



**ENVIRONMENTAL CLEARANCE
(J-11015/610/2007- IA.II(M)dt. 30th March'2016)**

Status of Compliance (November 2016)

ASHOK PROJECT



(ISO 9001 & ISO 14001-certified)

**(PIPARWAR AREA)
CENTRAL COALFIELDS LIMITED**

Block – Tandwa, Dist. – Chatra, Jharkhand

Status of compliance of the terms and conditions given in the Environmental clearance letter No. J-11015/610/2007- IA. II (M) dt. 30th March'2016 issued by MOEF, Govt. of India, New Delhi for expansion of production capacity of Ashok OCP, from 10.00 MTPA to 12.00 MTPA located in District – Chatra, Jharkhand.

SPECIFIC CONDITION

Sl. No.	Condition	Status of compliance								
i.	The maximum production shall not exceed the limit as prescribed in the Environmental Clearance (EC).	Maximum production is limited to the EC capacity of 12 MTPA. Production from April'16 to September'16 : 4.62 MT.								
ii.	The validity of the EC is for the life of the mine or as specified in the EIA Notification. 2006, whichever is earlier.	Agreed.								
iii.	As against the proposal for 14 MTPA, this EC shall be for the production capacity of 12 MTPA as recommended by EAC.	Agreed.								
iv.	The project proponent will immediately undertake adequate dust mitigative measures, including the deployment of at least six number of mist water sprayers.	Water sprinkling is done by mobile sprinklers & static sprinklers. The dust control measures in project are given below; a) Surface miners - 5 deployed for coal production which eliminate need of drilling, blasting and crushing of coal. b) Water sprinklers - 6 for dust suppression. c) Static water sprinklers – 116 no. covering 2.5 K.M d) Plantation – 5.08 Lakh saplings e) 7.7 K.M Coal transportation road (PCC) constructed. f) Additional new 6 no. of mist water sprayers under procurement.								
i.	To observe the reduction in PM10 value in ambient air on account of the dust mitigative measures introduced, the project proponent should provide to the EAC monitoring data up to June, 2016.	Monitoring of PM 10 has started. The location wise average results are given below; The trend shows reduction in PM10 concentration in air at most of the locations. <table border="1" data-bbox="896 1654 1409 1869"> <thead> <tr> <th>S. no</th> <th>Station</th> <th>PM10 (Quarter ending June16)</th> <th>PM10 (Quarter ending Sept 16)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bijan village</td> <td>77.5</td> <td>75.16</td> </tr> </tbody> </table>	S. no	Station	PM10 (Quarter ending June16)	PM10 (Quarter ending Sept 16)	1	Bijan village	77.5	75.16
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			2	Tola across Benti Nala	98.5	82.66																				
			3	Ashok Pit	104.5	93.16																				
			4	Benti village	78.75	79.16																				
ii.	Thereafter (since the PP has indicated that coal transportation will commence through railways by June 2016) data on air quality is to be provided to the EAC for the next three months period till September 2016 so as to observe the reduction in PM 10 on account of rail movement.	Monitoring of PM 10 has started. The location wise average results are given below; The trend shows reduction in PM10 concentration in air at most of the locations.	<table border="1"> <thead> <tr> <th>S. no</th> <th>Station</th> <th>PM10 (Quarter ending June16)</th> <th>PM10 (Quarter ending Sept 16)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bijan village</td> <td>77.5</td> <td>75.16</td> </tr> <tr> <td>2</td> <td>Tola across Benti Nala</td> <td>98.5</td> <td>82.66</td> </tr> <tr> <td>3</td> <td>Ashok Pit</td> <td>104.5</td> <td>93.16</td> </tr> <tr> <td>4</td> <td>Benti village</td> <td>78.75</td> <td>79.16</td> </tr> </tbody> </table>				S. no	Station	PM10 (Quarter ending June16)	PM10 (Quarter ending Sept 16)	1	Bijan village	77.5	75.16	2	Tola across Benti Nala	98.5	82.66	3	Ashok Pit	104.5	93.16	4	Benti village	78.75	79.16
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iii.	Production enhancement beyond 12 MTPA would depend on appreciable improvement in the ambient air quality data.	To improve air quality in and around Ashok OCP the following measures have been taken ;	<ul style="list-style-type: none"> g) Surface miners - 5 deployed for coal production which eliminate need of drilling, blasting and crushing of coal. h) Water sprinklers - 6 for dust suppression. i) Static water sprinklers – 116 no. covering 2.5 K.M j) Plantation – 5.08 Lakh saplings k) 7.7 K.M Coal transportation road (PCC) constructed . 																							

