



WESTERN COALFIELDS LIMITED



SIX MONTHLY EC COMPLIANCE REPORT

Period 1st April 2022 to 30th September 2022

CHHATARPUR I & II UG EXPANSION MINE

PATHAKHERA AREA

(Ref: EMP Clearance Letter No:- J- 11015/194/2008-IA. II(M) Date:-27.04.2010)

WESTERN COALFIELDS LIMITED
OFFICE OF THE GENERAL MANAGER
PATHAKHERA AREA

COMPLIANCE OF ENVIRONMENTAL CLEARANCE CONDITION IN RESPECT OF CHHATARPUR I&II MINES (COMBINED) ISSUED BY MOEF VIDE LETTER NO J-11015 / 194 / 2008.IA.II (M) DT 27.04.2010 FOR THE PRODUCTION CAPACITY 1.00 MTPA.

A -SPECIAL CONDITIONS

Sr. No.	Specific conditions	Compliance
i	No mining under taken beneath the balance 69.533 ha forest land until forestry clearance has been obtained.	Condition is duly Complied.
ii	Regular monitoring of subsidence movements on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil, suitable material.	Depillaring operations are being carried out as per the permission of DGMS. All directions are strictly adhered to. Regular monitoring of subsidence movements on the surface over the working are being done as per statute, to assess the impacts on the surface, natural drainage pattern, water bodies etc. and based on monitoring results Mitigative measures have been taken.
iii	High root density tree species shall be selected and planted over areas likely to be affected by subsidence	Noted for compliance. In depillaring areas. However, as predicted in the subsidence prediction report by ISM, Dhanbad, the likely subsidence would not cause any adverse impact on trees as the tensile strain value (9 – 12.8 mm/m) is not expected to

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		cross the permissible limits (20 mm/m). Total <u>28,471 Nos</u> of trees have been planted within the Lease Hold boundary of Mine.
iv	All plantation shall be carried out after the onset of monsoon.	Condition is duly noted. Total <u>28,471 Nos</u> of trees have been planted within the Lease Hold boundary of Mine.
V	Coal extraction shall also be optimized in areas where agricultural produce is continuing, some pillars shall be left below the agriculture land. No coal depillaring shall be under taken below areas of habitation	Coal Extraction /depillaring will be carried out strictly in accordance with the permission of DGMS. All precautions will be taken to protect surface infrastructure, habitation and for which, if required pillars, will be left intact or partial extraction will be done as per DGMS permission.
vi	Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.	Coal Extraction /depillaring will be carried out strictly in accordance with the permission of DGMS. All precautions will be taken to protect surface infrastructure, habitation. Provision of crop the compensations to the land owners is kept in the budget.
vii	Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharging area adjoining the mine sites. Sump capacity should also be provided adequate retention period to allow proper settling of silt material.	Condition Duly Complied. Garland Drain with adequate sump Capacity has been provided for proper settling of silt material. Moreover, This is an operating Underground Mine and all precautions have been taken to prevent the danger of inundation due to surface water as well as underground water as stipulated in Coal Mines Regulation, 2017 & its related Technical Circulars issued by DGMS from time to time. Sump has been provided in underground at the deep most point to collect the strata seepage water and the capacity of the sump is adequate to allow sufficient retention period for proper silting of silt material.
viii	Water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor	This is an operating Underground mine and there is no other sources of fugitive dust emissions except for coal transportation on

