style="width: 60%;">Particulars</th> <th style="width: 32%;">Kabribad OC (Ha.)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Quarry Area</td> <td style="text-align: center;">61.78</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Existing OB Dumps (Both Internal + External)</td> <td style="text-align: center;">43.93</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Railway Siding</td> <td style="text-align: center;">1.39</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Road</td> <td style="text-align: center;">2.69</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Infrastructures (W/S, coal Stock etc.)</td> <td style="text-align: center;">2.68</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Residential area</td> <td style="text-align: center;">2.74</td> </tr> <tr> <td style="text-align: center;">7</td> <td>Safety Zone/vacant Land including Nala and water bodies</td> <td style="text-align: center;">54.24</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total Area in Ha.</td> <td style="text-align: center;">169.45</td> </tr> </tbody> </table>	Sl. No	Particulars	Kabribad OC (Ha.)	1	Quarry Area	61.78	2	Existing OB Dumps (Both Internal + External)	43.93	3	Railway Siding	1.39	4	Road	2.69	5	Infrastructures (W/S, coal Stock etc.)	2.68	6	Residential area	2.74	7	Safety Zone/vacant Land including Nala and water bodies	54.24	Total Area in Ha.		169.45
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1.2	Clearance of existing land, vegetation and buildings?	Yes	In view of proposed mining activity clearance of existing land, vegetation and buildings is expected.																											
1.3	Creation of new land	Yes	Proposed mining activity and infrastructure development																											

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	uses?		will change the present land use as given above in 1.1.
1.4	Pre-construction investigations e.g. bore holes, soil testing?	No	Not required.
1.5	Construction works?	No	Construction of field workshop, Sub-station, statutory buildings, etc has taken place. Approach road already exists. So no major construction is anticipated.
1.6	Demolition works?	Yes	Clearance of existing land and vegetation for mining purpose is expected.
1.7	Temporary sites used for construction works or housing of construction workers?	No	The existing infrastructure is sufficient for this purpose.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	No	All the industrial infrastructure required for the operation of mine has already been set up.
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	Yes	Land reclamation followed by biological reclamation of internal & external dumping in opencast mine.
1.11	Dredging?	No	Not applicable.
1.12	Offshore structures?	No	Not applicable.
1.13	Production and manufacturing processes?	Yes	Coal production by opencast method using shovel-dumper combination.
1.14	Facilities for storage of goods or materials?	Yes	The coal produced from the mine will be transported by hauling dumpers/ tippers to nearby railway siding (CP Siding) for crushing at CHP and onward dispatch to customers by Indian Railways wagons at CP siding.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<p>Solid wastes that will be generated in course of coal mining are overburden material consisting of fragments of sandstone/shale of assorted size. They have not been found to generate acid mine drainage or leach high quantity of heavy metals.</p> <p>Total OB to be generated from proposed mining activity within the project area is 7.71 Mm³ including re-handling of around 2 Mm³. It is proposed to dump total OB into mine void. The detailed post mining land use will be worked out in the mining plan</p>

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1.16	Facilities for long term housing of operational workers?	No	Existing available quarter are sufficient to accommodate the proposed manpower. So no extra quarters would be required.
1.17	New road, rail or sea traffic during construction or operation?	No	Not applicable
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Not applicable
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not applicable.
1.20	New or diverted transmission lines or pipelines?	No	Not applicable.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable.
1.22	Stream crossings?	Yes	Two streams flowing through the project area. No diversion has been proposed and safety distance is being maintained from the mine workings.
1.23	Abstraction or transfers of water form ground or surface waters?	Yes	In the opencast mine, the different aquifers overlying the working coal seam will supply ground water to the mine by gravity drainage since they are exposed/removed at the mine. As such due pumping/gravity drainage, cone of depression will be formed. Mine induced effect will be restricted within a distance of 300-400 m from the mine edge in the down-dip side and becomes which will become milder/insignificant thereafter.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	Yes	There will be a local change in ground topography due to mining operations in the form of open pit, dumps of overburden and coal etc. As a result, there will be change in the drainage and surface run-off.

