

**STATUS OF COMPLIANCE OF ENVIRONMENTAL CLEARANCE
CONDITIONS**

(For the period October, 2015 – March, 2016)

Name of the Project : Ghonsa Opencast Coal Mine (0.60 MTPA)

EC Letter No.: MoEF&CC vide EC Letter No.: J-11015/165/2009-IA.II(M) dated 08th
December, 2014

A. Specific Conditions

Sl. No.	Conditions	Compliance Status
i.	The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.	Noted, The Maximum production from Ghonsa OCM shall not exceed the limit of 0.60 MTPA.
ii.	The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.	Noted & Agreed.
iii.	Plantation of Prosperis species should be avoided and only native plant species be planted.	Noted. Prosperis species shall not be planted. 10250 native plants are already planted and will be planted in future.
iv.	Rain water harvesting and other facilities should be created for ground water recharge.	Deeping of pond at Rasa and Kumbharkhnai village has been done for ground water recharge in 2015
v.	Run off from the garland canal must pass through the settling tank.	Catch drains of size 2.50m x 2.00m for a length of 2.00 Km is constructed around the mine. Two sumps of capacity 10.50 Million Gallon & capacity of 0.45 Million Gallon have been provided inside the mine to arrest silt and sediments of soil and OB. A sedimentation tank of size 30m x 15m x 2m has also been provided.
vi.	As far as possible No bore well should be made close to the mine.	Noted and Agreed
vii.	Trained manpower and environmental laboratory at site be provided for analysing basic parameters and for advanced analysis, a regional environmental laboratory be established so as to cater to a group of mines in the vicinity. Action Taken report to the implementation of submitted action plan be submitted to the concerned SPCB and the RO, MoEFCC.	Portable Digital Testing kit for on-site monitoring of pH conductivity TDS, salt and temperature for mine water has been provided at unit level. A fully fledged Environmental laboratory (An ISO 9000 : 2000 certified) is already exists at CMPDI, Nagpur with qualified Engineers along with adequate number of field staff for carrying out all the environmental monitoring of WCL projects including this project.
viii.	The garland drain and toe wall be provided after necessary consultation with the DGMS for its adequacy.	Toe wall for a length od 82m of size 1.8m x 0.6m has been constructed for arresting the silt. Work was completed on 13.02.2016 and expenditure is 3.89 Lakhs
ix.	Check dams/secondary/tertiary channels be provided for storing of	Check dam is already exists on Vidharbha river near Kumbharkhani village.

	water/rain water harvesting for ground water recharge.	
x.	An Environmental Management Cell with an Ecologist and a Social Scientist be established for environmental monitoring in the area.	Environmental management cell is functioning at Project level headed by SAM and assisted by NO(Env). At area level, headed by AGM and assisted by ANO(Env) with qualified environmental engineer. At company level it is headed GM(Env)/HOD who directly report to Director (P&P), WCL.
xi.	Restoration of OB Dumps should be done and monitored with respect of the approved plan.	Being complied
xii.	The source of acid mine water be identified and action plan to be prepared for treatment.	Routine monitoring of Mine water discharge is being done. It is observed that pH of mine water discharge is well above acidic range.
xiii.	Mine sump water be periodically monitored for pH with regard to acid mine water discharge as precautionary measure.	Mine sump water is being monitored fortnightly by RI-IV, CMPDIL Nagpur.
xiv.	Gabion i.e. stone in wire mesh be provided to prevent any land slide.	Toe wall for a length of 82m of size 1.8m x 0.6m has been constructed for arresting the silt. Work was completed on 13.02.2016 and expenditure is 3.89 Lakhs
xv.	Coal transportation in pit by Dumpers, Surface to Siding by Dumpers and loading to siding by Pay Loaders.	Being complied
xvi.	The production shall be within the same Mining Lease area.	Being complied
xvii.	The depth of the internal void shall be 40 m from the ground level and should be adequate for fishery purpose.	Agreed and will be complied.
xviii.	The OB shall be completely re-handled at the end of the mining.	OB dump will be rehandled at the end of mine life. It will be done as per provisions indicated & submitted in approved EIA & EMP report.
xix.	The rest of the area will be back filled upto the ground level and covered with about a meter thick top soil and put to use.	It will be done as per provisions indicated & submitted in approved EIA & EMP report.
xx.	Garland drains be provided.	Catch drains of size 2.50m x 2.00m for a length of 2.00 Km is constructed around the mine. Two sumps of capacity 10.50 Million Gallon & capacity of 0.45 Million Gallon have been provided inside the mine to arrest silt and sediments of soil and OB. A sedimentation tank of size 30m x 15m x 2m has also been provided.
xxi.	Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.	Adequate embankment of length 1.4 Km width 30m and height 7-10m is provided along Vidarbha river.
xxii.	The land after mining shall be brought back for the use of agriculture purpose to the extent possible.	Mine plan envisages afforestation and indicated in EIA-EMP and will be followed as final land use plan.
xxiii.	The CSR cost should be Rs 5 per	CSR expenditure for last 3 years 2012-13,

