

No. J-11015/03/2008-IA-II (M)  
Government of India  
Ministry of Environment, Forest and Climate Change  
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,  
Jorbagh Road, N Delhi-3  
Dated: 10<sup>th</sup> August, 2018

To,

The Managing Director,  
M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd,  
Vidyut Bhawan, Janpath, Joyti Nagar,  
Jaipur - 302 005 (Rajasthan) (Email: fuel.rvun@gmail.com)

**Sub: Expansion of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd in total project area of 2682.856 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh) - Environmental Clearance - reg.**

Sir,

This has reference to your letter No.RVUN/ACE(Fuel) /Dy. CE(Fuel)/D 2617 dated 1<sup>st</sup> December, 2016 along with online proposal No. IA/CG/CMIN/22290/2014 dated 3<sup>rd</sup> December, 2016 and subsequent letters dated 23.01.2017, 30.01.2017, 14.03.2017, 24.05.2017, 30.05.2017, 03.07.2017, 25.07.2017, 12.04.2018, 18.04.2018 and 03.05.2018 on the above mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for grant of environmental clearance to the project for expansion of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd in total project area of 2682.856 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh).

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its 4<sup>th</sup> meeting held on 30-31 January, 2017, 11<sup>th</sup> meeting on 30-31 May, 2017 and 28<sup>th</sup> meeting held on 17-18 April, 2018. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meetings, are reported to be as under:-

(i) The environment clearance for the Parsa East Kanta Basan OCP of 10 MTPA was accorded vide letter dated 21<sup>st</sup> December, 2011, which was further revalidated/amended vide letters dated 25<sup>th</sup> June, 2015 and 29<sup>th</sup> December, 2015.

(ii) The terms of reference (ToR) for the proposed expansion of the OCP and the washery from the present capacity of 10 MTPA to 15 MTPA, was granted by MoEFCC vide letter dated 10<sup>th</sup> September, 2014.

(iii) The latitude and longitude of the project site are 22° 47' 39" and 22° 51' 12" N and 82° 46' 38" and 82° 50' 51" E respectively.

(iv) Joint Venture: There is no joint venture



(v) Coal Linkage :

Sl. No.	Name of specified end use plant	Units	Capacity
1.	Chhabra TPP Unit -3 to 6, District- Baran, Rajasthan	2 x 250 MW 2 x 660 MW	1820 MW
2.	Kalisindh TPP Unit – 1 & 2, District- Jhalawar, Rajasthan	2 x 600 MW	1200 MW
3.	Suratgarh Supercritical TPP, Unit- 7 & 8, District- Shriganganagar, Rajasthan	2 x 660 MW	1320 MW

(vi) Employment generated/to be generated: About 1805 persons will get direct employment in various services till 5th year of mine operation (target achieving year), which will develop due to the project and the persons employed in the project

(vii) Benefits of the project:

- Coal shall be used for in power generation in Rajasthan, which would help in reducing gap in demand and production of electricity in the state.
- The basic requirement of the community will be strengthened by extending health care, educational facilities developed in the township to the community, providing drinking water to the villages affected, building/strengthening of existing roads in the area etc.
- Project will generate direct as well as indirect employment in the area

(viii) The land usage of the project area, both pre-mining and post mining, shall be as follows:

Pre-Mining:

S. No.	Land use	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	701.786	Nil	701.786
2.	Wasteland			
3.	Grazing land			
4.	Settlements			
5.	Surface water			
6.	Forest land	1871.118	Nil	1871.118
7.	Others (Government Land)	109.952	Nil	109.952
	<b>TOTAL</b>	<b>2682.856</b>	<b>Nil</b>	<b>2682.856</b>

Post- Mining:

S. No.	Type	During Mining (ha)	End of Life (ha)	Land Use (ha)					Total
				Plantation Grass/ greenbelt	Water Body	Public Use	Agriculture land	Dismantled	
1.	External OB Dump	112.655	112.655	112.655	-	-	-	-	112.655
2.	Top soil Dump	5.000	5.000	5.000	-	-	-	-	5.000

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3.	Excavation Area	2328.247		2127.555	260.692				2328.247
	(i) Backfilled area		2157.560						
	(ii) Excavated void		230.687						
4.	Road & Infrastructure	137.435	137.435	13.744	-	32.601	-	91.090	137.435
5.	Rationalization Area	39.518	39.518	35.931	-	3.588	-	-	39.518
	<b>TOTAL</b>	<b>2682.856</b>	<b>2682.856</b>	<b>2294.884</b>	<b>260.692</b>	<b>36.189</b>	<b>-</b>	<b>91.090</b>	<b>2682.856</b>

(ix) Total geological reserve is 516.40MT. The mineable reserve 452.46 MT, extractable reserve is 452.46 MT. The per cent of extraction would be 87.62%.

