

APPENDIX I
(See Paragraph -6)
FORM I

(a) I. Basic Information

S. No	Item	Details
1.	Name of the project/s	Kamarda Chromite Mines of M/s B. C. Mohanty & Sons Private Limited over an area of 107.24 Ha.
2.	S. No. in the Schedule	1(a)
3	Proposed capacity/area/length/ to be handled/command area/ lease area /number of wells to be handled.	<p>Enhancement of Production</p> <ol style="list-style-type: none"> 1. ROM (Chrome Ore) from 88,000 TPA to 2,00,000 TPA. 2. Chrome Concentrate through COB Plant up to 1,00,000 TPA. <p>w.r.to Kamarda Chromite Mines of M/s B. C. Mohanty & Sons (P) Ltd. over an ML area of 107.24 ha. located at village Kamarda, Tehsil Sukinda in Jajpur district of Odisha State.</p>
4.	New /Expansion/Modernization	Expansion of production both ROM (Chrome Ore) and Chrome Concentrate.
5.	Existing Capacity/Area, etc.	<ol style="list-style-type: none"> 1. 88,000 TPA of ROM (Chrome Ore) EC Obtained 2. 36,000 TPA of Chrome Concentrate EC Obtained 3. Public Hearing Completed and EC presentation given on 22.06.2016 and the proposal is deferred on the ground for carrying out detailed biological study of the Study Area along with authentication of reports and Wild Life Location Map including Wild Life Conservation Plan in case Schedule I fauna exists in the study area for Expansion of Production of Chrome Concentrate from 36000 to 66000 by re-handling of existing OB Dump.
6.	Category of Project i.e. 'A' or 'B'	'A' Category
7.	Does it attract the general condition? If, yes, please specify.	No.
8.	Does it attract the specific condition? If, yes, please specify.	No. Not applicable
9.	Location	<p>The area can be located in Survey of India Toposheet No. 73 G / 16. The Lease area bounded by Longitude and Latitude are given below.</p> <p>Pillar No.A: 85° 49' 22.45836" E and 21° 03' 48.28392" N Pillar No B: 85° 49' 44.93568" E and 21° 03' 06.11316" N Pillar NoC: 85° 50' 11.31576" E and 21° 03' 25.04052" N Pillar NoD: 85° 50' 00.66624" E and 21° 03' 45.62172" N Pillar No E: 85° 49' 29.60724" E and 21° 03' 50.88708" N</p> <p>Topo Map with location of Lease –Annexure -1.</p>

	Plot/Survey/Khasra No.	Survey of India Toposheet No. 73 G/16.
	Village	Kamarda
	Tehsil	Sukinda
	District	Jajpur
	State	Odisha
10.	Nearest railway station/airport along with distance in km.	<p>Railway Station: Tamka Railway station in Jhakhapura-Banspani Section at a distance of 32 Kms from the lease area by road.</p> <p>Jajpur-Keonjhar Road Railway Station at a distance of 33 Km from the Lease Area crow fly.</p> <p>Airport: Bhubaneswar at around 148 Kms from the Lease area by road.</p>
11.	Nearest Town, city, District Headquarters along with distance in km.	<p>Nearest Town: Jajpur Road at a distance of 33 Km from the Lease Area crow fly. By road it is around 51 Kms.</p> <p>Nearest City: Cuttack at around 130 Kms from the Lease area by road.</p> <p>District Headquarter: Jajpur at around 57 Km from the Lease area crow fly. By road it is approximately 82 kms. .</p>
12.	Village Panchayats, Zilla Parishad, Municipal corporation, Local body (complete postal addresses with telephone nos. to be given)	<p>Village Panchayat: Kansa Gram Panchayat, At/PO- Kansa, Dist – Jajpur, Odisha - 755028</p> <p>Zilla Parishad: Chairman, Jajpur Zilla Parishad,, At/PO- Jajpur Dist – Jajpur, Odisha– 755001</p> <p>Municipal Corporation: The Executive Officer, Jajpur Road Municipality At/PO- Jajpur Road Odisha - 755019</p>
13.	Name of the applicant	M/s B. C. Mohanty & Sons Private Limited
14.	Registered Address	Rajabagicha, (Opposite to S. B. I., Jhanjirmangala), Cuttack - 753009
15.	Address for correspondence:	
	Name	Mr. Siddhartha Mohanty
	Designation (Owner/partner/CEO)	Director and Nominated Owner for the Lessee.
	Address	M/s B. C. Mohanty & Sons (P) Limited Rajabagicha, (Opposite to S. B. I., Jhanjirmangala), Cuttack
	Pin Code	753009

	E – mail	bcmohantysonsprivatelimited@rediffmail.com
	Telephone No.	0671- 2349548, 2349546, 6544734, 9437054347
	Fax No.	0671- 2520347
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	No other alternate sites are considered. As the project is within the existing mining lease area. The site is found well connected to road and rail. Electrical power, water and raw material are also available.
17.	Interlinked Projects	NIL
18.	Whether separate application of interlinked project has been submitted?	Not required
19.	If, yes, date of submission	Not applicable
20.	If no, reason	There is no interlinked project.
21.	<p>Whether the proposal involves approval/clearance under: If yes, details of the same and their status to be given.</p> <p>(a) The Forest (Conservation) Act, 1980?</p> <p>(b) The Wildlife (Protection) Act, 1972?</p> <p>(c) The C. R. Z. Notification, 1991?</p>	<p>(a) The Forest (Conservation) Act,1980:</p> <p>Forest Clearance order over an area of 87.44 ha. has been obtained as per FC Act. 1980, vide letter no. 8-81/1996-FC dated 28th March, 2008 by Govt. of India, Ministry of Environment & Forests (FC Division). Copy attached- Annexure -2</p> <p>W.r.t. the MoEFCC guidelines dtd. 9th March 2016 and 31st March 2016 for balance Forest Area of 18.34 ha (10.03 ha for Mining Activities and 8.31 ha for Safety Zone) NPV is already deposited. Diversion proposal is under preparation.</p> <p>(b) The Wildlife (Protection) Act, 1972:</p> <p>Within 10 km radius of the project there is no Wildlife Reserve or Sanctuary. On account of Wildlife Management Plan an amount of Rs.21,44,800.00 over entire ML area i.e 107.240 Ha. has been paid to DFO, Cuttack, vide our letter no. 157/2009-10 dated 26.08.2009</p> <p>(c) The C. R. Z. Notification, 1991:</p> <p>Not applicable as the proposed project does not fall within CRZ areas.</p>