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			<p>Within the core zone, cracks and loosening of soils will occur due to mining and allied activities. This will lead to physical/textural changes in soil/formation. This mine-induced process increases the rate of infiltration and recharge. The back-filled area may be a good media for high groundwater recharge due to high permeability. Further, the final void will store substantial quantity of rainwater, which can be utilised for domestic and agriculture use and also for recharging the groundwater source. It is pertinent to highlight the fact that temporary groundwater loss/deficit created during active mining stage will be compensated by adopting suitable measures in the post mining stage so that the initial groundwater levels are regained to normalcy at the earliest for utilization of the local population.</p>
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	The coal produced from the proposed project is transported to nearby railway siding (CP Siding) for onwards dispatch.
1.26	Long-term dismantling or decommissioning or restoration works?	Yes	<p>The closure activities form an integral part of mine. The residential quarters along with dispensary, sub-stations, pump house, filtration plant for providing basic amenities to workers will be maintained till the project life</p> <p>After mine closure, service buildings namely, coal handling arrangement, workshop, store; office building etc will be demolished, if redundant and all useable items will be shifted to the area store house/office. In case a residential building is vacated, the same will be demolished to prevent any unauthorized occupation.</p>
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	Yes	Solid waste generated during demolition of service and residential buildings after cessation of industrial activity will have an impact on the environment. Care will be taken to dump the solid waste in mine voids.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Influx of people has already taken place due to direct and indirect employment opportunities. This will continue throughout the life of the mine.
1.29	Introduction of alien species?	No	Not applicable.
1.30	Loss of native species or genetic diversity?	No	Not applicable.

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1.31	Any other actions?	No	Not applicable.
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2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	Not applicable
2.2	Water (expected source & competing users) unit: KLD	Yes	Industrial water demand is 220 m ³ /day Domestic water demand is 1632.2 m ³ /day The water requirement is proposed to be met from recycled mine water. There are no competing users of this water.
2.3	Minerals (MT)	No	Not Applicable.
2.4	Construction material, stone, aggregates and soil (expected source – MT)	No	Not Applicable.
2.5	Forests and timber (source – MT)	No	Not Applicable
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Kabribad OC receives power at 11KV from Beniadih substation of CCL. DVC substation at Bhandardih which is at a distance of 8 kms is the main source of power. The power consumption details are as given below. Max. Demand- 4500 KVA Total annual consumption=18,000 MWH
2.7	Any other natural resources (use appropriate standard units)	No	Not Applicable

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data

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3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	Not Applicable.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not Applicable.
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Not Applicable.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Not Applicable.
3.5	Any other causes	No	Not Applicable.

Production of solid wastes during construction or operation or decommissioning (MT/month):

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	Yes	Total OB to be generated from proposed mining activity within the project area is 7.71 Mm ³ including re-handling of around 2 Mm ³ . It is proposed to dump total OB into mine void.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Small quantity of domestic waste will be generated from Project Colony that will be treated as per the prevalent norms.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Old batteries and used engine oil will be generated. These shall be recycled through authorized recycling agents.
4.4	Other industrial process wastes	No	Not applicable
4.5	Surplus product	No	Not applicable
4.6	Sewage sludge or other sludge from effluent treatment	Yes	An insignificant quantity of clayey sludge from effluent settling may be produced which will be used for backfilling.
4.7	Construction or demolition wastes	Yes	Solid waste will be generated from demolition of residential quarters and redundant infrastructure at the time of final mine

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			closure. The waste so generated will be used for backfilling in the de-coaled areas.
4.8	Redundant machinery or equipment	Yes	Old equipment and machinery will become redundant after the end of useful life and will be surveyed off and sold as scrap.
4.9	Contaminated soils or other materials	No	Not applicable
4.10	Agricultural wastes	No	Not applicable
4.11	Other solid wastes	No	Not applicable

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	The combustion of diesel oil during HEMM operation will lead to emission of particulates and gaseous emissions, which will be quantified in EIA & EMP.
5.2	Emissions from production processes	Yes	Dust emissions from drilling, blasting, loading and transportation of coal and OB (to be quantified in the EIA as per TOR).
5.3	Emissions from materials handling including storage or transport	Yes	Dust emissions from coal storage, handling and transportation will take place. Adequate measures shall be taken for dust suppression to mitigate the impacts.
5.4	Emissions from construction activities including plant and equipment	Yes	Adequate measures shall be taken to mitigate the impacts due to dust emission.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust will be generated from handling of coal & OB.
5.6	Emissions from incineration of waste	No	Not applicable
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not applicable
5.8	Emissions from any other sources	No	Not applicable