	Tonnes of Coal produced which should be adjusted as per the annual inflation.	20013-14 & 2014-15 is Rs. 4.37 Lakh, Rs. 29.46 Lakhs & Rs. 26.09 Lakhs. In 205-16 CSR fund was diverted to fulfill the Swachchh Bharat Programme.
xxiv.	Everybody in the core area should be provided with mask for protection against fugitive dust emissions.	Being complied.
xxv.	Dust mask to be provided to everyone working in the mining area.	Masks are being provided to the employees of the company those who are working in core area.
xxvi.	The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.	Noted and it is being complied
xxvii.	People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.	Initially all the working employees have been checked up (IME) and PME is being done once in five year. However the employees are being sent for medical tests of lung disease as and when required.
xxviii.	The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.	1500 plants have been planted on embankment of south quarry and 8750 on OB dump.
xxix.	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.	Embankment of length 1.40 Km, width 30m and height 7-10m has been constructed along Vidharbha river as per permission given by DGMS.
xxx.	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.	After stabilization of embankment plantation has been done along the Vidharbha river to protect the overflow of OB into river. It has been stabilized and no OB flows into the river.
xxxi.	OB shall be stacked at 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.	OB has been stacked on earmarked dumpsite only. Proper benching has been done, there are 8 benches of 6 mtrs. height. Slope of the dumps is 28°.
xxii.	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	Catch drains of size 2.50m x 2.00m for a length of 2.00 Km is constructed around the mine. Two sumps of capacity 10.50 Million Gallon & capacity of 0.45 Million Gallon have been provided inside the mine to arrest silt and sediments of soil and OB.

	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.	
xxiii.	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.	Toe wall for a length of 82m of size 1.8m x 0.6m has been constructed for arresting the silt. Work was completed on 13.02.2016 and expenditure is 3.89 Lakhs
xxiv.	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.	Crushers at CHP of adequate capacity has been installed with 10 nos. of rain guns are provided around the weigh bridge and CHP.
xxv.	Drills shall be wet operated.	Generally wet operated drill is used. In case of non-availability of wet operated drill, water spraying is arranged.
xxvi.	The project authorities 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,	Coal transportation road is being repaired at the regular interval.
xxvii.	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 being done with delay detonator.
xxviii.	A Progressive afforestation plan shall be implemented covering an area of 58.35 ha at the end of mining, which includes reclaimed External OB dump area (29.35 ha), excavated area (4.0 ha), blasting zone (10 Ha) and Embankment area (15 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	Plantation Details: In 2010-11, 1500 nos. of plants have been planted in 0.60 Ha area on OB Dumps In 2012-13, 8750 nos. of plants have been planted in 3.50 Ha area on OB Dumps.