22	Whether there is any Government order/Policy relevant/relating to the site?	NO
23.	Forest land involved (hectares)	<p><i>Hal</i>: Demarcated Protected Forest (Forest Block -27) 101.85 Ha.</p> <p><i>Sabik</i> : (Prior to 25.10.1980) Sal Jungle = 105.78 Ha.</p>
24.	<p>Whether there is any litigation pending against the project and/or land in which the project is proposed to be set up?</p> <p>(a) Name of the Court</p> <p>(b) Case No.</p> <p>(c) Orders/directions of the Court, if any and its relevance with the proposed project.</p>	<p>YES</p> <p>Against the ML, 3 (three) cases are under interim order of stay passed by the Hon'able High Court of Orissa and with Mines Revisional Authority.</p> <p>Case 1 (under Env. (Protection) Act)</p> <ol style="list-style-type: none"> Name of the Court : High Court of Orissa, Cuttack Case No. – CRLMC NO. 3462 of 2014 <p>Case 2 (under MMDR Act)</p> <ol style="list-style-type: none"> Name of the Court : Revisional Authority, Ministry of Mines, GOI, New Delhi Case No. – Revisional Application No. 22/(26)/2013/RC-1 <p>Case 3 (under MMDR Act)</p> <ol style="list-style-type: none"> Name of the Court : Revisional Authority, Ministry of Mines, GOI, New Delhi Case No. – Revisional Application No. 22/(13)/2014/RC-1

(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.)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of Information																																																
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>The present land use of 107.24 Ha of ML area as per Existing Mining Plan is as follows.</p> <table><tr><th>Sl. No</th><th>Type of land use</th><th>Area of land use (in Ha) At Present (as on 01.04.2015)</th></tr><tr><td>1</td><td>Area under Mining</td><td>23.252</td></tr><tr><td>2</td><td>Top Soil Storage</td><td>1.061</td></tr><tr><td>3</td><td>Waste dump site including tailing dump</td><td>25.637</td></tr><tr><td>4</td><td>Mineral Storage</td><td>2.636</td></tr><tr><td>5</td><td>Infrastructure – Workshop, Admin. Building, Magazine etc.</td><td>1.312</td></tr><tr><td>6</td><td>Roads</td><td>2.616</td></tr><tr><td>7</td><td>Railways</td><td>0.000</td></tr><tr><td>8</td><td>Tailing Pond</td><td>0.934</td></tr><tr><td>9</td><td>Effluent Treatment Plant</td><td>0.129</td></tr><tr><td>10</td><td>Mineral Separation/ Beneficiation Plant (COB Plant)</td><td>1.696</td></tr><tr><td>11</td><td>Township Area</td><td>1.613</td></tr><tr><td>12</td><td>Safety Zone, Greenbelt etc.</td><td>8.310</td></tr><tr><td colspan="2">Sub Total</td><td>69.196</td></tr><tr><td>13</td><td>Un disturbed</td><td>38.044</td></tr><tr><td colspan="2">Total</td><td>107.240</td></tr></table> <p>The land use during the proposed mining operation will be changed as per Modifications to the Approved Scheme of Mining.</p> <p>Topographical changes with respect to the contour will occur only due to mining operation and also will be restricted to excavation and OB dump areas only. Otherwise the area will be reclaimed with back filling and plantation during Conceptual period.</p>	Sl. No	Type of land use	Area of land use (in Ha) At Present (as on 01.04.2015)	1	Area under Mining	23.252	2	Top Soil Storage	1.061	3	Waste dump site including tailing dump	25.637	4	Mineral Storage	2.636	5	Infrastructure – Workshop, Admin. Building, Magazine etc.	1.312	6	Roads	2.616	7	Railways	0.000	8	Tailing Pond	0.934	9	Effluent Treatment Plant	0.129	10	Mineral Separation/ Beneficiation Plant (COB Plant)	1.696	11	Township Area	1.613	12	Safety Zone, Greenbelt etc.	8.310	Sub Total		69.196	13	Un disturbed	38.044	Total		107.240	Pre Feasibility Report
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1.2	Clearance of existing land, vegetation and buildings?	Yes	Some bushes and trees will be cleared as and when required as per approved diversion proposal.	Pre Feasibility Report																																																

