## 

Paryayaran Hawan, C.G.O.Complex, New Bolhi - 119510.

Dated; 26th December 2003

To
Director (Tech.)
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
Nagpur- 440001.

Sub: Ghorawari Opencast Coal Mine Project (from 0.45 MTPA to 1.50 MTPA) of M/s Western Coalfields Ltd. (WCL), located in village Ghorwari Khurd, Tehsil Junnardeo, District Chindwara, Madhya Pradesh - Environmental clearance – reg. Sir,

This has reference to letter No. 43011/65/2008-CPAM dated 30.07.2008 forwarding the application and letters dated 18.11.2008 and 18.11.2008 on the above-mentioned subject. The Ministry of Environment & Forests has considered the application. It has been noted that the project proposal is to mine coal from patches of old UG workings by opencast operations and expansion in production of coal from 0.45 MTPA to 1.50 million tonnes per annum(MTPA). EC was granted for 0.45 MTPA capacity project on 19.02.2008. The total lease area is 1296.011 ha of which 178.10 ha is agricultural land, 593 ha is forestland, 192 ha is grazing land, and 332.911 ha is Govt. land. Forestry clearance has been applied for for renewal of lease. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. River Kanhan flows at adistance of 6-7km from the ML. It is not proposed to modify the existing natural drainage.

There is no change in the geo-mining characteristics of the working of the various patches within the ML. Of the total lease area, area for excavation is 750.36 ha, area for OB dumps 217.86 ha, infrastructure is 12.34 ha, roads is 2.65 ha, area for green belt is 497.049 ha, area for township is 140 ha, and area for rationalisation is 172.80 ha. The proposal is to mine coal from patches of old UG workings by opencast operations as given below:

S.N.	Name of OC Patch	Quarry Area (ha)	TOTAL		Quarry Depth (m)		Final Backfilled Area (ha)	Final Void (ha)
			Balance Coal in LTPA	Balance OB in Lakh M3	Present	Max.		
A. P	resent Working	Patches						
1.	No. 16/17	17	Nif	Nil	45	50	9.50	7.50
2.	No. 6A & 6B	20	0.89	17.45	30	52	18	2
	TOTAL =	37	0.89	17.45			27.50	9.50
B. P	ropesed upto 2	015-16						
1.	No. 16 & 17 B. Ph.III	40.50	8.57	60.75	-	54	40.50	Nil
2.	Ghogra OC Patch	8.0	2.99	13.13	-	53	. 6	2
3.	Kathideo OC Patch	12.50	5.12	17.83	-	34	10	2.50
	TOTAL =	61	16.68	91.71			56.50	470

GNOTEWARI COMMY NO.

मेनीय योजना उ

MANAGER OTAWATI Coffiery No. 2 SUB AREA MANAGER

MATERIAN STRUCTS
ASSENCE OF LOCAL
BEST OF LEADING ASSE

श्रेत्रीयम्हण्रवंदाव Area General Man

	TOTAL =	39.816 750.36	82.90	679.11			39.816	NII
	THE PROPERTY AND THE PARTY AND						the state of the	1 444
	DQ-3 OC Patch	5.316					5.316	Nil
_	Patch						7	INII
	Kolhiya OC	4					4.50	Nil Nil
	Gh-3 OC Patch	4.50					5.0 4.50	Nil
	Gh-2 OC Patch	6.0					5.0	100
	No. 6 & 7 OC Patch Ph.I & II	7.50					7.50	Mil
	No. 16 & 17 OC Patch Phase-I	12.50	Not Applicable				12.50	Mil
	bandoned Patche							
	11.000	127,334						
	TOTAL =	424.594						
	Datla East	139.994	Individual Schemes will be firmed up aft				up after 201-	1-15
. 1	Proposed beyond Vegin Patch	2015-16 t						
	TOTAL =	187.95	55.84	518.48			130.758	57.19
	South Panara OC Patch	21.25	7.69	81.29		62	14.778	6.47
	Chikalam AU OC Patch	21.25	6.55	61.58		67	14.61	6.39
4.	Bharat Colliery OC Patch		24.0	198.0	-	48	55.10	24.1
3.	Panara OC Patch		4.25	39.75	-	54	8.70	3.0
2.	Dungariya OC Patch		10.60	109.50		50	27.13	11.8
	Kalan OC Patch			28.45	-	30	10.44	4.5

Mineral transportation of 1100 TPD of coal is by road to railway siding covering a distance of 12 km and the balance 270 TPD is by road. Ultimate working depth of the mine is 45m below ground level (bgl). Present working depth is 40m bgl. Water table is in the range of 4,05m-17.20 m bgl during premonsoon season and 0.05-8m bgl during post-monsoon. Mining has intersected water table. Peak water requirement is 440 m3/d, which will be met from mine pit water. Presently a total of 11.82 Mm3 of OB has been generated of which 11 Mm3 has been used for backfilling and 0.82 Mm3 has been dumped in ext. OB dump. An estimated 64.64 Mm3 of OB would be generated in the balance life of mine, which be backfilled simultaneously.