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6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise will be generated during operation of HEMM. Suitable measures of noise control will be adopted. Ambient noise level outside the lease area is not likely to exceed the permissible limit of 55 dBA during day-time and 45 dBA during night-time. (Source- CMPDI)
6.2	From industrial or similar processes	Yes	Noise will be produced during drilling and blasting.
6.3	From construction or demolition	Yes	The noise level is likely to be well within specified limit.
6.4	From blasting or piling	Yes	Controlled blasting as per DGMS statutes will be practiced.
6.5	From construction or operational traffic	Yes	From Coal and OB transportation. The quantum is measured through regular monitoring and is likely to remain within permissible limits.
6.6	From lighting or cooling systems	No	Not applicable
6.7	From any other sources	No	Not applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Not applicable
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	No contamination expected as domestic sewage and mine effluent will be properly treated before discharge into local drainage.
7.3	By deposition of pollutants emitted to air into the land	No	Control measures like spraying at all dust generating points is adopted. In view of this,

Form-1 for Giridih Kabribad Group of Mines (1.30 MTY capacity)
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	or into water		fugitive dust emission into air is expected to be insignificant.
7.4	From any other sources	No	Not applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not applicable

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	The magazine house for storage of explosives and components of SMS is maintained as per the terms and conditions of the Explosive License. In view of this, accident leading to fire or explosion is not likely. The magazine house is fenced-off and guarded round the clock from safety point of view.
8.2	From any other causes	Yes	1) Slope failure in OB Dump and mine Pit 2) Mine inundation 3) Blasting 4) Fire in coal or shale dump 5) Strata control in underground workings
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	The project does not fall under seismically active zone or landslide prone area. Apart from safety measures, the mine is equipped to deal with any eventuality.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality:

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	Supporting infrastructure facilities of the mine have already come up. This has impacted the local land use pattern. However, socio-economic growth associated with mining activity has led to semi-urbanisation. This

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	<ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other 		supports development of ancillaries and other related activities.
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	Some of the activities could assume permanent residency with appropriate feed sustained growth mechanism.
9.3	Set a precedent for later developments	Yes	The proposed mine infrastructure may be used in future also by other nearby projects after exhaustion of the reserves of Kabribad OCP. As such, the likelihood of precedence for later developments cannot be ruled out. Activities at 9.1 & 9.2 above will lead to over all socio economic growth of the area. Socio-economic benefits of the Project will accrue to local population also.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	As Giridih coalfield covers a large area having very good mining potential, associated mining activities in future with numerous closely located centers as indicated at 9.1, 9.2 and 9.3 along with other activities like coal beneficiation and power generation etc can not be ruled out. This could lead to cumulative impact on environment.

(III) Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Yes	Buffer zone consists of several patches of fairly dense protected forest mainly of sal. The drainage of block is mainly controlled by Barakar river flowing at a distance of 6kms towards the south of the project. Several minor order streams originating from the basin confluence into Khokha river which finally merges into Barakar river
2	Areas which are important or sensitive for ecological reasons -Wetlands, watercourses or other water bodies, coastal zone,	Yes	The general flow of the streams is towards south. Most of the streams originating from the basin confluence into Khokha river which finally

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	biospheres, mountains, forests		merges into Barakar river.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Buffer zone consists of several patches of fairly dense protected forest mainly of sal.
4	Inland, coastal, marine or underground waters	Yes	The drainage of block is mainly controlled by Barakar river flowing at a distance of 6kms towards the south of the project. Several minor order streams originating from the basin confluence into Khokha river which finally merges into Barakar river
5	State, National boundaries	None	Not applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	None	Not applicable
7	Defence installations	None	Not applicable
8	Densely populated or built-up area	Yes	Buffer zone comprises of several densely populated areas and colonies of CCL and other industries. Giridih Town, District HQ is at a distance of 5 Km from the block.
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	Buffer zone comprises of several densely populated areas and colonies of CCL and other industries. Giridih Town, District HQ is at a distance of 5 Km from the block.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Yes	Buffer zone is majorly a coal bearing area.
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	None	Not applicable
12	Areas susceptible to natural hazard which could cause the project to present environmental problems	None	Not applicable

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	(earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)		
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Signature of the applicant with full name, official seal & address

(Soumitra Singh)
Deputy General Manager (Env & Forest)
Central Coalfields Limited
Darbhanga House, PO- Ranchi
Dist : Ranchi, Jharkhand
PIN-834001