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1.3	Creation of new land uses?	Yes	<div> <div> The new land use during proposed plan period is as follows. <table> <tr> <th rowspan="2">Sl. No.</th> <th rowspan="2">Type of land use</th> <th>Area of land use (in Ha)</th> </tr> <tr> <th>End of Scheme Period (31.03.2018)</th> </tr> <tr> <td>1</td> <td>Area under Mining</td> <td>27.880</td> </tr> <tr> <td>2</td> <td>Top Soil Storage</td> <td>0.000</td> </tr> <tr> <td>3</td> <td>Waste dump site including tailing dump</td> <td>32.312</td> </tr> <tr> <td>4</td> <td>Mineral Storage</td> <td>3.466</td> </tr> <tr> <td>5</td> <td>Infrastructure – Workshop, Admin. Building, Magazine etc.</td> <td>1.312</td> </tr> <tr> <td>6</td> <td>Roads</td> <td>3.178</td> </tr> <tr> <td>7</td> <td>Railways</td> <td>0.000</td> </tr> <tr> <td>8</td> <td>Tailing Pond</td> <td>1.614</td> </tr> <tr> <td>9</td> <td>Effluent Treatment Plant</td> <td>0.129</td> </tr> <tr> <td>10</td> <td>Mineral Separation/ Beneficiation Plant (COB Plant)</td> <td>1.837</td> </tr> <tr> <td>11</td> <td>Township Area</td> <td>1.613</td> </tr> <tr> <td>12</td> <td>(i) Safety Zone, Greenbelt etc. (ii) Water Reservoir</td> <td>8.310 0.724</td> </tr> <tr> <td colspan="2">Sub Total</td> <td>82.375</td> </tr> <tr> <td>13</td> <td>Un disturbed</td> <td>24.865</td> </tr> <tr> <td colspan="2">Total</td> <td>107.240</td> </tr> </table> </div> </div>	Sl. No.	Type of land use	Area of land use (in Ha)	End of Scheme Period (31.03.2018)	1	Area under Mining	27.880	2	Top Soil Storage	0.000	3	Waste dump site including tailing dump	32.312	4	Mineral Storage	3.466	5	Infrastructure – Workshop, Admin. Building, Magazine etc.	1.312	6	Roads	3.178	7	Railways	0.000	8	Tailing Pond	1.614	9	Effluent Treatment Plant	0.129	10	Mineral Separation/ Beneficiation Plant (COB Plant)	1.837	11	Township Area	1.613	12	(i) Safety Zone, Greenbelt etc. (ii) Water Reservoir	8.310 0.724	Sub Total		82.375	13	Un disturbed	24.865	Total		107.240	Pre Feasibility Report
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1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Trial Pits, Bore holes were drilled.	Pre Feasibility Report																																																	
1.5	Construction works?	Yes	It is an existing and working mine. The ML area is already developed. There is no need of any new construction. Only construction of new haul road, Re designing Tailing Pond, Mineral Separation Plant will be required.	Pre Feasibility Report																																																	
1.6	Demolition works?	Yes	All Temporary constructions as mentioned above will be demolished at the end of Conceptual mining period.	Pre Feasibility Report																																																	

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of Information
1.7	Temporary sites used for construction works or housing of construction workers?	No	No temporary housing required. Site facilities are already exists.	Pre Feasibility Report
1.8	Above ground buildings, structures or Earthworks including linear structures, cut and fill or excavations	No	It is an existing working mine. The ML area is already developed. There is no need of any new construction except additional haul roads, Tailing Pond, Mineral Separation Plant will be required. .	Pre Feasibility Report
1.9	Underground works including mining or tunneling?	No	No underground work involved.	Pre Feasibility Report
1.10	Reclamation works?	No	At the end of mining in proposed modified scheme period no part of the quarry would have touched UPL warranting reclamation and rehabilitation.	Pre Feasibility Report
1.11	Dredging?	No	Not applicable	Pre Feasibility Report
1.12	Offshore structures?	No	Not applicable	Pre Feasibility Report
1.13	Production and manufacturing processes?	Yes	Mining will be as per Approved Modifications to the Approved Scheme of Mining.	Pre Feasibility Report
1.14	Facilities for storage of goods or materials?	Yes	<p>There is no topsoil available in the lease area as all most of the area has been degraded. Some top soil which was generated earlier has been stacked over 1.061 Ha area in the NW part of Qry-3&4 which will be used for plantation purpose.</p> <p>Crude ore raised from the quarry is being stacked separately in different ore yard as per the quality which is ear marked in the mining scheme. The low grade ore generated in the mechanized means of mining are stacked separately for beneficiation to make it a salable ore.</p> <p>Regarding storage of COB Plant Tailings, it is planned to provide impervious base to protect leaching into ground water table.</p>	Pre Feasibility Report

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of Information
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<p>The total waste materials likely to be generated during the scheme period are 2,095,655 CuM. Around 10% of these waste materials will be utilized for development of haul roads etc. and the balance materials will be stored in Dump-A&B and Dump-D.</p> <p>It has been observed that part of these dumps (NE part of A&B and NW part of D) contains sub grade ore with around 18% Cr₂O₃. Parts of these materials have been proposed to be re handled for blending and beneficiation during 2016-17 & 2017-18. Dumping of fresh waste has therefore been programmed to be started from SW side of dump-A&B and SE side of dump-D, keeping mineral conservation in view.</p> <p>The quantity of tailings likely to be generated during remaining scheme period is estimated to be around 2,32,000 TPA (24,000 tonnes during 2015-16 and 208,000 tonnes during 2016-17 & 2017-18) with around 8.4 to 9.8% of Cr₂O₃ content. These tailings collected in tails bin will be treated with Ferrous Sulphate and pumped to the tails collection pit through a Hydrocyclone. The under cyclone will be solid waste and the overflow mainly contains water with slime which will be treated for separation of slime collected in sump and will be recycled as process water. The slimes settled in the sump will be periodically pumped through a mud pump to solid waste pit. Flotex and fines spirals separator will be used in tailing circuit to recover 40-15 micron particles. The tailings will be disposed in the OB dump as they contain <10% Cr₂O₃.</p>	Pre Feasibility Report
1.16	Facilities for long term housing of operational workers?	Yes	<p>Maximum person from nearby villages working in the mines. They attain their duty from their respective village only.</p> <p>Some temporary residential facilities (Colony) for labor and staff for about 65 persons over an area of 1.613 Ha. in the lease hold area is made. The persons residing in the colony has been provided with pacca quarters having facility for water, electricity, schooling, transport, marketing, medical, cable TV, sports and other recreations.</p>	Pre Feasibility Report