(x) The coal grade is F, stripping ratio 5.24 cum/tonne with an average gradient of 1 in 15. There will be three seams with the details as under:-

Seam	Units	Seam Thickness Maximum
Seam-VI	M	2.27
Seam-V	M	8.37
Seam-IV	M	9.72

(xi) Total estimated water requirement is 13,195 m<sup>3</sup>/day. The level of ground water ranges from 0.30 m to 8.20 m.

(xii) Method of mining: Overburden removal by shovel-dumper & coal mining by surface miner.

(xiii) There shall be two external OB dumps with quantity of 52.07 Mbcm in an area of 112.655 ha with height of 60 m above the surface level, and two internal dump with quantity of 2316.65 Mbcm in an area of 1059.092 ha.

(xiv) The final mine void would be in 230.687 ha with depth of 30 m, and the total quarry area is 2388.247 ha. Backfilled quarry area of 2127.555 ha shall be reclaimed with plantation. A void of 230.687 ha with depth 30 m which is proposed to be converted into a water body.

(xv) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.

(xvi) The life of mine is 34 Years.

(xvii) Transportation: Coal transportation in pit by belt conveyor from in pit to pit head coal handling plant, Surface to Siding by belt conveyor to Pre-weigh Bin and loading at siding by SILO with inbuilt Rapid Loading System. Wagons while in motion hauled by loco.

(xviii) There is R & R involved. In Kente village 89 PAFs rehabilitated out of total 114 PAFs (increased by 23 nos. from base line data of 91) with monitory rehabilitation package & 1 employment to each family. Rehabilitation village has been developed with full facilities of electricity supply, roads with street lighting, piped water supply, school etc. Ghatbarra village with 203 PAFs will require relocation only after 15 years

(xix) Total capital cost of the project is Rs.2369 crores. CSR Cost Rs.10 Crore towards capital costs and Rs.5/T of coal as revenue expenditure (which shall be up scaled after adjusting for depreciation of the rupee). R&R Cost Rs. 82 Crore. Environmental Management Cost (capital cost

Rs.1460 Lakh annual recurring cost Rs. 350 Lakh.

(xx) Atem river is flowing at a distance of 2.7 km from Northern Boundary of the block. A seasonal nala namely Parsa nala flows on the South Eastern part of the block and discharge its water into Atem Nadi. No nala diversion is involved in the project.

(xxi) Ground water clearance has been obtained on 23<sup>rd</sup> September 2009,

(xxii) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone. There are no endemic, endangered species having habitat in the core zone of the study area. The species observed in the core zone were of common occurrence, mostly common birds such as Munias, Wablers, Babblers bulbuls, Egrets and the commonly noted mammals were Porcupine, Mongoose, Indian hare and common fox. A wildlife conservation plan with an estimated cost of Rs. 22 Crore has been prepared by retired IFS officer Mr. P.C Agrahari, which was revised based on the comments of the director Wildlife Institute of India (WII), Dehradun. The same has been approved by Government of Chhattisgarh

(xxiii) Total forest area involved was earlier informed as 1898.328 ha (1654.109 ha of revenue forest land and 244.219 ha of forest land). For its diversion, stage-II forest clearance was granted by the Ministry vide letter dated 15<sup>th</sup> March 2012, which was revalidated on 12<sup>th</sup> April, 2018. As per the revised Mining Plan, total forest land is now reported to be 1871.118 ha.

(xxiv) Total afforestation plan shall be implemented covering an area of 2294.884 ha at the end of mining. Greenbelt over an area of 54.675 ha with density of tree plantation 2500 trees/ha.

(xxv) There are court cases/violation involved with the details as under:-

- Appeal No.73 of 2012 before the National Green Tribunal against the order dated 28<sup>th</sup> March, 2012 passed by the Forest Department, State of Chhattisgarh.
- NGT, vide judgment dated 24<sup>th</sup> March, 2014, set aside the order dated 23<sup>rd</sup> June, 2011 and the consequential order dated 28<sup>th</sup> March, 2012 passed by the Government of Chhattisgarh under section 2 of the Forest (Conservation) Act, 1980. Further, the case was remanded to MoEF with directions to seek fresh advice of FAC within reasonable time on all aspects of the proposal. NGT also directed suspension of all works, except the work of conservation of existing flora and fauna, till further orders are passed by MoEF.
- Aggrieved against the judgment passed by NGT, RVUNL preferred a civil appeal (CA No.4395 of 2014) before the Hon'ble Supreme Court of India.
- Vide order dated 28<sup>th</sup> April, 2014, the Hon'ble Court has stayed the direction in the impugned order whereby NGT had directed that all works commenced by the RVUNL pursuant to the order dated 28<sup>th</sup> March, 2012 passed by the State of Chhattisgarh under Section 2 of the Forest Conservation Act, 1980 shall stand suspended till further orders are passed by the Ministry of Environment and Forests.
- Writ Petition (C) No.1346/2016 titled Forest Right Committee Ghatbarra Vs Union of India & Ors before the Hon'ble High Court of Chhattisgarh, regarding Forest Rights of the Community over the forest land.