Annexure 2

Revised Pre-feasibility Report of Kabribad OCP



सीएमपीडीआई
cmpdi

A Mini Ratna Company

PRE-FEASIBILITY REPORT
OF
KABRIBAD OC

Project Area (Ha)	Capacity (MTPA)
169.45 Ha	01

(Giridih Area)
Central Coalfields Limited
(April, 2019)

Prepared at

Regional Institute – III

Central Mine Planning & Design Institute Ltd.
(A Subsidiary of Coal India Ltd.)
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Chapter 1

Executive Summary

1.1 Summary

1	Kabribad OC (1 MTY) is operating mine located in Giridih coalfields of Central Coalfields Limited, Jharkhand.
2	Giridih Coalfield is one of the earliest coalfields in India. Mining activity in the coalfield started as early as 1871 by M/s Bengal Coal Company & by then State Railway and subsequently transferred to National Coal Development Corporation (NCDC) about 60 years back. Later in the year 1973, it came under the control of Central Coalfields limited (CCL), a subsidiary of Coal India Limited. Presently it is under the administrative control of Giridih Area of CCL.
3	This project is located in Giridih district, Jharkhand. The Kabribad OCP is located about 5 kms to the south of Giridih town and is covered in Survey of India toposheet no. 72L/8 (in 1:50,000 scale). The block is bounded by latitudes 24° 8' 45" to 24° 10' 7" North and longitudes 86° 17' 34" to 86° 18' 30" East.
4	<p>The area has a gentle undulating topography with occasional low humps. The isolated humps are locally known as Kamaljore, Bhadua and Bali hills. The ground elevation varies from 244m to 305m.</p> <p>The general flow of the streams is towards south. Most of the streams meet Barakar River at about 6 km south-west of the proposed OCP. The water level is very close to the surface during rainy season and about 20m below surface during dry season.</p>
5	The area is well connected by rail and road. The Giridih district town is about 5km from the project. The nearest Railway station Giridih is about 5km from the Project. Giridih Railway station is on the Giridih-Madhupur line of the Asansol Railway division in the Eastern Railway Zone of Indian Railways.
6	This pre-feasibility report of Kabribad OC is being prepared for the rated capacity of 1 Mty and within the revised project area of 169.45 Ha for making a fresh application in Form-I under violation as per MoEFCC notification vide letter no SO 804 (E) Dt.14.03.2017 and subsequent notifications 1030 (E) Dt 08.03.2018 & OM No Z-11013/22/2017-IA-II (M) Dt 15/16.03.2018.
7	The method of mining proposed to be adopted to extract coal and OB in Kabribad Opencast mine will be inclined slicing with shovel-dumper combination as the gradient of the seams vary from 6-10° with an average gradient of 8°.
8	The mineable reserve of Kabribad OC is estimated as 7.74 Mte with corresponding volume of O.B estimated as 7.71 Mm ³ (Including 2 Mm ³ of re-handling) with an average stripping ratio of 0.76 cum/t.

9	<p>Kabribad OC receives power at 11KV from Beniadih substation of CCL. DVC substation at Bhandardih which is at a distance of 8 kms is the main source of power. The power consumption details are as given below.</p> <p>Max. Demand- 4500 KVA Total annual consumption=18,000 MWH</p>
10.	<p>Water requirement: Industrial water demand is 220 m³/day Domestic water demand is 1632.2 m³/day Mine discharge- 1800 m³/day Total industrial and domestic demands of Kabribad OC are being fulfilled by mine water discharge.</p>

Chapter 2

Project Background

2.1 Introduction

The Giridih coalfield can be divided into three major regions viz., north, central & southern. The southern region is an elongated basin which is divided into three sub-basins namely Kabribad/Deep Pit, Jubilee Pit & Dhobidih-Jatkutti sectors. The proposed Kabribad OC falls within this region.

Project report of Kabribad OCP (0.5 MTY) was prepared for winning of coal from Lower Khandia (Khandia-I), Upper Khandia (Khandia-II) and Khandia III & IV seams by mechanized shovel-dumper combination. The project was approved on Feb 1988 with a capital of Rs. 16.53 Cr.