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of Information
1.17	New road, rail or sea traffic during construction or operation?	Yes	There will be some addition to existing traffic within the lease area during proposed expansion activity.	Pre Feasibility Report
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	No. but, there will be some addition to existing traffic within the lease area during proposed expansion activity.	Pre Feasibility Report
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	There is no proposal for diversion or change in transportation routes.	Pre Feasibility Report and project Proponent
1.20	New or diverted transmission lines or pipelines?	No	Not Applicable	Pre Feasibility Report and project Proponent
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not applicable	Pre Feasibility Report and project Proponent
1.22	Stream crossings?	No	The leasehold area does not have any perennial stream or nala flowing within it.	Topographical Map & Actual Physical Site Features
1.23	Abstraction or transfers of water form ground or surface waters?	Yes	Both Surface water rain water harvesting pond and Ground water from mine pit will be used for dust suppression, COB plant operation, and plantation. Ground water through Deep Bore well will be used for potable use only. Permission from CGWA has been obtained for abstraction ground water of 540 m ³ /day from Mine Pit and 50 m ³ /day of ground water through deep bore well for Domestic & Potable use.	Pre Feasibility Report
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	There is no evidence of such situation affecting mining operation around the lease area. However, as a protective measure a well-designed storm water/garland drain have been provided.	Pre Feasibility Report

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of Information
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	<ol style="list-style-type: none"> 1. For transport of personnel, the public and private communication system is being used and it will be continued. 2. Transport of Ore and other materials will be by road. Tippers, dumpers and trucks of adequate capacity will be used for the purpose. 	Pre Feasibility Report
1.26	Long-term dismantling or decommissioning or restoration works?	Yes	Only restoration will be considered through adequate plantation and back filling during post mining period wherever required.	Pre Feasibility Report
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable	Project Proponent
1.28	Influx of people to an area in either temporarily or permanently?	Yes	<p>Average annual production presently is 88,000 t which will be increased to 200,000 t per annum from 2016-17 onwards.</p> <p>Assuming 310 numbers of working days in a year, 645 t of Chromite is proposed to be produced daily.</p> <p>Keeping the output per man per shift at 2.5 t, about 258 numbers of persons are required for the mine.</p> <p>Since machine mining is being adopted, the requirement of man power will be less by around 40%.</p> <p>Thus, around 155 numbers daily rated workers will be required for manual sorting of ore, helpers in machines and other miscellaneous jobs.</p> <p>The total manpower including Administrative & Supervisory Personnel is 223 numbers.</p>	Pre Feasibility Report
1.29	Introduction of alien species?	No	Plantations are being done and will be done with local species only. As rate of survival / growth of local species is much higher than any alien species.	Project Proponent
1.30	Loss of native species or genetic diversity?	No	Vegetation of the core area mostly shrubs will be affected while clearing of the area for mining activity. This clearing of vegetation will take place wherever required, without affecting the native species. There will be no such impact in the buffer zone of the ML area by the said mining project.	Pre Feasibility Report
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):

S. No.	Information/checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data	Source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	As per HAL Settlement, 5.390 Ha. is non forest land and as per <i>Sabik</i> settlement 1.46 ha. is non forest land. And it is not agricultural land.	Pre Feasibility Report
2.2	Water (expected source & competing users) unit: KLD	Yes	Both Surface water rain water harvesting pond and Ground water from mine pit will be used for dust suppression, COB plant operation, and plantation. Ground water through Deep Borewell will be used for potable use only. Permission from CGWA has been obtained for abstraction ground water of 540 m ³ /day maximum from Mine Pit and 50 m ³ /day maximum of ground water through deep bore well for Domestic & Potable use. 540 m ³ /day of Mine Pit water is for captive use only.	Project Proponent and Site Condition & Draft Mining Plan.
2.3	Minerals (MT)	No	Not applicable	Pre Feasibility Report
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	Yes	Construction material may be required for RCC and PCC work for temporary construction. At present the actual figure of those materials are not available.	Pre Feasibility Report
2.5	Forests and timber (source – MT)	No	No Timbers will be used for any construction work.	Pre Feasibility Report
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	1 number of 500 KVA (0.4 MW) capacity DG set are being used for running of Plants & Machineries and general lightings. For office and colony, 0.64 MW electricity presently sourced from State Grid.	Pre Feasibility Report
2.7	Any other natural resources (use appropriate standard units)	No	Not applicable	Project Proponent / Pre Feasibility Report

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	Source of information data
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	<p>There will be use of Explosives for Blasting. Nitrate mixture such as Power gel explosive will be used for blasting. Ordinary detonator and <i>Nonel</i> system will be used for initiation/ignition.</p> <p>A permanent magazine is already constructed in the ML area for keeping the explosive in safe and secure. Stock of the magazine within ML Area will be restricted to less than the Threshold Limit Prescribed.</p> <p>The proposed capacity of the magazine are as follows;</p> <p>Nitrate Mixture = 75 Kgs.</p> <p>Detonating fuse = 250 meters.</p> <p>Electric & Ordinary Detonators = 1000 numbers.</p> <p>Safety fuse = 500 meters.</p> <p>However, the lessee will engage a licensed Third Party for safety of exploration.</p>	Pre Feasibility Report
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Quantities used are below thresh hold quantity Prescribed.	Pre Feasibility Report
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Quantities used are below thresh hold quantity prescribed.	Pre Feasibility Report
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	There is no such evidence.	Pre Feasibility Report
3.5	Any other causes	No	Not applicable	-----

