

BHARAT CUKING COAL LTD.

A Mini Ratua Company
(A Subsidiary of Coal India Ltd.)
REGD.Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005
CIN No.U10101JH1972GO1000918
OFFICE OF THE GENERAL MANAGER

BARORA AREA

Ref No.GM/AR-1/SURVEY/33e3/2014

To
The Director
Ministry of Environment & Forest
Chandrasekharpur
Post-Rail Vihar
Bhubneshwar-751023

Dated: -01.12.2014

Sub: - Six monthly Compliance report of Environmental Clearance of Cluster - XV group of mines for the period from Apr'14 to Sept'14.

Ref:-EC order no.-J-11015/100/2011-IA.II [M]

Dear Sir,

Please find enclosed herewith six monthly compliance of the conditions of environmental clearances granted to Cluster-XV group of mines of BCCL for the period from Apr'14 to Sept'14.

With Regards

Encls: As above

C.C. to:

 Sri Sundeep Scientist-D, Central Pollution Control Board Southern Conclave, Block 502,5th & 6th floor 1582, Rajdanga Main Road, Kolkata-700107.

 Member Secretary, Jharkhand State Pollution Control Board, TA Divn.Building, HEC Dhurwa, Ranchi.

3. Dy.G.M. (Env.), Koyla Bhawan, Dhanbad.

4. General Manager, Govindpur Area

5. Addl. G.M., Barora Arca.

6. Area Manager (Plg.), Barora Area.

7. Nodal Officer, (Env.), Barora Area/Govindpur Area

8. Project Officer, Phularitand/Madhuband/Kharkharee colliery.

9. Office File.

10. Master File.

Yours Faithfully

ອາໄດ້ eneral Manager

General Manager

<u>Barora Area</u>

GRANTED VIDE J-11015/100/2011-JA.II (M) Dated 16.12.2013) From April 14 to Sept.14 Action Plan for compliance of EC conditions

| SN | A. Specific Conditions by MOEF: | Compliance |
|-------------|--|--|
| i . | The maximum production in the cluster not exceed beyond that for environmental clearance has been granted for C XV as per given below: | shall The production from the cluster is within the which limit for which Environmental clearance has been granted. |
| | SI. Name of Mines Production capacity Lea | d area |
| | Coll. 2 Madhuband 0.113 0.147 39 coll. | 3.77 |
| | coll. | 0.88 |
| | coll(Closed for production) | 7.90 - 145 - 15 - 15 - 15 - 15 - 15 - 15 - 1 |
| | | 6.55 A Market Co. 10 Co |
| II . | The proponent shall prepare a contingency pl subsidence. | an for It is being complied as per the guidelines of DGMS. |
| | Keeping in view the pattern of the subsidence area, no depillaring should be carried out un rehabilitation of the affected families and shift infrastructure. | til the carried out at present. |
| iv | The channels adjoining the ML area leading to Ja river should not be disturbed and be regularly de- | |
| Y | The quality of the Jamunia river water shou continuously monitored and in order to prevent a series of check dams should be constructed boulders. This will help in recharging the ground of the series of the serie | silting, using |
| - vi | The coal from the mines will be transport mechanically covered trucks within two months. | ed by At present we are exploring the technology to cover existing trucks mechanically by local technicians and no OEM is available for covered trucks in Indian market until the coal production is being done by tarpaulin covered trucks. |
| VII | in underground mining there is presence of orgases. These gases are volatile in nature. Description of air, fire takes place. The routine rengineering will not serve the purpose. The proper studies be carried out to underground seams and how these fire areas consealed from further spreading. | and CMR 1957 along with statutes constituted under Mines act are fully complied to prevent any occurrence of fire. Regular monitoring and immension is done by DCMS. |
| viii | Cumulative impact of fire and gases for all the cl of coal mines in Jharia Coal field is carried out. | usters For Impact assessment by fire and gases in JCF, CMPDIL has been requested to carry out this study. Further for the source apportionment study a |