		l) Additional new sprinkler under procurement – 6 no. of mist water sprayers
iv.	73 Project Affected Families (PAFs) have been shifted as on date but 127 number PAFs have yet to be shifted. It has been agreed by the PP that the balance number of 127 PAFs would be definitely shifted by 30 th September, 2016.	The resettlement and rehabilitation of PAFs is in progress in Ashok OCP. i) 66 families from Thena & 7 families from Benti village i.e 73 PAFs have been shifted. ii) Employment provided to 122 persons. iii) An amount of 6.21 crore has been sanctioned for payment of land compensation, against which Rs 3.42 Crore has been disbursed to 71 PAFs at Bijan village.
v.	The PP will not alter the major channels around the site.	Damodar and its 2 tributaries namely Saphi & Garhi flow through the study area and these will not be diverted.
vi.	Efforts shall be made to explore the availability of mechanically covered trucks.	Some vendors have developed prototypes of mechanically covered trucks and commercial production / fitment will commence shortly.
vii.	All statutory permissions/MoU from State Government shall be obtained for transportation of coal by road.	All transporters have PUC certificate for vehicles used for coal transportation.
viii.	Coal transportation for additional production of coal is to be executed by means of a conveyor and or rail transport.	Presently Coal transport from Ashok OCP is from 2 no. of sidings namely RCM siding & KD (Old) siding located at a distance of 8-9 KM & 14-15 KM respectively. Dispatch of additional coal is proposed from Piparwar railway siding about 4-5 km from project. Progress of Piparwar Railway Siding: As per information from RITES track linking of 0.125 km is to be carried out and testing of rail track (engine rolling) is scheduled by middle of December 2016 after which diesel engine can operate in this section.
ix.	The production shall be within the same Mine Lease area.	The mine is working within the leasehold area as submitted in the application form for obtaining EC.
x.	The OB shall be completely re-handled at the end of the mining.	OB is being backfilled in the mine void/ de-coaled area as such there is no external OB dump and hence re-handling is not required.

xi.	Final mine void depth will not be more than 40 m. The void area will be converted into water body. The remaining area will be back filled up to the ground level and covered with about a meter thick top soil and put to use.	Concurrent mine reclamation is under process. Till date 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha. The final mine void will be converted into a water body with a depth of 40 mt.															
xii.	Garland drains be provided.	Garland drains of 800 mt length has been constructed.															
xiii.	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.	At present mine is at a distance of 3-4 KM from the river and it is moving away from the river. As such no embankment is required at present against river / stream.															
xiv.	The land after mining shall be restored for agriculture purpose.	OB is being back-filled in the mine void / decoaled area. Top soil is spread over the backfilled area thereafter plantation is presently done on the reclaimed land to maintain soil productivity.															
xv.	Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.	Regular monitoring of mine water is done by CMPDIL. The average values of main parameters are given below. These are within permissible limit ; <table border="1" data-bbox="896 970 1432 1333"> <thead> <tr> <th>S. no</th> <th>Parameter</th> <th>Avg Values for Quarter ending Sept 2016.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>COD</td> <td>9.0 mg/litre</td> </tr> <tr> <td>2</td> <td>.pH</td> <td>7.47 mg/litre</td> </tr> <tr> <td>3</td> <td>TSS</td> <td>33.66 mg/litre</td> </tr> <tr> <td>4</td> <td>Oil & Grease</td> <td>Less than 2 mg/litre</td> </tr> </tbody> </table>	S. no	Parameter	Avg Values for Quarter ending Sept 2016.	1	COD	9.0 mg/litre	2	.pH	7.47 mg/litre	3	TSS	33.66 mg/litre	4	Oil & Grease	Less than 2 mg/litre
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xvi.	The CSR cost should be Rs 5 per tonne of coal produced which should be adjusted as per the annual inflation.	Details of CSR for the year 2015-16 is given in table below-															