Of the total quarry area of 750.36 ha, of which 552.97 would be backfilled and plantation

S.N.	Area (ha)	Existing	upto 2015-16	upto 2025-26	Status beyond 2025-26	Status at the end of
1.	Excavation	83.36	81.00	The second second	The State of the Land of the L	mine life
2.	Backfilled	The state of the s		187.95	424.594	V50.36
2.	Dackinged	59.316	64.50	130.758	297.500	552.074

0,4000

Fealus 1615177

16/05/17

Polar a like of the mine at the referior party is 12 a constructed into the present a proceeding to 19-15 in would be left at the end of taken the start because the converted and a process, and the Hearing was held on 22.11.2005. The project was apparent by M/s WCt on 85.11.2008. The capital cost of the project is Rs. 1.37 croses.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Ghorawari Opencast Coal Mine Project of M/s WCL for production of coal at 1.50 MTPA rated capacity under section 7.2 of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below:

## A. Specific Conditions

- (i) No mining operations shall be undertaken in the forestland until clearance for renewal has been obtained under the provisions of FC Act, 1980.
- (ii) The environmental clearance is only for the specific patches consisting of details submitted to the Committee and summarised in the table.
- (iii) OC mining should be carried out at a safe distance for old UG workings.
- (iv) Prior permission of DGMS shall be obtained before start of the working based on the Environmental Clearance.
- (v) Safe distance shall be maintained for working adjacent to agricultural fields.
- (vi) The entire OB being generated in the balance life of mine shall be backfilled.
- (vii) No CB generated in the balance life of the mine shall be dumped in the external OB dumps. Reclamation, monitoring and management of the existing external OB dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis.
- (viii) Catch drains and slitation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.

Garland drains (size, gradient and length) 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 site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.

- (ix) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (x) Mining shall be carried out as per statuette at a safe distance from the Pench River flowing adjacent to the lease boundary.
- (xi) The road for coal transport shall be black topped and avenue trees developed on both sides.
- (xii) Drills should be wet operated or with dust extractors.
- (xiv) Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.

Choram Collery No. 2

MANAGER GNOTAWATI Collery No. 2

SUB AREA MANAGER

16.05.17

वीरीय योजना जिल्ला?

कित्दर-17

- Area brought under afforestation shall be not less than 769.93 ha and includes area external OB dump (217.86 ha), backfilled area (552.074 ha), along ML boundary, infrastructure along roads and safety zone located within and outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be
- A Progressive Mine Closure Plan shall be implemented by reclamation of decoaled quarry area of 750.36 ha of which 552.074 ha shall be concurrently backfilled with 67.778 Mm3 of OB generated in the balance life of mine and reclaimed with plantation using native plant species in consultation with the local DFO/Agriculture Department. The number of the trees should be around 2500 plants per ha. The balance 198.286 ha of decoaled void would be converted into a water reservoir of a maximum depth of 15m, the upper benches of which shall be gently sloped and stabilised with plantation and a peripheral fencing erected all around the reservoir.
- Regular monitoring of groundwater level and quality should be carried out by establishing a (xvii) network of exiting wells and construction of new peizometers. The monitoring for quantity should be done 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 tot eh Central Pollution Control Board quarterly within one month of monitoring.
- (xviii) 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 agency such as NIOH, Ahmedabad within a period of one year and the results reported to this Ministry and
- (xix) For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1: 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
- Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and
- The detailed Final Mine Closure Plan along with details of Corpus Fund should be submitted within six months to the Ministry of Environment & Forests Regional Office, Bhopal.

## В. General Conditions

- No change in mining technology and scope of working should be made without prior approval (i)
- No change in the calendar plan including excavation, quantum of mineral coal and waste (ii)
- Four ambient air quality monitoring stations should be established in the core zone as well as (111) in the buffer zone for monitoring SPM, RPM, SO2 and NOx and heavy metals such as Ho, etc. Location of the stations should be decided based of the meteorologically control features and environmentally and ecologically control targets in consultation with the State Pollution Control Board.
- Fugitive dust emissions (SPM and RPM and heavy metals such as Hg, As, Pb, etc ) from all (iv) the sources should be controlled regularly monitored and data recorded properly. Water

spraying arrangement on hard reach, water tording, start for a start or an expension points should be provided and properly maintained.

- (v) Data on ambient air quality (SPM, RFIR, SO2, NOx and heavy metals such as Hq, As, Fb, etc.) should be regularly submitted to the Panistry including its Regional Office at Bhopal and to the State Pollution Control Board and the Central Pollution Control Econd once in six months.
- (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.
- (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.
- (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.
- (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.
- Personnel 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 contractions due to exposure to dust and to take corrective measures, if needed.
- (4) A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- (xii) The funds earmarked for environmental protection measures should e kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.
- (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 office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.
- (xiv) A copy of the will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (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 and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a>. The compliance status shall also be uploaded by the project authorities in their website so as to bring the same in the public domain.
- 3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
- 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.

SURVEYOR Ghorawari Colliery No. R MANAGER Shorawari Collery No. 2

> धेत्रीयम्हणबंधक ea General Manage

SUB ATTENT Ghoragan

16/08/17

ATTEN STOWEY TO STOWER

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. 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.

> (Dr.T.Chandini) Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.

2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat,

3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240

4. Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony,

5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, Fast Arjun Nagar, New

6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.

7. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg,

8. District Collector, Chindwara, Government of Madhya Pradesh, New Delhi.

Monitoring File

Guard File

metel and Kanhan Area

Ty No 2

ron General Manager om / Kanhan Ar

2 1 .