

**UPDATED Form-I  
For  
SELECTED DHORI GROUP OF MINES**

<b>Lease Area (Ha)</b>		<b>Capacity (MTPA)</b>			
<b>Existing</b>	<b>Proposed</b>	<b>Normative</b>		<b>Peak</b>	
		<b>Existing</b>	<b>Proposed</b>	<b>Existing</b>	<b>Proposed</b>
<b>315.05</b>	<b>315.05</b>	<b>2.25</b>	<b>8.25</b>	<b>2.25</b>	<b>11.00</b>

(Dhori Area)  
**Central Coalfields Limited**  
(January 2016)

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

**APPENDIX I**  
(See paragraph-6)  
(See Paragraph 7 (ii) in case of expansion project)

**FORM 1**

**(I) BASIC INFORMATION**

S.No	Item	Details
1	Name of the project/s	<b>SELECTED DHORI GROUP OF MINES (Nominal Cap. 8.25 MTY, Peak Cap. 11.00 MTY)</b>
2	S. No. in the schedule	<b>1(a)</b>
3	Proposed capacity / area / length / tonnage to be handled / command area / lease area / number of wells to be drilled	Nominal Capacity of Project : 8.25 MTY Peak Capacity of Project : 11.00 MTY Project Area : 315.05 Ha Boreholes: 10 numbers of boreholes already been drilled by CCL.
4	New /Expansion /Modernization	Expansion in production capacity: 2.25 MTY to 8.25 MTY (nominal) and 11.00 MTY (peak)
5	Existing Capacity / Area etc.	Existing capacity : 2.25 MTY Project area : 315.05 Ha
6	Category of Project i.e. 'A' or 'B'	A
7	Does it attract the general condition? If yes, please specify.	Yes.
8	Does it attract the specific condition? If 'yes, please specify.	No
9	Location	Selected Dhori Group of Mines are located in Bokaro district of Jharkhand between latitudes 23°45' N & 23°48' N and longitudes 86°02' E & 85°03' E.
	Plot/Survey/Khasra No	The area is covered by the survey of India toposheet Nos 73 I/1.
	Village	Turio, Makoli, Tarmi & Gunjardih villages in Bermo

		block, Bokaro District of Jharkhand state.		
	Tehsil	Bermo		
	District	Bokaro		
	State	Jharkhand		
10	Nearest railway station / airport along with distance in kms.	The nearest railway station, Phusro on Barkakhana-Gomoh loop line of the Eastern railway is located at a distance of 1.0 K.M from the project		
11	Nearest Town, city, District Headquarters along with distance in kms.	a) Town: Phusro -2 Kms. b) District H/Q : Bokaro- 35 Kms.		
12	Village, Panchayats, Zilla Parishad , Municipal Corporation, Local body (complete postal address with telephone nos. to be given	Sno	Name of Gram Panchayat	Tel / Mobile no
		1	Tarmi Panchayat	9430150222
		2	Turiyo Panchayat	9934186123
		3	Ward No. 22 ( Makoli)	9431511219
		4	Ward No. 26 ( Makoli)	9279027100
		5	Ward No. 27 ( Sharda colony)	9934117597
		6	Ward No. 28 ( Karipani )	9934157538
		7	Phusro Nagar Parishad	9934546408
13	Name of the applicant	Central Coalfields Limited		
14	Registered address	Darbhanga House Ranchi - 834001		
15	Address for correspondence:			
	Name	Alok Kumar		
	Designation ( Owner/Partner /CEO)	Dy. General Manager ( Environment & Forest )		
	Address	Environment & Forest, CCL Darbhanga House Ranchi – 834001.		
	Pin Code	834001		
	E-mail	envccl@yahoo.com		
	Telephone No.	0651-2360184		
	Fax No.	0651-2360184		
16	Details of Alternative Sites examined if any. Location of these sites should be shown on a topo sheet.	The mine is operational and proposed for expansion in production capacity from 2.25 MTY to 8.25 MTY (nominal) and 11.00 MTY (peak). Coal Mining is a site specific activity. Photocopy of topo-sheet enclosed.		
17	Interlinked Projects	Not Applicable		
18	Whether separate application of interlinked	Not Applicable		