| | H_{const} | Services (Control of Control of C |
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| | | |
| | | |
| | 3,44,4 | tender document has been prepared and shall |
| . 4 | | be floated shortly to award the work. |
| | | National Remote Sensing Agency (NRSA) has |
| Li | National Remote Sensing Agency (NRSA) should be | studied and submitted information on surface |
| | contacted for thermal imaging techniques which are | coal fire of the Jharia coalfield using remote |
| - | being utilized for assessing the extent of impact of | |
| İ | underground of fire. BCCL should consider for an MOU with NRSA for short and long term studies so as to | sensing data in which fire area of JCF has been |
| l | obtain detailed information on Satellite imagery, | reduced to 2.18sq. Km (2006) from 9.00 sq. Km |
| 1 | thermal imagery, subsidence prediction and surface | (2012). |
| 1 | features of the mining area. | the land and any comment |
| x | The Project proponent should monitor the water | Work of monitoring ambient environment |
| ı | quality of the lamunia river as per the standards | including water quality of the Jamunia river is |
| | prescribed by the JSPCB/CPCB to maintain the required | being done by CIMFR, Dhanbad. |
| | BOD in the river water. The nullah as adjacent to the river should not be | It is being complied. |
| xi | disturbed. | |
| ,,;; | The open cast quarries of the abandoned mines should | It is being complied. |
| xii | be backfilled to the ground level and restored with | |
| | native species | It shall be complied. Coal production is being |
| xiii | All coal from the smaller U/G mines should be | done by Tarpaulin covered trucks. |
| . | transported by high capacity and mechanically covered | done by Tarpadiii Covered a data. |
| | trucks/tippers. | It is being complied. |
| χίν | Green belts shall be developed on both sides of the | |
| | roads. Action plan for quenching of fires and rehabilitation | It is being complied. The approved master plan is |
| XV | along with the details of master plan be submitted to | uploaded on BCCL website |
| | MOEF for monitoring purpose. | (www.bccl.gov.in/PDFS/MPLANBCUL-2000.pdf) |
| | | and regular monthly progress report is being |
| | | sent to ministry. |
| | Presently coal of Munidih washery from other mines of | Jharia Coalfield is a densely and highly populated |
| XVI | the cluster is taking place through NH. An alternate | LABORIN WILETINGUAC . CO.C. |
| | route for coal transportation may be explored. | nollistion and renabilitation problems. It may be |
| | | explored only after the shifting of population, |
| | | living in coalfield region. |
| | For understanding the composition of emissions from | BCCL has initiated the process to conduct source |
| XVII | coal mine fires BCCL may initiate action as proposed in | 1 Apply Comment steet |
| | the visit report of the EAC to Dhanbad. | tender document has been prepared and shall |
| | The property of the party of the state of th | be awarded shortly to award the work. |
| | The approved mining plan is submitted to the MOEF. | Most of the BCCL mines are taken over mines |
| XVIII | The approved turning biggs to approve the same and the sa | from the erstwhile private owners who were |
| | | prograting mines without mine plans at the time |
| | | of nationalization and now are being operated as |
| | | amalgamated collieries/quarries as per the guide |
| | | lines of DGMS. |
| | The measure to identify in the Environmental Plan for | or It is being complied. |
| XIX | of the VVI erouns of mine and the conditions given | ♥♥ ### ## 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - |
| | able environmental clearance letter shall be dove talle | |
| | in the learning of the Indria Action Plats. | NESC has been engaged for the purpose and |
| XX | nenare time -series maps of u | |
| | The proponent stall property of the property o | N. MINE 1103 SA |
| | | |

