

etc



Ref. No.:HIL/EC/GP-IV/4/2015/93

Date: 26.10.2015

The Regional Director,
Ministry of Environment & Forests (MoEF)
(Govt. of India)
Regional Office, Western Region,
Kendriya Paryavaran Bhawan, Link Road No. 3
E-5, Ravishankar Nagar,
Bhopal – 462 016 (M.P.)

Sub.: Six Monthly Environment Clearance Compliance Status Report for Gare Palma IV/4 Coal Mine at Village: Banjikhoh, District: Raigarh, C.G. along with Environmental Monitoring reports.
Ref. Environment Clearance No. J-11015/ 183/2010-IA.II (M) Dated: - 16th April 2015.

Sir,

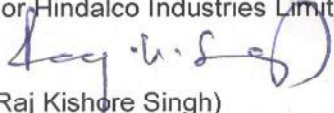
We would like to bring to your notice that, the Office of the Nominated Authority, Ministry of Coal, GOI, has been allotted Gare Palma IV/4 Coal mine to M/s Hindalco Industries Ltd. vide vesting order under clause (b) of sub- rule (2) of rule 7 and sub-rule (1) of rule 13 of Coal Mines (Special Provisions) Second Ordinance, 2014.

We hereby submitting the six monthly Environmental Clearance Compliance status report along with Environmental Monitoring report for Ambient Air, Water, Noise, during the period of April 2015 to September 2015.

This is for your kind information please.

Thanking you,

Yours faithfully,
For Hindalco Industries Limited,


(Raj Kishore Singh)
Asst. Vice President
Gare Palma IV/4,
Village: Banjikhoh, P.O.: Milupara, Tehsil: Tamnar, District: Raigarh, Chhattisgarh – 496107.

Encl. : Six Monthly Environmental Clearance Compliance Report as Annexure-A.

CC To:

1. The Member Secretary, Chhattisgarh Environment Conservation Board, Housing Board Colony, Kabir Nagar, Raipur Chhattisgarh.
2. Zonal Officer, Central Pollution Control Board, Sahkar Bhawan, 3rd Floor, North T.T. Nagar, Bhopal – 462 003 (M. P.)
3. Regional Officer, Chhattisgarh Environment Conservation Board (CECB), T.V. Tower Road, Raigarh (C.G.)

HINDALCO INDUSTRIES LIMITED
Gare Palma IV / 4 & IV / 5
Vill. & P.O. Milupara, Tehsil - Tamnar
Dist : Raigarh 496 107, Chhattisgarh

REGISTERED OFFICE

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Compliance Report on Environment Clearance for Gare-Pelma IV/4 coal mining project given by Ministry of Environment Forests & Climate Change vide letter No. – J-11011/183/2010-IA.II (M) Dated: - 16th April 2015 for Under Ground & Opencast Mining of Coal 1.0 Million Ton/Annum Production Capacity.

Sr. No.	Conditions	Status
1	Any change in scope of work will attract the provisions of Environment Protection Act (EPA), 1986 and Environment Impact Assessment Notification, 2006 in conjunction with the subsequent amendments/circulars.	Noted please.
2	All conditions stipulated in the EC letter No.J-11015/183/2010-IA.II (M) dated 12 th March, 2013 shall remain unchanged.	Noted please.
3	The successful bidder shall be liable, if any, for any act of violation of the EPA 1986/EIA Notification 2006/subsequent amendments and circulars which it has inherited during the transfer.	Noted please.
4	Successful bidder shall be liable for compliance of all court directions, if any.	Noted please.

Compliance Report on Environment Clearance for Gare-Pelma IV/4 coal mining project given by Ministry of Environment & Forests vide letter No. – J-11011/11/2002-IA.II (M) Dated: - 9TH March 2004 for Under Ground Mining of Coal 0.48 Million Ton/Annum Production Capacity.

Sr. No.	Conditions	Status
1.	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural pattern, water bodies, vegetation, structure, roads and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.	Agreed and will be complied accordingly.
2.	Project authorities should check the possibility of existence of fault (s) before deciding about the thickness of safe barrier required to be maintained between the working face and the river in consultation with the director general of mines & safety (DGMS). De pillarings should also be carried out after taking prior approval of the DGMS.	Noted please.
3.	Adequate measures should be taken to prevent entry of surface water into working mine.	Agreed and will be complied accordingly.



