



# WESTERN COALFIELDS LIMITED



## SIX MONTHLY ENVIRONMENTAL MONITORING REPORT

### PERIOD

1<sup>st</sup> April 2022 TO 30<sup>th</sup> September 2022

### TAWA-II UNDERGROUND COAL MINE EXPANSION

### PATHAKHERA AREA

(Ref: EMP Clearance Letter No:- J-11015/53/2006-IA-II(M)

Dated:- 15th January, 2021)

# Western Coalfields Limited

**COMPLIANCE OF ENVIROMENTAL CLEARANCE CONDITIONS**  
**NAME OF PROJECT – TAWA-II UNDERGROUND COAL MINE EXPANSION**  
**MOEF&CC CLEARANCE LETTER No IA-J-11015/53/2006-IA-II(M)**  
**Dated 15<sup>th</sup> January, 2021**

**A. Specific Conditions:**

S. No.	Condition	Compliance
i.	All the conditions stipulated by the MPPCB in their NOC shall be effectively implemented	Condition complied. The conditions stipulated by MPPCB in their NOC have been duly complied and the Consents Compliance report have been submitted to MPPCB through XgN portal on Regular interval.
ii.	No mining shall be undertaken in lease area falling in forest land for which forestry clearance has not been obtained under the provision of the forest conservation act – 1980.	Condition complied. No mining is being done in lease area falling in forest land for which forestry clearance has not been obtained under the provision of the forest conservation act –1980.
iii.	Regular monitoring of subsidence movement on the surface over and around the working 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 measure should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/ suitable materials.	Condition complied. Subsidence Monitoring is being carried out on regular basis.  Accordingly Subsidence Monitoring Plan has been prepared by the Highly skilled Team of DGMS Approved Survey Personnel.
iv.	Garland drain (size, gradient and length) around the safety areas such as mines shaft and low lying area and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sides. Sump capacity should also provided adequate retention period to all proper settling of silt material.	Condition duly complied. Garland drains have been constructed around safety areas such as mines shaft and low laying area as per statute and the same are properly cleaned before onset of every monsoon.
v.	Crush/ Crushers at the CHP should be operated with high efficiency bag filter, water sprinkling system should be provided to check fugitive emission from crushing operation, conveyor system, haulage road, transfer points etc	Condition complied.  The existing CHP facility is only used for storage of coal coming out from underground belt conveyor. <b>There is No Coal Crushing arrangement available in the CHP of Tawa – II UG Mine.</b>  Water spraying arrangement is in operation at all transfer points along the conveyor system as well as in the bunker.  To control the fugitive emission

		Sprinkler & Rain guns have been installed along the coal stock Yard, near Internal Coal Transportation Road, Near Way bridge and Coal Bunker for dust suppression purpose.
vi.	Drill should be wet operated only.	Condition complied. All the drill machines are wet operated as per the directions.  As indicated earlier, this is an operating underground mine and entire drilling operations are carried out below ground in a closed Manner.
vii.	Control blasting should be practiced with use of delay detonators. The Mitigative measures for control of ground vibration and to arrest the fly rocks and boulder should be implemented	Condition complied. This is an operating under ground mine and entire blasting operations are carried out below ground. Control blasting is being practiced with use of delay detonators. The explosives and detonators used in underground are being carried out strictly in accordance with the provisions of CMR 2017 and allied DGMS technical circular issued from time to time.
viii.	A progressive Afforestation plan shall be prepared and implemented for the undisturbed area. Area under green belt development, areas along road, infrastructure, along M.L. boundary and township out side the lease areas etc. by planting native species in consultation with the local DFO/Agriculture department. The density of the trees should be around 2500 plants per hectare.	Condition duly complied. Plantation of 2200 No. of Plants have been carried out on vacant land near Pathakhera Township. The density of the trees has been maintained around 2500 plants per hectare. (i.e. 2200 trees planted in 8800 sq. meter land with spacing of 2 meter)
ix.	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new peizo meters. The monitoring for quantity should be done four times a year in pre-monsoon (May) Monsoon (August), Post monsoon (November) and Winter(January) season and for quality in May. Data thus collected should be submitted to the MOEF and to CPCB quarterly within one month of monitoring.	Condition duly complied. Quarterly monitoring of ground water levels and annually ground water quality is being monitored through network of existing wells. All the parameters are well within permissible limit. Monitoring report is being regularly submitted to CGWB on annual basis. The well monitoring shows no depletion in ground water level.
x.	The company shall put up artificial ground water recharge measure for augmentation of ground water resource. The project authority should meet water requirement of nearby village(s). In case the village well go dry due to dewatering of mines.	Condition duly complied. Rain water harvesting System has been constructed at Rescue room premises, Bagdona Colony. In addition to that, Total 06 Nos of Hand Pump have been constructed in nearby villages by WCL to meet their water requirement.
xi.	Sewage treatment plants should be installed in the existing colony. ETP should also be provided for work shop and CHP waste water.	Condition complied. This is an operating Underground mine, no HEMM has been used in this mine hence No effluent has been generated in Unit Workshop. As only a small engineering workshop is present at mine to cater the day to day minor repairing kind of engineering services.