| | and also quantified. These studies would help ascertain 2 | |
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| | and also quantified. These studies would help ascertain 2. | |
| - : | and also quantified. These studies would help ascertain 2 | |
| | and also quantified. These studies would help ascertain 2 | U |
| - 1 | and also quantified. These studies would help ascertain | |
| | | |
| | particulate matter (PM ₁₀ and PM _{2.5}) in Jharia Coalfields | |
| | undertaken on the composition of the suspended | response in the control of the contr |
| | Coalfields, Mineralogical composition study should be | |
| | natural dust, etc.) and a source Apportionment Study- should be got carried out for the entire Jharia | |
| | source (fuel wood, coal, fly ash from TPPs, silica from | |
| | stated that smoke/dust emission vary from source to | Board. |
| | Jharkhand State Pollution Control Board. Committee | consultation of Jharkhand State Pollution Control |
| | coalfield should be finalized in consultation with | Coaltields has been finalized with the |
| VII | The locations of monitoring stations in the Jharia | ine location or monitoring stations in the Jharia |
| | | the control of the state of the |
| | Cluster- XV shall be implemented. | errore de la companya del companya del companya de la companya de |
| | for Dhanbad as a critically polluted are and relevant for | man or a section of the section of t |
| , | Coalfields in the Environmental Action Plan prepared | |
| XVI | Specific mitigative measures identified for the Jharia | It is being complied. |
| | regularly updated. | 機力 Sell (Advisor) published a transport (Advisor) (Adv |
| | be brought out in a booklet from within a year and | State Contraction of the Contrac |
| | of environmental action plan for the clusters XV should | tegytti i maket kan men en en tropper og en |
| (XV | Details of transportation, CSR,R&R and implementation | it shall be complied. |
| 244 | Ha., density of tree plantation 2500/ Ha. Of plants. | |
| | which will include, Green belt over an area of 229.12 | |
| | an area of 621.28 Ha. (Additional) at the end of mining | 新聞 Aller Age (1997) |
| XIV | Total afforestation plan shall be implemented covering | It shall be complied. |
| | shall be maintained along the nalas/water bodies. | especial control of the control of t |
| Ę. | boundary. A safety barrier of a minimum 60m width | of the supplied of the second section is |
| 195. | a safe distance from the Nalas flowing along the lease | |
| | streams/nalas flowing within the lease and maintaining | as per the guidelines of DGMS. |
| AIII | Mining shall be carried out as per statuette from the | |
| XIII | 414 151 11 11 11 11 11 11 11 11 11 11 11 11 | <u>1.276 3000 11 - 400 12 4 1 2 4 2 4 2 4 2 4 2 4 4 2 4 4 4 4 </u> |
| | sufficient carbon content. | |
| | the fire could start due to presence of coal /shale with | Minimum Market Control of the Contro |
| | check such fire including in old OB dump areas where | we per the Bullethiles Ul DOMS. |
| | fires continue. Measure shall be taken to prevent/ | as per the guidelines of DGMS. |
| OCH | No mining shall be undertaken where underground | It is being complied. Mining is being carried out |
| | the peak water flow and prevent mine inundation. | |
| | side and stabilized with plantation so as to withstand | |
| | be strengthened by stone pitching on the river front | great in the second of the sec |
| | shall be of suitable dimensions and critical patches shall | |
| XXI | The embankment constructed along the river boundary | It is being complied. |
| vvi | areas, which may restart fresh fires. | |
| | be taken prevent ingress of air (Ventilation) in such | Market and the second of the second |
| | imaging has been got done by NRSA. Measures would | Alexander of the second of the |
| | imaging has been get done by tipes as | |
| | subsidence control. Isothermal mapping using thermal | · 使物 一个 好说 一个 一个 一个 一个 一个 一个 |
| | reclamation and to further minimize time for fire and | |
| | for control of fire in Jharia Coalfields and for their | |
| | Expertise available internationally could also be utilized | |
| | including in mines of cluster XV shall be undertaken. | |
| | prevent restart fresh/spread fires in other areas | shortly after finalization of tender. |
| | prevent ingress of air (Ventilation) in such areas, to | and for its reclamation. Work shall be started |
| 4 | potential fire problems shall be identified. Measures to | invited for control of the fire in Jharia Coalfields |
| | ignition temperatures) and based on which, areas with | All international expression of interest has been |
| | coal seams (whether they are close to spontaneous | A. A |
| | mapping /imaging and monitoring temperatures of the | reduced from 9 00 km²+a 2 10 km² |
| | fire problems in the Jharia Coalfields by Isotherma | satellite data in which area of fire has been |
| | fine manhlama in all all in his | |



