



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Head - Corporate Affairs
SARDA ENERGY AND MINERALS LIMITED

M/s Sarda Energy & Minerals Limited 1st Floor, Vanijya Bhawan,,Jail Road, Devendra Nagar Square, Raipur (C.G.),Raipur,Chhattisgarh-492001

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/CG/CMIN/416221/2023 dated 29 Jan 2023. The particulars of the environmental clearance granted to the project are as below.

- EC Identification No.** EC23A001CG139493
- File No.** J-11015/37/2004-IA-II(M)
- Project Type** Expansion
- Category** A
- Project/Activity including Schedule No.** 1(a) Mining of minerals
- Name of Project** Revised EIA/EMP Report as per the provisions under para 7 (ii) (a) EIA Notification and its subsequent amendments till date, for Expansion of production capacity from 1.2 MTPA to 1.8 MTPA of Karwahi Open cast Coal Block (Gare Palma IV/7 Coal Block) within the existing Mine lease located at Village-Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda, Tehsil- Tamnar, District – Raigarh, Chattisgarh by M/s Sarda Energy & Minerals Limited.
- Name of Company/Organization** SARDA ENERGY AND MINERALS LIMITED
- Location of Project** Chhattisgarh
- TOR Date** N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 24/03/2023

(e-signed)
Lalit Bokolia
Scientist F
IA - (Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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File No. J-11015/37/2004-IA-II (M)]
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira ParyavaranBhawan,
Jorbagh Road, N Delhi – 3
Email: lk.bokolia@nic.in Tel: 011-20819417

Dated: 24th March, 2023

To,

The Head Corporate Affairs
M/s Sarda Energy Minerals Limited
at villages Karwahi, Khamaria, Saraitola
Raipur -492001 (Chattisgarh)
E-mail: pdutttagupta@seml.co.in

Sub: Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA by M/s Sarda Energy Minerals Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh) - Reconsideration for Environmental Clearance under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion) – reg.

Sir,

This has reference to your online proposal No. IA/CG/CMIN/416221/2023 dated 29th January, 2023 for grant of Environmental Clearance to the above project.

2. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance to the project for Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA by M/s Sarda Energy Minerals Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh).

The project/activity is covered under category 'A' of item1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 40th EAC Meeting during 16 -17 February, 2023 through physical mode. The details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meetings, are given as under:

- (i) The project area is covered under Survey of India Topo Sheet No F44L8 Project site and is bounded by the geographical coordinates ranging from Latitude: 22°9'11.383"N & 22°9'49.32"N, Longitude: 83°28'59.858"E & 83°29'50.409"E.
- (ii) Coal linkage of the project is proposed for commercial sale of Coal.
- (iii) Joint venture cartel has been formed: Not Applicable
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its

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EC to Expansion of Karwahi OCP of M/s Sarda Energy and Minerals Limited

OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.

- (v) Employment generation, direct employment to 300 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of direct and indirect employment generation in that region.
- (vii) Earlier, the EC for Gare Palma IV/7 Coal Block was earlier accorded to M/s Raipur Alloys & Steel Limited vide letter No. J-11015/37/2004 IA.II (M) dated 30.09.2005. After deallocation of coal block by Supreme court and M/s Monnet Ispat & Energy Limited became successful bidder. The EC was transferred from M/s Raipur Alloys & Steel Limited to M/s Monnet Ispat & Energy Limited vide letter No. J-11015/37/2004.1A II (M) dated 11.05.2015. Further, after Coal block re-auction process, M/s Sarda Energy & Minerals Limited had been declared as the successful bidder for Gare Palma IV/7. The EC was transferred from M/s Monnet Ispat & Energy Limited to M/s Sarda Energy and Minerals Limited with the production capacity of 1.2 MTPA vide dated 02.06.2021.
- (viii) Total mining lease area as per block allotment is 482 ha. The Mining Lease has been executed by the State Government on 23.11.2021 is over an area of 277.100 Ha. Revised Mine Plan with mine closure plan for 277.10 ha is in progress.
- (ix) The land usage pattern of the project is as follows

Pre-mining

S. No.	Land Use	Within ML Area (ha)	Outside ML Area (ha)	Total (ha)
1	Agricultural Land	256.122	Nil	256.122
2	Forest Land	0	Nil	0
3	Govt./Non forest land/Others	5.528	Nil	5.528
4	Grazing land	9.344	Nil	9.344
5	Barren/Water bodies/Other use	3.435	Nil	3.435
6	Free Hold	2.671	Nil	2.671
Total		277.10	0	277.10

Land use during mining

S. No	Land Use during mining	Land use (Proposed)	Land use (End of Life)	Land Use (Post Closure)					
				Plantation	Water Body	Agricultural land	Public Use	Undisturbed	Total
1	External OB Dump	7.89	7.89			7.89			7.89
2	Top soil Dump								
3	Excavated area	248.44							
	Backfilled area		143.24			143.24			143.24