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	systems, haulage roads, transfer points etc. Mobile sprinklers shall be provided in major haul roads and with high levels of SPM/RSPM.	surface as the entire coal winning operations are carried out below ground and all precautions for control of dust are taken strictly in accordance with the provisions of Coal Mines Regulations, 2017 and allied DGMS Technical Circulars issued from time to time. There is no crushing arrangement on the surface. The coal handling plant at the surface receives coal directly from underground through belt conveyor system and discharged on to overhead bunker for direct loading on to trucks. The water sprinkling system is in operation at all the transfer points along the conveyor system as well as in the bunker.												
ix	Major approach roads shall be black topped and properly maintained. A 3 tier plantation using native spacing which are effective as a shield in trapping.	Already black topped. Extensive plantation has been carried out in the mine to check fugitive emission.												
x	Drills should be wet operated to avoid fugitive dust emissions.	The drills used in underground are all approved by DGMS and drilling operations are carried out strictly in accordance with the provisions of Coal Mines Regulations, 1957 and allied DGMS Technical Circulars issued from time to time.												
xi	Areas along roads, infrastructure, along M L boundary and township out side the lease area etc shall be developed as green belt by planting native species in consultation with the local DFO / Agriculture department. The density of trees shall be around 2500 plants per hector.	Total 28,351 Nos of Plantation has been carried out all along the coal transportation road, around mine infrastructure etc. The year wise number of plantation done is as follows. <u>Chhatarpur – I mine :</u> <table><tr><td>Year</td><td>No. of Plants</td></tr><tr><td>1997-98</td><td>200</td></tr><tr><td>2006-07</td><td>3,500</td></tr><tr><td>2019-20</td><td>100</td></tr><tr><td></td><td>(DEPARTMENTAL)</td></tr><tr><td>2020-21</td><td>100 PLANTED & 400 DISTRIBUTED</td></tr></table>	Year	No. of Plants	1997-98	200	2006-07	3,500	2019-20	100		(DEPARTMENTAL)	2020-21	100 PLANTED & 400 DISTRIBUTED
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		<p>2021-22 10 PLANTED & 400 DISTRIBUTED</p> <p>2022-23 10 PLANTED</p> <p><u>Chhatarpur – II UG mine:</u></p> <p>1998-99 250</p> <p>2005-06 18,331 (Kailash Nagar)</p> <p>2006-07 4,750 (among them 4000 trees planted in Kailash Nagar)</p> <p>2012-13 1,100</p> <p>2020-21 100 PLANTED & 400 DISTRIBUTED</p> <p>2021-22 10 PLANTED & 400 DISTRIBUTED</p> <p>2022-23 10 PLANTED</p> <hr/> <p>Grand Total 28,471 Nos. PLANTED & 1,600 Nos. DISTRIBUTED</p> <p>Species planted – Jamun, Neem , Karanj, Maharukh, Arjun, Ashok , Mango etc. All plantation works are carried out through State Forest Department and density of plantation of 2500 nos. per hectare is maintained.</p>
xii	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for water levels should be done at least 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 should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of	Monitoring of groundwater level establishing network of existing wells is being done through CMPDIL & report has been submitted to MPPCB and MOEF.

Sr. No.	Specific conditions	Compliance
	monitoring.	
xiii	The company shall put up artificial ground water recharge measures for augmentation of ground water resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	<p>Noted. At present, Treated Strata Seepage Water from Mine is being utilized by nearby villages in Irrigation purpose. Two nos of stop dams have been made in this villages during- 2011-12.</p> <p>In addition to that, Total 11 Nos. of Hand pumps have been installed in nearby villages to meet the water requirement of villagers.</p>
xiv	Mine discharge water particularly TDS shall be treated to confirm to prescribe levels before discharge in to the natural environment.	Condition complied.
xv	ETP shall also be provided for treatment of effluents from workshop and the treated effluents shall be used for green belt development . An estimated 2000 cum / day of peak mine water shall be treated to prescribed standard before discharge into the surface water / agriculture use.	<p>This is an UG mine and there is no HEMM. All the equipments used below ground are approved by DGMS. There is a small unit workshop meeting the day to day needs of drill bit sharpening and minor repairs of small drill machines etc. As such there is no effluent generated / discharged particularly from Unit Workshop.</p> <p>The only source of discharge is Mine strata seepage water. The strata seepage water first gets accumulated in UG mine sump which has got sufficient storage capacity thereby allowing sufficient time for settlement of suspended particles. Regular water quality monitoring is carried out by CMPDIL on behalf of WCL & by MPCB as per Environment Protection Rules 2000. After treatment the mine water is being used for irrigation, plantation and dust suppression etc.</p>
xvi	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	Periodic Medical Examination (PME) of all employees are being carried once in every 5 years and records are maintained and submitted to DGMS. During PME the patient are subjected to a complete clinical examination (including vision and hearing)