| | source and extent of the air pollution, based on which appropriate mitigative measures could be taken. | • |
|---------|--|--|
| ×XVIII | The proponent will continue the existing Road-Rail | At present we are exploring the technology |
| AAVIII | transport network system in view of the | cover existing trucks mechanically by lo |
| | implementation of the Master Plan (For 10 years) and | technicians and no OEM is available for cover |
| | another 5 Years gestation period after the completion | trucks in Indian market until the coal producti |
| | of Master Plan for consolidation of the backfilled dug | is being done by tarpaulin covered trucks. |
| | out fire areas and unstable areas is required. All | |
| | mitigation measures (like covered trucks, green belting | |
| | on either sides of the roads, enhanced water sprinkling, | |
| | strengthening and maintaining the roads etc.) shall be | |
| | adopted up to 15 years (phase-I) with the existing | |
| | Road- Rail transport system. In phase -II, BCCL shall | |
| | implement conveyor-cum-rail transport to avoid movement of trucks within the cluster for coal | |
| | transportation in phase-II which shall start after 15 | |
| | years. Transportation of coal shall be by Rail and | |
| | Conveyor belt, minimizing the existing road transport | |
| | system in all the mines of the cluster and shall continue | |
| | after 15 years. Loading of coal by pay loaders shall be | |
| | discontinued. Adequate number suitably designed off- | |
| | take points shall be provided. | |
| XXIX | 1537 nos. of PAFs should be rehabilitated at cost of | It is being complied as per approved Jha |
| | Rs.140.03 crores as per the approved Jharia Action | Action Plan. |
| V/\0/ | Plan. Regular monitoring of subsidence movement on the | It shall be complied .No depillaring is bei |
| XXX | surface over and around the working area and impact | carried out at present. |
| | on natural drainage pattern, water bodies, vegetation, | |
| | structure, roads and surroundings shall be continued | |
| | till movement ceases completely. In case of | |
| | observation of any high rate of subsidence movement, | |
| | appropriate effective corrective measures shall be | |
| | taken to avoid loss of life and material. Cracks shall be | |
| | effectively plugged with ballast and clayey soil/suitable | |
| | material. Coal Extraction shall also be optimized in areas where | It is being complied. |
| XXXI | agricultural production is continuing. Some pillars shall | It is being complica. |
| | be left below the agricultural land. No depillaring & | the second secon |
| | coal extraction should be carried out below habitation, | and the second s |
| | H.T Lines & beneath road, water bodies. | |
| XXXII | Subsidence shall be monitored closely and if | No depillaring is being carried out at present. |
| | subsidence is found exceeding the permitted limits, | |
| | then the land owners shall be adequately compensated | |
| | with mutual agreement with the land owners. | It is being complied. |
| XXXIII | 3-tiers plantation should be developed 2KM stretch of | It's pelity complied. |
| \(\mu\) | road from the mine using native species. Water sprinkling system shall be provided to check | |
| XXXIV | fugitive emission from loading operations, conveyor | |
| | system, haulage roads, transfer points, etc. Major | the Kirlston Committee of the Committee |
| - | approach roads shall be black topped and properly | |
| | maintained. | |
| XXXV | A progressive afforestation plan shall be prepared and | It is being complied. |
| | implemented over the mine lease area acquired and | |
| | shall include areas under green belt development, | |
| -, | | |

| | and township etc, by planting native species in consultation with the local DFO/Agricultural Department. | |
|------------|--|---|
| XXXVI | Acid water Treatment Plant, volume of water to be treated and disposal of brine should be provided. | |
| XXXVII | Mine discharge water outside the Mil. shall be monitored, particularly for TDS and treated to confirm prescribed levels before discharge into the natural environment. | Presently water is not being discharged outside the ML. Excess mirie water is being stored at old quarries and ponds for community use. |
| XXXVIII | The Company shall put up artificial groundwater | Presently water is not being discharged outside |
| | recharge measures for augmentation of ground water | the ML. Excess mine water is being stored at old |
| | resource, incase water table shows a declining trend. | quarries and ponds for community use. This will |
| | The project authorities shall meet water requirement | help to recharge the ground water. |
| | of nearby village(s) in case the village wells go dry due | |
| | | |
| | to dewatering of mines. | |
| XXXIX | Besides carrying out regular periodic health check up of | It is being done. |
| | their workers, 10% of the workers identified from | TO IN THE PROPERTY. |
| | workforce engaged in active mining operations shall be | |
| | subjected to health check up for occupational disease | |
| | and hearing impairment, if any, through an agency | king of the state |
| | such as NIOH, Ahemdabad within a period of one year | |
| | and the results reported to this Ministry and to DGMS. | ・ 経験的 (1000) (2014) (1000) (1000) (1000) |
| kl | The mining in the existing mines would be phased out | Shall be complied. |
| | after expiry of the current mining lease and after | |
| | reclamation of mined over area. The operating mines | |
| | may be analyzed and monitored for compliance of | |
| | conditions, having bearing with movement of wild life | |
| | until such time they are closed/phased out. | |
| kli | Sufficient coal pillars shall be left unextracted around | It is being complied. |
| | the air shaft (within the subsidence influence area) to | 製物 Market Carlot and Carlot C |
| | protect from any damage from subsidence, if any. | |
| klii . | High root density tree species shall be selected and | It is being complied. |
| | planted over likely areas to be affected by subsidence. | M. Laborano and ind |
| kliii | Depression due to subsidence resulting in water | It is being complied. |
| | accumulating within the low lying areas shall be filled | |
| | up or drained out by cutting drains. Solid barriers shall be left below the roads falling within | it is being complied. |
| kliv | the blocks to avoid any damage to the roads. | It is being complica. |
| | The CSR Action Plan shall consist of need-based CSR | It is being complied. |
| xtv | Action Plan, CSR Auditing and monitoring mechanism | A B Delig complicat |
| | etc. The proponent will spend 5% of the retained | · Battan Ani Communication (1997) Battan Ani Communication (1997) |
| | earnings of the previous year subject to a minimum of | |
| | Rs.5/- per tonne of coal production which should be | |
| | adjusted as per the annual inflation. The progress made | |
| | there on shall be uploaded on the company website. | |
| | Monitoring of the impact of the activities under CSR | |
| | shall be carried out periodically | |
| xlvi | Third party evaluation shall be got carried out regularly | BCCL is implementing CSR activities. A separate |
| | for the proper implementation of activities undertaken | CSR committee has been formed at area level of |
| | in the project area under CSR. Issue raised in the Public | Barora, who will look after the works being |
| | Hearing shall also be integrated with activities being | executed under CSR. |