4. 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	Source of information data
4.1	Soil, overburden or mine wastes	Yes	<p>No Top soil will be generated during the plan period as all most all the area has been degraded. Some Top soil which was generated earlier has been stacked over 1.061 Ha. area in the NW part of Quarry 3 & 4 which will be used for plantation purposes.</p> <p>During the first 2 years (2013-14 to 2014-15) of the approved scheme period about 449,633 CuM OB/IB have been recovered and dumped on existing waste dump A&B and D.</p> <p>After dumping these wastes, the dump No. A&B contains about 21,05,400 CuM waste and covers an area of 12.986 Ha as on 01.08.2015.</p> <p>The dump D is covering 7.306 Ha area and contains about 829,620 CuM of materials as on 01.08.2015.</p> <p>The total waste materials likely to be generated during the prosed scheme period (balance 3 years (2015-16(P) to 2017-18 of the approved scheme period) are 2,095,655 CuM. Around 10% of these waste material will be utilized for development of haul roads etc and the balance material will be stored in Dump A & B and Dump D.</p> <p>It has been observed that part of these dumps (NE part of A & B and NW part of D) contains sub grade ore with around 18% Cr₂O₃. Parts of these materials have been proposed to be re – handled for blending and beneficiation during 2016-17 & 2017-18.</p> <p>Dumping of fresh waste has therefore been programmed to be started from SW side of Dump A & B and SE side of Dump –D, keeping mineral conservation in view.</p>	Pre Feasibility Report
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Septic Tank and Soak Pits as per BIS Specifications are provided at present.	Pre Feasibility Report

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data	Source of information data																				
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	<p>Hazardous Wastes are as follows.</p> <table> <tr> <th>Sl. No</th><th>Stream</th><th>Schedule</th><th>Waste Description</th><th>Qty/Annum</th></tr> <tr> <td>1</td><td>5.1</td><td>I</td><td>Used Oil</td><td>5 KL</td></tr> <tr> <td>2</td><td>35.1</td><td>I</td><td>Used Filters</td><td>200 Nos.</td></tr> <tr> <td>3</td><td>34.3/B1</td><td>I & II</td><td>ETP Sludge containing Chromium</td><td>3 m³</td></tr> </table>	Sl. No	Stream	Schedule	Waste Description	Qty/Annum	1	5.1	I	Used Oil	5 KL	2	35.1	I	Used Filters	200 Nos.	3	34.3/B1	I & II	ETP Sludge containing Chromium	3 m ³	Hazardous Waste Management Rules
Sl. No	Stream	Schedule	Waste Description	Qty/Annum																				
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2	35.1	I	Used Filters	200 Nos.																				
3	34.3/B1	I & II	ETP Sludge containing Chromium	3 m ³																				
4.4	Other industrial process wastes	No	There is no Industrial Process Waste from this ML Area other than OB.	Pre Feasibility Report																				
4.5	Surplus product	No	Not applicable	Mining Plan																				
4.6	Sewage sludge or other sludge from effluent treatment	NO/Yes	No sewage sludge as there is no STP existing. Sludge from ETP is dried and bagged in a thick poly bags and dumped separately in the dump yard.	Pre Feasibility Report																				
4.7	Construction or demolition wastes	Yes	During post mining period there will be generation of some quantity of Solid waste while decommissioning the temporary sheds & temporary office buildings.	Pre Feasibility Report																				
4.8	Redundant machinery or equipment	Yes	As per replacement schedule for the machinery or equipment, which will attain its economic life will be replaced with new equipment and old equipment will be disposed of as scrap through auction.	Project Proponent																				
4.9	Contaminated soils or other materials	No	Not Applicable	Pre Feasibility Report																				
4.10	Agricultural wastes	No	Not Applicable	Pre Feasibility Report																				
4.11	Other solid wastes	No	Not Applicable	Pre Feasibility Report																				

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	Source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Emissions from Mining Equipments will be in traces of SO ₂ , NO _x , PM, CO and other trace elements.	Monthly Monitoring Data
5.2	Emissions from production processes	Yes	Emissions from COB Plant will be in traces of SO ₂ , NO _x , PM, CO and other trace elements.	Monthly Monitoring Data
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive Dust emission rate near Ore Plat (i) and Near Ore Plot No. (ii) are as follows. Fugitive Dust (µg/M ³) Near Ore Plot (i) = 67.48 Near Ore Plot (ii) = 69.11	Monthly Monitoring Data
5.4	Emissions from construction activities including plant and equipment	Yes	Fugitive emission	Pre Feasibility Report
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Fugitive Dust	Pre Feasibility Report
5.6	Emissions from incineration of waste	No	No provision for Incinerator in the Mining Activities.	Project Proponent
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	No provision for burning of Wastes in the Open Area in the Project.	Project Proponent
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	source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes, due to operation of Vehicles and other Mining equipments.	<ol style="list-style-type: none"> 1. By selecting low noise prone equipment which would have leq level below 85 dB(A) at 1.0 meter distance. 2. By isolating the noise prone unit from the working personnel's continuous exposure. 3. By administrative control, the administrative control would have a major role to monitor the noise, take remedial measures and ensure that no plant personnel is over exposed to noise. 4. By providing acoustic enclosure at the source of noise generation. 	Pre Feasibility Report and Project Proponent
6.2	From industrial or similar processes	Yes	Same as above	---
6.3	From construction or demolition	Yes	Same as above	---
6.4	From blasting or piling	Yes	Same as above	---
6.5	From construction or operational traffic	yes	Same as above	----
6.6	From lighting or cooling systems	No	Not applicable	---
6.7	From any other sources	-----	-----	---