4.	Coal handling plant should be providing with adequate number of high efficiency dust extraction systems. Loading and unloading area including all transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	Noted please.
5.	A green belt of adequate width should be raised by planting the local species along the mine boundary, waste rock dump, ventilation fan roads and in selected open areas in consultation with local DFO/Agriculture Department. Density of tree should be at least 2500 plants/ha.	Agreed and plantation shall be carried out @2500 per hectare.
6.	Study report on subsidence and stage wise development plan starting from 5 th year of operation till the end of the mine at an intervals of 5 years should be submitted to the ministry within six months.	Agreed and will be complied accordingly.
7.	The project authority shall undertake artificial recharge measures in the project area as per action plan indicated in the ground water assessment report and as approved by central ground water authority	Agreed and will be complied as per the direction of central ground water authority.
8.	Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers during the mining operations. The interval of monitoring should be done four times a year in pre-monsoon (April-May), monsoon (August), post monsoon (November) and Winter (January) and for quality in May. Data thus collected should be submitted to the Regional office Ministry of Environment & Forests, Bhopal and to the Central Ground Water Authority, NCCR, Raipur.	Agreed, the Ground water level Monitoring report for the month of August 2015, is enclosed as annexure-I .
9.	Adequate measures for safety should be provided for storage, handling and use of explosives during the project period.	Noted please.
10.	A detailed mine decommissioning plan should be submitted to the Ministry of Environment and forests five years in advance for approval.	Noted please.
11.	Consent to operate should be obtained from SPCB before starting mining activities.	Consent to Operate and its Renewal has been obtained from CECB, Raipur.
12.	Vehicular emissions should be kept under control and regularly monitored.	Agreed and will be complied accordingly.
13.	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to MoEF and its Regional office.	Agreed and will be complied accordingly.
14.	Sewage Treatment plant should be installed for the colony. ETP should also be provided for workshop and CHP wastewater.	Agreed and will be complied accordingly.
General Conditions		



1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and forests.	Noted please.
2	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted please.
3	Four ambient air quality monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO ₂ , NO ₂ and CO monitoring location of the stations should be decided based on the meteorological data topographical features and environmentally and ecologically sensitive target in consultation with the state pollution control Board.	Four ambient air quality monitoring stations have been established and regular monitoring is being carried out. Monitoring Report is enclosed as Annexure -II.
4	Data on ambient quality (RPM, SPM SO ₂ , NO _x and CO) should be regularly submitted to ministry including its Regional office at Bhopal and to the State Pollution Control Board/ Central Pollution Control Board once in six months.	Four ambient air quality monitoring stations have been established and regular monitoring is being carried out. Monitoring Report is enclosed as Annexure -II.
5	Drills should be wet operated or with dust extractors.	Agreed and will be complied accordingly.
6	Fugitive dust emission of all sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading & unloading points should be provided and properly maintained.	Agreed and will be complied accordingly.
7	Adequate measures should be taken for control of noise levels below 85 dB A in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM etc. Should be provided with ear plugs/muffs.	Agreed. The Noise monitoring report is enclosed as Annexure-III.
8	Industrial waste water (workshop and wastewater from the mines) should be properly collected, treated so as to conform to the standards prescribed under GSR422 (E) dated 19 may 1993 and 31 st December 1993 or as amended from time to time. Oil grease trap should be installed before discharge of effluent from workshop.	Agreed and will be complied accordingly.
9	Acid mine water, if any has to be treated and disposed of after conforming to the standards prescribed the competent authority.	Agreed and will be complied accordingly.
10	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspect. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contraction due to exposure to coal dust and take corrective measures, if needed.	Agreed and will be complied accordingly.
11	Environmental laboratory should be established with adequate number and type of pollution monitoring and	Agreed and will be complied accordingly.