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| | taken up under CSR. The details of CSR undertaken | |
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| | along with budgetary provisions for the village-wise | |
| | various activities and expenditure thereon shall be | |
| | uploaded on the company website every year. The | TISS has been conducted survey to frame CSR |
| | company must give priority to capacity building both | policy for better implementation and monitoring |
| | within the company and to the local youth, who are | of the CSR activities. |
| | motivated to carry out the work in future. The | |
| - | gap/space available between the entire mine area | |
| - | should be suitably planted with native species. | |
| | Plantation should also be made in vacant area and | |
| | along the road side so as to reduce dust pollution. | |
| lvii | Central recreation park with herbal garden should be | It shall be complied. |
| | developed for use of all inhabitants. | · 사용 |
| lviii | The mine water should be treated properly before | It is being complied. |
| | supply to the villager. | |
| .1; | discharge water shall be treated to meet | It shall be compiled. |
| (IIX | | it shall be complica. |
| | standards prescribed standards before discharge into | • |
| | natural water courses/agriculture. The quality of water | |
| | discharge shall be monitored at the outlet and proper | |
| | records maintained thereof and uploaded regularly on | |
| | the company website. | |
| 1 | The void shall be converted into a water reservoir of a | It shall be complied. |
| • | maximum depth of 15-20 m and shall be gently sloped | |
| | and the upper benches of the reservoir shall be | |
| | stabilized with plantation and the periphery of the | |
| | reservoir fenced. The abandoned pits and voids should | |
| | be backfilled with OB and reclaimed with plantation | |
| | • | |
| | and or may be used for pisciculture. | The work of monitoring of groundwater level |
| 1ii | Regular monitoring of groundwater level and quality of | and quality is being done by Central Institute 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 | Mining & Fuel Research (CIMFR) Dhanbad. |
| | dome four times a year in pre-monsoon (May), | |
| | monsoon (August), post-monsoon (November) and | |
| | winter (January) seasons and for quality including | |
| | Arsenic and Fluoride during the month of May. Data | |
| | thus collected shall be submitted to the Ministry of | The state of the s |
| | Environment & Forest and to the Central Pollution | |
| | Control Board/SPCB quarterly within one month of | to the second of |
| | monitoring. Rainwater harvesting measures shall be | |
| | undertaken in case monitoring of water table indicates | |
| | a declining trend. | |
| 1ii | ETP shall also be provided for workshop, and CHP, if | It shall be complied. |
| 711 | any. Effluents shall be treated to confirm to prescribe | |
| | standards in case discharge into the natural water | anger a same |
| | course. | |
| 1iii | For monitoring land use pattern and for post mining | Being complied .Presently a time series map of |
| | land use, a time series of land use maps, based on | vegetation cover in the Jharia coal field is being |
| | satellite imagery (on a scale of 1: 5000) of the core | carried out through CMPDI Ranchi. Further |
| | zone and buffer zone, from the start of the project until | CMPDI has been requested to prepare "Time |
| | end of mine life shall be prepared once in 3 years (for | |
| | | |