	Excavated Void		105.20		68.29	36.91			105.20
4	Road & Infrastructure	0.60	0.60			0.60			0.60
5	Built up areas								
6	Green Belt	18.52	18.52	18.52					18.52
7	Safety Zone								
8	Undisturbed area								
	Haul Road b/w quarries	1.65	1.65			1.65			1.65
Total		277.1	277.10	18.52	68.29	190.29	0	0	277.10

Post-mining

S. No.	Type	Total Area	Reclaimed Area	Un-reclaimed Area
1	Excavation/Quarry Area :	248.44	180.15	68.29
	(a) Backfilled areas	143.24	143.24	-
	(b) Excavated Void	105.2	36.91	68.29
2	External Dump	7.89	7.89	-
3	Safety Zone			-
4	Roads & Infrastructure	0.6	0.6	-
5	Garland drains			-
6	Embankment			-
7	Others	20.17	20.17	-
Total		277.100	277.1	208.81

- (x) Total geological reserve reported in the mine lease area is 239.045 MT with 48.84MT mineable reserves. Out of total mineable reserve of 48.84MT, 46.40MT is available for extraction. Percent of extraction is 21.567%
- (xi) 9 seams with thickness ranging from 0.5 m to 6.86m are workable. Grade of coal is G-11, while gradient is 2° to 3°
- (xii) Method of mining operations envisages by Opencast, Shovel Dumper, Surface Miner.
- (xiii) Life of mine is 24 years.
- (xiv) The project has 4 (3 existing + 1 Proposed) external OB dumps in an area of Dump-1 23.72ha, Dump-2: 22.712 ha, Dump-3: 12.17ha, Dump-4: 2.80ha (Proposed) with Dump-1: 60 m, Dump-2: 50 m, Dump-3: 20m, Dump-4: 60 m height and 157.14.
- (xv) Total quarry area is 248.44 Ha out of which backfilling will be done in 180.15 ha while final mine void will be created in an area of 68.29 Ha with a depth of 100m in northern side and about 65m in west side. Backfilled quarry area of 180.15 Ha shall be reclaimed with plantation. Final mine void will be converted water body.
- (xvi) Transportation of coal has been proposed by Loaders & Dumpers in mine pit head. The allotted coal block is a commercial coal block for sale of coal. The consumers/buyers will lift the coal from pit head by truck and transport the same to end use plant by rail/road,
- (xvii) Reclamation Plan in an area of 208.81 ha, comprising of 7.89 ha ha of external dump, 0 Ha of internal dump and 18.52 ha of green belt. In addition to this, an area of 182.4 ha, included in the safety zone/rationalization area, has also been proposed for green belt development

(will be created as Agricultural Land).

- (xviii) No forest land has been reported to be involved in mine lease area.
- (xix) There are no National Parks, Sanctuary, Biosphere Reserve, Tiger Reserves, Elephant Reserve/Corridor and Wildlife Sanctuaries and Eco-Sensitive Zones fall in the study area impacted within 15 km.
- (xx) No any sighted species falls under schedule -I of Wildlife Protection Act 1972.
- (xxi) Base Line Environmental Data at the Project Site & 10 km study area from March 2022 to May 2022 (Pre-Monsoon as per condition prescribed in the standard ToR pertaining to various environmental components including air, noise, water, land and biological components along with parameters of human interest which may be affected due to proposed Project.
- (xxii) The ground water level has been reported to be varying between 0.42 to 12.49 m bgl during pre-monsoon and between 0.02 to 4.32 m bgl during post-monsoon. Total water requirement for the project is 339 KLD
- (xxiii) Approval of Central Ground Water Authority granted vide letter no 21-4/CGWA/RASL/03-1935 dated 29/10/2003. Further Comprehensive hydrogeological study with groundwater modeling on groundwater conditions in core and buffer zones of Gare Palma IV/7 Coal Mine for obtaining NOC from CGWB/CGWA is completed and accordingly, approval of Central Ground Water Authority granted vide CGWA/NOC/MIN/ORIG/2022/17116 dated 25/11/2022.
- (xxiv) Public hearing for the project of 1.2 MTPA capacity in an area of 335.736 ha was conducted on 08.01.2003 at SDM Office, Tehsil Gharghoda, District Raigarh, Chattisgarh under the Chairmanship of SDM, Tehsil Gharghoda, District Raigarh, Chattisgarh. Major issues raised in the public hearing and appropriate action to address the issues raised in the Public Hearing have already been taken into account.
- (xxv) Kelo River is flowing about 1.2 km away towards East direction of Karwahi opencast Coal Mine Lease Area is flowing
- (xxvi) No court cases, violation cases are pending against the project of the PP.
- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year 2009 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxviii) Total cost of the project is Rs 41.70 Cr (Rs. 31.70 Cr Existing + 10.00 Cr for Proposed Expansion.) Cost of production will depend on market demand. CSR cost as per Companies Act 2013, R&R cost is N.A. Environment Management Cost is Rs. 1.5 Crores.
- (xxix) Consent to Operate for the existing capacity was obtained from the State PCB on 03/08/2021 vide letter no. 2962/TS/CECB/2021 and is valid till 31/03/2024