	analysis equipment in consultation with the state pollution control Board.	
12	A Environmental management cell with suitable qualified personnel should be set up under the control of a senior Executive, who will report directly to the head of the organization.	Environmental monitoring cell will be established accordingly.
13	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Regional office, Bhopal of the MOEF and to the Ministry.	Agreed and will be complied accordingly.
14	The Regional office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional office by furnishing requisite data/information/monitoring report.	All cooperation will be extended to the officers of the Regional office.
15	A copy of the clearance letter will be marked to the concerned panchayat /local NGO, If any, from whom any suggestions/representation has been received while processing the proposal.	Complied by prior allottee.
16	The project authorities should inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Complied by prior allottee.
17	State pollution control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's / Tehsildar's Office for 30 days.	-
18	The project authorities should 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 the clearance letter informing that the project has been accorded environment clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment and forest at http://envfor.nic.in	Complied.



Compliance Report for Environment Clearance for Gare-Pelma IV/4 coal mining project given by Ministry of Environment & Forests vide letter No. – J-11011/11/2002-IA.II (M) Dated: - 31st December 2007 for Open Cast & Under Ground Mining of Coal 0.48 Million Ton/Annum Production Capacity.

Sr. No.	Particulars	Compliance
1.	No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980	Noted please.
2.	No diversion of Nala or road shall be carried out.	Noted please.
3.	Top soil shall be stacked properly with proper slope at earmarked site(s) and should be kept active and shall be used for reclamation and development of green belt.	Agreed and will be complied accordingly.
4.	OB should be stacked at the one earmarked external OB dumpsite of maximum height of 20 m within ML area within ML area. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & forests and its Regional office located at Bhopal on a yearly basis.	Agreed and will be complied accordingly.
5.	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. the drains should be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.	Agreed and will be complied accordingly.
6.	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run off and siltation should be based on the rainfall data.	Agreed and will be complied accordingly.
7.	Drills should be wet operated only.	Agreed and will be complied accordingly.
8.	Controlled blasting should be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	Agreed and will be complied accordingly.
9.	High efficiency bag filters/water sprinkling system to check fugitive emissions form crushing operations, conveyor, system/ ropeway, haulage roads, transfer points, etc. shall be installed and operated effectively at all time of operation.	Agreed and will be complied accordingly.
10.	Road to CHP shall be black topped.	Noted please.



12.	A progressive mine closure plan shall be implemented by reclamation of quarry area, which shall be backfilled and afforested by planting native species. In consultation with the local DFO/agriculture department. The density of the trees should be around 2500per Ha.	Agreed and will be complied accordingly.
13.	The company shall obtain prior approval of CGWA/CGWB Regional Office for use of ground water if any, for mining operations.	For the Renewal and transfer of NOC in favour of HIL has been applied to the Authority on 16.04.2015.
14.	ETP should also be provided for workshop and CHP.	Agreed and will be complied accordingly.
15.	Besides carrying out regular periodic health check-up of the workers 10%workers identified from work force engaged in active mining operations shall be subjected to health check-up or occupational disease and hearing impairment, if any through an agency such as NIOH Ahmedabad within a period of two years and the results reported to the Ministry and the DGMS.	Agreed and will be complied accordingly.
16.	A final mine land closure plan along with the details of corpus fund should be submitted immediately upon receipt of EC to the Ministry and forests RO, Bhopal for approval.	Agreed and will be complied accordingly.
17.	For monitoring land use pattern and for post mining land use time series of land use maps, based on satellite imagery (on a scale of 1:5000) of core zone and buffer zone, from the start of project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in time series), and the report submitted to MoEF and its Regional office at Bhopal.	Agreed and will be complied accordingly.



Compliance Report for Environment Clearance for Gare-Pelma IV/4 coal mining project given by Ministry of Environment & Forests vide **letter No. – J-11011/183/2010-IA.II (M) Dated: - 12th March 2013** for Open Cast & Under Ground Mining of Coal 1.0 Million Ton/Annum Production Capacity.