		<p>Pathakhera Area is having common colony infrastructure for all Mines of Area.</p> <p>Each residential unit is provided with septic tank &amp; soak pit arrangement to deal with domestic effluent, The sizes of the same varies from 25 users to 250 users. This is 02 stage Sewage treatment as per IS 2470 part I&amp;II - 1985.</p> <p>The preliminary treatment is being given through septic tank and The secondary treatment is being given through soil absorption system. Hence, this is the standard practice and we are following the system. The arrangement does not allow any sewage to get mixed into any natural water course without treatment.</p>
xii.	<p>Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from work force engaged in active mining operation shall be subjected to health check up for occupational diseases and hearing impairment, if any through an agency such as NIOH, Ahmedabad within a period of 1 year and the result reported to this ministry and to DGMS</p>	<p>Total 781 workers are employed in Tawa – II UG mine and 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) 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>In Pathakhera Area, A 60 bedded hospital with 05 doctors and 45 paramedical staff are being provided exclusively to cater the round the clock Medical Services to WCL Employees.</p>
xiii.	<p>Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 year for monitoring land used pattern and report submitted to MOEF and its Regional office at Bhopal.</p>	<p>Condition complied. Digital processing of the entire lease area using remote sensing technique has been carried out through CMPDIL. <b><u>Latest Report of March 2021 has been uploaded on Parivesh Portal along with Half yearly EC Compliance report.</u></b></p>
xiv.	<p>A final Mine Closure plan along with details of Corps Fund should be submitted to the MOEF 5 year in advance of final mine closure for approval.</p>	<p>Condition Duly complied, A final Mine Closure plan along with details of Corps Fund have been sent to MOEF&amp;CC vide letter no : WCL/PKD/TAWA – II / 2021 /880 Dated 17/06/2021</p>
xv.	<p>Consent to operate shall be obtained before starting mining operation.</p>	<p>Complied. Consent to operate has been obtained since inception.</p>

#### B. General Conditions:

S. No.	Condition	Compliance
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environmental and Forests.	Condition complied. No change in mining technology and scope of work has been made.
ii.	No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Condition Complied. No change in production has been made beyond approved EC capacity of 0.60 MTPA since beginning of Mine.
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 <sub>2</sub> and Nox monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board	Condition Complied. Four ambient air quality-monitoring stations have been established in the core zone as well as in buffer zone which have been decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets. Location of air monitoring station are as below 1. Manager Officer Tawa-II U/G 2. SAM Office 3. MPEB Colony 4. Hirapalla / Bhagaikhapa Village.
iv.	Data on ambient air quality (SPM, RPM, SO <sub>2</sub> and Nox) should 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.	Condition Complied. Data on ambient air quality (SPM, RPM, SO <sub>2</sub> and Nox) are being monitored and regularly submitted to the MPPCB, CPCB & MOEF, Bhopal on regular basis through mail & also uploaded in Parivesh Portal along with Six monthly EC Compliance Reports.
v.	Fugitive dust emissions from all the source should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.	Condition complied. This is an underground mine. All the mining activities i.e. Drilling, Blasting, Loading, unloading, transportation of coal from district to surface has been carried out in the closed condition w.r.t. an open cast mine where all the activities are being carried out in exposed circumstances. Along with that, Following air Pollution control mechanism has been introduced:  <ol style="list-style-type: none"> <li>1. Spray points have been provided in conveyor belt to prevent emission due to transportation.</li> <li>2. Tawa - II UG mine does not contain CHP / Coal Crushing facility.</li> <li>3. All the internal roads have been black topped and regularly maintained to prevent fugitive emission.</li> <li>4. Sprinkler &amp; Rain guns have been installed along the coal stock Yard, near Internal Coal Transportation Road, Near Way bridge and Coal Bunker for dust suppression purpose.</li> <li>5. Mine is located in a dense forest which is an effective means of Wind barrier.</li> </ol> In addition to that, Fugitive emission data is being collected on fortnightly basis through