In the preceding years, the coal production from Kabribad OC was as given below:

Year	Kabribad OC Coal Prod. (Mte)
1993-94	0.38
1994-95	0.28
1995-96	0.19
1996-97	0.29
1997-98	0.25
1998-99	0.13
1999-00	0.08
2000-01	0.10
2001-02	0.11
2002-03	0.15
2003-04	0.12
2004-05	0.15
2005-06	0.14
2006-07	0.20
2007-08	0.40
2008-09	0.42
2009-10	0.37
2010-11	0.34
2011-12	0.23
2012-13	0.31
2013-14	0.43
2014-15	0.56
2015-16	0.33
2016-17	0.19
2017-18	0.25
2018-19	0.19

2.2 Purpose of the report

This pre-feasibility report of Kabribad OC is being prepared for the rated capacity of 1.00 Mty and within the revised project area of 169.45 Ha for making a fresh application in Form-I under violation as per MoEFCC notification vide letter no: SO 804 (E) Dt.14.03.2017 and subsequent notifications 1030 (E) Dt 08.03.2018 & OM No Z-11013/22/2017-IA-II (M) Dt 15/16.03.2018.

2.3 Identification of project & project proponent

The project under consideration, i.e. Kabribad OC is administratively under Giridih Area of CCL headed by General Manager, Giridih Area. Geologically, it falls in Giridih Coalfield in Giridih District of Jharkhand.

The mailing address of the Project Officer is given below:

L.K. Mohapatra ,
Project Officer,
Kabribad OC,
Giridih Area.
Central Coalfields Limited.
Dist- Giridih Pin – 815311

2.4 Location & Communication

This project is located in Giridih district, Jharkhand. It is located about 5kms to the south of Giridih town and is covered in Survey of India toposheet no. 72L/8 (in 1:50,000 scale). The block is bounded by latitudes 24°8'45" to 24°10'7" North and longitudes 86°17'34" to 86°18'30" East.

Kabribad OCP falls within the latitude 24° 08' 47" and 24° 09' 57" North and longitude 86° 17' 38" and 86° 18' 39" East

The area is well connected by rail and road. The Giridih district town is about 5km from the project. The nearest Railway station Giridih is about 5km from the Project. Giridih Railway station is on the Giridih-Madhupur line of the Asansol Railway division in the Eastern Railway Zone of Indian Railways. Giridih lies on the junction of NH-122A and State Highway-13 (SH-13). The Grand Trunk Road passes through Dumri from where the Giridih is about 45km. The block is about 182km from Ranchi via NH-20 and 122A. The nearest commercial airport is situated at Ranchi.

2.5 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. Continuing of coal production from the mines of CCL will help to bridge the gap of demand and supply of coal in India. To meet the growing demand of coal, especially in power and steel sectors, CCL has planned to increase its production capacity from the present production level of 63.405 Mt. of coal during 2017-18 to 88.0 MTPA by 2020-21.

Coal production from Kabribad 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

2.6 Employment Generation:

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

Chapter 3

Project Description

3.1 Mining Method

The method of mining proposed to be adopted to extract coal and OB in Kabribad Opencast mines will be inclined slicing with shovel-dumper combination as the gradient of the seams vary from 6-10° with an average gradient of 8°.

The following mining parameters have been considered in the project.

Mining Parameters

Sl. No.	Particular	Unit	Value
1	OB Bench Height for 5.5-6.5 cum shovels	m	8-10
2	Coal Bench Height for 5.5-6.5 cum shovels	m	8-10
3	Working bench width	m	40
4	Non - Working bench width	m	20
5	Bench Slope for OB and coal	deg	60
6	Blast Hole Dia for OB and coal	mm	160
7	Powder Factor in OB and coal	kg/cum	0.3-0.4 & 0.2

3.2 Drilling and Blasting

Salient Physico-Mechanical Features of OB Rock and coal

Overburden rocks consist of medium grained sandstone to coarse-grained sandstone. Assumed category of rock is 50% of CAT-III + 50% of CAT-IV.

Type & capacity of drills:

OB
160mm dia drill

Elements of Drilling and Blasting:

The elements of drilling and blasting would be decided during actual operation after trial blasting in the field. Controlled blasting should be practiced near leasehold boundary. However, drilling of coal & OB benches is recommended to be done vertically at 90°. It is suggested to use slurry explosive in cartridge / site mixed slurry for better result and enhance safety with proper stemming material. Secondary blasting is not suggested in any circumstances.

The mineable reserve of Kabribad OC is estimated as 7.74 Mte with corresponding volume of O.B estimated as 5.71 Mm³ with an average stripping ratio of 0.76 cum/t.

3.3 Coal Reserves and Life of the Mine

Seam wise reserves have been detailed in the previous section. The life of proposed project is 9 years. Summarized mining schedule is as given below.