Sr. No.	EC Conditions	Compliance status
1	The Maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted for i.e. 0.48 MTPA to 1.0MTPA of which 0.4 MTPA OC and 0.6 MTPA UG in ML area of 701.512 ha)	Agreed and will be complied accordingly.
2	The calendar plan should be uploaded on MOEF website.	Noted please.
3.	The coal transportation by road is up to 270 km at Raipur by road presently with tarpaulin covered trucks and partially by rail up to Bhupdevpur. After new siding comes up which is approximately 3 km away for changing over to rail transport. The coal transportation by road should be by mechanically covered trucks. The mode of transportation shall be shifted to by rail by 2017.	As per Vesting order by Ministry of Coal, GOI, Coal will be used in the captive power plant of HIL located at Hiraikud and Lapanga District Sambalpur, Odisha and mode of transportation will be by road.
4.	Karanj should be deleted from the list of native species for plantation program.	Agreed and will be complied accordingly.
5	Rs. 5/T of coal/annum till the end of life of project with the escalation factor of coal production.	Agreed and will be complied accordingly.
6	No external OB dump will be left after mine operation and shall be backfilled in the mine void.	Agreed and will be complied accordingly.
7	The proponent shall take necessary action on the issues raised during public hearing.	Agreed and will be complied accordingly.
8	The coal will be used in existing steel plant of proponent.	As per Vesting order by Ministry of Coal, GOI, Coal will be used in the captive power plant of HIL located at Hiraikud and Lapanga District Sambalpur, Odisha.
9	Hence tree cutting from forest land is not proposed during expansion proposal. However if required plantation will be done 10 times of tree felling in the project affected area.	Agreed and will be complied accordingly
10	Kelo river and Bendra Nallah shall not be disturbed.	Noted please.
11	External OB dump of 0.67 million cubic meters will be created as reported in closure plan of first year. This external dump	Noted please.



	will be re handled and backfilled in subsequent years. There will be no external dump left after the mine operation.	
12	Biological reclamation of all external dumps will be done progressively after leveling these dumps. This will provide stability and prevent soil erosion from dumps. The total top soil generated (1.14 m.cum B) during the development of mine will be stacked separately in a soil stack pile in between the pit and the surface dump over an area of 7.12 Ha.	Agreed and will be complied accordingly.
13	The report Titled " Flora and Fauna and conservation plan for endangered species of Gare-IV/8 coal block approved by The PCCF (Wildlife) of Chhatisgarh, dated 22.11.2011 states that there is no national park, tiger reserve, eco-sensitive zones within 15 km radius. It was informed that this area is neither affected by elephant corridor exists. However, there are occasional presence of elephants and other wild lives.	Noted please.
14	A Wildlife Conservation Plan for the conservation and protection of wildlife in the study area has been approved at a cost of Rs. 1.0 crore and shall be implemented by the proponent in consultation with Department of Forest and Wildlife, Govt. of Chhattisgarh. The WLCP shall be comprise of components of habitat improvement and conservation of biodiversity, provision of water holes, and augmenting water bodies, nursery and plantation of species of natural food and fodder found in the natural habitat salt licks, measures for the protection against forest fires and poaching, awareness campaign of villagers in the study area and compensation in case of man animal conflicts. The status of implementation of WL Conservation Plan including budgetary provision of various activities and status of expenditure shall be regularly, uploaded on the website of the forest and wildlife Department of Government of Chhattisgarh and of the project proponent and the status shall be regularly reported to this Ministry and the MoEF Regional Office, as part of the compliance report.	Noted please.
15	As per the approved plan of the Flora and Fauna and Conservation plan for endangered species of Gare IV/4 coal block" and recommended the PCCF (Wildlife), Rs. One crore be deposited, at one time. With the department of forest and wildlife, Govt. of Chhattisgarh for the implementation of the plan.	Noted please.
16	The project authority shall also participate in a Regional action plan of the State Government for the conservation of flora and fauna found within the study area, in addition to the above funds shall also contribute financially for implementation of RWLCP.Habitat development such as grassland/conservation measures along the migratory route/habitats of elephants found/ visiting the area shall form a part of the regional action plan.	Agreed and will be complied accordingly.