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	Source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	Handling and storage of hazardous materials will be strictly followed as per Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 and amended thereafter. So no risk in this regard.	Pre Feasibility Report / Project proponent
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	There will be mainly surface runoff from the ML area. Which will be treated by adequately designed Garland Drain, Holding / Sedimentation pond with intermediate check Dams and ETP before discharge to outside ML area. The final discharge water will meet the norms specified by CPCB as well as OSPCB. So no risk envisage in this regard.	Pre Feasibility Report / Project proponent
7.3	By deposition of pollutants emitted to air into the land or into water	No	All emissions to air, water and land will be strictly as per the provisional limits. Thus, no risk of contamination in this regard.	Pre Feasibility Report / Project proponent
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	Situation of any long term risk is ruled out as the project proposed all adequate remedial measures for control of pollution.	Pre – Feasibility Report / Project proponent

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	Source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	But all preventive as well incidental measures will be followed as per Mines –Safety Rules as well as the DGMS Guidelines and Fire Safety Rules from the very inception of mining operation.	Pre Feasibility Report / Project proponent
8.2	From any other causes	No-	Not applicable	----
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. Floods, earthquakes, landslides, cloudburst etc)?	No	Project is not in a Flood Prone area. No such natural disaster is envisaged in the area.	Pre Feasibility Report / Project proponent

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	Source of information data
9.1	<p>Lead to development of supporting. Facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:</p> <ul style="list-style-type: none"> Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) Housing development Extractive industries Supply industries Other 	<p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>---</p>	<p>The growth may be very insignificant as the project is not that large to create such potential. However, any developmental activities in case considered will follow all related environmental guideline to protect the environment.</p>	Environmental Guidelines
9.2	Lead to after-use of the site, which could have an impact on the environment	No	Not Applicable as it is a lease hold area not free hold.	----
9.3	Set a precedent for later developments	Yes	Will follow all statutory provisions	---
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Distance is maintained	----

(III) Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary	Source of information data
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	Not Applicable	Toposheet No. 73 G/16
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	<ul style="list-style-type: none"> ➤ There is no such Ecologically Sensitive area as per Hon'ble Supreme Court Civil writ petition No.460 of 2004. ➤ The Damsal Nala is flowing adjacent to Northern boundary of ML area at a distance of 20 meters. ➤ Kusai nala is flowing at a distance of 9.0 kms. towards NNE of ML area. ➤ Kukurangee nala is flowing at a distance of 8.0 kms. towards NNW of ML area. ➤ Patharkanchia nala is flowing at a distance of 8.0 kms towards SSE of ML area. ➤ Daitary Protected Forest is in the buffer Zone of the Mine is at a distance of 0.6 kms from the lease area towards North. ➤ The ML area and the proposed COB Plant area is a part of Mahagiri Protected Forests. ➤ Mahagiri Reserve Forests is at 8 kms from ML area towards SSW. 	Toposheet No. 73 G/16
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	Not Applicable	Toposheet No. 73 G/16
4	Inland, coastal, marine or underground waters	No	Not applicable	Toposheet No. 73 G/16

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary	Source of information data
5	State, National boundaries	No	No State or national Boundary is within 15 kms of ML Area.	Toposheet No. 73 G/16
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Not applicable	Toposheet No. 73 G/16
7	Defence installations	No	Not applicable	Toposheet No. 73 G/16
8	Densely populated or built-up area	No	Jajpur Road at a distance of 51 kms. by road.	Latest Census Data
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	Yes	<ul style="list-style-type: none"> ➤ Primary School at Saruabil at a distance of 3.0 kms from lease area by road. ➤ High School is at a distance of more than 10.0.kms from lease area by road. ➤ Hospitals at Kaliapani at a distance of 8.0 kms from lease area by road. 	Project Proponent and Toposheet.
10	Areas containing important, high quality or scarce resources (<i>ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals</i>)	Yes	Good Quality of Chromite Ores are available.	Project Proponent
11	Areas already subjected to pollution or environmental damage. (<i>those where existing legal environmental standards are exceeded</i>)	No	Not applicable	----
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (<i>earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions</i>)	No	<p>Not applicable as the ML area falls under Seismic Zone - II.</p> <p>The Lease area does not comes under Severity with reference to Richter Scale.</p>	Seismic Zone Maps

(IV) Proposed Terms of Reference for EIA studies

Proposed Terms of Reference of EIA Study will follow the generic structure of EIA out lined in Appendix III of the EIA Notification No.S.O.1533 (E) dated 14th September, 2006 and amended thereafter. Briefly describing the same as follows;

Generic Structure of Proposed EIA Report

Sl. No	Chapter	Section
1.	Introduction	<ul style="list-style-type: none">1.1 Preamble1.2 Purpose of the report1.3 Identification of project & project proponent1.4 Brief description of nature, size, location of the project1.5 Its importance to the country and region1.6 Scope of the study – details of regulatory scoping carried out1.7 Terms of Reference
2.	Project Description	<ul style="list-style-type: none">2.1 Type of project2.2 Need for the project2.3 Location including general location, specific location, project boundary & project site layout2.4 Size or magnitude of operation (Associated activities required by or for the project)2.5 Proposed schedule for approval and implementation2.6 Technology and process description2.7 Project description.<ul style="list-style-type: none">2.7.1 Project layout2.7.2 Components of project2.7.3 Schematic representations of the feasibility drawings (information important for EIA purpose)2.8 Description of mitigation measures incorporated into the project to meet environmental standards, environmental operating conditions, and other EIA requirements (as required by the scope)2.9 Assessment of New & untested technology for the risk of technological failure
3.	Description of the Environment	<ul style="list-style-type: none">3.1 Study area3.2 Period of Study3.3 Components & Methodology3.4 Establishment of baseline for valued environmental components, as identified in the scope3.5 Base maps of all environmental components