Table of CSR Activities (2015-16)

S.No.	Sector/subsector	Amount spent (Rs. Lakh)	Location
1.	Infrastructure(Culvert, Sheds/ Ghats, Road (PCC/WBM), Bridge)	201.07	Kalyanpur, Akhratola, Raham, Iaranga and other village road (Drain & Culvert), Playground Stage and Shed at Benti, Cello point to Billari More, CMPDI More to Baglata, CPMDI More to Baglata, Lukaiya & Torhad(

			RCC Culvert with Approach Road), Nagduva Pool to Patal, Garhi to Banhe, Kalyanpur, Bundu, Sidalu Village, PWD road to LarangaBaghutobar village, Damodar River
2.	Drinking water(Hand pump,well)	14.25	Kalyanpur, Karo, Pahan Tongri, Bachra-Patal Panchayat, Koilara, Ulatu, Karo
3.	Education (Infrastructural development at Schools/ Colleges, Adoption of dropout student, Misc.)	159.72	Bright Children Convent-Kalyanpur(2 rooms), Laboratory & development works-Girls High School Bachra, Primary School-Kalyanpur, Nehru Adarsh Vidyalaya-Benti(2 Rooms), Nehru Adarsh Vidyalaya-Benti(2 rooms), Saraswal Shishu Mandir-Ray(2 rooms), Sarswati Vidya Mandir-Ray(2 rooms), Mandair village(2 rooms), mandair village(2 rooms), UrduSchool-New Mangardaha(renovation), St. Joseph School Mander, Book Purchase for Library, Wiring at Sec. School Kalyanpur, Electrical wiring in MS Kalyanpur
4.	Health(Health camp)	0.90	Gynecological/cancer detection/village health camp
5.	Environment(Pond,check dam, Installation of solar lights, Misc. (Ecopark, rain water harvesting, etc.)	44.77	Thethangi village-Bahera Panchayat, Ray Panchayat, Benti Pond, Patal village, Damaru village-Patal, Lohra Bandh-Tharha Basti Ray, Tarwa village(Spring), Rain water harvesting-Ray
6.	Social emp./skill dev. (Computer training, Misc. (Any other vocational training)	19.74	Constr. Of Skill Development Centre, ST/SC Hostel-Kalyanpur, Running of Old Age at Bachra