17	It will be used for growing plants along the fringes of the side roads and reclamation of external dump and backfilled area. The topsoil stockpile will be low height not exceeding 6 m and will be made use for concurrent filling without keeping the top soil for a long period.	Agreed and will be complied accordingly.
18	The OB dump for the South Quarry dump will be spread over 13.75 Ha. area on the south and eastern part of south quarry while the mining operation will start from north and advance towards south and west. Part of OB excavated from the mine from 1st year and part of 2nd year (3.91 Mm ³) will be accommodation in it including top soil for afforestation. The height of dump achieved during 1st and 2nd year will be 6 m to 20 m respectively.	Agreed and will be complied accordingly.
19	The O.B. left in external dump will be re handled and backfilled in the void after the extraction of coal is completed, this will make the operation of UG mining safe as no water will be logged in the quarry. The OB will be temporarily stored which primarily consist of sand stone and shale which does not contain any heavy metal. As per the reclamation plan, the entire OB will be re handled and biologically reclaimed with local grass to minimize fugitive emission as well to control surface runoff.	Agreed and will be complied accordingly.
20	Topsoil generated in the balance life of mine should be stacked properly with proper slope at earmarked site (s) and should not be kept active and shall be used for reclamation and development of green belt.	Agreed and will be complied accordingly.
21	OB generated in the balance life of mine should be stacked at earmarked one external OB dumpsite within ML area. The ultimate slope of dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self- sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional offices located at Bhubaneswar on yearly basis. The area of OB dump should be reduced. The grass turfing should be done on OB dumps.	Agreed and will be complied accordingly.
22	Adequate numbers of sprinklers should be provided on both the side of road to minimize pollution.	Agreed and will be complied accordingly.
23	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient, length,) and sump capacity should be designed 50 % safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also	Agreed and will be complied accordingly.



	provide adequate retention period to allow proper settling of silt material.	
24	Dimension of retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on rain fall data.	Agreed and will be complied accordingly.
25	Water sprinkling system (mist spray type) shall be provided to check fugitive emission from conveyor system, haulage roads and transfer points.	Agreed and will be complied accordingly.
26	Fixed sprinkler shall be installed at pit top truck loading hoppers in all the three mines, siding for dust control during coal loading. Adequate numbers of sprinklers should be provided on both the sides of road to minimize dust pollution.	Agreed and will be complied accordingly.
27	Drills should be wet operated only.	Agreed and will be complied accordingly.
28	An action plan for mine closure with details of area, depth, voids and details of abandoned mine should be submitted to the Ministry.	Noted please.
29	Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly of rocks and boulders should be implemented.	Agreed and will be complied accordingly.
30	Transportation shall be by covered trucks of higher capacity (25 –tonne) and loading shall be by siding. Mechanically covered trucks should be provided for transportation of coal.	Agreed and will be complied accordingly.
31	Area brought under afforestation from the three mines shall be by planting native species in consultation with local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.	Agreed and will be complied accordingly.
32	Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.	Agreed and will be complied accordingly.
33	Mine discharge water shall be treated to meet the prescribed standards before discharge into the natural water course/agriculture. The quality of water discharge shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.	Agreed and will be complied accordingly.
34	No ground water shall be used for mining activities; additional water required if any shall be met from mine water or by recycling /reuse of water from existing activities and from rainwater harvesting measures. The project authority shall meet water requirement of nearby village (s) in case the village wells go dry to dewatering of mine.	Agreed and will be complied accordingly.
35	Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (August), Post- monsoon (November), and winter	Agreed, the Ground water level Monitoring report for the month of August 2015, is enclosed as annexure-I .