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	diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.	<p>Radiological examination of chest and routine examination of blood and urine. In case of any abnormality is detected during the course of above examination, further investigation is carried out and treatment given as required. WCL has got a team of specialist trained in coal miners pneumoconiosis to take care of the disease and subsequent treatment. WCL is having occupational Health Committee at the corporate level as well as at the unit level for regular health status monitoring of all employees.</p> <p>A 60 bedded hospital with 05 doctors and 45 paramedical staff are provided.</p>
xvii	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 1: 5000) of the core and buffer zone from the start of project until end of mine life shall be prepared once in three years (for any one particular season which is consistent in the time series) and report submitted to MOEF and its Regional Office at Bhopal.	Condition complied. Digital processing of the entire lease area using remote sensing technique has been carried out through CMPDIL. <u>Latest Report of March 2021 attached.</u>
xviii	A final Mine Closure Plan along with details of corpus fund should be submitted to the MOEF 5 years in advance of final mine closure for approval.	<p>Condition Duly complied, Mine closure Plan has been prepared and approved by WCL board in compliance of guidelines of Ministry of Coal. All the mine closure activities have been carried out as per the approved Mine Closure Plan.</p> <p>Copy of Final Mine Closure Plan enclosed.</p>
Xix	The project proponent shall undertake a socio –economic survey for identifying and taking up need based specific socio- economic activities / programmes / schemes,	CSR Activities are being carried out as per statutes.

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	which are required in the area . Monitoring of the impacts of activities under CSR shall be carried out periodically . Education center shall be established in the area to create awareness and for organizing workshop etc.	

B. GENEAL CONDITIONS :

Sr. No.	General Conditions	Compliance
i	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	No change in mining technology has been proposed nor envisaged in future. However, it is proposed to enhance production capacity to 1.00 MTPA of the mine within the lease area and EC has been obtained for the same.
ii	No change in the Calendar Plan including excavation, quantum of mineral coal and waste shall be made.	This is an underground working mine, there is no question of excavation and generation of waste. No change in calendar programme is proposed in the EC letter.
iii	Four Ambient Air Quality Monitoring Stations should be established in the Core Zone as well as in the Buffer Zone for SPM, RPM, SO ₂ , NO _x & CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with SPCB.	Four Ambient Air Quality Monitoring Stations have been established in the Core Zone as well as in the Buffer Zone which have been decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets. The stations are as follows- 1. Sub Station Chhat-I , Core Zone 2- Sub station Chhat-II 3. SAM Office , Core Zone 4. Chattarpur Village, Buffer Zone.
iv	Fugitive dust emissions (PM 10, and PM 2.5 , So ₂ a and NOPX) from all	This is an operating underground mine and all the coal winning operations are carried

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	sources should be controlled regularly, monitored & data recorded properly. Water spraying arrangement on haul roads, wagon, loading, dump trucks (loading & unloading) points should be provided & properly maintained.	out below ground strictly as per the provisions of Coal Mines Regulations, 1957. The only activity which generates fugitive dust on surface is coal transportation through trucks. It may be noted that coal from underground is brought on to surface overhead bunker through a series of belt conveyors and all along the conveyor route specifically at transfer points adequate water sprinkling arrangement has been provided. To control fugitive dust during coal transportation-the measures followed are – covered transportation, avoiding overloading, black-topping of roads and avenue plantation.
v	Data on ambient air quality (PM 10, and PM 2.5 , So2a and NOPX) shall be regularly submitted to the ministry including its regional office at Bhopal and to the state Pollution Control Board and the central Pollution Control Board once in six months.	The ambient air quality monitoring data are being sent to MOEF and MPPCB Bhopal and CPCB regularly on Half Yearly Basis.
vi	Adequate measures should be taken for control of noise levels below the limit of 85 dB(A) in the work environment. Workers engaged in blasting & drilling operations of HEMM, CHP etc. should be provided with ear plugs/muffs.	This is an operating underground mine and all the coal winning operations are carried out below ground strictly as per the provisions of Coal Mines Regulations, 1957. The main source of excessive noise in this UG mine is Ventilation fan. In order to control excessive noise during operations, maintenance of all equipments as well as supply of protective gears namely, Ear Plugs & Muffs are carried out. In addition, regular monitoring of ambient noise levels at two locations on every fortnight is being done as per Environment Protection Amendment Rule 2000 & data recorded & submitted as quarterly report & results are within permissible limits.
vii	Industrial wastewater (workshop & wastewater from mine) should be	This is an UG mine and there is no HEMM. All the equipments used below ground are