xvii.	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	Dust masks are regularly provided to the persons working in the mining area. Distribution details of dust mask is as under : <table border="0"> <thead> <tr> <th>Year</th> <th>No. of dust masks</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>200</td> </tr> <tr> <td>2012</td> <td>600</td> </tr> <tr> <td>2013</td> <td>200</td> </tr> <tr> <td>2014</td> <td>350</td> </tr> <tr> <td>2015</td> <td>350</td> </tr> </tbody> </table>	Year	No. of dust masks	2011	200	2012	600	2013	200	2014	350	2015	350
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xviii.	Dust mask to be provided to every worker in the mining area.	Dust mask have been regularly provided to the persons working in the core zone. Distribution details of dust mask is as under : <table border="0"> <thead> <tr> <th><u>Year of distribution</u></th> <th><u>No. of dust masks</u></th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>200</td> </tr> </tbody> </table>	<u>Year of distribution</u>	<u>No. of dust masks</u>	2011	200								
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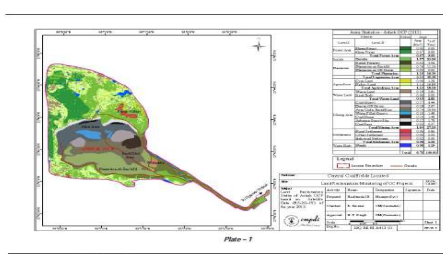
		2012 2013 2014 2015	600 200 350 350																		
xix.	The supervisory staff should be held personally responsible for ensuring compulsory wearing of dust mask in the core area.	During training / refresher training employees are made aware on all aspects of safety in mines including wearing of dust masks. Safety Officer ensures that all employees working in dust prone areas wear dust masks.																			
xx.	People working in the core area should be periodically tested for the lung diseases and the cost to be met by PP.	Initial Medical Examination at the time of new recruitment and Periodical medical examination for occupational diseases is done for 1/5 of total man power every year. Details of PME & IME undertaken is as under :- <table border="1"> <thead> <tr> <th>Year</th> <th>PME (Nos.)</th> <th>IME (Nos.)</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>158</td> <td>158</td> </tr> <tr> <td>2012</td> <td>156</td> <td>0</td> </tr> <tr> <td>2013</td> <td>156</td> <td>175</td> </tr> <tr> <td>2014</td> <td>143</td> <td>265</td> </tr> <tr> <td>2015</td> <td>139</td> <td>54</td> </tr> </tbody> </table> During the period April '16 to Sept.'16 - 45 PME was done in project.		Year	PME (Nos.)	IME (Nos.)	2011	158	158	2012	156	0	2013	156	175	2014	143	265	2015	139	54
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xxi.	The mining area should be surrounded by green belt having tree cover with thick closed canopy.	Till date 5.08 Lakhs saplings have been planted over an area of 197.29 Ha including reclaimed area, block plantation and roadside plantation.																			
xxii.	The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.	At present mine is at a distance of 3-4 KM from the river and it is moving away from the river. As such no embankment is required at present against river / stream and no likelihood of mine inundation.																			
xxiii.	There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.	OB is being backfilled in the mine void / de-coaled area as such there is no overflow of OB into the river or into the agricultural fields. At present mine is at a distance of 3-4 KM from the river and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha including reclaimed area, block plantation and roadside plantation.																			
xxiv.	OB shall be stacked at two	There is no external OB dump. OB is																			

	<p>earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional Office on yearly basis.</p>	<p>being backfilled in the mine void / de-coaled area. After backfilling the area is spread with top soil for reclamation before plantation is developed by State Forest Deptt.</p>
xxv.	<p>Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.</p>	<p>With the help of garland drains silt & sediment flow is arrested in mine sump. Garland drains of 800 mt. length have been constructed. The capacity of mine sump is 5.67 Lakh cu.mt to take care of the entire catchment area.</p> <p>Retaining wall of dimension 45m (L) X1m (Ht) X 0.5m (W) has already been constructed. 45 mt. wide check dam has also been constructed.</p>
		
xxvi.	<p>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.</p>	<p>There are no external dumps. Toe walls, garland drain & check dams have also been constructed in project. Details given above.</p>
xxvii.	<p>Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.</p>	<p>5 numbers of surface miners have been deployed. Surface miners do away the need for crushing as it produces (-) 100 mm coal. Surface miners are equipped with water sprinkling system which runs during its operation.</p>
xxviii.	<p>Drills shall be wet operated.</p>	<p>All the drills have been provided with wet</p>

		drilling arrangement.
xxix.	The PP shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,	Regular repairing of coal transportation road is regularly carried out. PCC road of 7.7 K.M length from mine to railway siding has been constructed. 5.08 Lakhs saplings have been planted over an area of 197.29 Ha including reclaimed area, block plantation and roadside plantation.
xxx.	Controlled blasting shall 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 shall be implemented.	Controlled blasting is carried out in project. Blasting is done with the use of shock tubes. Maximum charge per delay 80 KG is used to reduce ground vibration and noise pollution.
xxxii.	(i) A Progressive afforestation plan shall be implemented covering an area of 477.08 Ha at the end of mining, which includes reclaimed External OB dump area nil, Internal OB dump area (377.08 Ha) and Green belt (100 Ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.	OB is being backfilled in the mine void / decoaled area. After backfilling the area is spread with top soil for reclamation and plantation is raised by State Forest Deptt. Concurrent mine reclamation is under process 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha including reclaimed area, block plantation and roadside plantation.
xxxiii.	An estimated total 242.99 Mm ³ of OB will be generated during the entire life of the mine. There is no external OB dump. 242.99 Mm ³ of will be one internal OB dump in covering an area of 377.08 ha. The maximum height of internal OB dump will not exceed 30 m above ground level. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining	Concurrent mine reclamation is under process 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha. The height of the internal dump is not above the original ground level and slope of the dump is kept within 28°