	mine.													
xxix.	An estimated total 8.54 Mm ³ of OB will be generated during the entire life of the mine. Out of which 7.37 Mm ³ of OB will be dumped in one external OB Dumps an earmarked area covering 29.35 ha of land with height of upto ground level. 1.17 Mm ³ of will be one internal OB dump in covering an area of 4 ha with height of 60 m. The maximum height of external OB dump for hard OB will not exceed 90 m. 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 and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.	OB Dumps Details: <table border="1"> <thead> <tr> <th>Dump</th> <th>Area</th> <th>Qty. of OB</th> <th>Height of the Dump</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20.00 Ha</td> <td>4.61 Mm³</td> <td>10-50m</td> </tr> <tr> <td>2</td> <td>Under process</td> <td>5.095 Mm³</td> <td>10-50m</td> </tr> </tbody> </table>	Dump	Area	Qty. of OB	Height of the Dump	1	20.00 Ha	4.61 Mm ³	10-50m	2	Under process	5.095 Mm ³	10-50m
Dump	Area	Qty. of OB	Height of the Dump											
1	20.00 Ha	4.61 Mm ³	10-50m											
2	Under process	5.095 Mm ³	10-50m											
xl.	The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.	Agreed and will be complied												
xli.	Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.	Will be complied												
xlii.	The mining should be phased out in sustainable manner. No extra over burden dumps are permitted	Being complied												
xliii.	No groundwater shall be used for mining operations.	Complied												
xliv.	Of the total quarry area of 38.05 ha. the backfilled quarry area of 4.0 ha shall be reclaimed with plantation and a void of 34.05 ha at a depth of 46 m which 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.	Will be complied. 10250 plants have been planted on OB dump. Density of trees is 2500 plants per Ha approx.												
xliv.	Regular monitoring of ground water 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	Regular monitoring of ground water level and quality is being carried out by RI-IV Nagpur, CMPDIL four times in a year in pre-monsoon (May), monsoon(August), post-monsoon (November) and winter (January) and for quality in May. Data are being submitted regularly.												

	(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 the Central Pollution Control Board quarterly within one month of monitoring.	
xlvi.	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.	Artificial ground water recharge measures for augmentation of ground water resource has been done by deepening and widening of ponds in Rasa and Kumbharkhani villages in the year 2015.
xlvii.	Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.	Will be provided. ETP will be provided upto 2017-18.
lviii.	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 specialized agency /institution within the District/State and the results reported to this Ministry and to DGMS.	Periodical medical examinations of all workers are conducted in every five years. If any occupational diseases and hearing impairment found, action is taken as per guide lines.
xliv.	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.	As per CIL R&R policy, land oustees are compensated
i.	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 I: 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 MOEF&CC and its concerned Regional office.	It is being complied. Land Restoration - Reclamation Monitoring based on Satellite Data carried out by CMPDIL, Ranchi. Report is enclosed with this report. (March-2015 Report).
ii.	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.	Mine closure plan has been prepared and duly approved by WCL Board. The corpus fund has been deposited in following escrow account: Escrow Acc. No. : 08973161002881 Amount submitted till 31.03.2016: Rs. 9,93,97,424.00.
lii.	The project authorities shall in	CSR works are carried out as CIL CSR policy

	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.	in consultation with state govt. authorities, Panchayat of local village. CSR expenditure for last 3 years 2012-13, 20013-14 & 2014-15 is Rs. 4.37 Lakh, Rs. 29.46 Lakhs & Rs. 26.09 Lakhs. In 205-16 CSR fund was diverted to fulfill the Swachchh Bharat Programme.
liii.	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 or forest norms/conditions. 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 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.	Coal India Limited's Corporate Environment Policy 2012 approved by the board of director exist.

B. General Conditions

Sl. No.	Conditions	Compliance Status
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.	Noted.
ii.	No change in the calendar plan of production for quantum of mineral coal shall be made.	Noted.
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	Following four ambient air quality monitoring stations have been established in the core zone and buffer zone for PM ₁₀ , PM _{2.5} SO ₂ and NO _x monitoring 1. Ghonsa village 2. Kumbharkhani Guest house/colony

