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**SIX MONTHLY COMPLIANCE REPORT OF  
ENVIRONMENTAL CLEARANCE**

**NANDAN UG MINE**

**(0.405 MTPA IN AREA OF 543.50 HA)**

**EC NO. - J-11015/237/2005-IA-II(M)**

**DATED 17.10.2006**



**WESTERN COALFIELDS LIMITED  
KANHAN AREA  
PO: DUNGARIA, CHHINDWARA (MP)-480553  
PERIOD - OCTOBER 2022 TO MARCH 2023**

## Part – IV

### Compliance of EC Conditions

**Name of Project : Nandan U/G (0.405 MTPA)**

**EC Letter No. J 11015/237/2005-IA.II(M) Dated 17-10-2006**

Sl.No	Condition	Remarks/Action
A)	<b>Specific Conditions</b>	
I	All the condition stipulated by the SPCB in their NOC shall be effectively implemented	Status of Compliance of condition stipulated by the SPCB has been attached herewith at Annex-I
II	No Mining operation shall be undertaken in the forest land until clearance under provision of FC Act 1980	Out of total 543.5 Ha of land 206.2 Ha. is under forest, working under forest land began before 1980. At present there are no working going on in forest land. Proposal for additional 112.64 Ha of land for mining rights is under consideration for Environmental Clearance (for expansion project into Dhau North block), of which 57.618 Ha is forest land. Application made for FC for forest land area of 57.618 Ha for expansion into Dhau North.
III	Monitoring of subsidence movement on the surface ground the working area and impact on natural patters, water bodies, vegetation, structures, 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 materials. Cracks should be effectively plugged with ballast and clayey soil/suitable material.	The depillaring operation is done in accordance with permission of DGMS where regular subsidence monitoring is being carried out. Accordingly subsidence survey is done and as per available data no measurable subsidence in the entire land is noticed. Due to motur formation in the strata minor crack develops, these are filled up on regular basis. About 70% of total area had been worked out i.e. 380.45 Ha of land is depillared/decoaled.
IV	Garland drain(size, gradient & length) around the safety areas such as mineshaft and low lying areas & sump capacity should be designed keeping 50% safety margin over & above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump Capacity should also provide adequate retention period to allow proper setting of silt material	This is a UG Mine & all the precautions are taken to prevent the risk of inundation due to surface water as per CMR 1957. Adequate sump capacity provided in UG dip side working for settlement of silt material has been provide Besides, for second stage settling, a sedimentation tank of capacity 300 m <sup>3</sup> is also provided at the surface.
V	Two rows of pillars from the line of HFL of Kanhan River including the pillars under the HFL line shall not be reduced in any manner	Two rows of pillars from line of HFL of Kanhan River including pillars under HFL are not touched. Area left intact as mentioned in DGMS permission

VI	Crusher at the CHP should operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emission from crushing operations, haulage roads, transfer points etc.	No crusher provided. Water sprinkling system is provided at transfer point by sprinklers and at haulage road through mobile tankers.								
VII	Drills should be wet operated only	IN UG mines drilling in coal faces is done by portable hand held electric drill machines duly approved by DGMS.								
VIII	Controlled blasting should be practiced with use of delay detonators	Blasting in underground is done using delay detonators under direct supervision of competent person. All the precautions as per CMR 1957 are taken at the time of blasting.								
IX	A progressive forestation plan shall be prepared & implemented for the undisturbed area and shall include areas under green belt development. Areas along roads, along ML boundary, township outside the lease area etc. By planting native plant species in consultation with the local DGO/Agriculture department. The density of the trees should around by 2500 plants per ha.	Total plantation actual nos. & location also shown on the plan. <table border="1" data-bbox="853 768 1476 1288"> <thead> <tr> <th>Sl. No.</th> <th>Location</th> <th>Area (Ha)</th> <th>Nos.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Plantation has been done around mine premises, Workshop sides of transportation road &amp; vacant land by MPRVVN, Chhindwara (MP)</td> <td>47.50 Ha approx.</td> <td>1,17,875</td> </tr> </tbody> </table>	Sl. No.	Location	Area (Ha)	Nos.	1	Plantation has been done around mine premises, Workshop sides of transportation road & vacant land by MPRVVN, Chhindwara (MP)	47.50 Ha approx.	1,17,875
Sl. No.	Location	Area (Ha)	Nos.							
1	Plantation has been done around mine premises, Workshop sides of transportation road & vacant land by MPRVVN, Chhindwara (MP)	47.50 Ha approx.	1,17,875							
X	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring for water levels should be done at least four times a year in Pre-Monsoon (May), Monsoon(August), Post-Monsoon (November) & Winter(January) seasons & quality in may data thus collected should be submitted to the MOEF & CGWB, Regional office quarterly within one month of monitoring.	Regular monitoring, of groundwater level and groundwater quality is done four times a year as specified through a certified external agency- Anacon Laboratories.  Monitoring Report for the period Oct'22-Mar'23is enclosed.								
XI	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 village wells go dry due to dewatering of the mines	Complied. Stop dam of capacity 1620 cum( 16.20 Lakh litres)has been provided for recharging of ground water. Water is supplied to nearby villages through water tanker as and when required.								
XII	Beside carrying out regular periodic health	Regular periodic medical examination of workers								