| | time series), and the report submitted to MOEF and its Regional office at Bhubaneswar. | imagery of the core zone and buffer zone in the scale 1:5000 for 3 years. |
|-----|--|--|
| 1iv | A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five year before mine closure for approval. Habitat Restoration Plan of the mine area shall be carried out using a mix of native species found in the original ecosystem, which were conserved in-situ and ex-situ in an identified area within the lease for reintroduction in the mine during mine reclamation and at the post mining stage for habitat restoration. The mining plan and post —mining plan, closure plan should be prepared and submitted to the Ministry. | CMPDI has been prepared "Final Mine Closure Plan along with details of Corpus Fund and amount has been deposited to Fund. |
| 1v | A separate management structure for implementing environment policy and socio-economic issues and the capacity building required in this regard. | A full-fledged Environment Department, headed by a HOD (Environment) along with a suitable qualified multidisciplinary team of executives (17 nos.) which includes Environment, Mining, Excavation, Civil, Survey ,Electrical & mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarter. They |
| | | are also trained in ecological restoration, sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/ Laws including environment protection measures. The |
| | | activities are monitored on regular basis at Area and at Head quarter levels. GM (Environment) at head quarter level, co-ordinates with all the Areas and reports to the Director (Technical) and in turn he reports to the CMD of the company. The team is multidisciplinary and very much motivated under the guidance of company's |
| 1vi | Corporate Environment Responsibility: | Director (Technical) and CMD. Further capacity building at both corporate and operating level is being done. |
| | a) The Company shall have a well laid down Environment Policy approved by the Board of Directors. | A well defined Corporate Environment Policy has already been laid down and approved by Board of Directors. This is also posted on BCCL website. Complied. |

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|------|--|--|--|
| | b) The Environment Policy shall prescribe for standard | A hierarchical system of the company to de | |
| | operating process/procedures to bring into focus | with environmental issues from corporate lev | |
| İ | | already exists. | |
| | ally littlingeritettes/ de viere in viere in | ancady exists: | |
| | environmental or forest norms/conditions. | | |
| | Administrative Order of | Being complied. | |
| - | c) The hierarchical system or Administrative Order of | | |
| | the company to deal with environmental issues and | | |
| | for ensuring compliance with the environmental | | |
| | clearance conditions shall be furnished | | |
| | d) To have proper checks and balances, the company | Being complied. | |
| | 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. | | |
| | Of Stakehoniers at large. | | |
| | | | |
| | | | |
| В | General Conditions by MOEF: | | |
| i | No change in mining technology and scope of working | Being complied. | |
| | shall be made without prior approval of the Ministry of | | |
| | Environment and Forests. | Being complied. | |
| ii | No change in the calendar plan of production for quantum of mineral coal shall be made. | | |
| | Four ambient air quality monitoring stations shall be | The locations of monitoring stations in the Jh | |
| 1816 | established in the core zone as well as in the buffer | Coalfield have been finalized with the Jnankn | |
| | zone for PM.s. PM.s. SO2 and NOx monitoring. Location | State Pollution Control Board. | |
| | 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. | | |
| | | to della constitue | |
| iv | Data on ambient air quality (PM ₁₀ , PM _{2.5} , SO ₂ and NO ₃ | It shall be compiled. | |
| | Hg,As,Ni,Cd,Cr and other monitoring data shall be | 1 | |
| | regularly submitted to the Ministry including its Regional | | |
| | Office at Bhubaneswar and to the State Pollution Control | | |
| | Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis | 5 | |
| | from independent laboratories recognized under the EPA | | |
| | rules, 1986 shall be furnished as part of compliance | > | |
| | report. | | |
| | 1 . | Being Complied. | |
| ٧ | 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 | of Control of Control | |
| | HEMM, etc shall be provided with ear plugs/muffs. | | |
| | Industrial wastewater (workshop and wastewater from | m The fixing up of locations of monitoring sta | |
| vi | Industrial Wastewater (Workshop and Waste Hotel Hotel | | |

