



WESTERN COALFIELDS LIMITED

MAJRI AREA

NEW MAJRI - II (A) OPENCAST

COAL MINE EXPANSION PROJECT

SIX MONTHLY EC COMPLIANCE REPORT

AS ON 30TH SEPTEMBER 2022

Project : New Majri-II(A) Opencast Coal Mine Expansion Project.

Clearance letter No. : J-11015/306/2008-IA.II(M)

Date : 19th May 2009

1. Specific Conditions																									
SN	Condition	Compliance																							
i.	No additional land, manpower and equipment shall be used for the expansion project.	Noted. No additional land, manpower and equipment are being used for the expansion project.																							
ii.	No OB from the expansion project shall be dumped on existing external OB dump or no new ext. OB dumps shall be created. The OB generated from the balance life of the project shall be concurrently backfilled into decoaled void. The existing dumps shall be biologically reclaimed using a mix of native species and ultimate slope of the dumps shall not exceed 28 degree. Monitoring and management of reclaimed dumpsite shall continue until vegetation in all the dumps becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and Regional Office located at Bhopal on yearly basis.	<div>No OB from the expansion project is being dumped on existing OB dumps and no new ext. OB dump being created. The OB generated from the balance life of the project shall be concurrently backfilled into de-coaled void. The reclamation of external OB dump has already been started. The plantation on OB are given below:-</div> <table><tr><th>S N</th><th>OB Dump</th><th>Area OB top & slope</th><th>Ht</th><th>Plantation</th></tr><tr><td>1</td><td>Wardha Dump</td><td>52.22 Ha</td><td>50 Mt. Avg</td><td>1,30,554</td></tr><tr><td>2</td><td>Konda Dump/Sirna dump</td><td>115.05 Ha</td><td>50 Mt. Avg</td><td>41,700</td></tr><tr><td colspan="4">Total</td><td>1,72,254</td></tr></table> <div>The species planted are mix of native species namely Karanj, Kini, Sirus, Arjun, Gulmohar, Peltophorum etc.</div> <div>The ultimate slope of dump shall be maintained within 28 degree. Monitoring and management of reclaimed dump sites is being done continuously so that they become self sustaining.</div>				S N	OB Dump	Area OB top & slope	Ht	Plantation	1	Wardha Dump	52.22 Ha	50 Mt. Avg	1,30,554	2	Konda Dump/Sirna dump	115.05 Ha	50 Mt. Avg	41,700	Total				1,72,254
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iii.	Catch drain and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and material dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development, etc. The drain 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 rain fall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provided adequate retention period to allow proper settling of silt material.	Catch drains of size 3.0 m x 1.5 m of 4.0 km length around OB dumps & Garland drains of size 5.0 m x 2.0 m of 7.0 km length around quarry area has been constructed to arrest silt & sediments. The sump provided at the floor of the seam is 13.2 Ha at Sector A & 2.10 Ha at Sector B. The water so collected is utilized for watering mine area, roads, green belt development etc. The drains are desilted & maintained before onset of every monsoon.																							