	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.	3. SAM Office/ Canteen 4. Project Manager Office, Ghonsa Reports are submitted regularly.
iv.	Data on ambient air quality (PM ₁₀ , PM _{2.5} SO ₂ and NO _x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its 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.	Environmental monitoring is regularly carried out by CMPDIL, Nagpur for WCL projects as per Environmental Protection Amendment Rule, 2000 (GSR 720E dated 25.09.2000). Data of environmental monitoring is regularly submitted to the Ministry including Regional Office, Bhopal and to Maharashtra Pollution Control Board and Central Pollution Control Board once in six months. Quarter Ending Environmental Monitoring reports for December-2015 Quarter is enclosed with this report.
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.	Proper maintenance of HEMM is being done and plantation has been done to control noise levels below 85 dBA. Workers engaged in blasting and drilling operations are provided with ear plugs/muffs.
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 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.	Will be complied. Proposal for construction of ETP is under process. Work will be completed in 2017-18.
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.	PUC certificates of vehicles are checked time to time and vehicles used for transporting coal are properly covered with tarpaulin and are 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 analysed through a laboratory recognised under EPA Rules, 1986.	Monitoring of environmental quality parameters is being carried out by RI-IV Nagpur, CMPDIL. A fully fledged Environmental laboratory (An ISO 9000 : 2000 certified) is already exists at CMPDI, Nagpur with qualified Engineers along with adequate number of field staff for carrying out all the environmental monitoring of WCL projects including this project.

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.	Personnel working in dusty areas are given dust mask and training and information on safety and health aspects.
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.	Workers are gone through periodical medical examination in every 5 years and records are maintained thereof.
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 Environmental Cell with qualified & trained team of engineers exists at WCL HQ headed by GM (Env.), who report to Director (Tech), WCL Env. Cell at Area level is headed by GM(Opn) and assisted by Area Nodal Officer (Env.) . At Project level the cell as headed by Sub Area Manager & assisted by Nodal Officer (Env) 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 protection measures are kept in separate account and not diverted for other purpose. Report of expenditure is sent to Ministry.
xiii.	The Project authorities 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, Forests & Climate Change at http://envfor.nic.in .	Information regarding Environmental Clearance for 0.60 MPTA expansion has been accorded to Ghonsa OC has been advertised in two local news papers: 1. लोकशाही वार्ता dated 24 th December, 2014 (Marathi Daily news paper) 2. दैनिक लोकदूत dated 24 th December, 2014 (Marathi Daily news paper) Copies of advertisement are enclosed with this report.
xiv.	A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the	Complied

	proposal. A copy of the clearance letter shall also be displayed on company's website.	
xv.	A copy of the environmental clearance letter shall be 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.	Not applicable for us.
xvi.	The clearance 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 PM ₁₀ , PM _{2.5} SO ₂ and NO _x (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.	Complied. Environmental Clearance letter has been uploaded on WCL's website (www.westerncoal.gov.in) Link for EC letter: http://www.westerncoal.gov.in/sites/default/files/userfiles/GHONSA%20OC%200.6.pdf
xvii.	The project proponent shall submit six monthly 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 Offices of CPCB and the SPCB.	Complied. Six monthly compliance reports are send regularly to concerned authority. Soft copy (CD) of this report is enclosed with it.
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.	All necessary co-operation will be extended to Regional Office, Bhopal.
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	Environmental Statement for each financial year ending 31 st March in Form - V is submitted to Maharashtra Pollution Control Board. Environmental Statement-Form V for year 2014-15 has been submitted on online portal of MPCB dated 19.09.2015

	also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.	
6	The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.	Noted.
7	The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.	Noted.
8	The proponent is required to obtain all necessary clearances/ approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Noted.
9	The Ministry or any other competent authority may stipulate any further condition for environmental protection.	Noted.
10	The proponent shall setup an Environment Audit Cell with responsibility and accountability to ensure implementation of all the EC Conditions.	Noted.
11	Concealing factual data or submission of false/ fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
12	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble	Noted.

	Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.	
13	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Noted.
14	This EC supersedes the earlier EC, vide letter no. J-11015/165/2009-IA.II (M) dated 29 th February, 2012 for 0.45 MTPA.	Noted.

**Sr. Survey Officer
Ghonsa OC Mine**

**Sr.Mgr. (Civil)/Nodal Officer(Env.)
Ghonsa Sub Area**

**Mine Manager
Ghonsa OC Mine**

**Sub Area Manager
Ghonsa Sub Area**

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ENVIRONMENTAL MONITORING REPORT

GHONSA OC EXPN.

(WITHIN EXISTING LAND)

(WANI NORTH AREA)

WESTERN COALFIELDS LTD.