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	properly collected, treated so as confirm to standards prescribed under GSR 422 (E) dt. 19/05/1993 & 31/12/1993 or as amended from time to time. Oil & grease trap should be installed before discharge of workshop effluents.	approved by DGMS. There is a small unit workshop meeting the day to day needs of drill bit sharpening and minor repairs of small drill machines etc. As such there is no effluent generated/ discharged from Workshop. The only source of discharge is Mine strata seepage water. The strata seepage water first gets accumulated in UG mine sump which has got sufficient storage capacity thereby allowing sufficient time for settlement of suspended particles. Regular water quality monitoring is carried out by CMPDIL on behalf of WCL & by MPCB as per Environment Protection Rules 2000.
viii	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulin and optimally loaded.	This condition is duly complied .All hired vehicles are having valid PUC. The vehicles are used for transporting the minerals covered with tarpaulin and optimally loaded.
ix	Environmental laboratory should be established with adequate number & type of pollution monitoring & analysis equipments in consultation with the State Pollution Control Board.	A full-fledged environmental laboratory (An ISO-9000:2000 certified) already exists at CMPDI, Nagpur with qualified multi-disciplinary team of engineers along with adequate number of field staff for carrying out all the environmental monitoring of all WCL projects including this project. & analysis is done as per Indian Standards.
x	Personnel working in dusty areas should wear protective respiratory devices & they should also be provided with adequate training & information on safety & health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures if needed.	Protective health & safety gears are provided to workmen exposed to dust namely Dust Mask, Helmet, Safety Boot, Goggle as per DGMS specifications. Workers are regularly given training on safety & health aspects (statutory requirement under Mines Act). As per statute, Periodical Medical Examination (PME) of all employees are carried out once in every 5 years and records are maintained and submitted to DGMS. During PME the patients are

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		<p>subjected to a complete clinical examination (including acuity of vision and hearing), radiological examination of chest and routine examination of blood and urine. In case of any abnormality is detected during the course of the above examination, further investigations are carried out and treatment given as required. WCL has got a team of Specialists trained in coal miners' Pneumoconiosis to take care of the disease and subsequent treatment. WCL is having Occupational Health Committee at the Corporate level as well as at the Unit level for regular health status monitoring of all employees.</p>
xi	<p>A separate environmental management cell with suitable qualified personnel should be set-up under the control of Sr. Executive, who will report directly to the head of the organization</p>	<p>At project level, environmental management cell is headed by Sub Area Manager & is assisted directly by Project Nodal Officer (Env.)/S.E.(C). At Area level, Chief General Manager heads the cell & is assisted by Area Nodal Officer (Env.). At WCL, HQ/Corporate level HOD (Env.) heads environment department assisted by multi-disciplinary team of qualified & trained professionals.</p>
xii	<p>The funds earmarked for environmental protection measures should be kept in separate account & should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry & its Regional Office located at Bhopal.</p>	<p>Funds earmarked for environmental protection measures are kept separate and are not used for any other purposes. Expenditure under capital head till date & under revenue head is maintained. Year-wise expenditure is regularly reported to the Ministry & its Regional Office located at Bhopal along with six monthly compliance reports.</p>
xiii	<p>Regional office of this Ministry located at Bhopal shall monitor compliance of stipulated conditions. Project authorities should extend full co-operation to officer(s) of Regional Office by furnishing requisite data/information/monitoring reports.</p>	<p>Full co-operation from project authorities shall be extended to officers of MOEFCC Regional Office, Bhopal, by furnishing the requisite data/information/monitoring reports.</p>

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xiv	Copy of clearance letter will be marked to concerned Panchayat/Local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	Complied
xv	State Pollution Control Board shall display copy of clearance letter at Regional Office, District Industry Centre & Collector's office/Tahsildar's office for 30 days.	Pertaining to MPPCB.
xvi	Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in vernacular language of locality concerned within seven days of issue of clearance letter informing that project has been accorded environmental clearance & copy of clearance is available with the State Pollution Control Board & may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in	Complied
3	The Ministry of any other competent authority may stipulate any further condition for environmental protection.	Noted.
4	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act. 1986.	Noted.
5	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	Noted.

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	Act, 1991 along with their amendments and Rules. The proponent shall ensure to undertake and made for the costs incurred for taking up remedial measures in case of soil elimination, contamination, of ground wall and diseases due to the mining operation.	