S. No.	Condition	Compliance
		CMPDIL Environment Lab Team.
vi.	Adequate measures should 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. should be provided with ear plugs/muffs.	Condition Complied. In order to control excessive noise during operations, maintenance of all equipments as well as supply of protective wears namely ear plug & muffs are carried out. In addition regular monitoring of ambient noise level at two locations on every fortnightly is being done as per environment protection amendment rule 2000 & data recorded & submitted as mentioned earlier & Noise monitoring results are within permissible limit.
vii.	Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May 1993 and 31 <sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Condition Complied. There is a small unit workshop meeting day to day needs of drills bit sharpening and minor repairs of small drill machines etc. as such there is no effluents or any other kind of liquid waste discharged from workshop.
viii.	Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Condition Complied. Vehicle used for transportation are being covered with tarpaulins and optimally loaded. PUC has been checked for each vehicle and records have been maintained.
ix.	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	Condition Complied. A Full fledged NABL approved Environmental laboratory of CMPDIL working at Jaripatka, Nagpur with qualified muff-disciplinary team of engineers along with adequate no. of field staff for carrying out all the Routine environmental monitoring of all WCL projects including this project & Air, Water and Noise Quality Monitoring is being carried out at every fortnight interval. In Addition to that, As per the direction and consultation of MPPCB, One Continuous Ambient Air Quality Monitoring Station has been established in the Premises of Area General Manager Office, WCL Pathakhara Area for monitoring of Ambient Air Quality in a continuous manner.
x.	Personal working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contraction due to exposure to dust and to take corrective measures, if needed.	Condition Complied. Protective respiratory devices have been provided to Persons working in dusty areas and they have been provided with adequate training and information on safety and health aspects by the Designated Medical Expert Faculty in the Group Vocational Training Centre of Pathakhara Area along with other safety related training as per VT Rules.  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) Radiological examination of chest and routine examination of blood and

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		<p>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>In Pathakhera Area, A 60 bedded hospital with 05 doctors and 45 paramedical staff are being provided exclusively to cater the round the clock Medical Services to WCL Employees.</p>
<b>xi.</b>	A separate Environmental management cell with suitable qualified personnel should be set up under the control of s Senior Executive, who will report directly to the Head of the company.	<p>Condition Complied.</p> <p>a) At Area Level: Area General Manager of the Area coordinate the environmental activities of various units in the area in implementing all necessary provisions as per act assisted by Area Environment Officer at Area level for generation of environmental data and management of all aspect of environment along with the team of Engineers of CMPDIL for collection, analysis and interpretation of samples.</p> <p>b) At Project level : At project level Sub Area Manager and Manager primarily responsible for land resource management assisted by Project Environment Officer and other staff for Env. Pollution mitigation measures, environment monitoring and field activities like subsidence measurements, dust suppression, etc.</p>
<b>xii.</b>	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to the Ministry and its Regional Office at Bhopal.	<p>Condition Complied.</p> <p>The funds earmarked are used exclusively for Environment protection measures are kept separately in the form of Separate Environment Capital Budget &amp; Environment Revenue Budget and not used for any other purpose. Expenditure under capital head and revenue head as maintained Properly and uploaded on Parivesh portal with every Half yearly EC Conditions Compliance Report.</p>
<b>xiii.</b>	The Regional Office of the Ministry located at Bhopal 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.	Full cooperation shall be extended by the project officials to the Regional Officials of MOEF&CC.
<b>xiv.</b>	A copy of the clearance letter will be marked to concern Panchayat/local NGO, if any, from whom any suggestion / representation has been received while processing the proposal.	<p>Condition Complied.</p> <p>Copies of the Environment Clearance letter have been sent to PANCHAYAT SECY. OF NEARBY VILLAGES (i.e. BHOGAIKHAPA, SHAKTIGARH &amp; SHOBHAPUR VILLAGE) vide letter No.</p>