	check up of their workers, 10% of the workers identified from work force engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any through an agency such NIOH, Ahmedabad within period of one year & the results reported to this Ministry & to DGMS	is done once in five years of workers below 50 years of age & twice in five years for workers above 50 years ages.
XIII	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern & report submitted MOEF & its Regional office at Bhopal	Complied. Land use monitoring report based on satellite imagery for PENCH-KANHAN-TAWA valley coalfield is prepared by CMPDIL and uploaded on the company website  <a href="http://103.59.142.228:8081/wclweb/TPK_CF_2020.pdf">http://103.59.142.228:8081/wclweb/TPK_CF_2020.pdf</a>
XIV	A final mine closure plan along with details of corpus fund should be submitted to the Ministry of Environment & Forests 5 years advance for final mine closure for Approval	Copy of Approval letter and copy of Approved Mine Closure Plan is enclosed. Total Amount deposited in Escrow account of Nandan UG mine is 1041.10 lakhs till date and balance as on 31/03/23 is INR 13,47,68,157 /-
XV	Consent to operate (CTO) shall be obtained before starting mining operations.	Mine not Operational at present. CTO granted vide Consent no. 56976 dated 28/10/22 valid till 30/09/2023.
XVI	Mine working shall be restricted to 300m bgl in accordance with the submission made during the Public hearing as well as to the SPCB while seeking their clearance	Noted for compliance. Mine not operational at present
<b>B)</b>	<b>General Conditions</b>	
i)	No change in mining technology & scope for working should be made without prior Approval of the Ministry of Environment & Forests.	Complied. No change in mining technology is proposed.
ii)	No change in the calendar plan including excavation, quantum of mineral coal should be made.	No change in calendar programme proposed. Proposal for EC for expansion into Dhau North Block is pending with MoEF&CC.
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 <sub>2</sub> , NO <sub>X</sub> & CO Monitoring location of the stations should be decided based on the meteorologically date topographical features and environmentally and ecologically sensitive target in consultations with State Pollution Control Board.	Complied. Four Ambient air quality monitoring stations have been established in the core and buffer zone of the mine 1) SAM Office – Nandan I 2) Pit Office – Nandan II UG 3) Health Centre - Nandan 4) Nandan Filter Plant

		The monitoring is carried out in accordance with GSR 742 (E) dated 25.09.2000
iv)	Data on ambient air quality(RPM, SPM, SO <sub>2</sub> , NOX & CO) should be regularly submitted to the Ministry including its Regional office at Bhopal and the State Pollution Control Board/Central Pollution Control Board once in six months.	Complied. The environmental monitoring reports, including ambient air quality data are regularly submitted to MPPCB and MoEF Bhopal along with six monthly EC compliance report. Report for period Oct'22-Mar'23 is enclosed.
v)	Fugitive dust emission from all sources should be controlled regularly Monitored & data recorded properly. Water spraying arrangements on haul roads, wagon loading, dump trucks, (loading, unloading) should be provided and properly maintained.	Mine not operational at present. However, during mine operations, the following arrangements have been made to control dust emission. (i) Dust emission in Underground is suppressed by regular water spraying arrangement at all U/G workings as per statute. Also water spraying arrangement is done along the belt incline and at transfer points. (ii) Side cladding by G.I. Sheets done over the gantry of conveyer belt for 25.00 m length for preventing coal dust during transportation of coal by conveyor belt.
vi)	Adequate measure should be taken for control noise levels below 85 db(A) in the work environment. Worker engaged in blasting and drilling operation, operation of HEMM should be provide with ear plugs & muffs.	Mine is not operational at present. Noise level is controlled below 85 dB(A)
vii)	Industrial waste water(workshop & water from the mines) should be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dated 19 May 1993 and 31 December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	There is no industrial waste water from workshop as it is an underground mine. Waste water from mine is treated in settling tanks and re-used for plantation etc. Sedimentation tank of 300 m <sup>3</sup> is also provided for mine water treatment.
vii)	Industrial waste water(workshop & water from the mines) should be properly collected, treated so as to confirm to the standards prescribed under GSR 422(E) dated 19 May 1993 and 31 December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	This is an underground mine and HEMM are not employed. There is no workshop. Mine water discharge is allowed to settle in settling tanks. The settled mine water meets the standards prescribed in GSR 742 (E) dated 25.09.2000 Sedimentation tank of 300 m <sup>3</sup> is also provided for mine water treatment.
viii)	Vehicular emission should be kept under control & regularly monitored. Vehicles used for transporting & mineral should be covered with tarpaulin	Vehicles used for transporting mineral are covered with tarpaulin. All light vehicle like jeep, school buses,