(xxvi) Public Hearing was held on 11<sup>th</sup> September 2016 which was organized by Chhattisgarh Environment Conservation Board (CECB) in village Basan, District Surguja (Chhattisgarh). About 1200 persons from surrounding villages attended the public hearing and expressed their views. The issues raised in the public hearing include mine discharge, arrangement of treatment of polluted water, transportation of coal, employment, culture and traditions, rehabilitation etc.

(xxvii) Mining Plan for 10 MTPA capacity was approved by Ministry of Coal vide letter No.13016/74/2006-CA-I dated 16<sup>th</sup> July, 2009. The revised Mining Plan for expansion project from 10 to 15 MTPA was accorded in principle approval on 3<sup>rd</sup> February, 2012. Mining Plan (first revision) of 15 MTPA was approved by MoC on 19<sup>th</sup> November, 2013. Mining Plan 15 MTPA

(second revision) was approved by MoC on 12<sup>th</sup> August, 2016 to accommodate FBC Power Plant within mine lease area as per EC condition. Mine closure plan is an integral part of mining plan. (xxviii) 10 MTPA pit top Jig Washery commissioned. Additional 5 MTPA Washery is proposed. Coal washery has been planned for yield of 77.5% of clean coal with an ash content of about 30% based on throughput quality of ROM coal. Salient features of the coal washery are as under:-

Description	Details		
Capacity	10 MTPA (Present Capacity)	5 MTPA Washery (Additional)	15 MTPA (Total Capacity After Expansion)
Hourly Throughout capacity	1700 TPH	800 TPH	2500 TPH
No. of Annual working Hours	6000 hrs	6000 hrs	6000 hrs
Washing Technology	Wet washing process	Wet washing process	Wet washing process
Plant Process	Wet process comprising of crushing, screening, washing and material handling		
Land Requirement	28.381 ha (no additional land requirement for expansion)		
Water Requirement	3750 m <sup>3</sup> /day	1950 m <sup>3</sup> /day	5700 m <sup>3</sup> /day
Source of Water	Mine discharge		
Power Requirement & source	10 MVA from existing 33kv Substation	15 MVA from 132 kv Sub-station (under construction)	

(xxix) The monitoring report on compliance status for the conditions stipulated in the existing environmental clearance dated 21<sup>st</sup> December, 2011 has been forwarded by the Regional Office, MoEFCC at Nagpur vide their letter No.3-3/2012(Env)/1080 dated 21<sup>st</sup> November 2016, based on the site visit carried out on 11<sup>th</sup> September, 2016.

4. The Expert Appraisal Committee in its 28<sup>th</sup> meeting held on 17-18 April, 2018 has recommended the project for grant of environmental clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the **expansion of Parsa East and Kanta Basan Opencast Coal Mining project from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd in a total area of 2682.856 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh)**, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the terms & conditions and environmental safeguards as below:-

- (i) All the conditions stipulated by the Ministry vide letter dated 12<sup>th</sup> April, 2018 for diversion of 1898.328 ha forest land shall be complied with.
- (ii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (iii) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee,

which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.

(iv) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.

(v) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.

(vi) Thick green belt of 75 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.

(vii) The maximum production from the coal washery at any given time shall not exceed the limit as prescribed in the EC.

(viii) The project proponent shall obtain consent to establish from the State Pollution Control Boards of Chhattisgarh for the coal washery of 15 MTPA prior to commencement of the industrial operations.

(ix) Transportation of raw coal, washed coal and the rejects shall be through rail.

(x) The technology so chosen for the washery should conform to 'Zero Liquid Discharge'.

(xi) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.

(xii) Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.

(xiii) Total fresh water requirement shall be less than 1.5 cum/tonne of raw coal.

**4.1** The grant of EC is further subject to compliance of the generic conditions as under:

**(a) Mining**

(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) No change in mining method i.e OC to UG, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change.

(iii) 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).

(iv) No mining shall be carried out in forest land without obtaining Forestry Clearance as per the provisions of the Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.

**(b) Coal beneficiation**

(i) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there-under.



(ii) No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of this Ministry. No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made.

(iii) No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m<sup>3</sup>/tonne of raw coal.

**(c) Land reclamation and water conservation**

(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 shall be submitted to Ministry of Environment, Forest and Climate Change/Regional Office (RO).

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

(iii) 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 handed over to the respective state government as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> August, 2009 and subsequent amendments.

(iv) 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 Ministry of Environment, Forest and Climate Change/Regional Office on six monthly basis.

(v) The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. 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 on six monthly basis.

(vi) An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.