	(January) seasons and for quality including Arsenic and Fluoride during the month of may. Data thus collected should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board /SPCB quarterly within one month of monitoring. Rain water harvesting shall be undertaken in case monitoring of water table indicates a declining trend.	
36	Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural pattern, water bodies, vegetation, structure, roads and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.	Noted please.
37	Sufficient coal pillars shall be left un-extracted around the airshaft (within the subsidence influence area) to protect from any damage from subsidence, if any.	Noted please.
38	High root density tree species shall be selected and planted over areas likely to be affected by subsidence.	Noted please.
39	Depression due to resulting in water accumulating within the low laying areas shall be filled up or drained out by cutting drains.	Noted please.
40	Solid barriers shall be left below the village, roads falling within the blocks to avoid any damage to the roads.	Noted please.
41	No depillaring operation shall be carried out below the roads and habitation area found within the lease.	Noted please.
42	The proponent shall ensure to undertake and provide the costs incurred for taking up remedial measures in case of soil.	Noted please.
43	Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.	Agreed and will be complied accordingly.
44	ETP shall be provided for workshop, CHP, if any. Effluent shall be treated to conform to prescribe standards in case discharge in to any water course outside the lease. The quality of water discharged shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.	Agreed and will be complied accordingly.
45	A detailed plan for CSR with specific budgetary allocation (capital and revenue) for various skill development and alternate livelihood programmes and schemes shall be implemented and the impacts activities under CSR monitored based on in a scientific methodology. An amount of Rs. 5 per tonne of coal produced with escalation factor shall be utilized for the CSR activities for the adjoining villages for the balance life of project apart from one time capital expenditure. The	Agreed and will be complied accordingly.



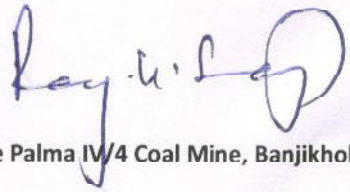
	details of CSR undertaken along with budgetary provisions for the village wise various activities and expenditure thereon shall be uploaded on the company website every year. CSR Audit should be carried out annually.	
46	A special corpus fund either at company level or in CIL/MOC be provided for the reclamation of abandoned and degraded areas.	Noted please.
47	For monitoring land use pattern and for post mining land use, a time series of land use, maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in the three years (for any one particular season which is consistent in the time series). And the report submitted to MOEF and its regional office at Bhopal. The post mining land use shall be that out of the total 701.512 ha area, 57.73 ha area will be under plantation. 319.65 Ha area for public use, 324.132 ha area shall be undisturbed.	Agreed and will be complied accordingly.
48	A Final Mine closure plan along with a plan for habitat restoration and with details of corpus Fund shall be submitted to the Ministry of Environment & forest five years before mine closure for approval. The species selected for habitat restoration for post mining and shall include a specific plan for development of agro forestry using a mix native species found in the study area.	Noted please.
49	A special corpus fund either at company level or in CIL/MOC be provided for reclamation of abandoned and degraded area.	Noted please.
50	The possibility of sand stone, wherever is present in the OB as per lithology report, be explored and be provided to locals free of cost.	Noted please.
51	After extraction of coal is completed, the OB left will be completely rehandled and backfilled the voids. This will be achieved by rehandling of OB Dumps in the area. Contamination of ground water and surface water and occupational and other diseases due to the mining operation.	Agreed and will be complied accordingly.
52	Corporate Environment Responsibility: a)The company shall have a well laid down Environment Policy approved by the Board of Directors. b)The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/deviation/violation of the environmental of forest norms/conditions. c)The hierarchical system or administrative Order of the company to deal with environmental issues and for	Noted please.



	<p>ensuring compliance with the environmental clearance conditions shall be furnished.</p> <p>d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and /or shareholders at large.</p>	
B.	General Conditions	
1	No change in mining technology and scope of working should be made without prior approval of the ministry of Environment & Forest.	Noted please.
2	No change in the calendar plan for quantum of mineral coal and waste should be made.	Noted please.
3	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM10, PM2.5, SO2, and NOx monitoring. Location of the stations shall be decided based on meteorological data topographical features and environmentally and ecologically sensitive targets in consultation with the state pollution Control Board. Monitoring heavy metals such as Hg, As Ni, Cd, Cr, etc. carried out at least once in six months.	Agreed and will be complied accordingly.
4	Data on ambient air quality (PM10, PM2.5, SO2, and NOx) and heavy metals such as Hg, As, Ni, Cd, Cr, and other monitoring data shall be regularly submitted to the ministry including its Regional office and to the state pollution Control Board and the Central Pollution Control Board once in six month. Random verification of samples through analysis from independent laboratories recognized under the EPA rules, 1986 shall be furnished as part of compliance report.	Agreed and will be complied accordingly.
5	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operation of HEMM, etc should be provided with ear plugs/muffs.	Agreed and will be complied accordingly.
6	Industrial wastewater (workshop and wastewater from the mine) should be properly collected treated so as to conform to the standards under prescribed GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Agreed and will be complied accordingly.
7	Vehicular emission should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Agreed and will be complied accordingly.
8	Monitoring of Environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the state pollution control board and data	Agreed and will be complied accordingly.