	optimally loaded.	ambulances etc having valid PUC certificate.
ix)	Environmental Laboratory should be established with adequate number and type of pollution monitoring and analysis equipments in consultation with the state pollution control board.	Well established environmental laboratory exists at CMPDIL Nagpur, which is NABL accredited. (Copy of certificate enclosed)
x)	Personnel working in dust area should be wear protective respiratory devices and they should also provide with adequate training and information on safety and health aspects. Occupational health surveillances program of the worker should be undertaken periodically to observe any contradictions due to exposure to the coal dust and take corrective measures, if needed	All workmen are given protective devices as per statute. Occupational health survey i.e. PME is done for every workman once in five (5) years & twice in five years for workers above 50 years ages
xi)	A separate Environmental management cell with suitable qualified personnel should be set up under the control of Senior Executive, who will report directly to the head of company	There is well established environmental cell at the corporate HQ, headed by GM(ENV) reporting to Director(Tech) P&P. He is assisted by well qualified and well trained team of Engineers of Mining, Civil and Environment disciplines.  At area level, the team is headed by General Manager (Operation) and assisted by Area Nodal Officer(Environmental) & Asistant Manager (Environment) under the overall control of Chief General Manager of the area.  At project level the team is headed by Sub Area Manager of the project and assisted by Project Nodal Officer (Environment).
xii)	The funds earmarked for environmental protection measures should be kept separate account should be diverted for other purpose. Year wise expenditure should be reported to the Ministry and Regional office located office at Bhopal.	Noted.
xiii)	The Regional Office of this Ministry located office at Bhopal shall monitor compliance of the stipulated conditions. The project authorities should be extent full co-operation to the officers) of the Regional Office by furnishing the requisite data/information/monitoring reports	Noted
xiv)	A copy of clearance letter will be marked to the concerned panchayat/local NGO. If any from whom and suggestion/ representation while processing the proposal	Copy of clearance letter marked to the concerned Panchayat vide ref. no.: WCL/KAN/NDN/ACC/2006-306, Dtd. 21-11-06 WCL/KAN/NDN/ACC/2006-307, Dtd. 21-11-06

		WCL/KAN/NDN/ACC/2006-308, Dtd. 21-11-06
xv)	State pollution control board should be display a copy of the clearance letter. The Regional office, District Industry centre and Collectors Office/Tehsildar Office for 30 days	This is for MPPCB
xvi)	The project authorities should advertise at least in two local news paper widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance and a copy of clearance letter is available with state pollution control board and may also be seen at web site ministry of Environment & Forests. at <a href="http://envfor.nic.in">Http://envfor.nic.in</a>	Copy of Advertisement enclosed
xvii)	The Ministry or any other competent may alter/modify the above condition or stipulated any further condition in the interest of environment protection	Noted for compliance
xviii)	Failure to the comply with any of the condition mentioned above may result withdrawal of the clearance and attract action under the provisions of environment (protection) Act 1986	Noted for compliance
xix)	The above condition will be enforced inter alia under the provision of water(prevention & control of pollution) Act 1974 the air(prevention & control of pollution) Act 1981 the environment(protection) Act 1986 and public liability insurance Act 1991 along with their amendments and rules	Noted for compliance