iv.	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall besides on the rainfall data.	<p>Retaining wall at the toe of dump with sufficient dimensions is prepared wherever required. In addition to this, following measures are being taken to arrest the flow of silt.</p> <p>The external OB dumps were declared dead long back in 1990 and plantation over these dumps were made from the year 1992. The strata of the dump is very hard. Moreover, external OB dumps have been thickly covered with plantation which arrest the flow of silts. Details of plantation done on OB dump over the top surface and on the slope are emphasized below –</p> <ul style="list-style-type: none"> • On OB slope & top – 96,000 nos. • Area Covered- 38.40 Ha. <p>In addition to this, catch drains/ garland drains are constructed all around the OB dumps. Size of garland drain – 5.0 m x 2.0 m. These drains collect all the flow of silt and are cleaned before onset of every monsoon. Further, Cross drainage has been made along OB benches (size of catch drains– 3.0 m x 1.5 m) & water flows to the main mine sump at the floor of the seam which has got sufficient capacity allowing significant settlement of silt material. Capacity of the main mine sump – 170 MG In line with this, catch drains of size 3.0 m x 1.5 m are also constructed around the periphery of mine working which are also cleaned before onset of every monsoon.</p>
v.	Drills shall be wet operated only.	Complied. All the drills used in the mine are wet operated.
vi.	Controlled blasting shall be practiced with use delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	Controlled blasting is in practice with due permission from DGMS. All conditions stipulated by DGMS for control of ground vibration and for arresting fly rocks & boulders are strictly followed during actual operation. Moreover, the records of blasting are also maintained by using vibrometer.
vii.	High efficiency bag filters/ water sprinkling system to check fugitive emission from crushing operation, conveyor system – rope way, haulage roads, transfer points, etc. shall be installed and operated effectively at all times of operation.	<p>The control of dust in the CHP is being done by Wind barrier, Side Cladding along conveyor belts and dust suppression through water spraying. CHP has been provided with sufficient (10 nos.) fixed type dust suppression arrangement at all the dust generating points like receiving pit, transfer point, conveyor belt and loading point. These are maintained & operated properly. Whole dust in CHP area is being suppressed effectively through this system.</p> <p>In CHP areas, the main principle behind providing fixed water sprinklers is to prevent – Dust generated at the source To arrest dust from raising in to the atmosphere For that effect, water spraying system is adopted right at the generating source to control dust from mixing in the atmosphere.</p> <p>The fugitive emission is well within the permissible limit.</p>

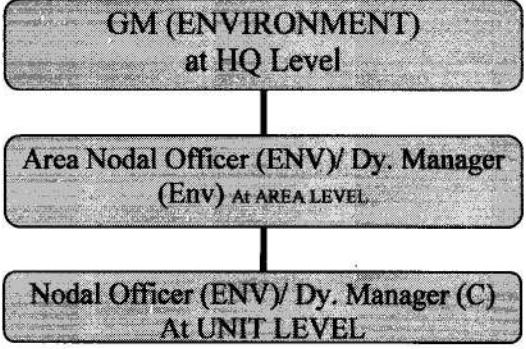
viii.	An area not less than 581.025 Ha shall be brought under afforestation which includes reclaimed external OB dumps (177.90 Ha), backfilled area (403.125 Ha), along ML boundary, along road and infrastructure, green belt and area for rationalization area within the lease and within the township by planting native species in consultation with the local DFO- Agriculture Department. The density of the tree shall be around 2500 plants per Ha.	<p>Effective green belt has been developed around the mine premises. Details of plantation done along with the species planted are depicted below –</p> <p>Plantation done on OB slope & top – 96,000 nos. Plantation done on plain area viz. around CHP area, along road & around colonies – 76,254 nos Total plantation done – 1,72,254 nos. Density of plantation – 2500 nos/Ha Total area covered – 68.90 Ha & 7.8 kms of road Species planted – Kini, Arjun, Sirus, Gulmohur, Karanj etc.</p> <p>And the remaining shall be done in due course of time depending on the availability of dead dumps in each subsequent year. The plantation has been done through expert, Govt., forest agencies such as FDCM of Maharashtra and Madhya Pradesh Rajya Van Vikas Nigam of Madhya Pradesh.</p>
xi.	A Progressive Mine Closure Plan shall be implemented by reclamation of the quarry area of 537.50 Ha of which 403.125 Ha shall be backfilled and afforested by planting native plants species in consultation with the local DFO- Agriculture Department. The density of the tree shall be around 2500 plants per Ha.	A progressive Mine Closure Plan as per approved EMP (403.125 Ha to be backfilled out of 537.50 Ha of quarry area). Total excavated area is 380.53 Ha as on 30.09.2022 out of which 34.00 Ha has been backfilled. Backfilling is still in progress. Backfilled area will be afforested by planting native plants species in consultation with the local DFO- Agriculture Department keeping the density of the tree around 2500 plants per Ha.
x.	Additional water requirement if any shall be met from mine water discharge.	Noted. Additional water requirement if any will be met from mine water discharge.
xi.	Ground water shall not be used for mining operation.	Noted. Ground water is not being used for mining operations and shall not be used in future also.
xii.	The Company shall identify sites for construction of water harvesting structures for augmentation of ground water resource in case of decline in water table is observed over the project life.	Noted. Sites for construction of water harvesting structures shall be identified for augmentation of ground water resource in case of decline in water table is observed over the project life. Till date no such decline in water table has been recorded.
xiii.	ETP of sufficient capacity shall be provided for workshop and CHP waste water and maintained and operated properly. An STP of adequate capacity shall also be provided to treat the domestic effluent and recycle the treated water for green belt development. Mine water discharge from the mine shall be treated to confirm to prescribed standards.	<p>ETP of 100 KLD capacity is provided for workshop waste water & is in operation. Individual septic tanks & soak pits provided for colony. Mine pumped out water is treated so as to confirm the prescribed standards.</p> <p>Modular Sewage Treatment Plant of 5.0 KL capacity has been provided at mine premises to treat the domestic effluent generated</p>
xiv.	Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from work force engaged in active mining operation shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of 2 years and the results reported to this Ministry and to DGMS.	Complied.