4. The Expert Appraisal Committee in its 40th EAC Meeting held during 16 -17 February, 2023 through Physical mode has recommended the project for grant of Environment Clearance (EC). Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for Environment Clearance (EC) to Expansion of Karwahi Opencast coal mine project sub block Gare IV/7 with production capacity from 1.2 MTPA to 1.44 MTPA by M/s Sarda Energy Minerals Limited located at villages Karwahi, Khamaria, Saraitola, Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh), under Ministry's OM

Dholnara & Bajarmuda Tehsil Karwahi, District Raigarh (Chattisgarh), under Ministry's OM dated 11.04.2022 (Stage I - 20% expansion), under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions in addition to the standard environmental conditions notified by the Ministry:-

- (i) PP shall obtain CTE/CTO for capacity enhancement upto 1.44 MTPA.
- (ii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP to comply with all the recommendation of Carrying Capacity Study being conducted by reputed institute by CPCB & SPCB.
- (iii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, Coal transportation is permitted for only one year through road from date of commissioning and subsequently, transport must be done by rail or closed conveyor belt only.
- (iv) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, proper and free health care facilities with multispecialty treatment system shall be provided in coal mine buffer area.
- (v) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP shall have to comply that when coal is sold to TPP, there is the agreement to sell that at least 25% Fly Ash of the coal sold, should be accepted by the coal company (seller) from TPP(Purchaser) failing which coal company shall be liable for civil action and other legal measures.
- (vi) The project proponent shall implement the mechanized system in the Mine lease area before December, 2023.
- (vii) The project proponent shall prepare 5-year plantation plan along with the preparation of Garland drain and retaining wall.
- (viii) The project proponent shall make plantation plan of atleast 1 Lakh number in next 3 years by Miyawaki method.
- (ix) The project proponent shall prepare the systemic mine closure plan.
- (x) The project proponent shall prepare the transportation plan with best possible route. The dedicated pukka road route should not be pass from any village area.
- (xi) PP shall deploy minimum 10% of total Mine vehicle operating, on biofuels and Electric.
- (xii) The PP shall increase the truck fleet size i.e. upto 45-50 tonne.
- (xiii) The PP shall develop Sal nursery with the minimum plant capacity of 25,000 within 5 ha of project area. Further, Sal tree shall be planted as much as possible while reclaiming during mine closure activity.
- (xiv) PP shall install fixed fog cannon (mist spayer) all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB.
- (xv) PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.
- (xvi) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing

mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

- (xvii) PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC.
- (xviii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.
- (xix) PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup at site itself which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority
- (xx) All the condition stipulated in the EC letter and Transfer letter vide F. No. J-11015/37/2004-IA.II (M) dated 30.09.2005 and 11.05.2015 respectively shall remain unchanged.

4.1 The grant of Environment Clearance (EC) is further subject to compliance of the Standard EC conditions as under:

(a) Statutory compliance

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

(b) Air quality monitoring and preservation

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the ~~buffer zone~~ for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- (vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environment friendly sustainable technology should be implemented for mitigating such parameters.

(c) Water quality monitoring and preservation

- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E)

dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

(iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

(vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).

(viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.

(ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

(x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.

(xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

(d) Noise and Vibration monitoring and prevention

(i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

(iii) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

(i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

(ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.

(iv) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

(i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in

1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change (MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

(ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

(iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

(v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

(vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species

(endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(i) Corporate Environment Responsibility

- (i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account

and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(v) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

(v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.

(ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

(x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

(xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

(xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

(xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules made their under and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report as well as during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented by the EC in letter and spirit.

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

7. Any appeal against this Environment Clearance (EC) shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

8. The coal company/project proponent shall be liable to pay the compensation against illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

10. This Environment Clearance (EC) shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

11. All the conditions stipulated in Ministry's EC letter and Transfer letter vide F. No. J-11015/37/2004-IA.II (M) dated 30.09.2005 and 11.05.2015 respectively shall remain unchanged.

This issues with the approval of the competent Authority


(Lalit Bokolia)
Director

Copy to:

1. The Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat Raipur
2. Deputy Director General of Forests (C), Ministry of Env., Forest and Climate Change, Integrated Regional Office, Aranya Bhawan, North Block, Sector-19 Naya Raipur, Atal Nagar, Chhattisgarh - 492002
3. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Jannagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
4. The Member Secretary, Central Pollution Control Board, CBD-cum Office Complex East Arjun Nagar New Delhi- 32
5. The District Collector, Raigarh, Government of Chhattisgarh.
6. Monitoring File
7. PARIVESH


(Lalit Bokolia)