*Environmental Clearance issued by MOEF, New Delhi
Vide Letter No. J-11015/165/2009 IA.II(M) dated 08-12-2014*

(JOB No. 8000002)



QUARTER ENDING – MARCH 2016

Environment Laboratory
NABL Accredited vide Cert. No. T-2969

CMPDI

**REGIONAL INSTITUTE-IV, KASTURBA NAGAR,
JARIPATKA, NAGPUR, PIN – 440 014**

AN ISO 9001:2000 COMPANY

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INTRODUCTION

Location :

Ghonsa Open Cast Project is located in Wani Tahsil of Yeotmal district of Maharashtra State. It is administered by Wani North Area of Western Coalfields Limited.

Communication :

The project is located at a distance of nearly 18 km SW of Wani township. It is approachable from Wani by a metalled, motorable road (Wani – Patan road). The nearest railway station is Wani on Majri-Rajur branch line of Central Railway.

Drainage : Vidarbha river serves as the main drainage of the area during rainy season.

Climate :

The climate of this area is tropical with maximum and minimum temperature 48°C in summer and 10°C in winter respectively. The average annual rainfall is about 1200 mm.

Pollution due to other Sources:

Transportation roads, agricultural and local activities ,vehicular traffic etc also contributes to the pollution.

Sampling Locations :

Ambient Air Quality Monitoring location :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Ghonsa village	- W _N GOA-1
2.	Kumbarkhani Guest house /Colony	-- W _N GOA-2
3.	SAM Office/ canteen	- W _N GOA-3
4.	Project Manager Office (Ghonsa)	- W _N GOA-4

Water Quality Monitoring locations :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Mine water discharge	- W _N GOW-1

Noise Level Monitoring locations :

<u>S.No.</u>	<u>Location Details</u>	<u>Location Code</u>
1.	Near Manager Office	-- W _N GON-1

Frequency of Monitoring :

Air : Frequency of monitoring is as per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000.

Water : Water quality is monitored on fortnightly basis.

Noise : Noise level is monitored on fortnightly basis.

Methodology of Sampling and Analysis :

- Air** : 24 hourly air samples are collected with Respirable Dust Sampler at selected locations to monitor ambient air quality w.r.t. Suspended particulate matter (TPM), Respirable Particulate Matter (RPM), Sulphur di-oxide (SO₂) and Oxides of nitrogen (NO_x) etc.
- TPM** : Ambient air laden with suspended particulates enters the Respirable Dust Sampler through the inlet pipe of sampler by means of a high flow rate blower. As the air passes through the cyclone, coarse, non-respirable dust (size >10 μ) is separated from the air stream by centrifugal forces acting on the solid particles. These separated particles fall through the cyclone's conical hopper and collect in the sampling bottle placed at bottom. The fine dust forming the respirable fraction (size <10 μ) of the Total Suspended Particulates passes through the cyclone and is carried by the air stream to the Glass Micro Fiber Filter Paper. The Respirable dust (RPM) is retained by the filter and the carrier air exhausted from the system through the blower. The mass concentration (μg/m³) of Suspended Particulate Matter (non-respirable dust and respirable dust) and Respirable Particulate Matter in the ambient air is computed by measuring the mass of collected particulates and the volume of air sampled.
- PM-2.5** : Ambient air enters the Fine dust sampler through an omni-directional air inlet designed to provide a clear aerodynamic cut point for particles greater than 10 microns. Particles in the air stream finer than 10 microns proceed to a second impactor that has an aerodynamic cut point at 2.5 microns. The air sample and fine particulates exiting from the PM 2.5 impactor are passed through a 47 mm diameter Teflon filter membrane that retains the PM-2.5. The mass concentrations (μg/m³) of PM-2.5 in the ambient air are computed by measuring the mass of collected particulates and the volume of air sampled.
- NO_x** : Determination of oxides of Nitrogen is based on the procedure of "Jacobs and Hochheiser method". In this method the air sample is collected 24 hourly in the field and analysed in the laboratory using spectronic 20 D+ Spectrophotometer. Nitrogen oxides as Nitrogen di-oxide are collected by bubbling air through a Sodium hydroxide solution to form a stable solution of Sodium nitrite. The nitrite ion produced during sampling is determined colorimetrically (with the help of Spectrophotometer, measuring absorbance at 540 nm) by reacting the exposed absorbing reagent with Phosphoric acid, Sulphanilamide and N(1-naphthyl) ethylenediamine dihydrochloride. The interference of Sulphur di-oxide is eliminated by converting it to Sulphuric acid with Hydrogen peroxide before analysis.
- SO₂** : Determination of SO₂ is based on the procedure of West and Gaeke method. Sulphur di-oxide from the air stream is absorbed in a Sodium tetrachloromercurate solution to form a stable solution of Dichlorosulphitomercurate. The amount of Sulphur dioxide is then estimated by the colour produced when P-Rosaniline hydrochloride is added to the solution. The colour is estimated by a reading of absorbance at 560 nm in the Spectrophotometer.
- Water** : Mine water discharge is collected on fortnightly basis in plastic zaricane and is transported to the laboratory for analysis. As per the Env. (Protection) Amendment Rules published vide Gazette dt. 25.9.2000, water samples are analysed fortnightly for the parameters - pH, TSS, Oil & Grease and COD and once in a year for all parameters as per Schedule VI, Env. Protection rule.
- Noise** : Day time and Night time Noise level data are recorded fortnightly.