xv.	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted for approval to the Ministry of Environment and Forest RO, Bhopal 5 years before closure of mine.	Final Mine Closure plan has been prepared and As on 31.03.2022, an amount of Rs 53.09 crores has been deposited in Escrow account (A/c no. 0897107600001203 (Renewed)). Progressive Mine closure claim of Rs 21.52 crores for the period 2012-13 to 2016-17 is reimbursed. Balance as on 31.03.2022 is Rs 44,70,91,828.00 /-.
xvi.	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 500) of the core zone and buffer zone, from the start of the 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 the report submitted to MOEF and its regional Office at Bhopal.	Land use pattern of the mine is studied every year through Satellite imagery. Monitoring of same has been done by CMPDIL during 2022-23 and report of same is uploaded on WCL Website
xvii.	The Socio- economic development of the village covered under CSR shall be monitored over the life of the project using UNDP Human Development Indices and reported as part of the report submitted to MOEF RO, Bhopal.	Noted. Socio-economic development measures are being continuously taken in nearby villages. The monitoring of CSR using UNDP Human development Indices is being developed.

2. General conditions

Sl. No.	Condition	Compliance
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted. No change in mining technology and scope of working has been made not envisaged in future.
ii.	No change in calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted. No change in calendar plan including excavation, quantum of mineral coal and waste has been made nor envisaged in future.
iii.	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x & heavy metals such as Hg, Pb, Cr, As, etc. Location of the stations shall be decided based on the meteorological data, topographical features, and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	<p>The ambient air quality monitoring at present is being carried out at four stations in core as well as buffer zone which are as follows:-</p> <ol style="list-style-type: none"> 1. Sub Station NMOC, 2. Patala Magazine, 3. Kuchna Colony, 4. Primary Health Centre, Majri Basti. <p>The monitoring reports for April 2022 to September 2022 is enclosed herewith.</p> <p>In addition to above, monitoring of fugitive emission is also being done at 2 stations namely :-</p> <ol style="list-style-type: none"> 1. Field maintenance shed, 2. Railway Siding. <p>The above locations have been finalized on the basis of meteorological data, topographical features etc. The information regarding above has been given to State Pollution Control Board.</p>