	Project has been submitted?	
19	If yes, date of submission	Not Applicable
20	If no, reason	Not Applicable
21	Whether the proposal involves approval /clearance under if yes, details of same and their status to be given a) Forest conservation Act 1980 b) Wildlife protection Act 1972 c) CRZ Notification 1991.	It requires clearance under Forest conservation Act 1980. The details of forest land diverted are given below; a) 143.05 Ha of Forest land has been diverted vide letter no 8-122/90-FC, dt. 01-07-1996. b) 69.183 Ha of forest land has been diverted vide letter no 8-69/2004-FC, dt. 02-03-2009.
22	Whether there is any government order / policy relevant / relating to site?	No
23	Forest land involved (ha)	a) 143.05 Ha of Forest land has been diverted vide letter no 8-122/90-FC, dt. 01-07-1996. b) 69.183 Ha of forest land has been diverted vide letter no 8-69/2004-FC, dt. 02-03-2009.
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 relevance with the proposed project.	No

**(II) Activity**

**1. 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.)**

<b>S.No</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</b>														
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)	No	<p>There will not be any increase or change in total land requirement of the project. Total land involved – 315.05 Ha Breakup is as follows:</p> <table border="1" data-bbox="762 869 1361 1010"> <thead> <tr> <th data-bbox="762 869 943 943">Forest</th> <th data-bbox="943 869 1155 943">Non Forest</th> <th data-bbox="1155 869 1361 943">Total Land</th> </tr> </thead> <tbody> <tr> <td data-bbox="762 943 943 1010">294.59 Ha</td> <td data-bbox="943 943 1155 1010">20.46 Ha</td> <td data-bbox="1155 943 1361 1010">315.05 Ha.</td> </tr> </tbody> </table> <p>This land will undergo change during mining and at the end of mine life the land use pattern will be as follows</p> <table border="1" data-bbox="762 1151 1407 1563"> <tbody> <tr> <td data-bbox="762 1151 1177 1323">Built up area –Infrastructure, roads, colony etc.</td> <td data-bbox="1177 1151 1407 1323">20.89</td> </tr> <tr> <td data-bbox="762 1323 1177 1429">Green Belt/afforested area(reclaimed internal dump)</td> <td data-bbox="1177 1323 1407 1429">166.12</td> </tr> <tr> <td data-bbox="762 1429 1177 1496">Quarry /Void</td> <td data-bbox="1177 1429 1407 1496">70.0</td> </tr> <tr> <td data-bbox="762 1496 1177 1563">Aforrested Safety zone</td> <td data-bbox="1177 1496 1407 1563">78.93</td> </tr> </tbody> </table>	Forest	Non Forest	Total Land	294.59 Ha	20.46 Ha	315.05 Ha.	Built up area –Infrastructure, roads, colony etc.	20.89	Green Belt/afforested area(reclaimed internal dump)	166.12	Quarry /Void	70.0	Aforrested Safety zone	78.93
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1.2	Clearance of existing land, vegetation and buildings?	Yes	The proposed mining of Central Sector (New Selected Dhori OCP) will degrade Forest land. 69.183 Ha. Of forest land for the setor / mine has already been diverted as per details given at point no. 23 above.														
1.3	Creation of new land uses?	Yes	Coal mining in the Central sector, Sel. Dhori Qry no. 1, Sel. Dhori Qry no. 3 will create internal overburden dumps and water bodies which will be afforested and reclaimed during operational														