## ANNEX – I

### NANDAN U/G

#### STATUS OF COMPLIANCE OF CONDITION OF NOC ISSUED BY MPPCB

Sr. No.	Condition	Status of Compliance
1	Industry shall have to provide adequate facility for proper treatment of industrial and domestic waste water as well as mine discharge water to ensure efficient quality confirm to the standards prescribed by the Board in Gazette of M.P.Date 25-03-1988	Mine water is provided two stage settling – first at an underground sump inside the mine and then at a sedimentation tank at the surface. The quality of pumped out water is monitored every fortnight. Environmental Monitoring Report for period Oct'22-Mar'23is enclosed.
2	The mine discharge water domestic waste water after proper treatment shall be utilized in plantation sprinkling or other useful purpose industry shall no discharge any untreated water at any time into the surface water bodies.	Mine is not operational at present. Treated water is utilized in UG roof bolting, plantation and for domestic purposes.
3	Extensive tree plantation shall be done in around mining lease area. The tree plantation shall be carried out in phase manner preferable with species.	About 1,17,875 plants were planted in around residential areas, office premises and around the mines. Species like Karanj, Neem, Peatform, Sagaon, Jamun, Silver Oak, Babooland Gulmohar etc have been planted.
4	Solid waste generated during mining operation shall be disposed off by proper scientific methods. All the slope of external dumps of overburden should be maintained at maximum of 28 degrees each.	Nandan being an UG mine, no solid waste in the form of OB is generated. As such as not applicable.
5	Industrial shall have to install adequate air pollution control equipments at all point sources of emission so as to achieve limit of particulate matter 150mg/Nm <sup>3</sup> (Milligram/Normal Cubic meter).	Regular water spraying for dust suppression is done through Mobile water tankers.  Mine is currently not operational
6	Ambient Air quality within and around the mining lease area shall confirm to the standards prescribed by MP Pollution Control Board published in MP Gazette Notification date 25-3-1998	The regular monitoring of ambient air quality is being done at four stations at the project and the report is being submitted to the board regularly (copy of Monitoring report for period Oct'22-Mar'23 is enclosed. Ambient air quality monitoring is being done through CMPDIL and same is being submitted regularly to MPPCB Bhopal and Chhindwara. Also periodical monitoring is done by MPPCB Chhindwara office.



7	Effective steps shall be taken to avoid fugitive emission from excavation of raw materials coal handling plant and transpiration system.	Mobile water sprinkles are used for dust suppression on coal transport road.
8	The industry shall have to provide proper and adequate as pollution control arrangements to control the air pollution in the coal handling plant coal crushing transfer points, during transportation loading/unloading of coal and other mining activities.	Water sprinkling for dust suppression is done at all loading points. Coal transportation road is of 3.8 Km has been black topped.
9	All coal transporting trucks shall be covered fully with tarpaulin and properly tied up with rope.	Mine is presently not operational. However all coal transport trucks are covered by tarpaulin
10	Water spreading arrangement shall be made during transpiration of coal on haul roads.	Not applicable being UG mine. Coal is transported for UG working through conveyors on to surface.
11	The industry shall take proper action to control the noise pollution. The noise level should not exceed the limit 75 dB(A) during the day time and 70 dB(A) during the night time with the mine lease area.	Complied.
12	Industry shall ensure that the blasting and other mining operations shall not cause any damages to nearby settlements	This is an underground mine, entire coal extraction is carried out in below ground as per coal mines regulation 1957 and DGMS stipulations/guideline. The entire blasting operation is done as per permission of DGMS.
13	Industry shall take effective steps to check the soil erosion from waste material dumping area and causing siltation problem in nearby nallah/river/pond during rainy season.	UG mine, so there is not scope of soil erosion due to waste material. As such not applicable.
14	Industry shall take due precaution and appropriate measures to control vibration and noise effects during mining activities	This is an U/G working and entire coal extraction operation is carried out as per Coal Mines Regulation 1957 and DGMS stipulations. All precautions are taken as per statute.
15	Mining activity shall be carried out in such a way so that prime land area may not get degraded	This is an UG mine and there is no chance of degradation of prime land.
16	The industry shall establish an environmental management cell to carry out function relating to environmental management under the supervision of senior executive who will directly report to the head	There is full fledged environment department at corporate HQ headed by GM(Env.) and comprised of team of well qualified and trained engineers from Mining, Civil and Environment.  At Area level the team is headed by GM(Oprn) and

	of organization	assisted by Area Nodal Officer(Env.)
17	The submission of Environmental statement by the Industries who consent under Air & Water acts of bothe and authorization under the Hazardous Waste (management and handling) Rules 1989 has been made mandatory under the environmental(Protection Act 1986) As per the provision for the previous year ending 31 <sup>st</sup> March on or before 30 <sup>th</sup> Sept. Every year to the Board.	Env. Statement for year 2021-22 already submitted.
19	Good housekeeping practices shall be adopted by the industry	Complied
20	Mines management shall submit the environmental management plan within 3 months from the date of issue of this letter.	Complied.
21	Industry shall provide LPG to workers to control air pollution.	All the employees of the mines residing in the company quarters have been provided with gas connection.
22	Industry shall have to follow the conditions laid down at the time of grant of consent under water(Prevention and control of pollution) Act 1974 and the Air(Prevention and Control of Pollution) Act 1981.	Noted.