Year	Kabribad OC		
	Coal Production (MT)	OB Removal (M.cum)	Stripping Ratio (cum/te)
1	0.45	0.27	0.6
2	0.70	0.46	0.66
3	1	0.76	0.76
4	1	0.76	0.76
5	1	0.76	0.76
6	1	0.76	0.76
7	1	0.76	0.76
8	1	0.76	0.76
9	0.59	0.44	0.75
TOTAL	7.74	5.71	0.76

3.4 Coal Handling & Dispatch System

It has been proposed that coal from Kabribad OC will be despatched by rail. The existing CP railway siding is existing nearby. The existing siding comprises two number of wharf wall sidings are existing with two no. of loading platforms. The capacity of each wharf wall siding is of 28 wagons. Loading of coal into wagons is being done through pay loaders. The existing siding has sufficient capacity to handle the additional coal. So no additional provision is being proposed.

3.5 Power Requirement

Kabribad OC receives power at 11KV from Beniadih substation of CCL. DVC substation at Bhandardih which is at a distance of 8 kms is the main source of power. The power consumption details are as given below.

Max. Demand- 4500 KVA

Total annual consumption=18,000 MWH

3.6 Water Requirement

Total industrial and domestic demands of Kabribad OC are being fulfilled by mine water discharge. The details are as given below.

S.No.	Description	Kabribad OC
1.	Mine Discharge	1800 m ³ /day

2.	Industrial water demand	220 m ³ /day
3.	Domestic water demand	1632.2 m ³ /day

3.7 Land Requirement

The total project area of Kabribad OCP is 169.45 Ha. The proposed land use during mining is as given below.

Sl. No	Particulars	Kabribad OC (Ha.)
1	Quarry Area	61.78
2	Existing OB Dumps (Both Internal + External)	43.93
3	Railway Siding	1.39
4	Road	2.69
5	Infrastructures (W/S, coal Stock etc.)	2.68
6	Residential area	2.74
7	Safety Zone/vacant Land including Nala and water bodies	54.24
Total Area in Ha.		169.45

Acquisition status of land-

S.no	Type	Kabribad OCP
1	Forest	NIL
2	GMK JJ	NIL
3	Tenancy	169.45
4	GMK	NIL
	Total	169.45

Chapter 4

Site Description

4.1 Identification of Project

The project under consideration, i.e. Kabribad OC is administratively under Giridih Area of CCL headed by General Manager, Giridih Area. Geologically, it falls in Giridih Coalfield in Giridih District of Jharkhand.

The mailing address of the Project Officer is given below:

L.K. Mohapatra ,

Project Officer,

Kabribad OC,

Giridih Area.

Central Coalfields Limited.

Dist- Giridih Pin – 815311

4.2 Topography

The area has a gentle undulating topography with occasional low humps. The isolated humps are locally known as Kamaljore, Bhadua and Balihills. The ground elevation varies from 244m to 305m.

The general flow of the streams is towards south. Most of the streams meet Barakar River at about 6 km south-west of the proposed OCP. The water level is very close to the surface during rainy season and about 20m below surface during dry season.

4.3 Land Use Pattern

The total project area of Kabribad OC is 169.45 Ha. The proposed land use during mining is as given below.

Sl. No	Particulars	Kabribad OC (Ha.)
1	Quarry Area	61.78
2	Existing OB Dumps (Both Internal + External)	43.93
3	Railway Siding	1.39
4	Road	2.69
5	Infrastructures (W/S, coal Stock etc.)	2.68

6	Residential area	2.74
7	Safety Zone/vacant Land including Nala and water bodies	54.24
Total Area in Ha.		169.45

The details of land is as given below.

Type	Area in Ha
Forest	NIL
GMK JJ	NIL
Tenancy	169.45
GMK	NIL
Total	169.45

4.3 Climate

The climate of the area is tropical. The temperature ranges from 20⁰ C to 45⁰ C during summer whereas it is upto 9⁰C in winter months. The annual rainfall ranges from 900mm to 1300 mm in a year. The wind direction is predominately from south and south-west during May-August and it is from North and North-west during November to January.

Chapter 5

Project Planning

5.1 Mining reserves

The mineable reserve of Kabribad OC is estimated as 7.74 Mte with corresponding volume of O.B estimated as 7.71 Mm³ including re-handling of around 2 Mm³ with an average stripping ratio of 0.76 cum/t.