			phase as part of mine closure plan of the project.								
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Boreholes: 10 numbers of boreholes already drilled by CCL.  <b>Source- Project Reports</b>								
1.5	Construction works?	No	No new /additional construction work is envisaged.								
1.6	Demolition works?	Yes	To be included in the Mine Closure Plan.								
1.7	Temporary sites used for construction works or housing of construction workers?	No	No new /additional construction work is envisaged.								
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Infrastructure like Railway siding, Office premises, Colony, Workshop & CHP are existing in the Project. The land use at the end of mining will be : <table border="1" data-bbox="762 907 1410 1317"> <tr> <td>Built up area –Infrastructure, roads, colony etc.</td> <td>20.89</td> </tr> <tr> <td>Green Belt/afforested area(reclaimed internal dump)</td> <td>166.12</td> </tr> <tr> <td>Quarry /Void</td> <td>70.0</td> </tr> <tr> <td>Aforrested Safety zone</td> <td>78.93</td> </tr> </table>	Built up area –Infrastructure, roads, colony etc.	20.89	Green Belt/afforested area(reclaimed internal dump)	166.12	Quarry /Void	70.0	Aforrested Safety zone	78.93
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1.9	Underground works including mining or tunneling?	No	Not applicable.								
1.10	Reclamation works?	Yes	About 166.12 Ha. O.B dump & back filled area of Qry 1,2 & 3 will be reclaimed.								
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 & other HEMM and the same method will be used in the Central sector for production as well. The Nominal production of the Group of Mines will be 8.25 MTPA & Peak production will be 11.00 MTPA.								
1.14	Facilities for storage of goods or materials?	Yes	Coal stockyard, Store, Workshop existing in the mines.								

1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<p>44.93 M Cu M of OB will be generated in the mines and entire overburden will be backfilled in the de-coaled area as internal dumps and reclaimed.</p> <p>2. Composite capacity of primary sedimentation tank / sump = 3.96 Million K.L.</p> <p>3.. Treatment of Domestic sewage through soakpit &amp; septic tank.</p> <p>Source- Information from unit.</p>
1.16	Facilities for long term housing of operational workers?	Yes	02 numbers of residential colonies cater to the housing needs of the workforce.
1.17	New road, rail or sea traffic during construction or operation?	Yes	Despatch of coal will be done from existing siding /CHP.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	Yes	No major infrastructure is required for increase in Normative as well as Peak capacity. The existing road network will be strengthened.
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?	No	Not applicable.

1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The Selected Dhori Group of mines include three units – Selected Dhori Quarry I , Selected Dhori Quarry III and proposed Central Sector ( New Selected Dhori OCP ), out of these units SDQ 1 & SDQ 3 are existing mines. Water demand for industrial use, domestic use and fire suppression will be about 850 KLD. It will be met by mine sump water and Damodar river.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	Yes	Coal mining in Central sector will affect minor streams of order I.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Despatch of additional 6.0 MTY of coal will be done from existing siding & CHP.
1.26	Long-term dismantling or decommissioning or restoration works?	Yes	Mine closure Plan shall be prepared.  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 employees are required to stay.  Service buildings namely, coal handling arrangement, workshop, stores, office building etc will be demolished, if redundant, after mine closure and all useable items will be shifted to area store.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	Yes	Solid waste generated during demolition of service 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	The existing manpower of the project is 1936. Influx of people has 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.
1.31	Any other actions?	No	Not applicable.