(vii) Three tier greenbelt comprising of a mix of native species, of minimum 30 m width shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/transfer points and also along internal roads/main approach roads.

(viii) Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.

(ix) Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.

(x) Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.

(xi) Fly ash shall be utilized 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 S.O. 2804 (E) dated 3<sup>rd</sup> November, 2009 as amended from time to time. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

**(d) Emissions, effluents, and waste disposal**

(i) 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 PM<sub>10</sub>/PM<sub>2.5</sub>) 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.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area in a phased manner. The green belt comprising a mix of native species shall be developed all along the major approach/ coal transportation roads.

(iii) The transportation of coal shall be carried out as per the provisions and route proposed in the approved Mining 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.

(iv) 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.

(v) 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.





(vi) Coal handling plant shall be operated with effective control measures viz. bag filters/water or mist sprinkling system etc to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.

(vii) 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.

(viii) Catch/garland drains and siltation ponds of 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 measures and green belt development. 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.

(ix) 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 Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.

(x) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

**(e) Illumination, noise & vibration**

(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) Adequate measures shall be taken for control of noise levels below 85 dB(A) 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.

(iii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations and fly rocks as per the guidelines prescribed by the DGMS.

(iv) 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.

**(f) Occupational health & safety**

(i) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the workers 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 workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.

(ii) Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iii) Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

**(g) Ecosystem and biodiversity conservation**

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered 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.

**(h) Public hearing, R&R and CSR**

(i) 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.

(ii) The project proponent shall ensure the expenditure towards socio-economic development in and around the mine, in every financial year in pursuance of the Corporate Social Responsibility Policy as per the provisions under Section 135 of the Companies Act, 2013

(iii) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29<sup>th</sup> 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'.

(iv) 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.

**(i) Corporate environment responsibility**

(i) The Company shall have a well laid down environment policy duly approved by Board of Directors. The environment 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 or forest norms/conditions. Also, the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders/stakeholders.

(ii) The project proponent shall comply with the provisions contained in this Ministry's OM dated 1<sup>st</sup> May, 2018, as applicable, regarding Corporate Environment Responsibility.

(iii) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.

(iv) A separate environmental management cell both at the project and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

(v) Action plan for implementing EMP and environmental conditions 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.

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

#### **(j) Statutory Obligations**

(i) The environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law from time to time, and as applicable to the project.

(ii) This environmental clearance shall be subject to obtaining wildlife clearance, if applicable, from the Standing Committee of National Board for Wildlife.

(iii) The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the concerned State Pollution Control Board.

(iv) The project proponent shall obtain the necessary permission from the Central Ground Water Authority (CGWA).

#### **(k) Monitoring of project**

(i) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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 25.9.2000 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) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.

(iv) 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 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(v) 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 Ministry of Environment, Forest and Climate Change/Regional Office.

(vi) 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.

(vii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/Regional Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years.

(viii) 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.

#### **(I) Miscellaneous**

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

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

(iii) A copy of the environmental clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional Office,

District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.

(iv) The EC shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain.

(v) The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this clearance, informing that the project has been accorded environmental clearance and a copy of the same is available with the State Pollution Control Board and also at website of the Ministry.

(vi) The environmental statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail. Concerns raised during public hearing.

(vii) The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.

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

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

8. The concerned State Government shall ensure that the mining operations shall not 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.

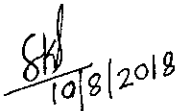
9. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.



10. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

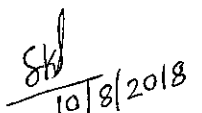
11. All recommendations of the Forest Advisory Committee in its meeting held on 25<sup>th</sup> January, 2018 while considering the proposal for diversion of 1898.328 ha of forest land involved under the project, and subsequently communicated vide the Ministry vide letter dated 12<sup>th</sup> April, 2018, shall be strictly adhered to by the project proponent.

12. This EC supersedes the earlier EC/revalidated/amendment granted vide letter dated 21<sup>st</sup> December, 2011, 25<sup>th</sup> June, 2015 & 29<sup>th</sup> December, 2015 respectively, and is subject to final outcome of the Civil Appeal No.4395 of 2014 pending in Hon'ble Supreme Court of India.

  
(S. K. Srivastava)  
Scientist E

**Copy to:-**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi-1
2. The DG (Forest), MOEFCC, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi -3
3. The Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat, Raipur
4. The Principal Chief Conservator of Forest and CWLW, Govt. of Chhattisgarh, Raipur
5. The APCCF, Ministry of Environment Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-1
6. The Chairman, Chhattisgarh State Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Avanti Vihar, Raipur (Chhattisgarh) - 492001
7. The Member Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
8. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
9. The District Collector, Sarguja, Government of Chhattisgarh
10. Monitoring File 11. Guard File 12. Record File

  
(S. K. Srivastava)  
Scientist E