| | the mine) shall be properly collected, treated so as to conform to the standards prescribed under 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 shall be installed before discharge of workshop effluents. | in the Jharia Coalfields has been taken up with the Jharkhand State Pollution Control Board. The work of monitoring of ambient environment is being done through Central Institute of Mining & Fuel Research (CIMFR), Dhanbad which is having laboratory recognized under the EP Rules. Presently mine effluent is being monitored through BCCL own Laboratory at HQ level. |
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| 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. | Being done. Transporting of coal is being done covered with tarpaulins and optimally loaded. |
| 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 analyzed through a laboratory recognized under EPA Rules, 1986. | The work of monitoring of environment quality parameters is being awarded to Central Institute of Mining & Fuel Research (CIMFR), Dhanbad having CSIR laboratory recognized under the EP Rules. |
| 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. | Being done. |
| 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. | Being done. |
| 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. | A full-fledged Environment Department, headed by a HoD (Environment) along with a suitable qualified multidisciplinary team of executives (17 nos.) which includes Environment, Mining, Excavation, Civil, Survey ,Electrical & mechanical, Forestry disciplines executives and technicians (4 nos.) has been established in Headquarter. They are also trained in ecological restoration, |
| | | sustainable development, rainwater harvesting methods etc. At the project level, one Executive in each area has also been nominated as Project Nodal Officer (Environment) and is also entrusted with the responsibility of compliance and observance of the environmental Acts/ Laws including environment protection measures. The activities are monitored on regular basis at Area |



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| • | | and at Head quarter levels. GM (Environment) at |
| | en en en en en en en en en en en en en e | head quarter level, co-ordinates with all the |
| - 4 | | Areas and reports to the Director (Technical) and |
| | | in turn he reports to the CMD of the company. |
| | | The team is multidisciplinary and very much |
| | | motivated under the guidance of company's |
| | | Director (Technical) and CMD. Further capacity |
| | | building at both corporate and operating level is |
| | | being done. |
| xii | The funds earmarked for environmental protection | It is being complied. |
| | 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 Regional Office at Bhubaneswar. | |
| | The Project authorities shall advertise at least in two | Complied. |
| xiii | 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 & Forests at http://envfor.nic.in. | |
| xiv | A copy of the environmental clearance letter shall be | Complied. |
| A14 | marked 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 | |
| | clearance letter shall also be displayed on company's | · · |
| | website. | |
| | | |
| xv | A copy of the environmental clearance letter shall also | Complied. |
| | 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 | |
| xvi | The clearance letter shall be uploaded on the | Complied. |
| | company's website. The compliance status of the | • |
| A | | • • |
| AVI | structured environmental clearance conditions site | r |
| | also be uploaded by the project authorities on the | |
| | also be uploaded by the project authorities on their website and updated at least once every six months so the bring the same in public domain. The monitorin | o B |
| | also be uploaded by the project authorities on thei website and updated at least once every six months so as to bring the same in public domain. The monitorin | B B |
| | also be uploaded by the project authorities on thei website and updated at least once every six months so as to bring the same in public domain. The monitorin data of environmental quality parameter (air, water and soil) and critical pollutant such as PM ₁ | B B |
| | also be uploaded by the project authorities on thei website and updated at least once every six months so as to bring the same in public domain. The monitorin data of environmental quality parameter (air, water noise and soil) and critical pollutant such as PM ₁ | |
| | 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 monitorin data of environmental quality parameter (air, water noise and soil) and critical pollutant such as PM ₁ PM _{2.5} , SO ₂ and NO _x (ambient) and critical sectors | B B C, D, al |
| | also be uploaded by the project authorities on thei website and updated at least once every six months so as to bring the same in public domain. The monitorin data of environmental quality parameter (air, water noise and soil) and critical pollutant such as PM ₁ | B B C, D, al |

| | compliance reports 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 Office s of CPCB and the SPCB. | |
|-------|--|-----------------|
| xviii | The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities shall extend fill cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports. | |
| 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 company's website along with the status of compliance of Environment condition and shall be sent to the respective Regional Offices of the MOEF by e-mail. | Being complied. |

Nodal Officer (Env.) Barora Area

Nodal Officer (Env.) Govindpur Area

General Manager Barora Area