**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):**

<b>S.No.</b>	<b>Information/checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</b>						
2.1	Land especially undeveloped or agricultural land (ha)	No	There will not be any increase in total land requirement of the project. Total land involved -315.05 Ha Breakup is as follows: <table border="1" data-bbox="798 761 1372 896"> <thead> <tr> <th>Forest</th> <th>Non-forest</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>294.59 Ha</td> <td>20.46 Ha</td> <td>315.05Ha..</td> </tr> </tbody> </table>	Forest	Non-forest	Total	294.59 Ha	20.46 Ha	315.05Ha..
Forest	Non-forest	Total							
294.59 Ha	20.46 Ha	315.05Ha..							
2.2	Water (expected source & competing users) unit: KLD	Yes	The Selected Dhori Group of mines include three units – Selected Dhori Quarry I , Selected Dhori Quarry III and proposed Central Sector ( New Selected Dhori OCP ), out of these units SDQ 1 & SDQ 3 are existing mines. Water demand for industrial use, domestic use and fire suppression will be about 850 KLD. It will be met by mine sump water and Damodar river.						
2.3	Minerals (MT)	Yes	Extractable balance reserve as on 01.04.2012 is : 25.78 MT <b>Source: Pre feasibility Report &amp; information from unit.</b>						
2.4	Construction material, stone, aggregates and soil (expected source – MT)	No	Existing infra structure of the mine will be used during expansion of the project.						
2.5	Forests and timber (source – MT)	No	The mine is opencast.						
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Electricity- Max. demand 19.30 MKW/Hr Fuel- Diesel : 4000 KL / Year (approx)						
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.**

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

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

<b>S.No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
4.1	Spoil, overburden or mine wastes	Yes	44.93 M Cu M of OB will be generated in the mines and entire overburden will be backfilled in the de-coaled area as internal dumps.
4.2	Municipal waste (domestic and or commercial wastes)	No	These are operational units with residential colonies. The treatment of domestic sewage is presently done by soak-pit & septic tank which will be continued in future also.

4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Burnt oil, Oil and Grease sludge, Oil Filters, Used Batteries are hazardous waste. About 50 KL of burnt oil is generated in the mines.
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	No	The treatment of domestic sewage will be done by soak-pit & septic tank.
4.7	Construction or demolition wastes	No	No construction or demolition waste is envisaged.
4.8	Redundant machinery or equipment	Yes	Machinery/ equipments are surveyed off as and when found necessary.
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)**

<b>S.No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Operation of tippers for coal transport (about 100 tippers per day), plying of 41 Dumpers ( HEMM ) of 35 T & 60 T capacity & other light vehicles. The levels of exhaust emissions are within permissible limits.  <b>Source: Analysis report enclosed.</b>
5.2	Emissions from production processes	Yes	Dust is produced which is within prescribed limits. Copy of monitoring report is enclosed.
5.3	Emissions from materials handling including storage	Yes	Dust emitted from CHP, coal transport by about (about 100 tippers per day),

	or transport		plying of 41 Dumpers ( HEMM ) of 35 T & 60 T capacity & other light vehicles. The level is within prescribed limits. <b>Source: Analysis report enclosed.</b>
5.4	Emissions from construction activities including plant and equipment	No	The mines are operational and no new construction is proposed.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	The generation of dust is within permissible limit. The domestic sewage is treated in Soak pit & septic tank.  <b>Source: Analysis report</b>
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

## 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	Operation of tippers for coal transport (about 100 tippers per day), plying of 41 Dumpers ( HEMM ) of 35 T & 60 T capacity & other light vehicles.  The levels of exhaust emissions are within permissible limits.  <b>Source: Analysis report enclosed.</b>
6.2	From industrial or similar processes	Yes	Same as above.
6.3	From construction or demolition	No	No change for increase in Normative as well as Peak capacity.
6.4	From blasting or piling	Yes	Blasting - Instantaneous noise and vibration.

			Impact maintained within the permissible limits as specified by Directorate General of Mines Safety
6.5	From construction or operational traffic	Yes	Operation of tippers for coal transport (about 100 tippers per day), plying of 41 Dumpers ( HEMM ) of 35 T & 60 T capacity & other light vehicles.  The levels of exhaust emissions are within permissible limits.  <b>Monitoring report enclosed</b>
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:**

<b>S.No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
7.1	From handling, storage, use or spillage of hazardous materials	Yes	Burnt oil, Oil and Grease sludge, Oil Filters, Used Batteries are hazardous waste. About 50 KL of burnt oil is generated in the mines.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	Yes	The domestic sewage is treated in Soak pit & septic tank.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	Fugitive emission into air which is within the prescribed limits.  <b>Source: Analysis report enclosed</b>
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:**

<b>S.No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	Prevention of accidents is planned as per Mine Emergency Response Plan prepared as per guidelines of DGMS. Mock drills are conducted to ascertain readiness of persons.
8.2	From any other causes	Yes	1) Operation of fleet of HEMM / vehicles 2) Blasting 3) Fire 4) Inundation of mine / other infrastructure.  Traffic rule, Code of practice for blasting & Emergency Organization Plan has been prepared as per guidelines of DGMS.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	Not Applicable.