S. No.	Condition	Compliance
		PKD/TAWA - II/2021/ 854 dt. 15/06/2021. In the similar manner, A copy of the Environment Clearance letter has been sent to Gram Bharti mahila Mandal (NGO) vide letter No. PKD/TAWA - II/2021/ 855 dt. 15/06/2021.
xv.	State Pollution Control Board should be display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/ Tahsildar's Office for 30 days.	This Condition is pertaining to MPPCB
xvi.	The project authorities should 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.	Condition Complied. In 2006, on receipt of EC copy, We have given the advertisement in the following newspapers: 1. NAV BHARAT (NAGPUR EDDITION) IN HINDI LANGUAGE ON 23.02.2007 2. DAINIK JAGARAN (BHOPAL EDDITION) IN HINDI LANGUAGE ON 23.02.2007 3. LOKMAT SAMACHAR IN HINDI LANGUAGE ON 19/09/2006 4. DAINIK MAT MATANTAR IN HINDI LANGUAGE ON 06/10/2006  In 2021, on receipt of Revalidated EC copy, We have given the advertisement in the following newspapers: 1. NAV BHARAT (BHOPAL EDDITION) IN HINDI LANGUAGE ON 21.01.2021 2. RAJ EXPRESS – (BETUL EDDITION) IN ENGLISH LANGUAGE ON 21.01.2021 <b>( Copies of advertisements attached)</b>
3.	The ministry or any other competent authority may stipulate any further condition for Environmental protection.	The PP agrees to the condition.
4.	Failure to comply with any of the condition mentioned above may result in with drawl of this clearance and attract the provisions of the environmental protection Act 1986	The PP agrees to the condition.
5.	The above conditions will be enforced inter alia under the provision of the water (Prevention and control of pollution ) Act 1974 and Air ( Prevention and control of pollution ) Act 1981 the environmental ( Protection ) Act 1986 and the public Liability insurance Act 1991 along with their amendment and rules.	The project agrees to the condition.



**C. Additional Conditions Stipulated in Revalidation of EC vide MOEF OM No. J-11015/53/2006-IA-II(M)**  
**Dated 15<sup>th</sup> January, 2021**

S. No.	Condition	Compliance
1.	PP shall obtain prior permission of Central Ground Water Authority for extraction or intersecting of ground water.	Condition complied. Mine Management has already obtained No Objection Certificate (NOC) for Ground Water Abstraction from Central Ground Water Authority for vide NOC No: CGWA/NOC/MIN/ORIG/2021/14068 dated 17/12/2021 valid up to 16/12/2023
2.	Transportation of coal shall be done only on concrete road instead of kuchcha road - Bogaikhapa (presently being done). Concrete road shall be built within six months and compliance shall be submitted to Ministry's Regional Office.	<p>Condition duly complied. Transportation of coal is being done only on concrete road. Black topped metalled road provided and maintained for transportation of coal:</p> <ol style="list-style-type: none"> <li>1. Main gate to Tawa junction= 5.5 km</li> <li>2. Mine gate to bunker to Way bridge = 220 meter</li> </ol> <p>Since the mining activities including coal transportation are far away located from the Bhogaikhapa Village.</p> <p>Construction of Cement concrete road of length 400 m has been completed at Bhogaikhapa village.</p>
3.	PP shall be use only High axle trucks of 40-50 tonne capacity for transportation of coal.	<p><b>Compliance not Applicable to Project Proponent as PP does not use any trucks for transportation of coal.</b></p> <p>As per the Long Term, Coal Supply Agreement officially signed between WCL and MPPGCL on 02/01/2013,</p> <p>“PP’s scope of work is limited up to Mining of coal and Transportation of Coal from coal face to ‘<b>delivery point</b>’ (as mentioned in sub clause ‘<b>m</b>’ of Sub section 1.1 of Section 1 and Section 7 of Coal Supply Agreement ) through conveyor belt.</p> <p>The Entire Work of Coal transportation from ‘<b>Delivery Point</b>’ i.e. Colliery Loading point to <b>Unloading Point</b> of Thermal Power Plant <b>through the Purchaser's Container (i.e. MPPGCL's Container)</b> (as mentioned in sub caluse ‘<b>nn</b>’ of Sub section 1.1 of Section 1 of Coal Supply Agreement) is comes under the scope of MPPGCL, Sarni and accordingly MPPGCL, Sarni is regulating and supervise the job of Coal transportation from Mine to STPS Sarni.</p> <p>As per the Section 7 of the Coal Supply Agreement, “Once delivery of Coal have been effected at the Delivery Point (i.e. Colliery Loading point) by the Seller, the property / title and risk of Coal so delivered shall stand transferred to the Purchaser (<b>i.e. MPPGCL</b>) in</p>

S. No.	Condition	Compliance
		<p>terms of this Agreement. Hence, <b>The compliance of this Condition is pertaining to Purchaser of Coal (i.e. MPPGCL).</b></p> <p>We have formally communicated and informed the officials of MPPGCL, Sarni regarding the compliance of above condition and for deployment of High axle trucks of 40-50 tonne capacity for transportation of coal through letter no : PK/SA/TAWA – II / 950 dated 20/06/2021</p> <p>Hence, As per Coal Supply Agreement, The above Matter comes under the Jurisdiction of MPPGCL-Sarni. &amp; any unilateral move from Project Proponent will be resulted in to the Violation of the above FSA. Hence, Based on the above Facts, the Condition is pertaining to MPPGCL Sarni and Compliance not Applicable to Project Proponent.</p>