4.	Anticipated Environmental Impacts & Mitigation Measures	4.1 Details of Investigated Environmental impacts 4.1.1 Due to project location 4.1.2 Possible accidents, 4.1.3 Project design, 4.1.4 Project construction 4.1.5 Regular operations, 4.1.6 Final decommissioning 4.1.7 Rehabilitation of a completed project 4.2 Measures for minimizing and / or off setting adverse impacts identified 4.3 Irreversible and Irretrievable commitments of environmental components 4.4 Assessment of significance of impacts 4.4.1 Criteria for Determining significance 4.4.2 Criteria for Assigning significance 4.5 Mitigation measures
5.	Analysis of Alternatives (Technology & Site)	5.1 In case, the scoping exercise results in need for alternatives 5.1.1 Description of each alternative 5.1.2 Summary of adverse impacts of each alternative 5.1.3 Mitigation measures proposed for each alternative and 5.1.4 Selection of alternative
6.	Environmental Monitoring Program	6.1 Technical aspects of monitoring the effectiveness of mitigation measures 6.1.1 Measurement methodologies, frequency, location, data analysis, reporting schedules, emergency procedures, detailed budget & procurement schedules)
7.	Additional Studies	7.1 Public Consultation 7.2 Risk assessment 7.3 Social Impact Assessment. R&R Action Plans
8.	Project Benefits	8.1 Improvements in the physical infrastructure 8.2 Improvements in the social infrastructure 8.3 Employment potential –skilled; semi-skilled and unskilled 8.4 Other tangible benefits
9.	Environmental Cost Benefit Analysis	9.1 Environmental Cost Benefit Analysis

10.	EMP	10.1 Description of the administrative aspects of ensuring that mitigation measures are implemented 10.2 The effectiveness of administrative aspects monitored, after approval of the EIA
11	Summary & Conclusion (This will constitute the summary of the EIA Report)	11.1 Overall justification for implementation of the project 11.2 Description of methods for Mitigation of adverse effects
12.	Disclosure of Consultants engaged	12.1 The names of the Consultants engaged 12.2 Brief resume and nature of Consultancy rendered by the Consultant

Note: Besides the above, the additional ToRs to be issued by MoEFCC will be covered in the EIA/EMP Report.

- (b) I hereby given undertaking that the data and information given in the application and enclosures 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 give, if any to the project will be revoked at our risk and cost.

Date: 04/08/2016

Place: Cuttack

For B. C. Mohanty & Sons (P) Ltd.

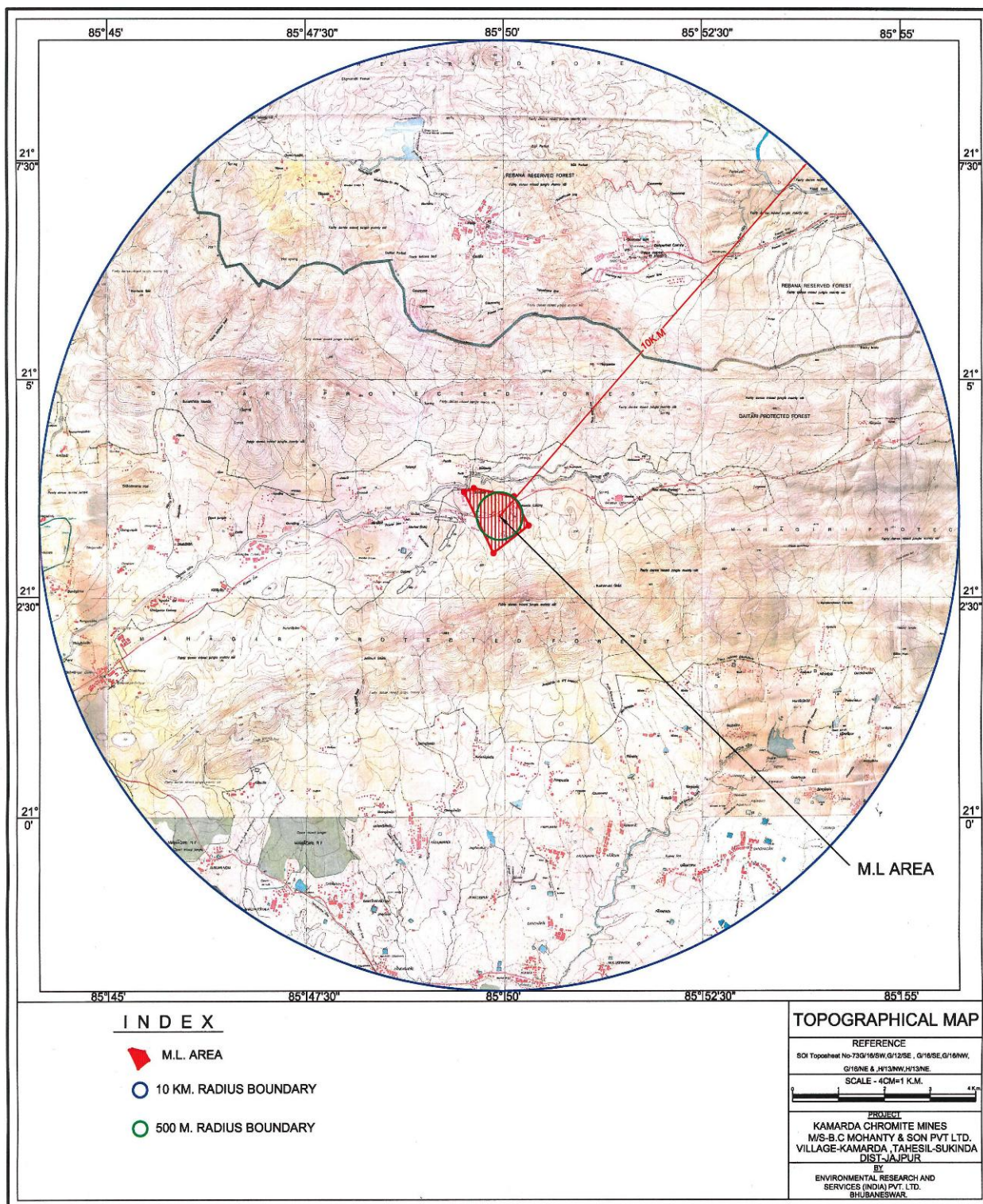
S. Mohanty.