**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:**

<b>S. No.</b>	<b>Information/Checklist confirmation</b>	<b>Yes/No</b>	<b>Details thereof (with approximate quantities/rates, wherever possible) with source of information data</b>
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.:  • Supporting infrastructure (roads, power supply, waste	Yes	The mine is located in a highly industrialized area of Bokaro district. A number of mines like Tarmi OC, Dhori OC, Amlo OC and several underground mines of CCL and their colonies are situated in the study area. This has led to creation of social infrastructures like schools, hospitals, roads, etc which have helped in the economic development of the region. The expansion of mine will further

	or waste water treatment, etc.) • housing development • extractive industries • supply industries • other		help in development of region through CSR activities and creation of direct and indirect employment.
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	The biologically reclaimed land will improve the green cover in the area after mining and help in biodiversity conservation.
9.3	Set a precedent for later developments	Yes	It is a coal bearing area and economic development due to additional investment will lead to over all socio economic growth of the region.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	There are a number of mines of CCL in study area along with thermal plants of DVC, in the vicinity. The mines of CCL have been planned for expansion in future. The cumulative impact of these units has resulted in economic development of Bermo / Phusro.

### (III) Environmental Sensitivity

<b>S. No.</b>	<b>Areas</b>	<b>Name/ Identity</b>	<b>Aerial distance (within 15 km.) Proposed project location boundary</b>
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	Not applicable
2	Areas which are important or sensitive for ecological reasons -Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	The core zone consists of 212.233 Ha. Of ( Forest land ). It has been diverted as per details given below : a) 143.05 Ha of Forest land has been diverted vide letter no 8-122/90-FC, dt. 01-07-1996. b) 69.183 Ha of forest land has been diverted vide letter no 8-69/2004-FC, dt. 02-03-2009.

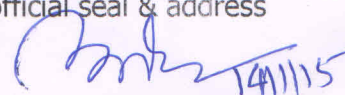
			Damodar river flows at a distance of 0.5 K.M from the mine boundary.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	Not applicable
4	Inland, coastal, marine or underground waters	Yes	Damodar river is the main drainage of the area. The study area includes a number of seasonal nalla like Tisri nallah, Joria nallah flow through the study area of project.
5	State, National boundaries	No	Not applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Not applicable
7	Defence installations	No	Not applicable
8	Densely populated or built-up area	Yes	Mining, commercial and residential establishments of mines of CCL such as Tarmi OCP, Dhori OC, Amlo OC and several underground mines of CCL are situated within 15 km of the project boundary.  Villages in core zone : 04  Villages in buffer zone : 46
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	No. of primary schools : 44 No. of middle schools : 12 No. of secondary schools : 04 Primary health centres : 01 Hospitals : 02 Dispensary :05 Playground :05 Stadium 01
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Yes	A number of underground and opencast coal mines of CCL are situated in the study area as mentioned above. The study area consists of patches of notified forest and GMK Jungle Jhari. Damodar River falls within the study area.



11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	Not applicable
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	Not applicable

**Undertaking:** I hereby given undertaking that the data and information given in the application and enclosure are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Signature of the applicant with full name,  
official seal & address



(Alok Kumar)

Dy. General Manager,  
Environment & Forest Department  
Central Coalfields Limited

**Dy. General Manager**  
**(Envnt. Forest) H.O.D.**  
**C.C.L., Darbhanga House Ren...**