5.2 Coal Reserves and Life of the Mine

The life of proposed project is 9 years. Summarized mining schedule is as given below.

Year	Kabribad OC		
	Coal Production (MT)	OB Removal (Mcum)	Stripping Ratio (cum/te)
1	0.45	0.27	0.6
2	0.70	0.46	0.66
3	1	0.76	0.76
4	1	0.76	0.76
5	1	0.76	0.76
6	1	0.76	0.76
7	1	0.76	0.76
8	1	0.76	0.76
9	0.59	0.44	0.75
TOTAL	7.74	5.71	0.76

5.3 Land Use Planning

5.3.1 Land Use Plan during Mining

The total project area of Kabribad OCP is 169.45 Ha

Land use During Mining

Sl. No	Particulars	Kabribad OC (Ha.)
1	Quarry Area	61.78

2	Existing OB Dumps (Both Internal + External)	43.93
3	Railway Siding	1.39
4	Road	2.69
5	Infrastructures (W/S, coal Stock etc.)	2.68
6	Residential area	2.74
7	Safety Zone/vacant Land including Nala and water bodies	54.24
Total Area in Ha.		169.45

5.3.2 Post-Mining Land Use Plan

Total OB to be generated from proposed mining activity within the project area is 7.71 Mm³ including re-handling of around 2 Mm³. It is proposed to dump total OB into mine void. The detailed post mining land use will be worked out in the mining plan

5.4 Amenities/Facilities

Kabribad OC is an existing project. The facilities for industrial purposes like workshop, offices, Magazine site etc. have already been set up. Further, amenities for working manpower like Residential colony, schools, hospitals, community centres have already been established.

Chapter 6

Infrastructure

6.1 Existing Infrastructure

Kabribad OC is an existing project. The facilities for industrial purposes like workshop, offices, Magazine site etc. have already been set up. Further, amenities for working manpower like Residential colony, schools, hospitals, community centres have already been established.

6.2 Proposed Infrastructure

Construction of field workshop, crusher, Sub-station, statutory buildings, etc has taken place. Approach road already exists. So no major construction is anticipated.

6.3 Drinking water Management

The approximate domestic water demand is 1632.2 m³/day. This demand is majorly satisfied by the mine discharge.

6.4 Industrial Waste water Management

The effluent generated from workshop due to washing of HEMM is being treated in ETP installed with oil & grease trap, and settling pond.

6.5 Solid waste Management

Total OB to be generated from proposed mining activity within the project area is 7.71 Mm³ including re-handling of around 2 Mm³. It is proposed to dump total OB into mine void. The detailed post mining land use will be worked out in the mining plan.

Chapter 7

Rehabilitation & Resettlement

Mining activity in the Giridih coalfield started as early as 1871 by M/s Bengal Coal Company & by then State Railway and subsequently transferred to National Coal Development Corporation (NCDC) about 60 years back. The land within the proposed project has already been acquired. No further R&R is involved.

Chapter 8

Cost Estimates

8.1 Capital Expenditure

Project report of Kabribad OCP (0.5 MTY) was prepared for winning of coal from Lower Khandia (Khandia-I), Upper Khandia (Khandia-II) and Khandia III & IV seams by mechanized shovel-dumper combination. The project was approved on Feb 1988 with a capital of Rs. 16.53 Cr.

8.2 Environmental Capital Expenditure

Total fund allocation under environmental head of approved PR is around Rs. 61.70 Lakhs. Fund allocation was done under reclamation, water quality and dust suppression heads.

Chapter 9

Analysis of Proposal

Pre-feasibility report of Kabribad OC is prepared for rated capacity of 1 MTY within the project area of 169.45 ha for making an application in Form I for EC as per MoEF&CC Notification vide SO No. 804 (E) dated 14.03.2017, subsequent notification vide SO No. 1030 (E) dated 08.03.2018 and OM no. Z-11013/22/2017-IA. II(M) dated 15.03.2018 and 16.03.2018.

Central Coalfields Limited is facing increasing demand of coal because of increased demand from industry and steel sector. Continuing of coal production from the mines of CCL will help to bridge the gap of demand and supply of coal in India. To meet the growing demand of coal, especially in power and steel sectors, CCL has planned to increase its production capacity from the present production level of 63.405 Mt. of coal during 2017-18 to 88.0 MTPA by 2020-21. Coal production from Kabribad OC will help to a certain degree to meet the growing demand of coking coal in the Country.