DIRECTOR

Signature of the applicant
With name and Full Address
(Project Proponent/Authorized Signatory)

Mr. Siddhartha Mohanty
Director and Nominated Owner for the Lessee.
M/s B. C. Mohanty & Sons (P) Limited
Rajabagicha, (Opposite to S. B. I., Jhanjirmangala),
Cuttack – 753009, Odisha

Location Map/Topographical Map



Copy of Forest Clearance

F. No. 8-81/1996-FC
Government of India
Ministry of Environment & Forests
(FC Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi – 110 510.

Dated: 28th March 2008

To
The Principal Secretary (Forests),
Government of Orissa,
Bhubaneswer.

Sub: Diversion of 87.44 ha. of forest land (including 41.157 ha area already approved by this Ministry's order dated 14.02.97 and 29.08.97) for renewal of Kamarda Chromite mining lease of M/s B.C. Mohanty & Sons (Pvt.) Ltd. in Jajpur district of Orissa.

Sir,

I am directed to refer to State Government's letter No.10.F. (Cons) / 6 / 1999 / 1500 / F&E dated 21.01.1999 on the subject cited above seeking prior approval of the Central Government under the Forest (Conservation) Act, 1980. After careful consideration of the proposal by the Forest Advisory Committee constituted under Section-3 of the said Act, **in-principle approval** for the said Mining Lease was granted vide this Ministry's letter of even number dated 4/7th July, 2003 subject to fulfillment of certain conditions. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested the Central Government to grant final approval.

2. In this connection, I am directed to say that on the basis of the compliance report furnished by the State Government vide letter No. 10.F. (Cons) / 6 / 1999 / 4479 / F&E dated 14.03.2008, approval of the Central Government is hereby granted under Section-2 of the Forest (Conservation) Act, 1980 for diversion of 87.44 ha of forest land for renewal of Kamarda Chromite Mining Lease of M/s B.C. Mohanty & Sons (Pvt.) Limited in Jajpur district of Orissa subject to fulfillment of the following conditions:

1. Legal status of the diverted forest land shall remain unchanged.
2. (i) Compensatory afforestation shall be raised and maintained by the State Forest Department at the project cost.
- (ii) Fencing, protection and regeneration of the safety zone area (7.5 metres strip all along the outer boundary of the mining lease area) shall be done at the project cost. Besides this, afforestation on degraded forest land, to be selected elsewhere, measuring one and a half times the area under safety zone, shall also be done at the project cost.
- (iii) Wherever possible and technically feasible, the User Agency shall undertake afforestation measures in the blanks within the lease area, as well as along the roads outside the lease area diverted under this approval, in consultation with the State Forest Department at the project cost.
3. Following activities shall be undertaken by the State Forest Department at the project cost:
 - (i) Proper mitigative measures to minimize soil erosion and choking of streams shall be prepared and implemented.

- (ii) Planting of adequate drought hardy plant species and sowing of seeds to arrest soil erosion.
- (iii) Construction of check dams, retention/toe walls to arrest sliding down of the excavated material along the contour.
4. The period of diversion under this approval shall be twenty (20) years with effect from date of issue of this letter subject to valid lease by User Agency under the MMDR Act, 1957.
5. (i) The User Agency shall take up planting work on the static dumps during the advance mining operations.
- (ii) All the dumps shall be fully reclaimed by afforestation immediately after closure of the mine in the shortest possible period under supervision of the State Forest Department.
6. Any tree felling shall be done only when it is absolutely necessary and unavoidable, and that too under strict supervision of the State Forest Department.
7. No damage to the flora and fauna of the area shall be caused.
8. Reclamation Plan shall be strictly implemented which shall be monitored regularly by the State Forest Department.
9. It shall be ensured that no labour-camps are set up inside the forest area.
10. The mining lease area shall be demarcated on ground at the project cost, using four feet high RCC pillars, with each pillar inscribed with the serial number, forward and backward bearings and distance between two adjacent pillars.
11. The forest land shall not be used for any purpose other than that specified in the proposal.
12. This approval is subject to the Environment Clearance under the Environment (Protection) Act, 1986 and any other clearances required for such project.
13. Any other condition that the CCF (Central), Regional Office, Bhubaneswar, may impose from time to time for protection and improvement of flora and fauna in the forest area, shall also be applicable.

Yours faithfully,

(C.D. Singh)

Assistant Inspector General of Forests

Copy to :-

1. The Principal Chief Conservation of Forests, Government of Orissa, Bhubaneswar.
2. The Nodal Officer, O/o the PCCF, Government of Orissa, Bhubaneswar.
3. The Chief Conservator of Forests (Central), Regional Office, Bhubaneswar.
4. User Agency.
5. Monitoring Cell of FC Section.

(C.D. Singh)

Assistant Inspector General of Forests