Remarks :

- Air** : All parameters of air samples monitored during this quarter are within permissible limit except TPM & PM-10. Values have been observed high in respect of location no. W_NGOA-1 (Jan Ist Feb Ist). W_NGOA-2 (Jan II nd Feb II nd). and PM-2.5 at location no W_NGOA-1 (Feb IIInd). W_NGOA-2 (Feb Ist). W_NGOA-3 (Jan Ist & Mar IIInd) W_NGOA-4 (Mar IInd).
- Water** : All parameters of water samples monitored during this quarter are within permissible limit. Only pH is high in the month of Feb Ist f/n . Acidic in nature .
- Noise** : Recorded Noise level data have been observed within permissible limits during this quarter.

Recommendations :

Air


1. Regular water sprinkling is required to keep the TPM level within TLV.
2. Proper maintenance of CHP is required to minimize dust generation.
3. Dust suppression by mist in CHP should be tried.
4. Green barrier may be developed around village and colony area.
5. Covering of coal carrying trucks with tarpaulin.

Water

1. Mine discharge to be treated properly before discharge into natural water course.

Noise

1. Noise levels should be kept below TLV at industrial as well as residential site.

Environment Laboratory CMPDI, RI IV, Nagpur	Test Report	 T - 2969
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Test Report No. : RIN/TR/QE-M16/A-47 Date of Issue : 05.04.16
Name of the Customer: Env.CMPDI,Nagpur Sampling method : IS-5182
Customer letter Ref. No. : क्षे.स.4/प.अ./पा.का./15-16
Sample Description : Air sample No. of pages : 2
Test Required : IS-5182 [PM-10(04:1999), NO_x(06:2006), SO₂(02:2001)] & TPM*.

AIR QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2016
NAME OF THE AREA : WANI NORTH Q.E. : MAR
NAME OF THE PROJECT : GHONSA OC

1. Ghonsa Village		: W _N GOA-1		(24 hourly values in µg/m ³)				
Month	Dates of Sampling		Parameters					
	From	To	TPM	PM-10	NO _x	SO ₂	PM-2.5*	
JAN.2016	07.01.16	08.01.16	225	88	8	30	60	
JAN.2016	21.01.16	22.01.16	154	71	9	31	-	
FEB.2016	04.02.16	05.02.16	315	302	10	43	144	
FEB.2016	20.02.16	21.02.16	139	49	8	31	-	
PERMISSIBLE LIMIT			200	100	80	80	60	
2. Colony / Guest house		: W _N GOA-2		(24 hourly values in µg/m ³)				
Month	Dates of Sampling		Parameters					
	From	To	TPM	PM-10	NO _x	SO ₂	PM-2.5*	
JAN.2016	07.01.16	08.01.16	152	100	9	34	24	
JAN.2016	20.01.16	21.01.16	245	93	10	35	36	
FEB.2016	04.02.16	05.02.16	147	121	9	43	429	
FEB.2016	20.02.16	21.02.16	390	220	10	28	39	
MAR.2016	05.03.16	06.03.16	157	50	9	35	40	
MAR.2016	19.03.16	20.03.16	173	43	12	49	33	
PERMISSIBLE LIMIT			200	100	80	80	60	