iv.	Fugitive dust emissions (SPM and RSPM and heavy metals such as Hq, Pb, Cr, As, etc) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading & unloading) points shall be provided and properly maintained.	In order to control fugitive dust emission from different sources various measures like water spraying through mobile sprinklers on haul road, coal transportation roads, approach roads, coal stock yard etc. & by fixed sprinklers in railway siding, CHP etc. have been provided and properly maintained. Fugitive emission is being monitored by CMPDIL since 2 nd fortnight of May 2006 at two stations namely:-1. Field maintenance shed 2. Railway siding
v.	Data on ambient air quality (RPM, SPM, SO ₂ , NO _x & heavy metals such as Hq, Pb, Cr, As, etc) shall be regularly submitted to the Ministry including its Regional office at Bhopal and the State Pollution Control Board and the Central Pollution Control Board once in six months.	Reports on ambient air quality are being submitted to State Pollution Control Board as well as to MOEF, Regional Office, Nagpur quarterly along with Six monthly report. The same for April 2022 to September 2022 is enclosed herewith for ready reference.
vi.	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.	Adequate measures namely proper maintenance of HEMM and controlled blasting are in operation so as to control noise levels below 85 dBA. The workers engaged in noisy environment are provided with ear plugs/muffs. 2 nos. stations are there for monitoring the noise level data namely i. Colony, ii. Field maintenance shed.
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	Mine water is collected in the sump in the quarry itself and pumped out after settlement of suspended particles and put in to surface natural sedimentation pond for further settlement. The quality of mine pumped out water is monitored every fortnight and all parameters are found to be within the permissible limits. The workshop is having a ETP of 100 KLD capacity with facility of recirculation of water.
viii.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the material shall be covered with tarpaulins and optimally loaded.	All the light vehicles namely Jeep & trucks etc. are having valid PUC certificate for vehicular emission through RTO approved agency. Further, it may be mentioned here that the ambient air quality monitoring in and around the mine site is regularly carried out. Vehicles used for transporting the material are being covered with tarpaulins and optimally loaded.
ix.	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	A full-fledged Environmental laboratory under CMPDIL exists at Nagpur, which monitors all the mines of WCL including this mine.
x.	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 provided with dust masks. The workers are given training/refresher training in VTC on safety and health aspects which is also a statutory requirement under Mines Act 1952.

	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to coal dust and to take corrective measures, if needed.	Periodic Medical Examination for all workers once in every five years is carried out and records maintained to observe any disease and to take corrective measures, if needed.
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 organization.	<p>Environment Cell exists at HQ, Area, & project level. GM (Environment) of HQ directly reports to the head of the Organization.</p>  <pre> graph TD A[GM (ENVIRONMENT) at HQ Level] --> B[Area Nodal Officer (ENV)/ Dy. Manager (Env) At AREA LEVEL] B --> C[Nodal Officer (ENV)/ Dy. Manager (C) At UNIT LEVEL] </pre>
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 Regional Office located at Bhopal.	Funds have been earmarked for environment protection measures and is kept in separate account and is not diverted for other purpose. Expenditure on environment measures has been enclosed in Part -III document.
xiii.	The Regional Office of this ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	Noted.
xiv.	A copy of clearance letter will be marked to concerned Panchayat/ Local NGO if any, from whom suggestions/ representation has been received while processing the proposal.	A copy of clearance letter given to concerned Panchayats vide letter no. 489 dated 29.06.2009. Copy of letter already submitted alongwith earlier report.
xv.	State Pollution Control Board shall display a copy of the clearance letter at Regional Office, District Industry Center and Collector's Office/Tahasildar's Office for 30 days.	Clearance letter sent to MPCB for display vide our letter no. WCL/MA/CGM/ENV/2009-10/74 dated 15.06.2009. Copy of letter already submitted alongwith earlier report.
xvi.	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 web site of the Ministry of Environment & Forests at http://envfor.nic.in . The compliance status shall also be uploaded	<p>Complied. Advertisement given in following 2 Newspapers :-</p> <ol style="list-style-type: none"> 1. The Hitwada (English) dt. 24.05.2009 2. Mahavidarbha (Marathi) dt. 24.05.2009 <p>Copies of the advertisements already submitted alongwith earlier report.</p>

	by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at entrance of the project premises and mines office and in corporate office.	
3.	The ministry or any other competent authority may stipulate any further condition in the interest of environment 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, <u>inter-alia</u> , 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. The proponent shall ensure to 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.	Noted.


 Sub Area Manager
 New Majri -II (A) Opencast Coal Mine
 Expansion Project
 Majri Area, Western Coalfields Limited