	and compliance status shall be submitted to MOEFCC and its Regional Office on yearly basis.																			
xxiii.	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner	Reclamation plan is included in Environmental Management Plan. Restoration & reclamation work is being concurrently followed. Details given above.																		
xxiv.	Compensatory Ecological Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	Concurrent mine reclamation is under process 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha.																		
xxv.	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.	There is no external OB dump. OB is being backfilled in the mine void / decoaled area.																		
xxvi.	No groundwater shall be used for mining operations.	Groundwater is not used for mining operations. Mine water is used for sprinkling and community use.																		
xxvii.	Of the total quarry area of 551.18 Ha, the backfilled quarry area of 377.08 Ha shall be reclaimed with plantation and a void of 174.10 Ha at a depth of 40 m is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation / afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.	Concurrent mine reclamation is under process 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha. During plantation tree density of 2500 per Ha. is ensured. The mine void will be converted into a water body. The water body will be developed for community purpose.																		
xxviii.	Regular monitoring of groundwater level and quality 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 (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & Climate Change and to the Central Pollution Control Board quarterly within one month of monitoring.	Regular monitoring of groundwater level is done by CMPDIL by monitoring of wells. Well monitoring by CMPDIL. Details of Well: <table border="1"> <thead> <tr> <th>Village</th> <th>No.</th> <th>Depth</th> </tr> </thead> <tbody> <tr> <td>Kalyanpur</td> <td>04</td> <td>33 ft</td> </tr> <tr> <td>Bijain</td> <td>05</td> <td>38 ft.</td> </tr> <tr> <td>Benti</td> <td>01</td> <td>41ft</td> </tr> <tr> <td>Barwatola</td> <td>01</td> <td>37 ft</td> </tr> <tr> <td>Henzda</td> <td>01</td> <td>38 ft.</td> </tr> </tbody> </table>	Village	No.	Depth	Kalyanpur	04	33 ft	Bijain	05	38 ft.	Benti	01	41ft	Barwatola	01	37 ft	Henzda	01	38 ft.
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xxix.	The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	11 no. of ponds have been made in nearby villages to augment water availability as well as ground water recharge. 3 no. of check dams & 2 no. of earthen dams have also been made on Bentinaallah. 7 no. of boreholes with 5 Hp capacity submersible pumps have been installed for meeting water requirement of nearby villages like Berawtola, Benti, Bijan, Hendja, Jaratongdi etc.																		
xl.	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Oil grease trap has been constructed and functioning in the workshop.																		
xli.	Besides carrying out regular periodic health check-up of their workers, 10% 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, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.	Initial Medical Examination at the time of new recruitment and Periodical medical examination for occupational diseases is done for 1/5 of total man power every year. Details of PME & IME undertaken is as under :- <table border="1" data-bbox="885 1003 1421 1213"> <thead> <tr> <th>Year</th> <th>PME (Nos.)</th> <th>IME (Nos.)</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>158</td> <td>158</td> </tr> <tr> <td>2012</td> <td>156</td> <td>0</td> </tr> <tr> <td>2013</td> <td>156</td> <td>175</td> </tr> <tr> <td>2014</td> <td>143</td> <td>265</td> </tr> <tr> <td>2015</td> <td>139</td> <td>54</td> </tr> </tbody> </table> During the period April '16 to Sept.'16 - 45 PME was done in project.	Year	PME (Nos.)	IME (Nos.)	2011	158	158	2012	156	0	2013	156	175	2014	143	265	2015	139	54
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xlii.	Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.	The resettlement and rehabilitation of PAFs is in progress in Ashok OCP as per R&R policy of CIL. i) 66 families from Thena & 7 families from Benti village i.e 73 PAFs have been shifted. ii) Employment provided to 122 persons. iii) An amount of 6.21 crore has been sanctioned for payment of land compensation, against which Rs 3.42 Crore has been disbursed to 71 PAFs at Bijan village.																		
xliii.	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:	Monitoring of land use pattern by remote sensing is done by CMPDI every year for Ashok OCP. The monitoring report is enclosed & the details as per the																		