Test Report No. : RIN/TR/QE-M16/A-47

3. SAM Office / Canteen		: W _N GOA-3						
		(24 hourly values in µg/m ³)						
Month	Dates of Sampling		Parameters					
	From	- To	TPM	PM-10	NO _x	SO ₂	PM-2.5*	
JAN.2016	07.01.16	- 08.01.16	187	130	8	30	73	
FEB.2016	20.02.16	- 21.02.16	124	42	8	31	35	
MAR.2016	05.03.16	- 06.03.16	88	47	7	31	30	
MAR.2016	19.03.16	- 20.03.16	253	218	11	39	110	
TLV as per Env.(Protection) Amendment Rule 2000			600	300	120	120	60	
4. Project Manager office- Ghonsa OC		: W _N GOA-4						
		(24 hourly values in µg/m ³)						
Month	Dates of Sampling		Parameters					
	From	- To	TPM	PM-10	NO _x	SO ₂	PM-2.5*	
JAN.2016	20.01.16	- 21.01.16	390	273	9	34	60	
MAR.2016	05.03.16	- 06.03.16	163	88	6	21	57	
MAR.2016	19.03.16	- 20.03.16	210	120	9	43	100	
TLV as per Env.(Protection) Amendment Rule 2000			600	300	120	120	60	

(Scientific Assistant)

(Technical Manager)

- Note: 1) This Report refers to the values related to the items tested as received.
 2) This Report cannot be reproduced in part or full without written permission of the management.
 3) * - Test parameter not under NABL scope.

Environment Laboratory CMPDI, RI IV, Nagpur	Test Report	 T - 2969
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Test Report No. : RIN/TR/QE-M16/W-47 Date of Issue : 05.04.16
Name of the Customer : Env.,CMPDI,Nagpur Sampling method : By the party
Customer letter Ref. No. : क्षे.स.4/प.अ./पा.का./15-16
Sample Description : Water sample No. of pages : 1

EFFLUENT WATER QUALITY MONITORING DATA

NAME OF THE COMPANY : WCL YEAR : 2016
NAME OF THE AREA : WANI NORTH Q.E. : MAR.
NAME OF THE PROJECT : GHONSA OCP

Name of the Location : Mine water discharge - W_NGOW-1

Month	Date of Sample collection	Analysis Results			
		pH	COD (mg/l)	TSS (mg/l)	O & G (mg/l)
Below Detection Limit		0.2	4.0	10.0	2.0
JAN.2016	07.01.16	8.25	76	72	<2
JAN.2016	20.01.16	7.52	32	30	<2
FEB.2016	04.02.16	4.88	28	30	<2
FEB.2016	20.02.16	7.19	32	26	<2
MAR.2016	05.03.16	6.88	32	38	<2
MAR.2016	20.03.16	6.85	44	48	<2
TLV as per Env.(Protection) Amendment rule 2000		5.5 - 9.0	250	100	10

(Scientific Assistant)

(Technical Manager)

Note: 1) This Report refers to the values related to the items tested as received.
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NOISE LEVEL DATA

NAME OF THE COMPANY : WCL YEAR : 2016
NAME OF THE AREA : WANI NORTH Q.E. : MAR.
NAME OF THE PROJECT : GHONSA OC

Name of the Location : Manager Office - W_NGON-1

Month	Date of Data collection	Noise Level in dB(A)	
		Day Time	Night Time
JAN.2016	08.01.16	52.6	52.3
FEB.2016	20.02.16	55.9	53.7
MAR.2016	05.03.16	52.7	42.1
MAR.2016	19.03.16	53.1	43.7
Noise Level Standard as per Env. (Protection) Amendment rule 2000		75	70

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**Maharashtra Pollution
Control Board**

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Submission Receipt

(Form V Environmental Statement Online Submission Portal)

This is to inform you that we have successfully received and accepted the Form V (Environmental Statement) submitted.

Company CRC: CHA/445304/01423

Company Name: Ghonsa Open Cast Mine

Company Address: WCL, Wani North Area, Bhalar Township, P.O. Bhalar, Wani

Year Of Submission: 1st April 2014 to 31st March 2015

Submit Date: 26-09-2015

(Maharashtra Pollution Control Board)