	got analyzed through a laboratory recognized under EPA Rules,1986.	
9	Personnel working in dusty area shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspect.	Agreed and will be complied accordingly.
10	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.	Agreed and will be complied accordingly.
12	A separate environment management cell with suitable qualified personnel shall be set up under the control of a senior Executive, who will report directly to the head of the company.	Agreed and will be complied accordingly.
13	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this ministry and it's Regional Office at Bhubaneswar.	Noted please.
14	The project authority shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State pollution control Board and may also be seen at the website of the ministry of environment & forest at https://envfro.nic.in .	Complied by prior allotee.
15	A copy of environmental clearance letter shall be marked to concern panchayat / Zila Parishad, Municepal Corporation or Urban local body and local NGO,if any.. from whom any suggestion /representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.	Complied by prior allotee.
16	A copy of environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the regional office, District Industry Sector and Collector's office/Tehsildar's office for 30 days.	Complied by prior allotee.


Gare Palma IV/4 Coal Mine, Banjikhohol



Annexure-I

Ground water level monitoring in and around the Coal Mine area**(Month: August 2015)**

Sr.No.	Location	Types of structure	Water level (MBGL)
1	Bankheta (Near HIL Office)	Borewell	6.20
2	Banjikhol (Near Office)	Borewell	10.80
3	Milupara (PHC-HIL)	Dugwell	4.00
4	Urba (Near Intermediate school)	Dugwell	5.25
5	Sakta (Near Primary School)	Dugwell	2.00
6	Sidarpara (Primary School compound)	Dugwell	5.40



Annexure-II

Results of Ambient Air Quality Monitoring

(July 2015 to September – 2015)

Sr.No.	Location	Parameters	Results ($\mu\text{g}/\text{m}^3$)			
			July'15	Aug'15	Sep'15	Average
1	Near Office Area, Banjikhoh	PM ₁₀	64	62	63	63
		PM _{2.5}	11	12	10	11
2	ETP Area, Banjikhoh	PM ₁₀	59	58	60	59
		PM _{2.5}	12	13	11	12
3	Near Office Area, Bankheta	PM ₁₀	60	61	62	61
		PM _{2.5}	10	11	10	10
4	Near Pit office, Bankheta	PM ₁₀	61	62	59	61
		PM _{2.5}	11	10	09	10



Annexure -III

Result of Treated Water Quality Analysis
(Mine Seepage Water)

(July 2015 to September – 2015)

S. No	Test Parameters	Unit	Results			
			July'15	Aug'15	Sep'15	Average
1	pH Value	-	7.20	7.26	7.35	7.27
2	Total suspended solids (TSS)	mg / l	13	16	18	16
3	Oil and grease	mg / l	Not Detectable	Not Detectable	Not Detectable	Not Detectable
4	Free Chlorine	PPM	Not Detectable	Not Detectable	Not Detectable	Not Detectable



Annexure-IV

Result of Noise Monitoring

(July 2015 to September – 2015)

S. No.	Location		Results dB(A)			
			July'15	Aug'15	Sep'15	Average
1	Office Area, Banjikhoh	Day	50	51	52	51
		Night	48	49	50	49
2	Incline Area, Banjikhoh Office	Day	56	55	56	56
		Night	52	51	54	52
3	ETP, Banjikhoh	Day	57	56	57	57
		Night	55	53	55	54
4	Office Area, Bankheta	Day	59	58	60	59
		Night	53	52	55	53
5	Bunker area, Banjikhoh	Day	63	62	65	63
		Night	60	59	62	60
6	Weight Bridge Area, Bankheta	Day	56	57	58	57
		Night	54	55	56	55