	<p>5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEFCC and its concerned Regional Office</p>	<p>report is as under :</p> <table border="1" data-bbox="885 262 1430 527"> <thead> <tr> <th rowspan="2">Sl. No</th> <th rowspan="2">Land Type</th> <th colspan="2">Year</th> </tr> <tr> <th>2013</th> <th>2014</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Total vegetation Area(sq K.M).</td> <td>3.34</td> <td>3.36</td> </tr> <tr> <td>2.</td> <td>Total Agriculture Area(sq K.M).</td> <td>1.23</td> <td>1.15</td> </tr> <tr> <td>3.</td> <td>Total waste Land (sq K.M).</td> <td>0.19</td> <td>0.20</td> </tr> </tbody> </table> 	Sl. No	Land Type	Year		2013	2014	1.	Total vegetation Area(sq K.M).	3.34	3.36	2.	Total Agriculture Area(sq K.M).	1.23	1.15	3.	Total waste Land (sq K.M).	0.19	0.20
Sl. No	Land Type	Year																		
		2013	2014																	
1.	Total vegetation Area(sq K.M).	3.34	3.36																	
2.	Total Agriculture Area(sq K.M).	1.23	1.15																	
3.	Total waste Land (sq K.M).	0.19	0.20																	
<p>xliv.</p>	<p>A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.</p>	<p>Mine Closure Plan has been prepared and duly approved by the CCL Board in its 422th meeting held on 15-03-2016. Proposed fund for Mine closure is Rs. 7460.02 Lakhs. Copy of the Mine Closure Plan submitted to the MoEF&CC at the time of EC meeting.</p>																		
<p>xlv.</p>	<p>The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.</p>	<p>CSR activities are carried out in consultation with members of Panchayati Raj Institutions, local villagers.</p>																		
	<p>Corporate Environment Responsibility:</p>																			
<p>a.</p>	<p>The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p>	<p>Coal India Limited has a corporate environmental policy which is applicable for Central Coalfields Limited also.</p>																		
<p>b.</p>	<p>The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements /deviation /violation of the environmental or forest norms/conditions.</p>	<p>The environmental policy and objective of CIL addresses the issues.</p>																		
<p>c.</p>	<p>The hierarchical system or Administrative Order of the company</p>	<p>The company has a well structured organizational structure for dealing with</p>																		

	to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	environmental issues and for ensuring compliances. The organizational structure for environment management is as under : <table border="1"> <tr> <td>At Project level</td> <td>Project Nodal officer reporting to the Project Officer.</td> </tr> <tr> <td>At Area Level</td> <td>Area Nodal officer reporting to the General Manager of the Area.</td> </tr> <tr> <td>At Corporate level</td> <td>Dy. GM / HOD (Env.) assisted by his team.</td> </tr> </table>	At Project level	Project Nodal officer reporting to the Project Officer.	At Area Level	Area Nodal officer reporting to the General Manager of the Area.	At Corporate level	Dy. GM / HOD (Env.) assisted by his team.
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At Area Level	Area Nodal officer reporting to the General Manager of the Area.							
At Corporate level	Dy. GM / HOD (Env.) assisted by his team.							
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 or stakeholders at large.	The company has a well laid down system of reporting of non-compliances & violations of environmental norms.						
General Condition								
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forest & Climate Change.	There is no change in mining technology. Open cast mining is carried out by Shovel - dumper combination.						
ii.	No change in the calendar plan of production for quantum of mineral coal shall be made.	Production of coal and OB is as per calendar plan. For the period between April'16 to September'16 coal production has been 4.62 MT.						
iii.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM ₁₀ , PM _{2.5} , SO ₂ and NO _x monitoring. 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.	Air quality monitoring station has been established at Tola across Benti Nallah, Benti village, Bijain village, Asholk pit for monitoring SPM, RPM, SO ₂ , NO _x . The results of monitoring report are enclosed as Annexure I.						
iv.	Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NON) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its	Environment Quality data is regularly monitored by the CMPDIL and monitoring report is submitted to MoEF, Regional Office and JSPC Alongwith the EC compliance report. A copy of same is						

	concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.	enclosed as Annexure - I.																																																																							
v.	Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.	<p>Noise levels are regularly monitored by CMPDIL and it is below 85 dBA. Noise level at diff. station is as under :</p> <table border="1"> <thead> <tr> <th rowspan="2">Date of Sampling</th> <th colspan="5">Sampling Stations</th> </tr> <tr> <th>I</th> <th>II</th> <th>III</th> <th>IV</th> <th>V</th> </tr> </thead> <tbody> <tr> <td>18/4/16</td> <td>49.7</td> <td>50.3</td> <td>52.6</td> <td>49.8</td> <td>51.6</td> </tr> <tr> <td>30/5/16</td> <td>48.2</td> <td>50.6</td> <td>52.9</td> <td>49.2</td> <td>54.6</td> </tr> <tr> <td>13/6/16</td> <td>46.8</td> <td>47.8</td> <td>52.4</td> <td>49.6</td> <td>52.2</td> </tr> <tr> <td>27/6/16</td> <td>55.3</td> <td>53.9</td> <td>54.8</td> <td>54.7</td> <td>53.8</td> </tr> <tr> <td>18/7/16</td> <td>45.1</td> <td>46.2</td> <td>47.3</td> <td>49.1</td> <td>46.5</td> </tr> <tr> <td>01/8/16</td> <td>52.9</td> <td>50.5</td> <td>48.6</td> <td>49.1</td> <td>50.1</td> </tr> <tr> <td>16/8/16</td> <td>45.2</td> <td>46.4</td> <td>47.7</td> <td>44.3</td> <td>46.3</td> </tr> <tr> <td>01/09/16</td> <td>49.8</td> <td>49.3</td> <td>50.4</td> <td>49.6</td> <td>51.2</td> </tr> <tr> <td>19/9/16</td> <td>47.2</td> <td>48.6</td> <td>53.2</td> <td>52.1</td> <td>49.2</td> </tr> <tr> <td>3/10/16</td> <td>51.3</td> <td>52.4</td> <td>50.6</td> <td>54.8</td> <td>52.6</td> </tr> </tbody> </table> <p>Ear plugs have been provided to mine workers for regular use. Concurrent mine reclamation is under process 219.50 Ha of land has already been reclaimed and 5.08 Lakhs saplings have been planted over an area of 197.29 Ha including reclaimed area, block plantation and roadside plantation.</p>	Date of Sampling	Sampling Stations					I	II	III	IV	V	18/4/16	49.7	50.3	52.6	49.8	51.6	30/5/16	48.2	50.6	52.9	49.2	54.6	13/6/16	46.8	47.8	52.4	49.6	52.2	27/6/16	55.3	53.9	54.8	54.7	53.8	18/7/16	45.1	46.2	47.3	49.1	46.5	01/8/16	52.9	50.5	48.6	49.1	50.1	16/8/16	45.2	46.4	47.7	44.3	46.3	01/09/16	49.8	49.3	50.4	49.6	51.2	19/9/16	47.2	48.6	53.2	52.1	49.2	3/10/16	51.3	52.4	50.6	54.8	52.6
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vi.	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19' May 1993 and 31' December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	<p>ETP / Oil & Grease traps have been constructed and is in operation. 100% water is re-cycled. The results of water quality monitoring report done by CMPDIL are enclosed as Annexure III. The result of water quality monitoring report.</p>																																																																							
vii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.	<p>Vehicles engaged in coal transportation are regularly checked and have been asked to obtain PUC certificate. Transportation of coal is done through covered trucks.</p>																																																																							

																				
viii.	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 got analysed through a laboratory recognised under EPA Rules, 1986.	Pollution monitoring and analysis is being carried out by CMPDIL, Ranchi. CMPDIL Environmental lab is well equipped with all required latest instruments and also with well trained manpower for analyzing samples of water, waste water, air quality etc.																		
ix.	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	Persons working in dusty area have been provided with dust mask. Details of dust mask distributed between employees since 2011 is as under : <table border="1"> <thead> <tr> <th>Year of distribution</th> <th>No. of dust masks</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>200</td> </tr> <tr> <td>2012</td> <td>600</td> </tr> <tr> <td>2013</td> <td>200</td> </tr> <tr> <td>2014</td> <td>350</td> </tr> <tr> <td>2015</td> <td>350</td> </tr> </tbody> </table>	Year of distribution	No. of dust masks	2011	200	2012	600	2013	200	2014	350	2015	350						
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x.	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. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.	Initial and periodic medical examination of employees is carried out on regular basis every year. Details of PME & IME undertaken is as under :- <table border="1"> <thead> <tr> <th>Year</th> <th>PME(No.)</th> <th>IME (No.)</th> </tr> </thead> <tbody> <tr> <td>2011</td> <td>158</td> <td>158</td> </tr> <tr> <td>2012</td> <td>156</td> <td>0</td> </tr> <tr> <td>2013</td> <td>156</td> <td>175</td> </tr> <tr> <td>2014</td> <td>143</td> <td>265</td> </tr> <tr> <td>2015</td> <td>139</td> <td>54</td> </tr> </tbody> </table> <p>During the period April '16 to Sept.'16 - 45 PME done. Medical & health services is provided by dedicated company Doctors & other medical staffs at Area medical hospital.</p>	Year	PME(No.)	IME (No.)	2011	158	158	2012	156	0	2013	156	175	2014	143	265	2015	139	54
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xi.	A separate environmental 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.	Sri Sanjay Kumar, has been appointed exclusively to work as Area Environmental Officer of Piparwar Area and Sri R.N Prasad Engineer civil has been appointed exclusively to work as Environmental Officer of the project.																		

xii.	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 its concerned Regional Office.	Funds earmarked for environmental works are used for this purpose only.
xiii.	The PP 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 issue of EC letter informing that the project has been accorded environmental clearance and a copy of the EC letter is available with the State Pollution Control Board and may also be seen at the website of the Ministry of Environment, Forests & Climate Change at http://envfor.nic.in .	The advertisement about the environment clearance had been published in local news papers. Copy of the advertisement is given below: 
xiv.	A copy of EC letter shall be marked to concern Panchayat to concern Panchayat / ZilaParishad, Municipal 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 EC letter shall also be displayed on company's website.	Complied.
xv.	A copy of the EC letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at	A copy of the EC was submitted to the Member secretary Jharkhand State pollution control by PO(AK)/Civil/ Env./ EC /2015-16/684 dt. 31-03-2016.

	the Regional Office, District Industry Sector and Collector's Office / Tehsildar's Office for 30 days.	
xvi.	The EC letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance 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. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM10, PM2.5, SO2 and NOx (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.	EC letter along with 6 – monthly Compliance report is also uploaded on the company's website.
xvii.	The PP shall submit six monthly compliance report on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.	Six monthly Compliance report is regularly submitted to the respective Regional Office of the Ministry, respective Zonal Offices of CPCB and the SPCB.
xviii.	The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	Agreed.
xix.	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 & shall be sent to the respective Reg. Office of the MoEF by e-mail.	The Environmental statement has been submitted to the Regional Office of the MoEF& CC, Ranchi and Jharkhand State Pollution Control Board, Ranchi.

